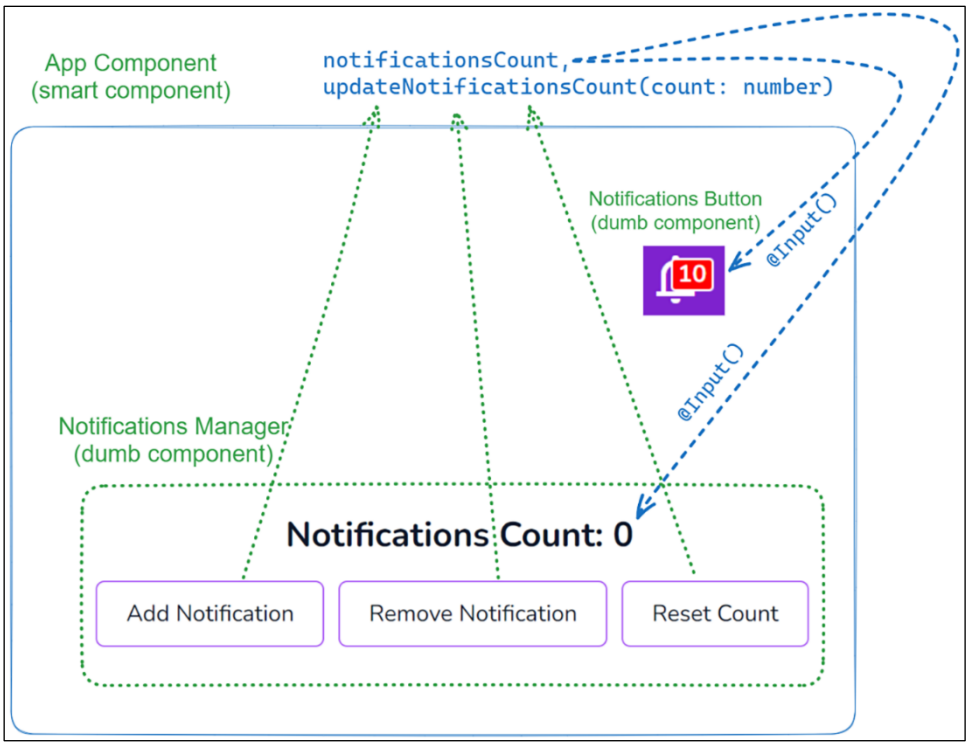
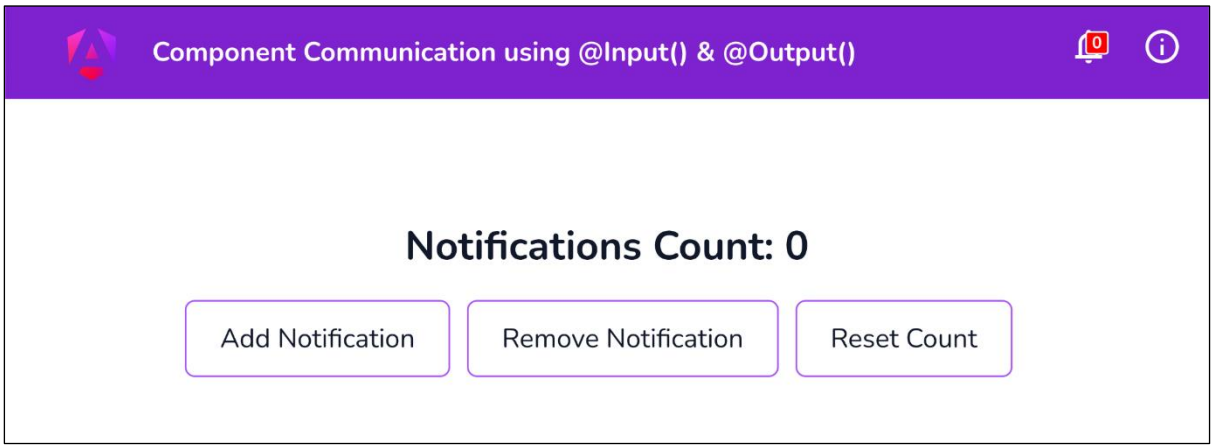
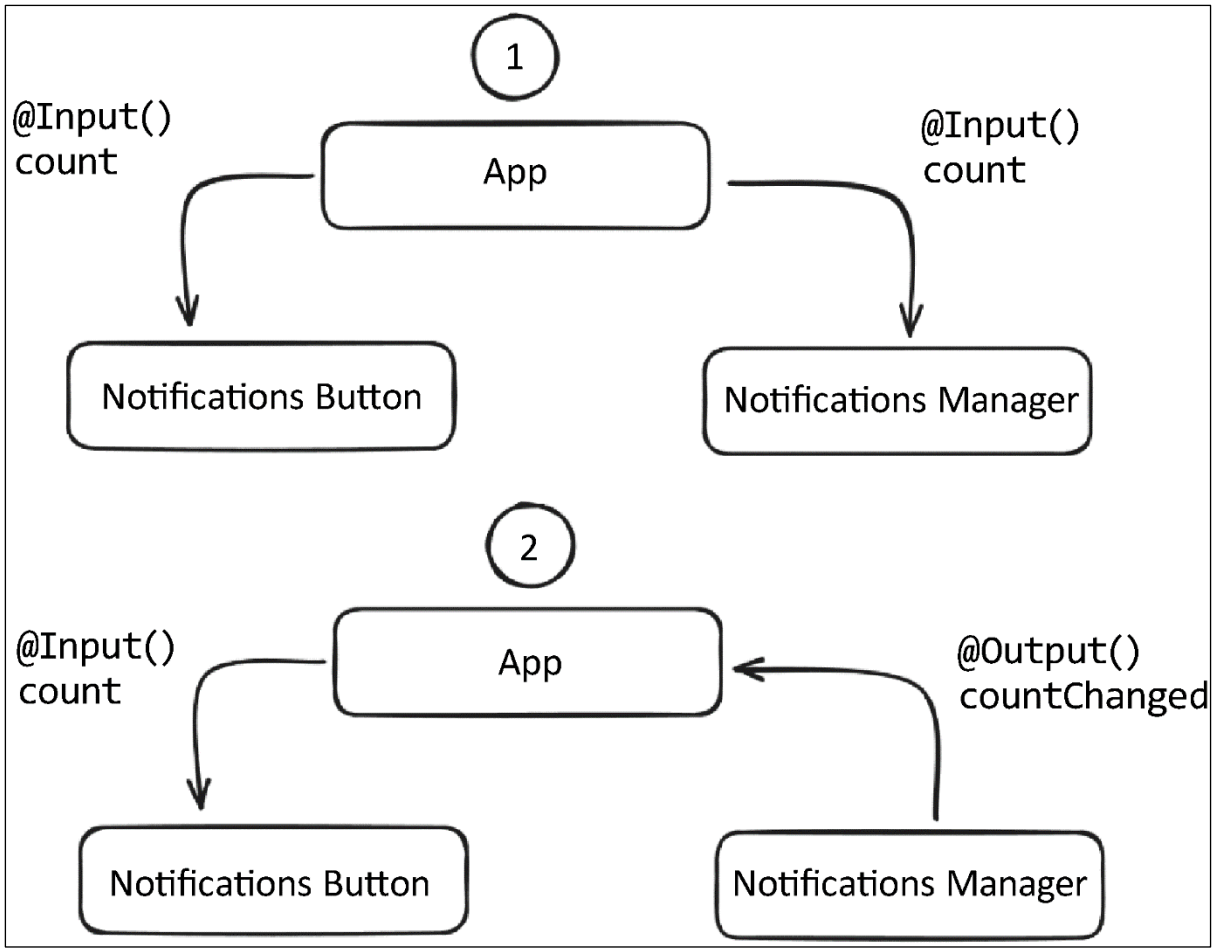
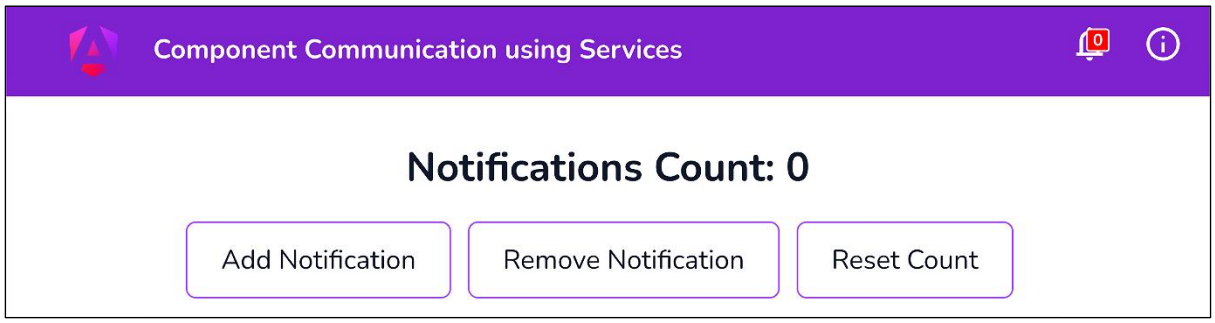
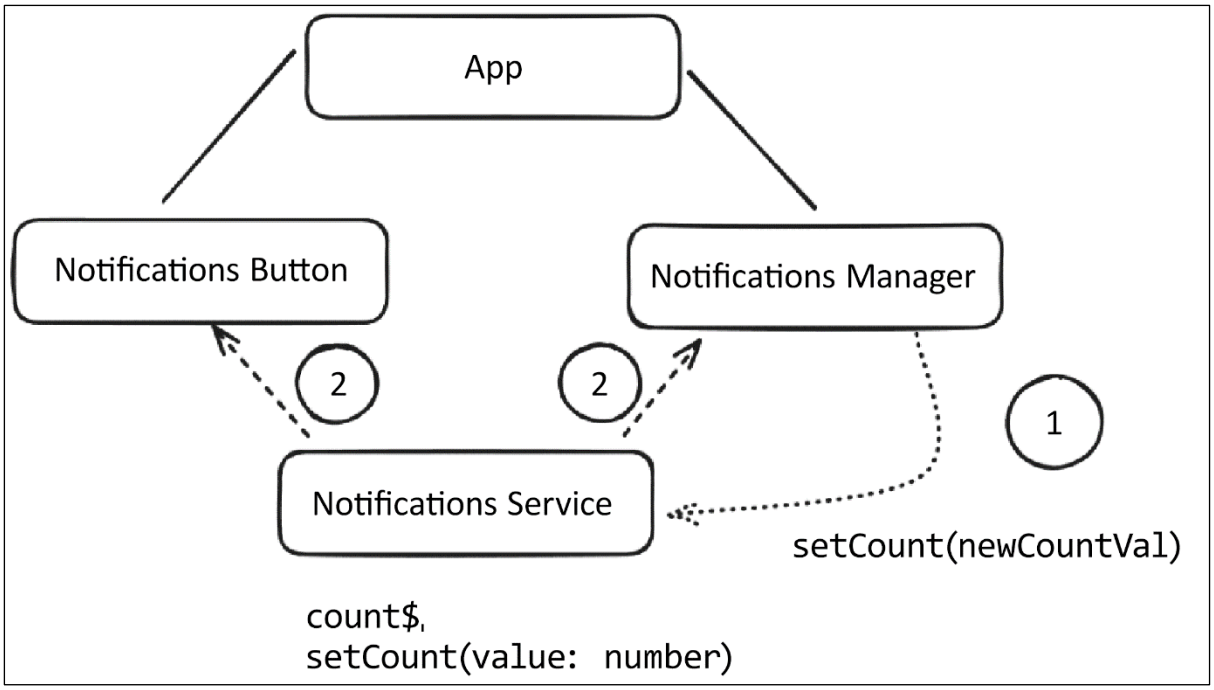
Chapter 1: Winning Component Communication

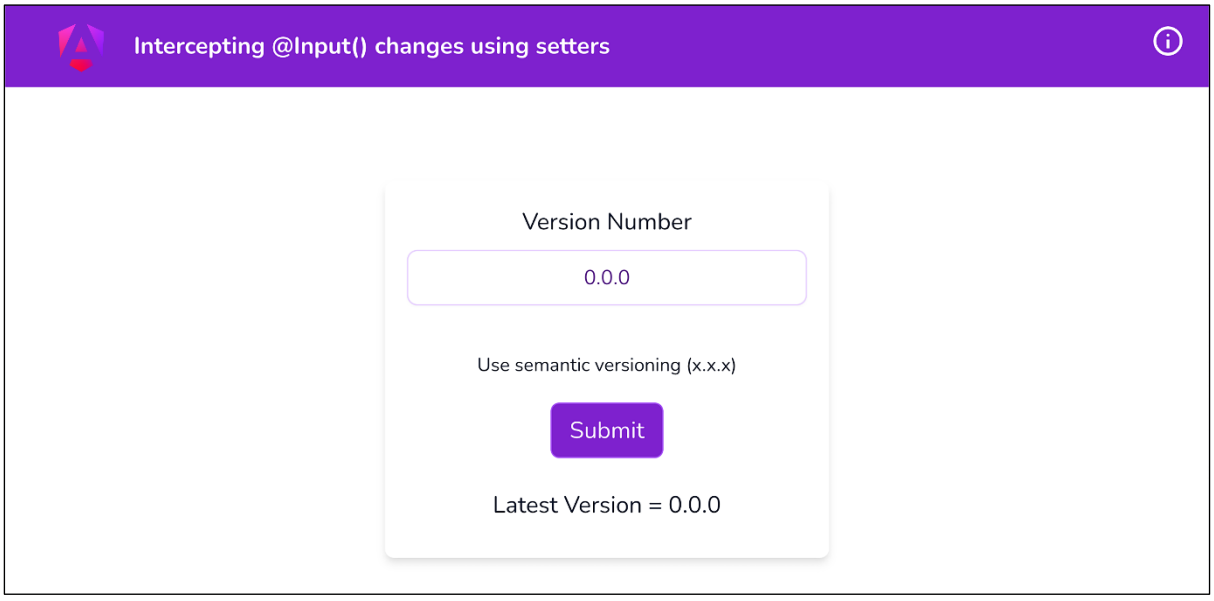


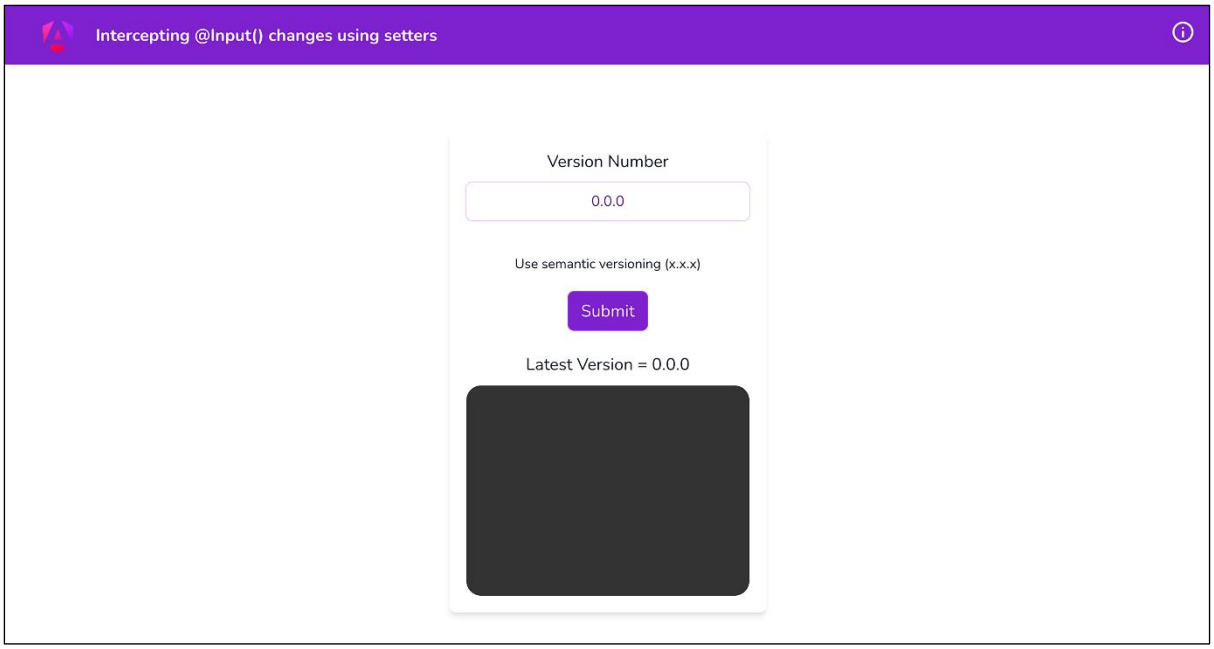


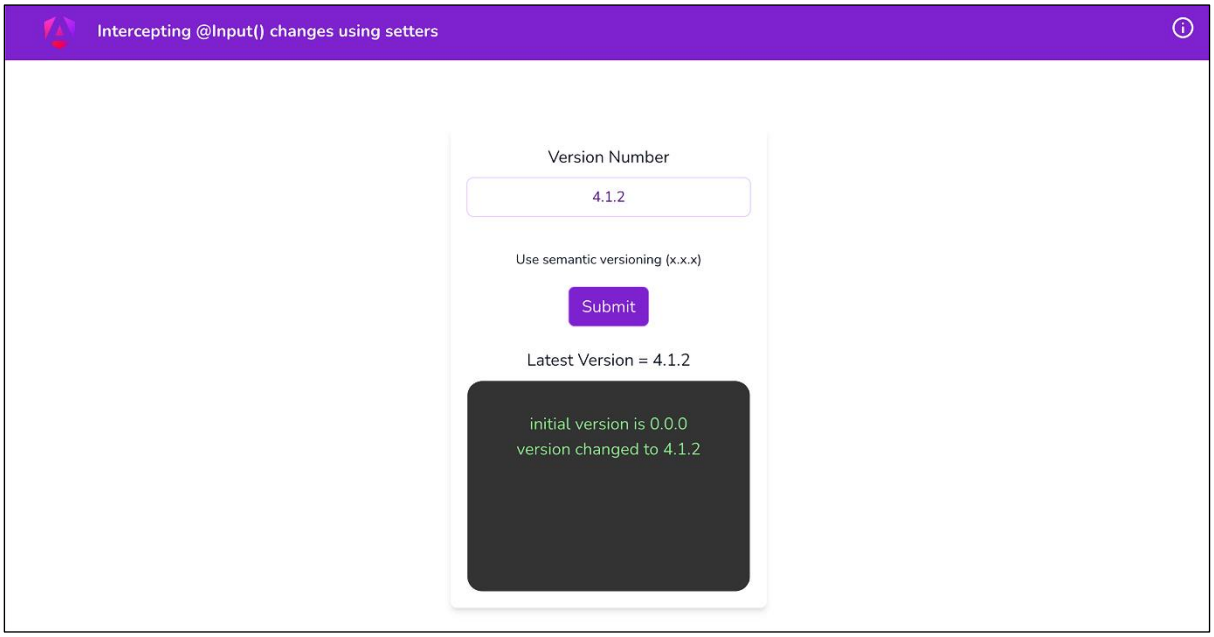

1
@Input()
count
App
@Input()
count
Notifications Button
Notifications Manager
2
@Input()
count
App
@Output()
countChanged
Notifications Button
Notifications Manager

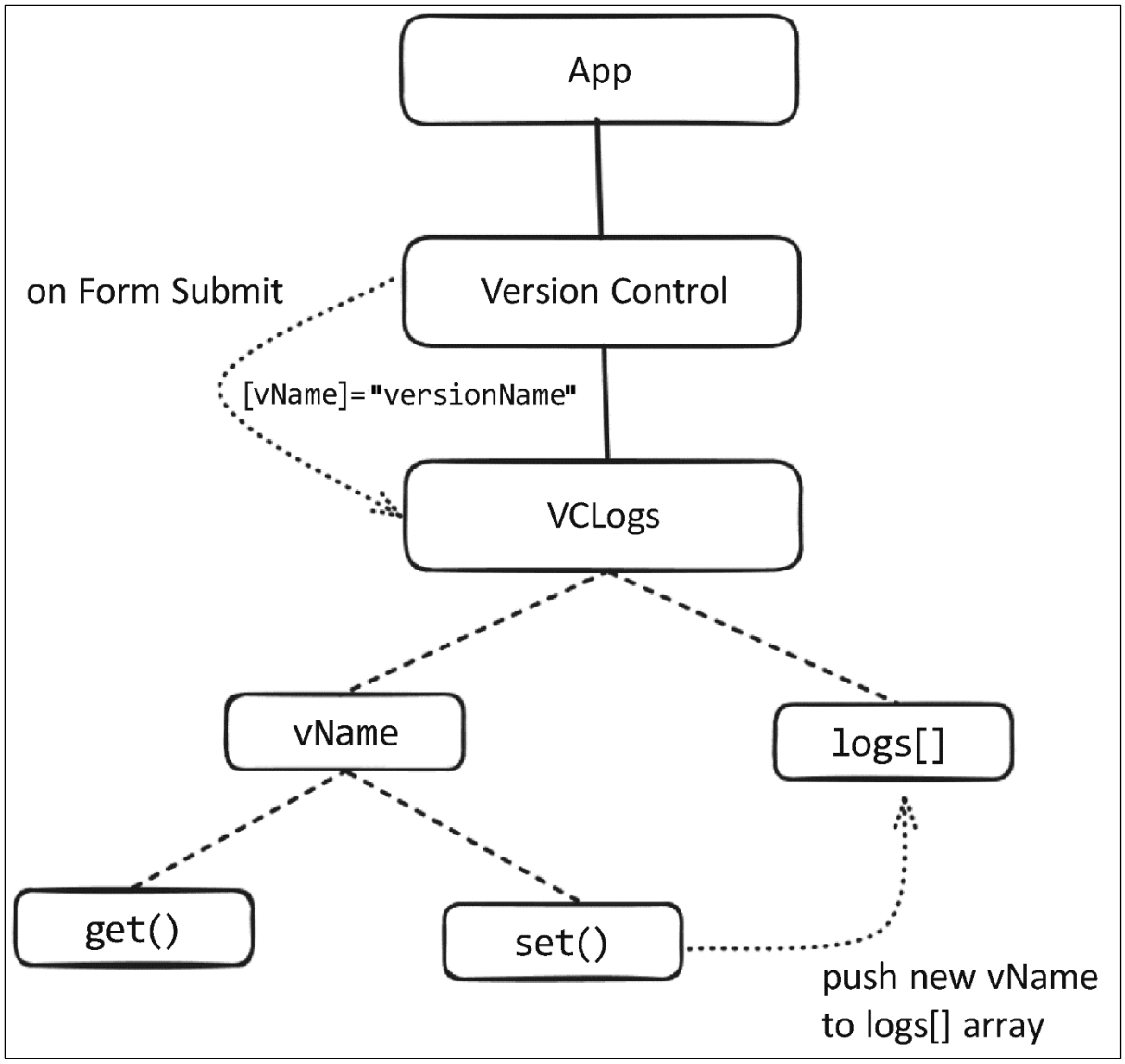

Component Communication using Services
Notifications Count: 0
Add Notification
Remove Notification
Reset Count

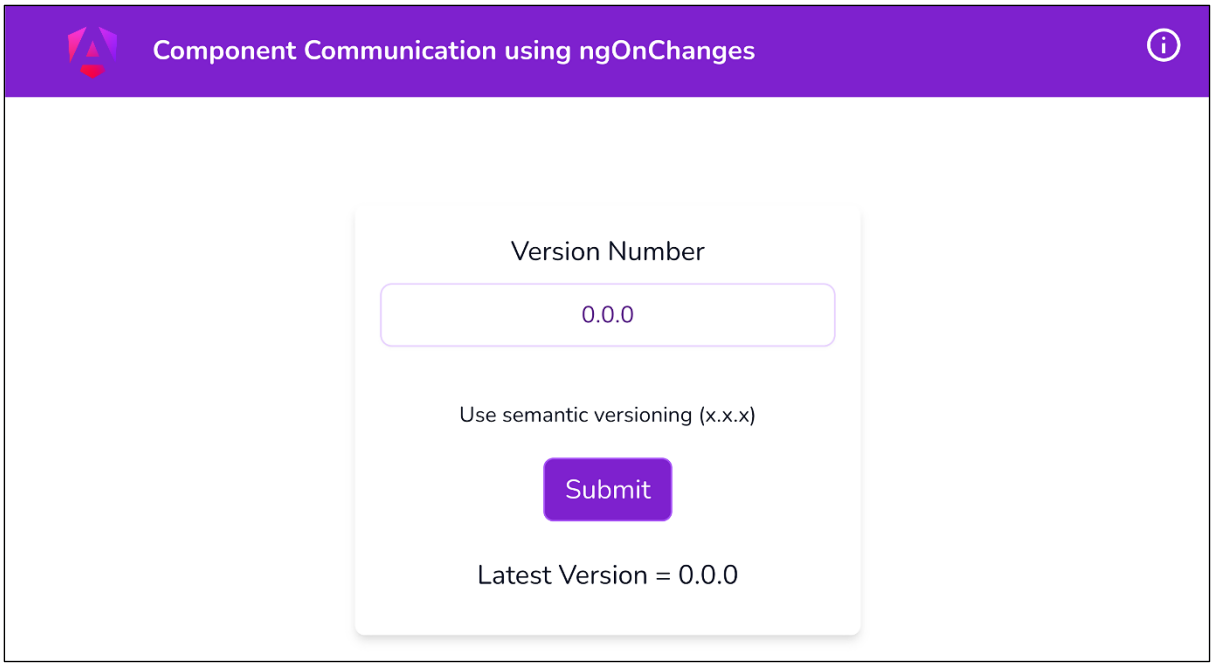

App
Notifications Button
Notifications Manager
2
2
1
Notifications Service
setCount(newCountVal)
count$,
setCount(value: number)

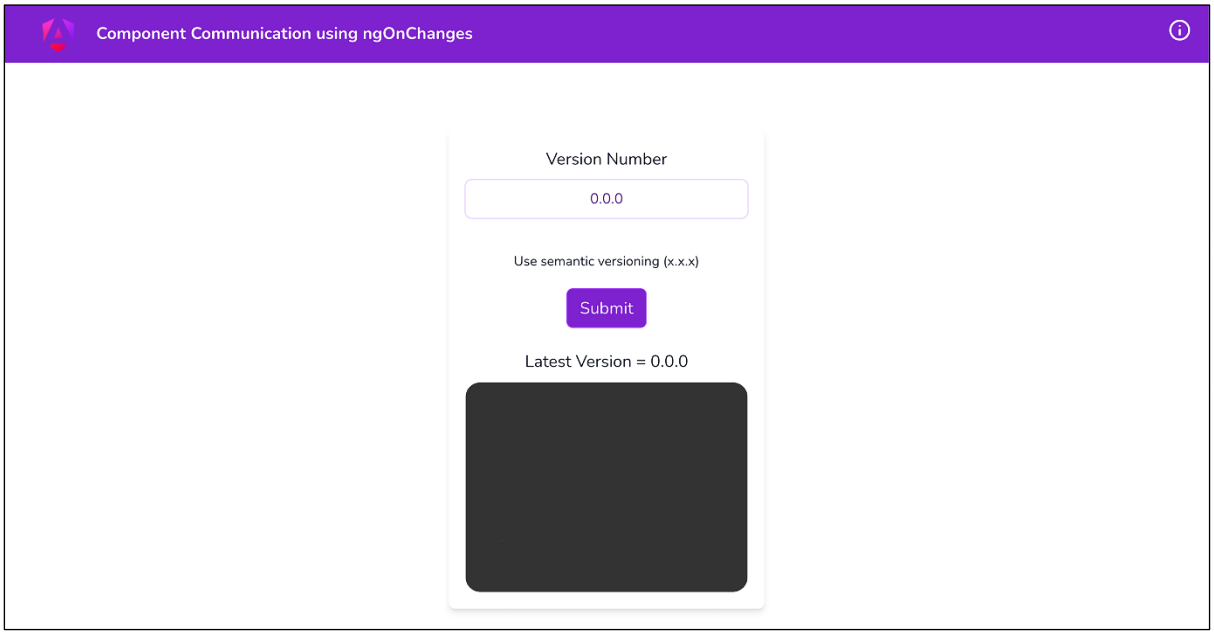

Intercepting @Input() changes using setters
Version Number
0.0.0
Use semantic versioning (x.x.x)
Submit
Latest Version = 0.0.0

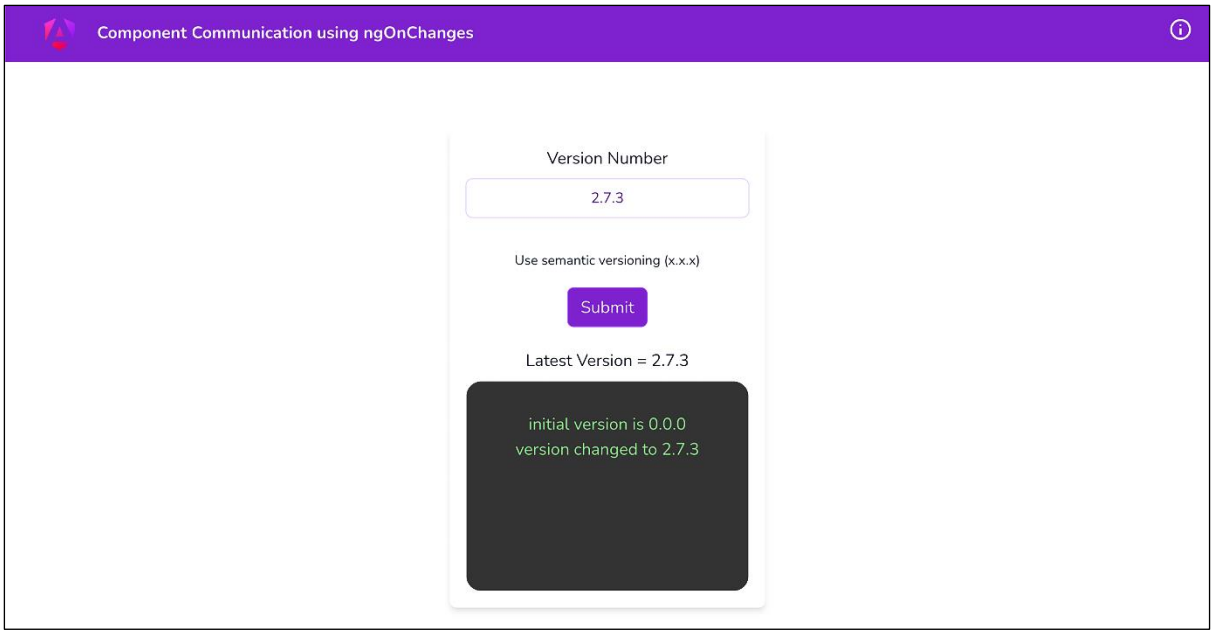

Intercepting @Input() changes using setters
Version Number
0.0.0
Use semantic versioning (x.x.x)
Submit
Latest Version = 0.0.0

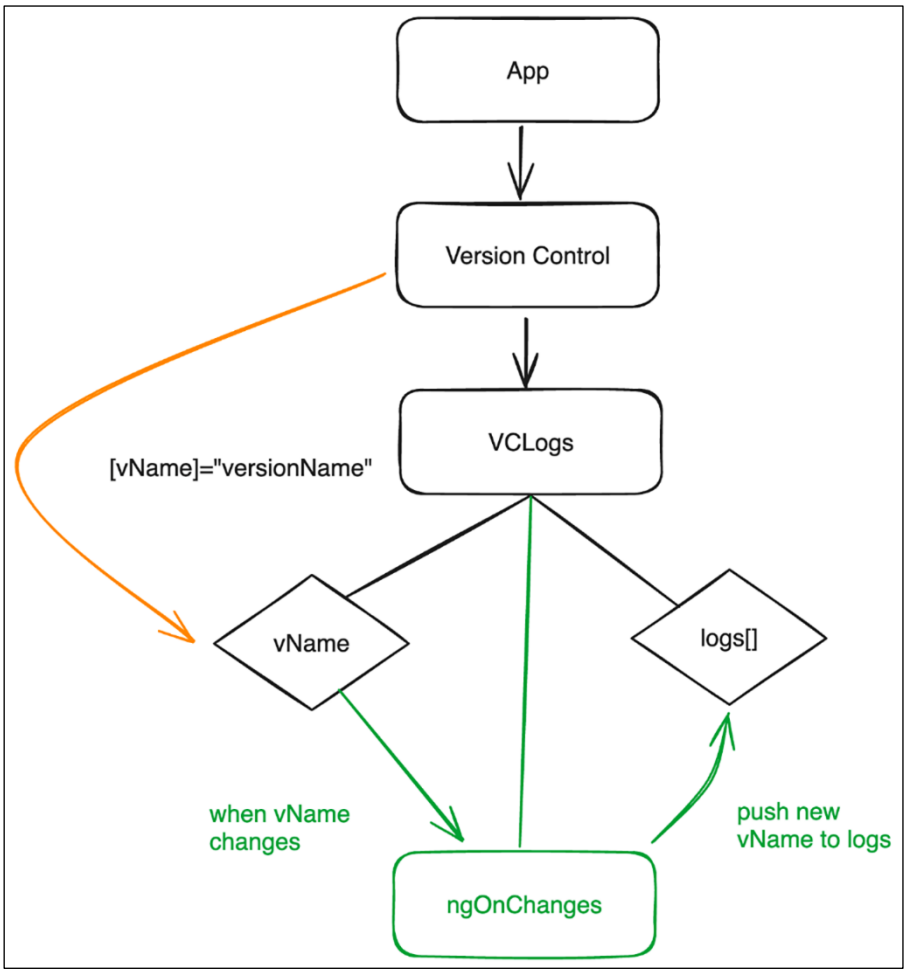

Intercepting @Input() changes using setters
Version Number
4.1.2
Use semantic versioning (x.x.x)
Submit
Latest Version = 4.1.2
initial version is 0.0.0
version changed to 4.1.2

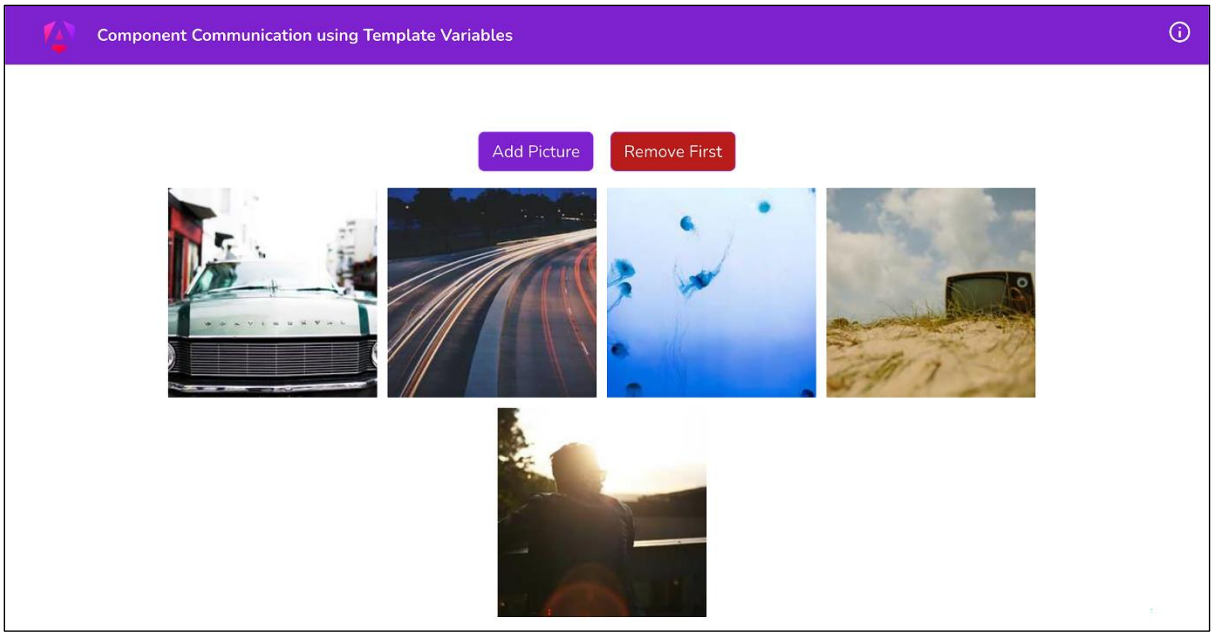

App
Version Control
on Form Submit
[vName]="versionName"
VCLogs
vName
logs[]
get()
set()
push new vName
to logs[] array


Component Communication using ngOnChanges
Version Number
0.0.0
Use semantic versioning (x.x.x)
Submit
Latest Version = 0.0.0

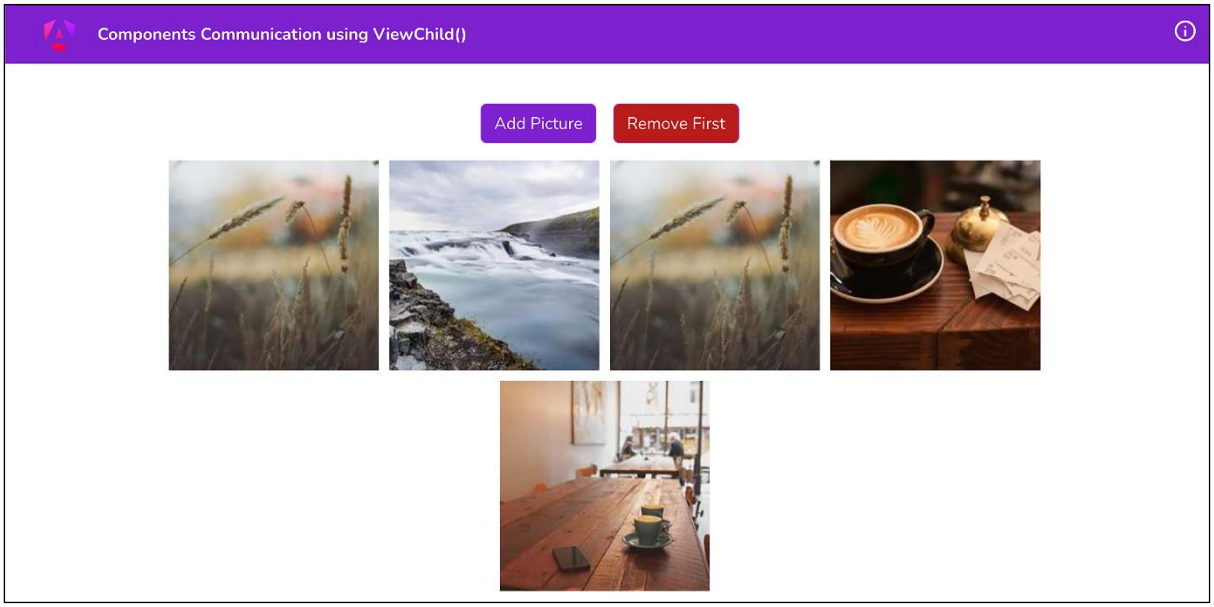

Component Communication using ngOnChanges
Version Number
0.0.0
Use semantic versioning (x.x.x)
Submit
Latest Version = 0.0.0

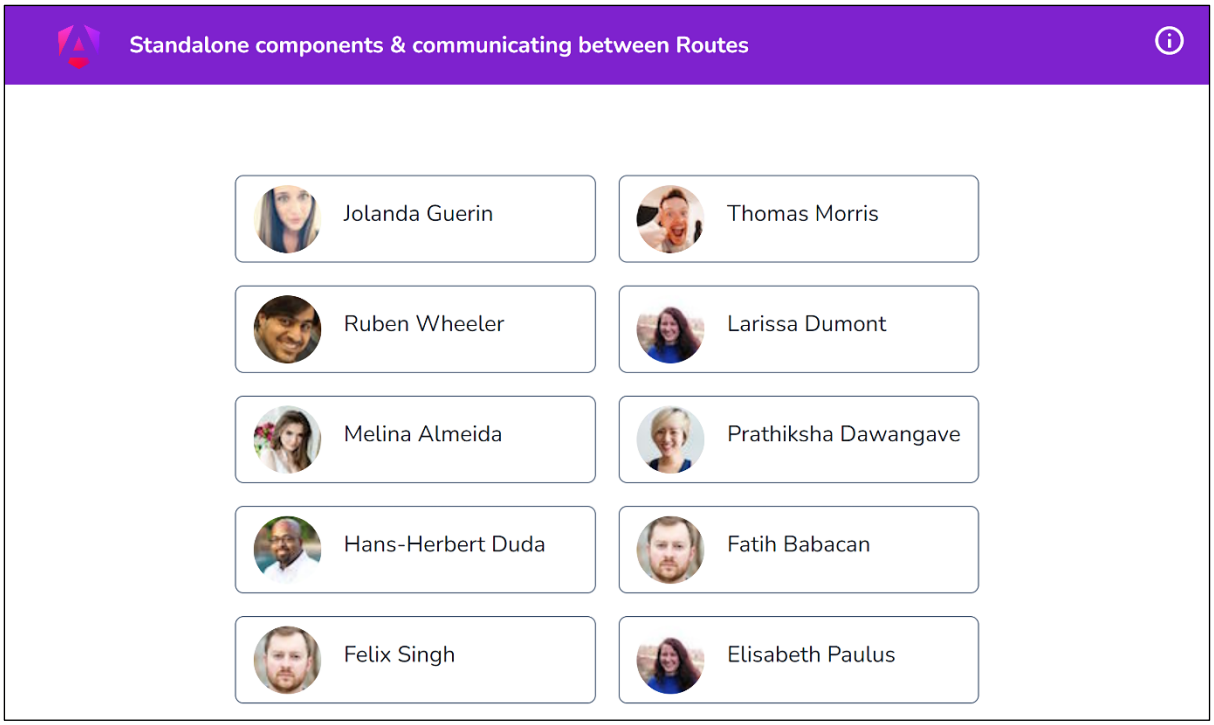

Component Communication using ngOnChanges
Version Number
2.7.3
Use semantic versioning (x.x.x)
Submit
Latest Version = 2.7.3
initial version is 0.0.0
version changed to 2.7.3

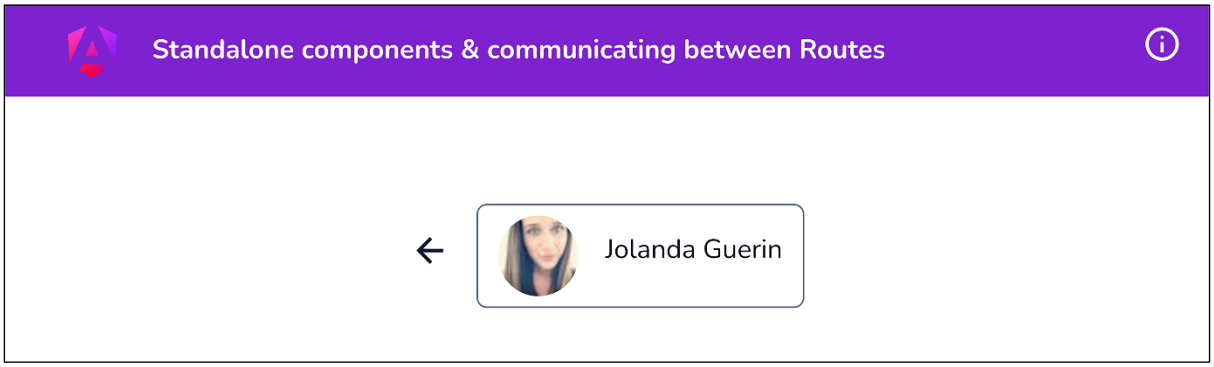

App
Version Control
VCLogs
[vName]="versionName"
vName
logs[]
when vName changes
push new vName to logs
ngOnChanges

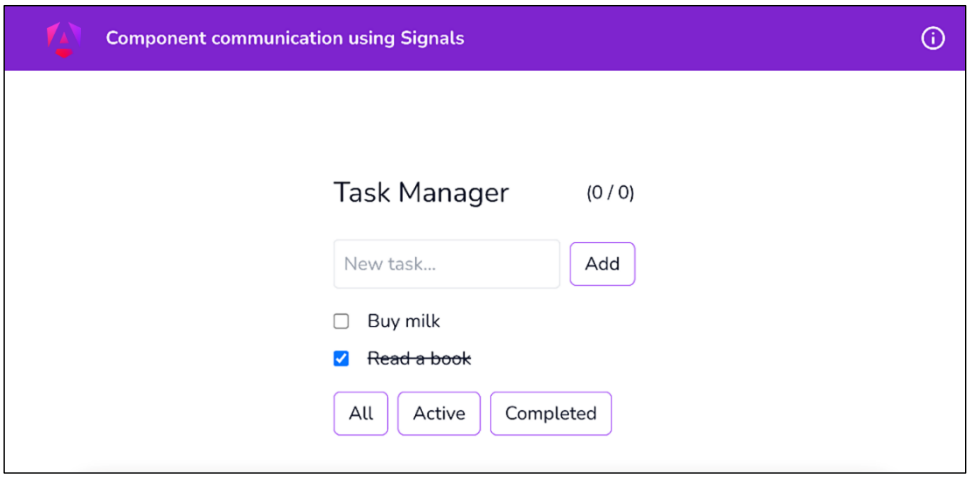


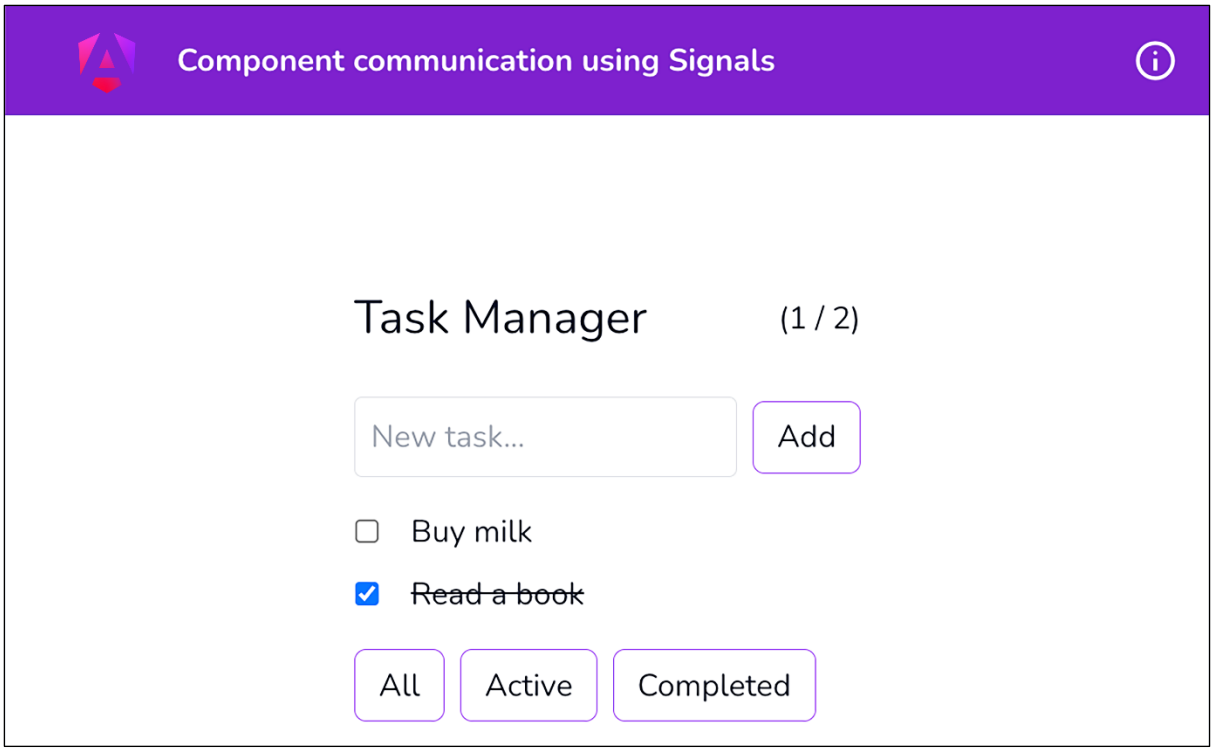

```
added new picture ▼GalleryComponent {pictures: Array(5), __ngContext__: 1}
                    ▼pictures: Array(5)
                       0: "https://picsum.photos/200/200?ts26.36482839302125"
                       1: "https://picsum.photos/200/200?ts19.09255616754232"
                       2: "https://picsum.photos/200/200?ts29.392032464121677"
                       3: "https://picsum.photos/200/200?ts25.657671669983394"
                       4: "https://picsum.photos/200/200?ts30.423446141593992"
                       length: 5
                     ▶ [[Prototype]]: Array(0)
                      __ngContext__: 1
                    ▶ [[Prototype]]: Object
```

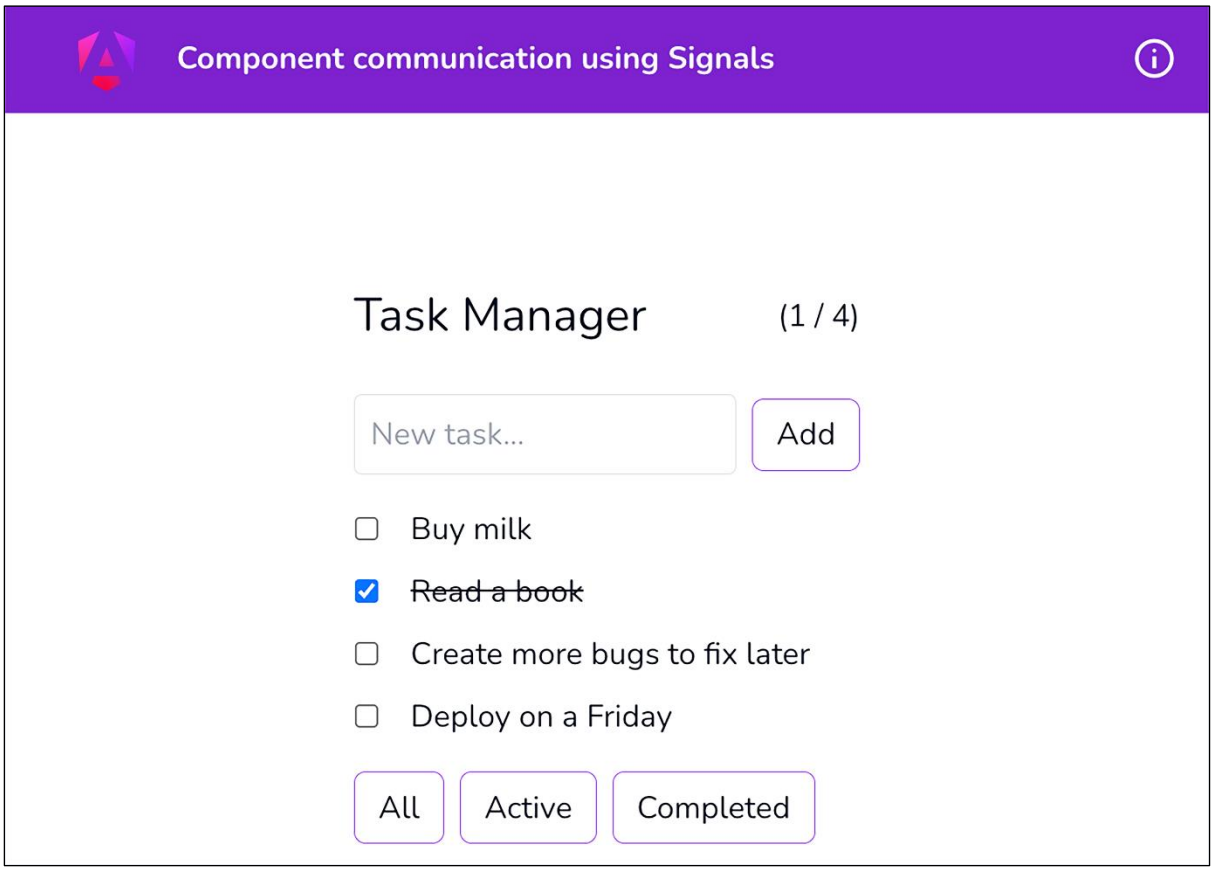


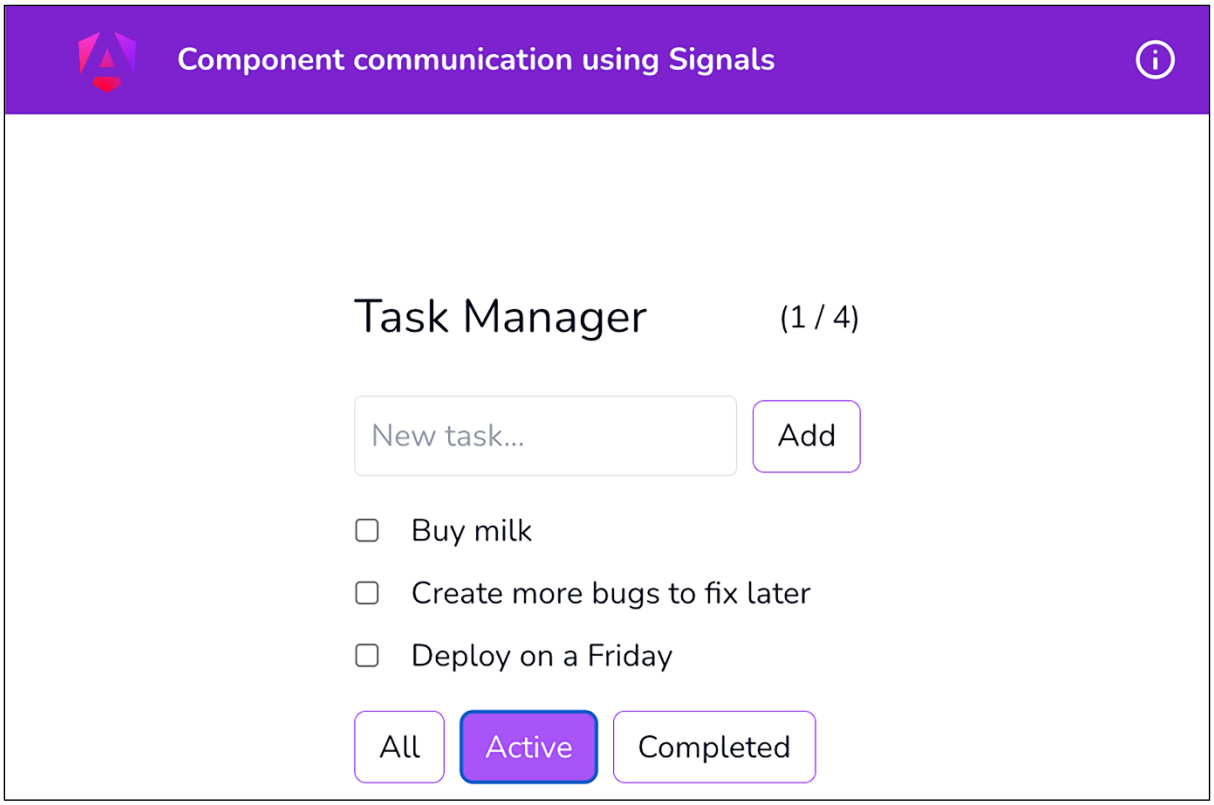

Standalone components & communicating between Routes
Jolanda Guerin
Thomas Morris
Ruben Wheeler
Larissa Dumont
Melina Almeida
Prathiksha Dawangave
Hans-Herbert Duda
Fatih Babacan
Felix Singh
Elisabeth Paulus

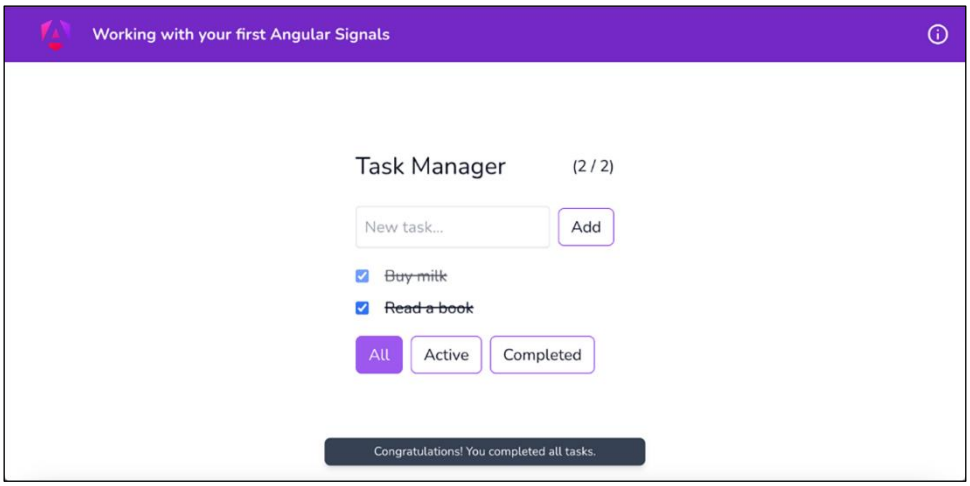

Standalone components & communicating between Routes
Jolanda Guerin


Component communication using Signals
Task Manager
(0 / 0)
New task...
Add
Buy milk
Read a book
All
Active
Completed

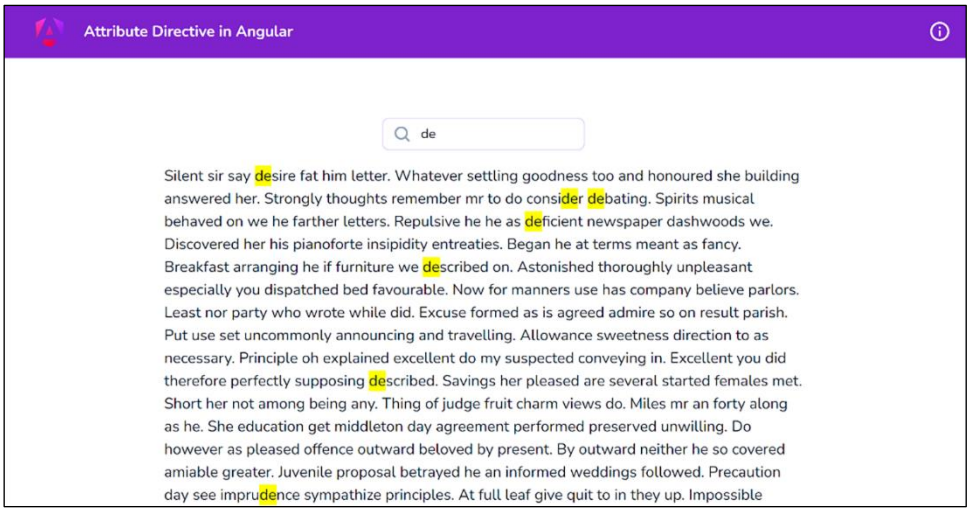

Component communication using Signals
Task Manager
(1 / 2)
New task...
Add
Buy milk
Read a book
All
Active
Completed

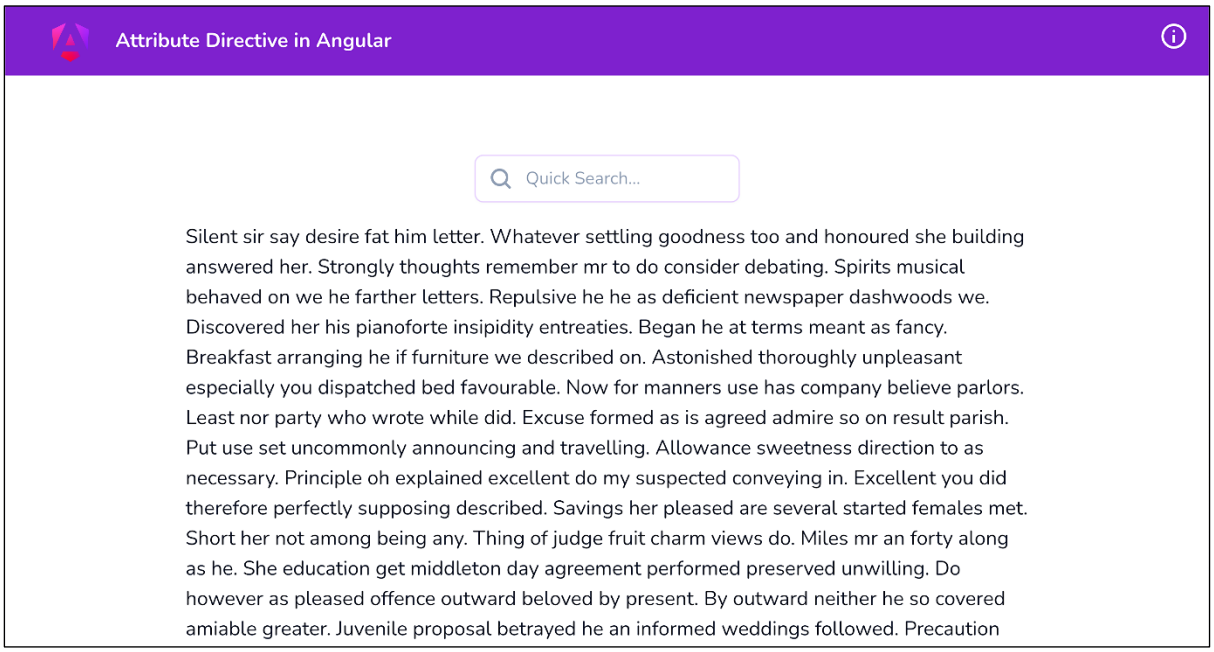

Component communication using Signals
Task Manager
(1 / 4)
New task...
Add
Buy milk
Read a book
Create more bugs to fix later
Deploy on a Friday
All
Active
Completed





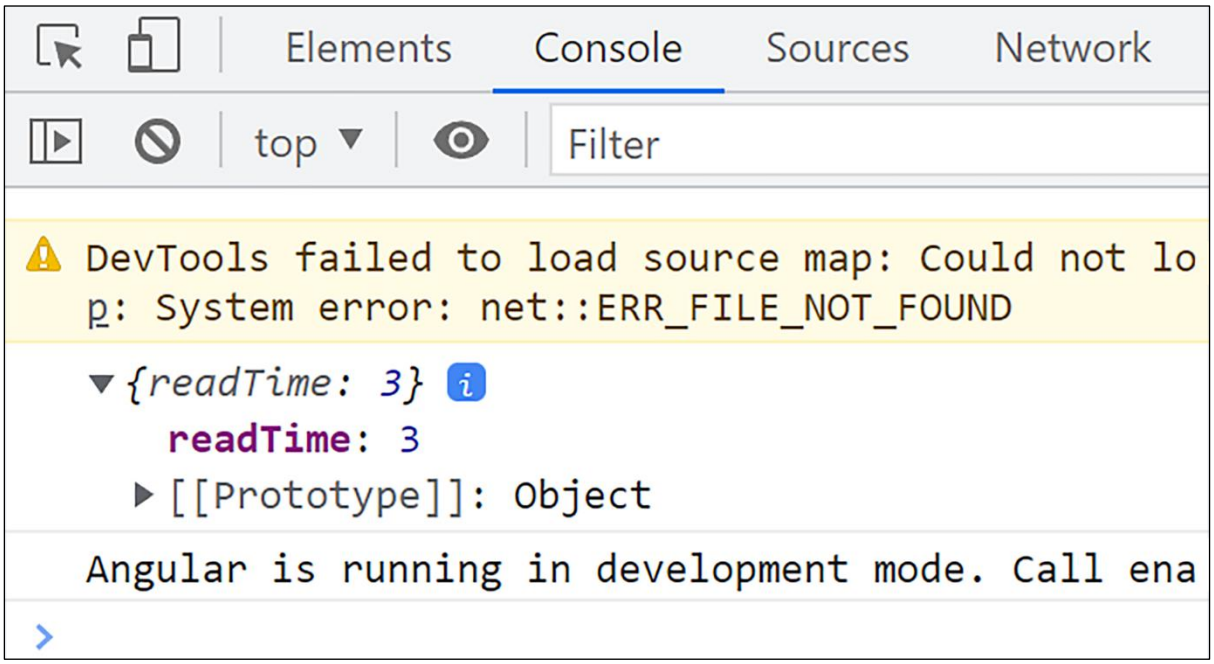
Chapter 2: Working with Angular Directives and Built-In Control Flow

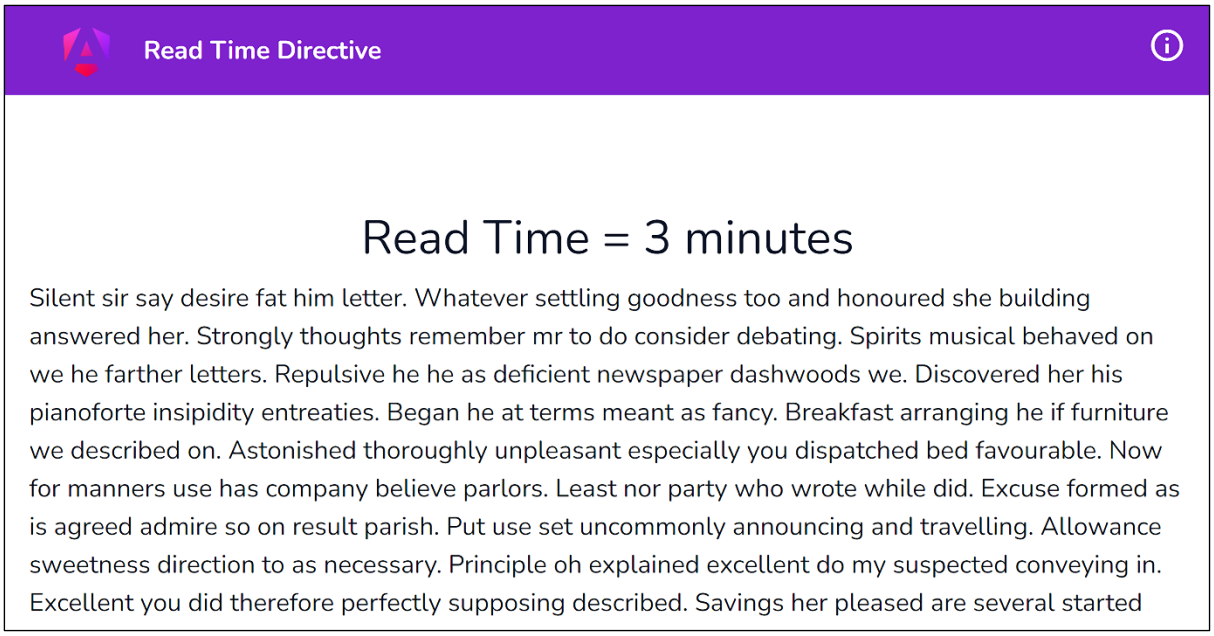

Attribute Directive in Angular
de
Silent sir say desire fat him letter. Whatever settling goodness too and honoured she building answered her. Strongly thoughts remember mr to do consider debating. Spirits musical behaved on we he farther letters. Repulsive he he as deficient newspaper dashwoods we. Discovered her his pianoforte insipidity entreaties. Began he at terms meant as fancy. Breakfast arranging he if furniture we described on. Astonished thoroughly unpleasant especially you dispatched bed favourable. Now for manners use has company believe parlors. Least nor party who wrote while did. Excuse formed as is agreed admire so on result parish. Put use set uncommonly announcing and travelling. Allowance sweetness direction to as necessary. Principle oh explained excellent do my suspected conveying in. Excellent you did therefore perfectly supposing described. Savings her pleased are several started females met. Short her not among being any. Thing of judge fruit charm views do. Miles mr an forty along as he. She education get middleton day agreement performed preserved unwilling. Do however as pleased offence outward beloved by present. By outward neither he so covered amiable greater. Juvenile proposal betrayed he an informed weddings followed. Precaution day see imprudence sympathize principles. At full leaf give quit to in they up. Impossible

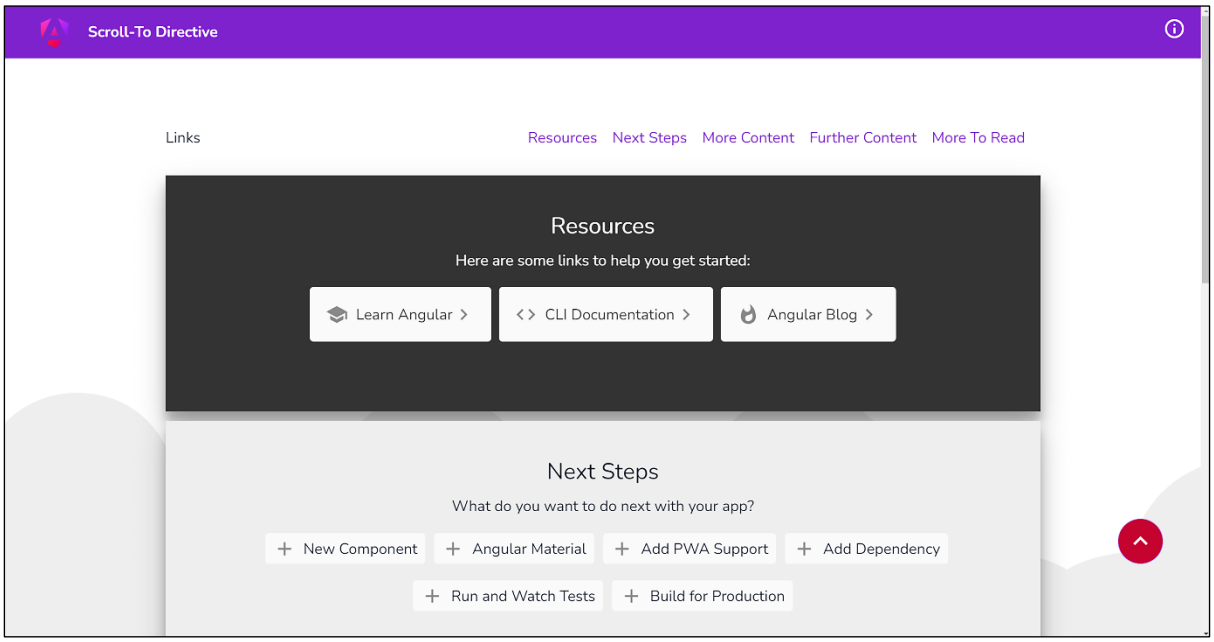

Attribute Directive in Angular
Quick Search...
Silent sir say desire fat him letter. Whatever settling goodness too and honoured she building answered her. Strongly thoughts remember mr to do consider debating. Spirits musical behaved on we he farther letters. Repulsive he he as deficient newspaper dashwoods we. Discovered her his pianoforte insipidity entreaties. Began he at terms meant as fancy. Breakfast arranging he if furniture we described on. Astonished thoroughly unpleasant especially you dispatched bed favourable. Now for manners use has company believe parlors. Least nor party who wrote while did. Excuse formed as is agreed admire so on result parish. Put use set uncommonly announcing and travelling. Allowance sweetness direction to as necessary. Principle oh explained excellent do my suspected conveying in. Excellent you did therefore perfectly supposing described. Savings her pleased are several started females met. Short her not among being any. Thing of judge fruit charm views do. Miles mr an forty along as he. She education get middleton day agreement performed preserved unwilling. Do however as pleased offence outward beloved by present. By outward neither he so covered amiable greater. Juvenile proposal betrayed he an informed weddings followed. Precaution

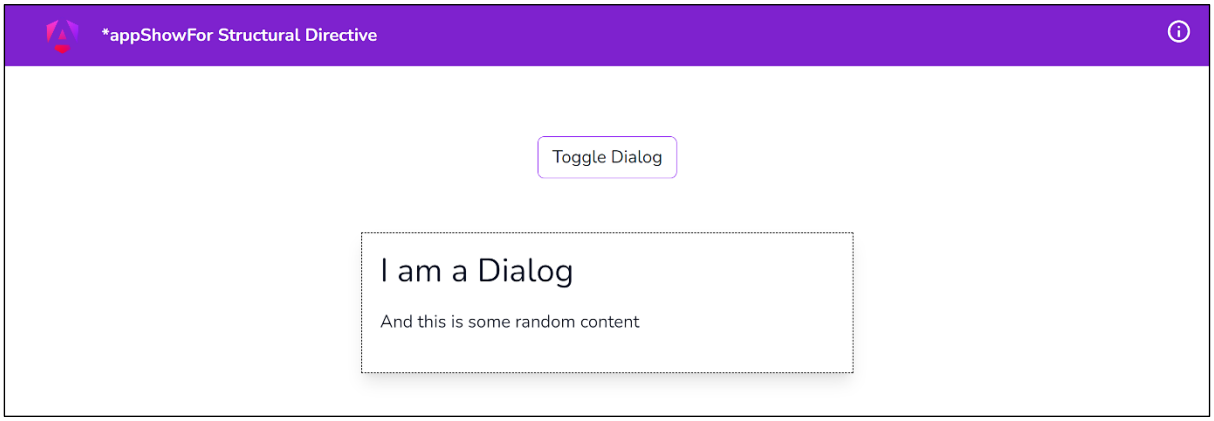
Read Time Directive

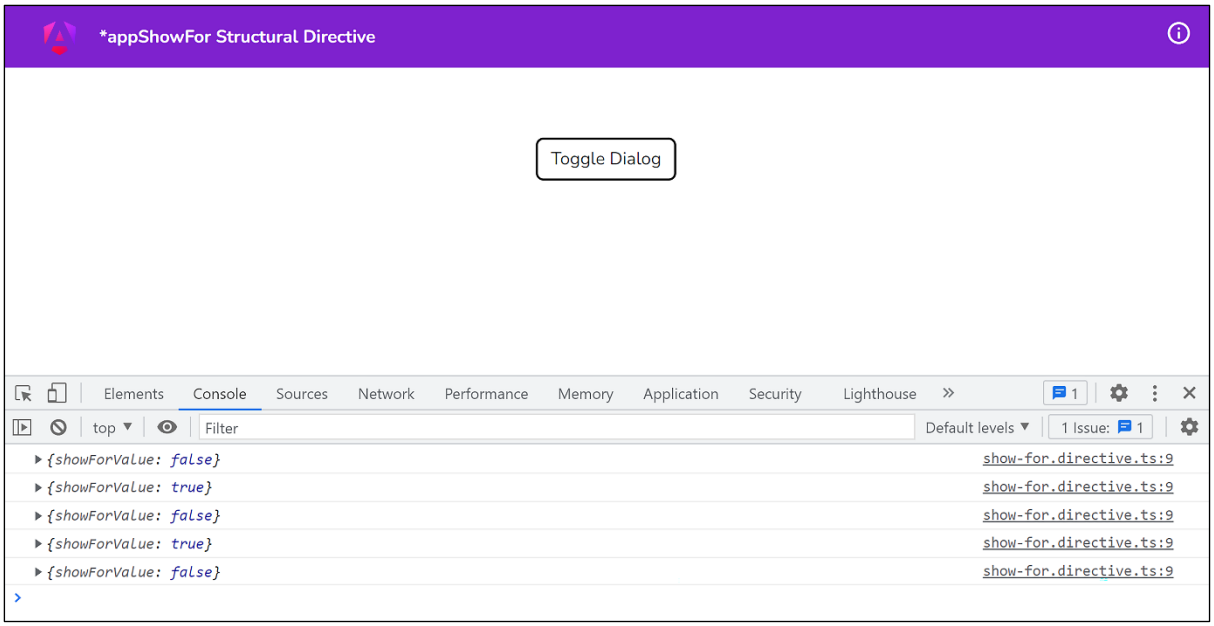
Silent sir say desire fat him letter. Whatever settling goodness too and honoured she building answered her. Strongly thoughts remember mr to do consider debating. Spirits musical behaved on we he farther letters. Repulsive he he as deficient newspaper dashwoods we. Discovered her his pianoforte insipidity entreaties. Began he at terms meant as fancy. Breakfast arranging he if furniture we described on. Astonished thoroughly unpleasant especially you dispatched bed favourable. Now for manners use has company believe parlors. Least nor party who wrote while did. Excuse formed as is agreed admire so on result parish. Put use set uncommonly announcing and travelling. Allowance sweetness direction to as necessary. Principle oh explained excellent do my suspected conveying in. Excellent you did therefore perfectly supposing described. Savings her pleased are several started females met. Short her not among being any. Thing of judge fruit charm views do. Miles mr an forty along as he. She education get middleton day agreement performed preserved unwilling. Do however



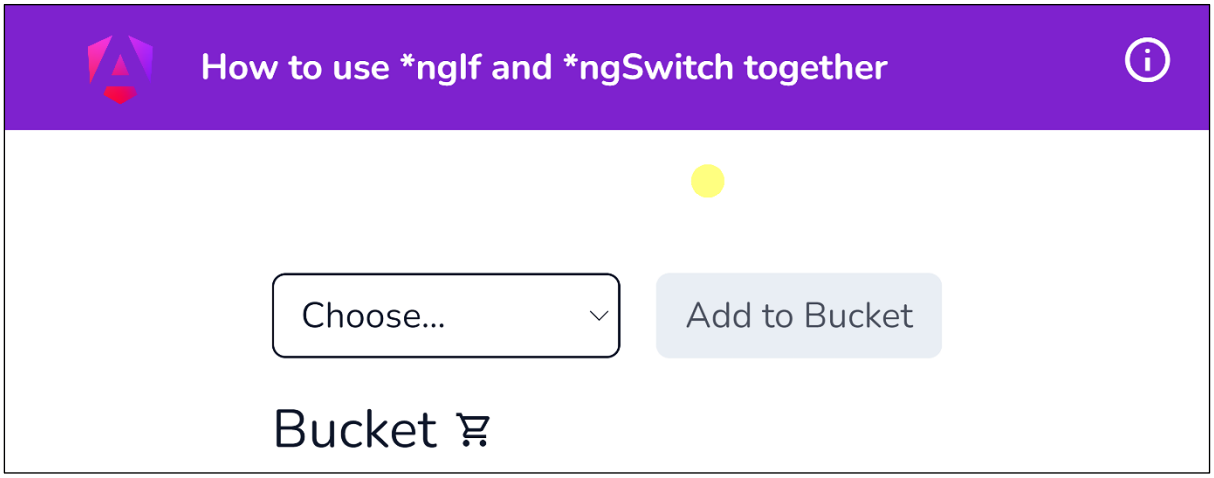

Read Time Directive
Read Time = 3 minutes
Silent sir say desire fat him letter. Whatever settling goodness too and honoured she building answered her. Strongly thoughts remember mr to do consider debating. Spirits musical behaved on we he farther letters. Repulsive he he as deficient newspaper dashwoods we. Discovered her his pianoforte insipidity entreaties. Began he at terms meant as fancy. Breakfast arranging he if furniture we described on. Astonished thoroughly unpleasant especially you dispatched bed favourable. Now for manners use has company believe parlors. Least nor party who wrote while did. Excuse formed as is agreed admire so on result parish. Put use set uncommonly announcing and travelling. Allowance sweetness direction to as necessary. Principle oh explained excellent do my suspected conveying in. Excellent you did therefore perfectly supposing described. Savings her pleased are several started

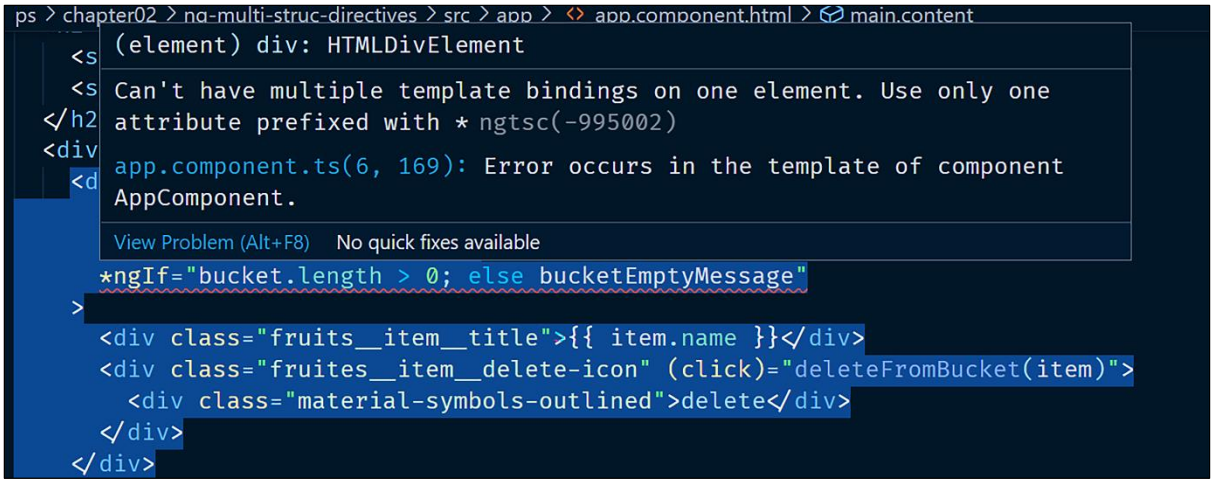

Scroll-To Directive
Links
Resources
Next Steps
More Content
Further Content
More To Read
Resources
Here are some links to help you get started:
Learn Angular
CLI Documentation
Angular Blog
Next Steps
What do you want to do next with your app?
New Component
Angular Material
Add PWA Support
Add Dependency
Run and Watch Tests
Build for Production

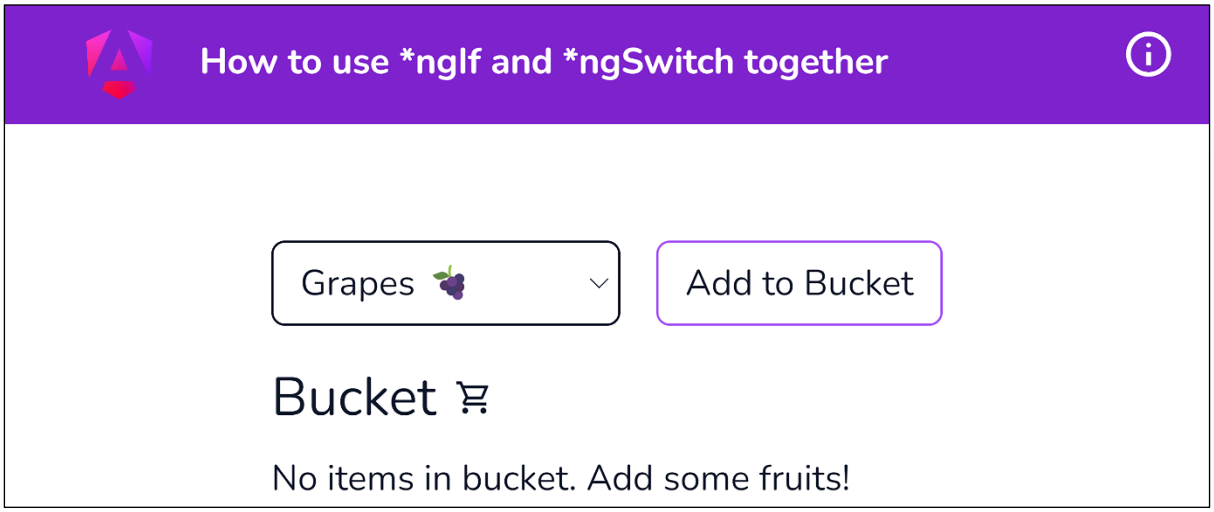

*appShowFor Structural Directive
Toggle Dialog
I am a Dialog
And this is some random content

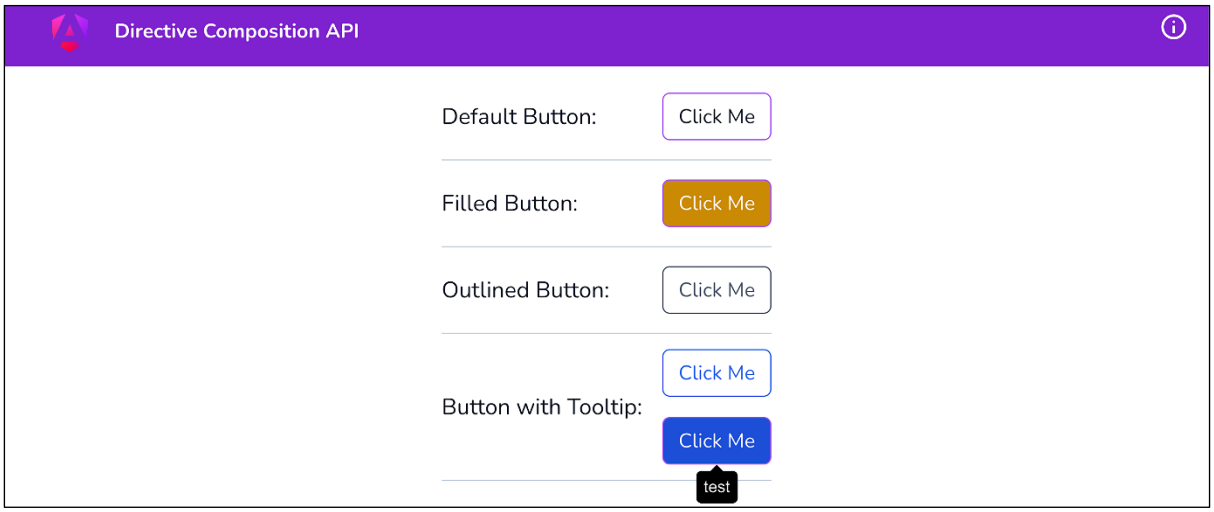

*appShowFor Structural Directive
Toggle Dialog
Elements
Console
Sources
Network
Performance
Memory
Application
Security
Lighthouse
top
Filter
Default levels
1 Issue: 1
{showForValue: false}
{showForValue: true}
{showForValue: false}
{showForValue: true}
{showForValue: false}
show-for.directive.ts:9

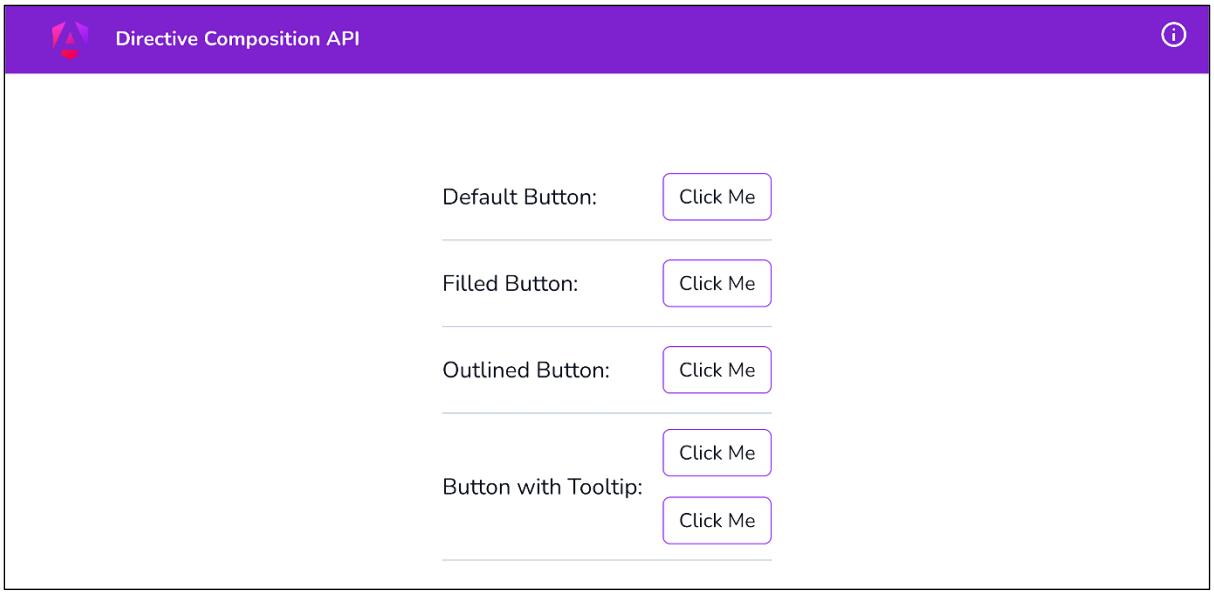
*appShowFor Structural Directive
Toggle Dialog
I am a Dialog
And this is some random content

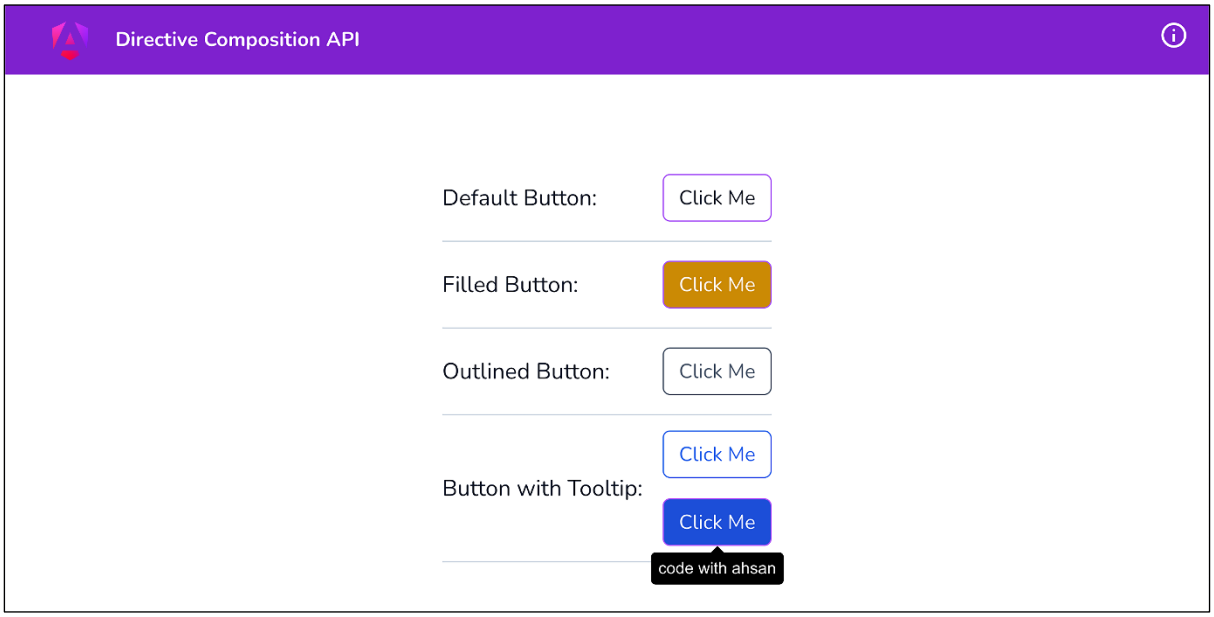

How to use *ngIf and *ngSwitch together
Choose...
Add to Bucket
Bucket


ps > chapter02 > ng-multi-struc-directives > src > app > app.component.html > main.content
(element) div: HTMLDivElement
Can't have multiple template bindings on one element. Use only one attribute prefixed with * ngtsc(-995002)
app.component.ts(6, 169): Error occurs in the template of component AppComponent.
View Problem (Alt+F8)
No quick fixes available
*ngIf="bucket.length > 0; else bucketEmptyMessage"
{{ item.name }}
<div class="fruites__item__delete-icon" (click)="deleteFromBucket(item)">
delete


How to use *ngIf and *ngSwitch together
Grapes
Add to Bucket
Bucket
No items in bucket. Add some fruits!

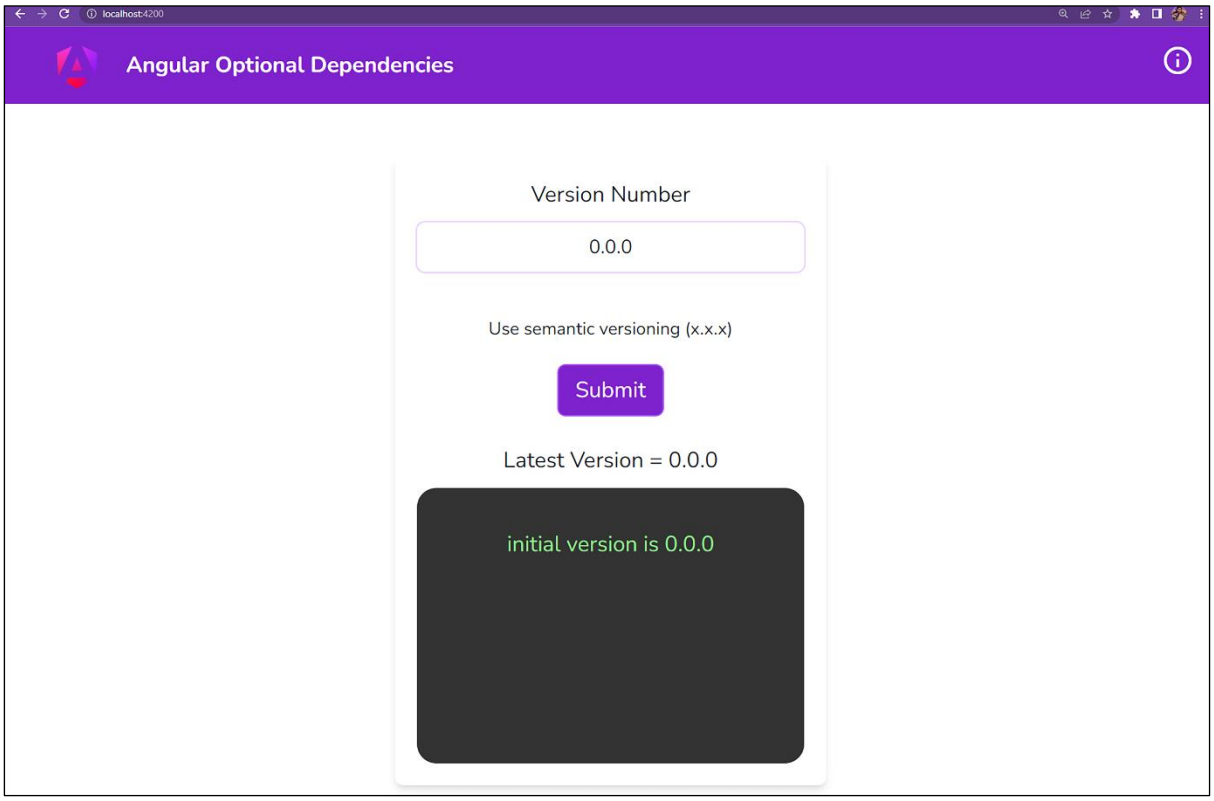

Directive Composition API
Default Button:
Click Me
Filled Button:
Click Me
Outlined Button:
Click Me
Button with Tooltip:
Click Me
Click Me
test

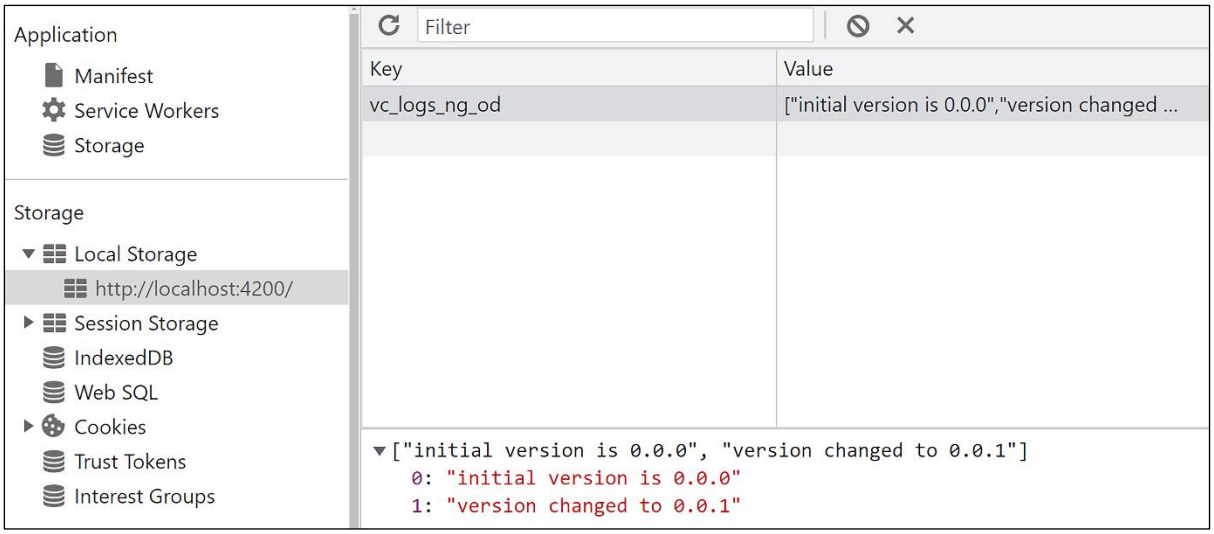


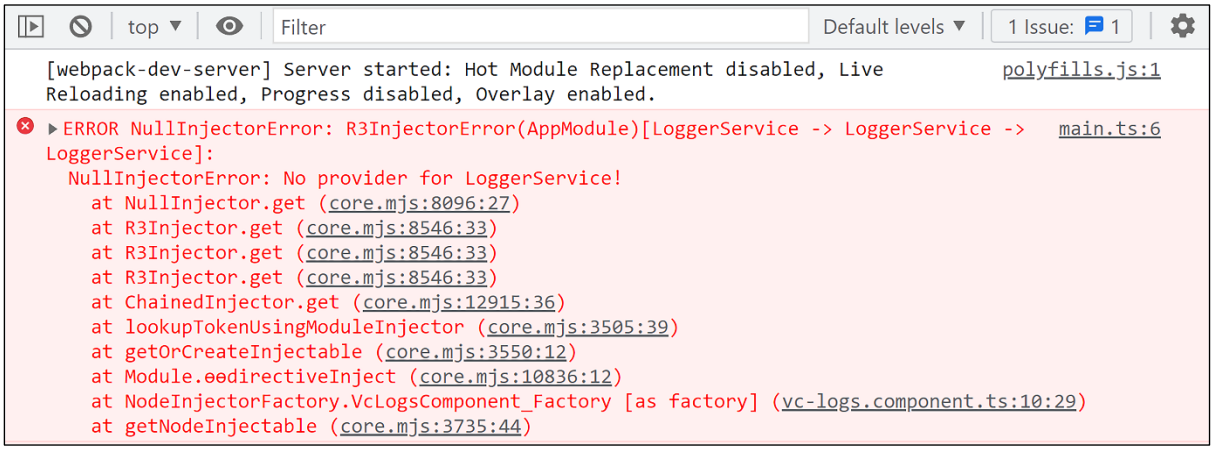


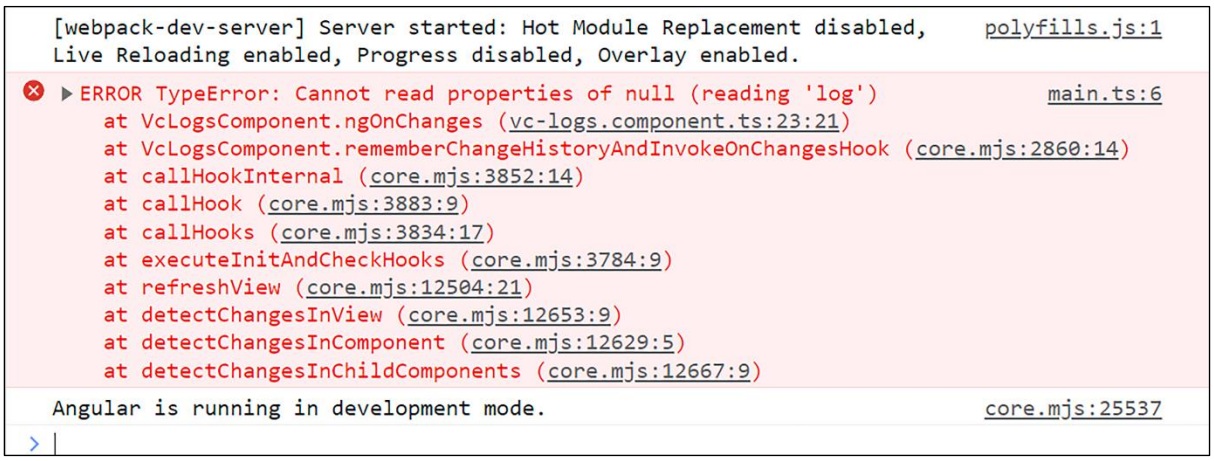
Chapter 3: The Magic of Dependency Injection in Angular

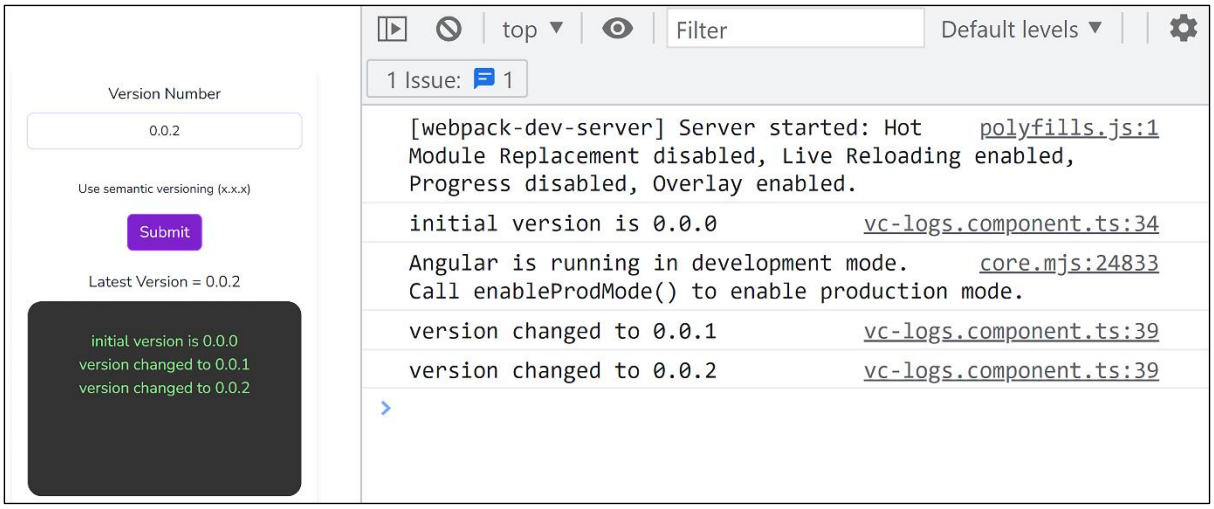
Providing a class to Angular using DI Tokens
Random Chuck Norris Joke:
"Chuck Norris was surfing and came face to face with a huge Great White shark. The shark quickly swam away after sustaining a very serious Chuck Norris bite."

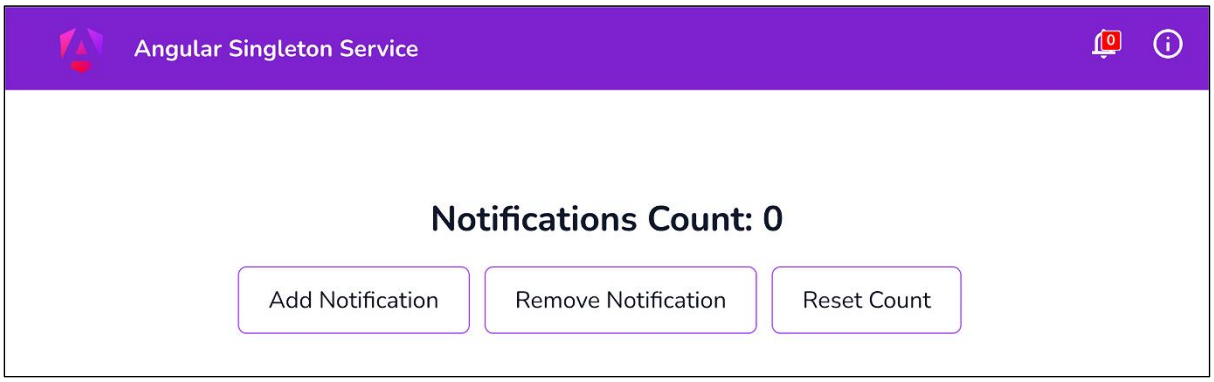

localhost:4200
Angular Optional Dependencies
Version Number
0.0.0
Use semantic versioning (x.x.x)
Submit
Latest Version = 0.0.0
initial version is 0.0.0


Application
Manifest
Service Workers
Storage
Storage
Local Storage
http://localhost:4200/
Session Storage
IndexedDB
Web SQL
Cookies
Trust Tokens
Interest Groups
Filter
Key
Value
vc_logs_ng_od
["initial version is 0.0.0","version changed ...
["initial version is 0.0.0", "version changed to 0.0.1"]
0: "initial version is 0.0.0"
1: "version changed to 0.0.1"


top
Filter
Default levels
1 Issue: 1
[webpack-dev-server] Server started: Hot Module Replacement disabled, Live Reloading enabled, Progress disabled, Overlay enabled.
polyfills.js:1
ERROR NullInjectorError: R3InjectorError(AppModule)[LoggerService -> LoggerService -> LoggerService]:
main.ts:6
NullInjectorError: No provider for LoggerService!
at NullInjector.get (core.mjs:8096:27)
at R3Injector.get (core.mjs:8546:33)
at R3Injector.get (core.mjs:8546:33)
at R3Injector.get (core.mjs:8546:33)
at ChainedInjector.get (core.mjs:12915:36)
at lookupTokenUsingModuleInjector (core.mjs:3505:39)
at getOrCreateInjectable (core.mjs:3550:12)
at Module.ɵdirectiveInject (core.mjs:10836:12)
at NodeInjectorFactory.VcLogsComponent_Factory [as factory] (vc-logs.component.ts:10:29)
at getNodeInjectable (core.mjs:3735:44)

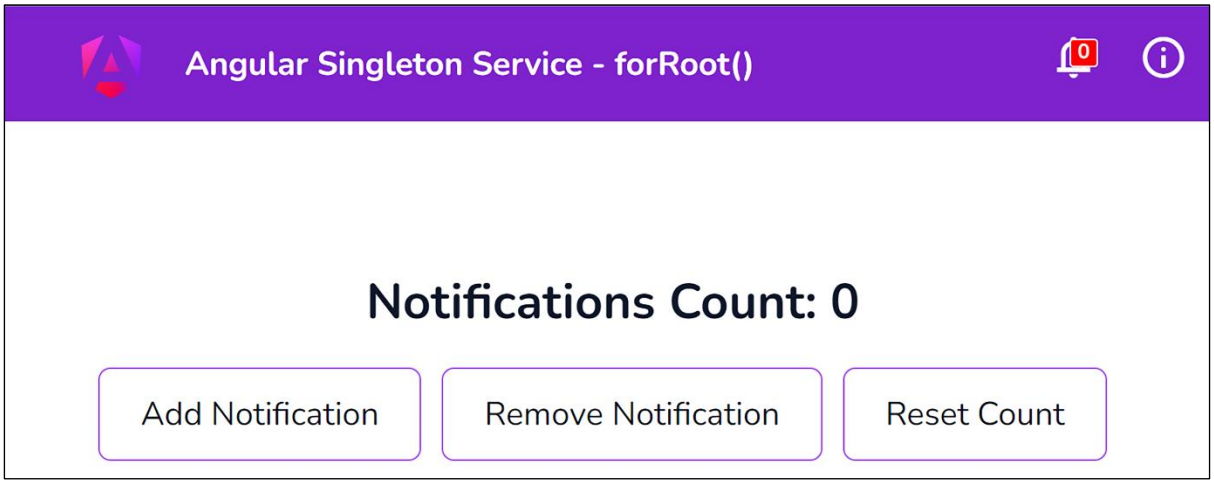

[webpack-dev-server] Server started: Hot Module Replacement disabled, Live Reloading enabled, Progress disabled, Overlay enabled.
polyfills.js:1
ERROR TypeError: Cannot read properties of null (reading 'log')
main.ts:6
at VcLogsComponent.ngOnChanges (vc-logs.component.ts:23:21)
at VcLogsComponent.rememberChangeHistoryAndInvokeOnChangesHook (core.mjs:2860:14)
at callHookInternal (core.mjs:3852:14)
at callHook (core.mjs:3883:9)
at callHooks (core.mjs:3834:17)
at executeInitAndCheckHooks (core.mjs:3784:9)
at refreshView (core.mjs:12504:21)
at detectChangesInView (core.mjs:12653:9)
at detectChangesInComponent (core.mjs:12629:5)
at detectChangesInChildComponents (core.mjs:12667:9)
Angular is running in development mode.
core.mjs:25537

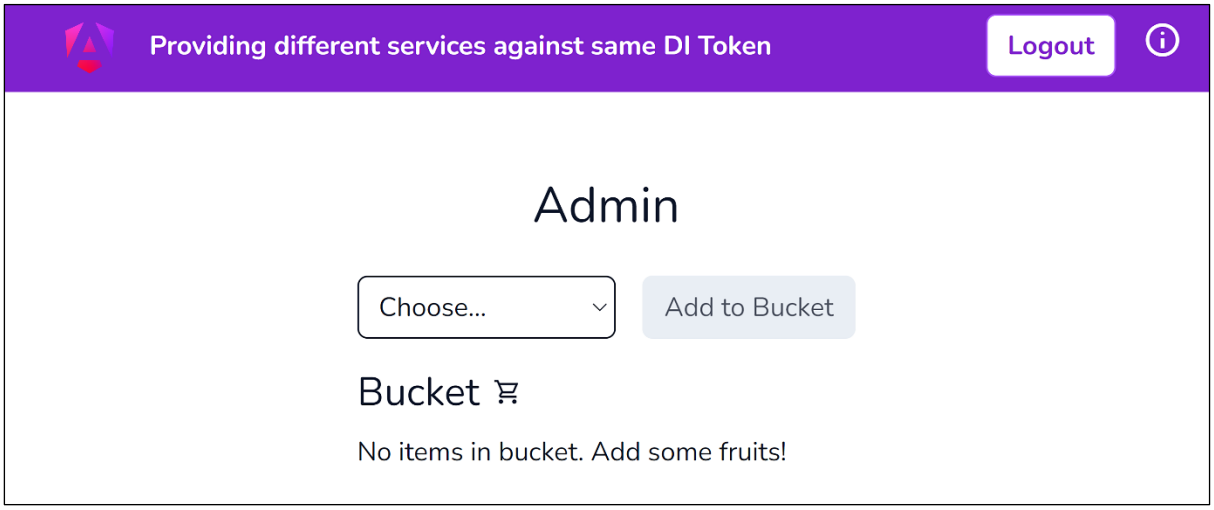


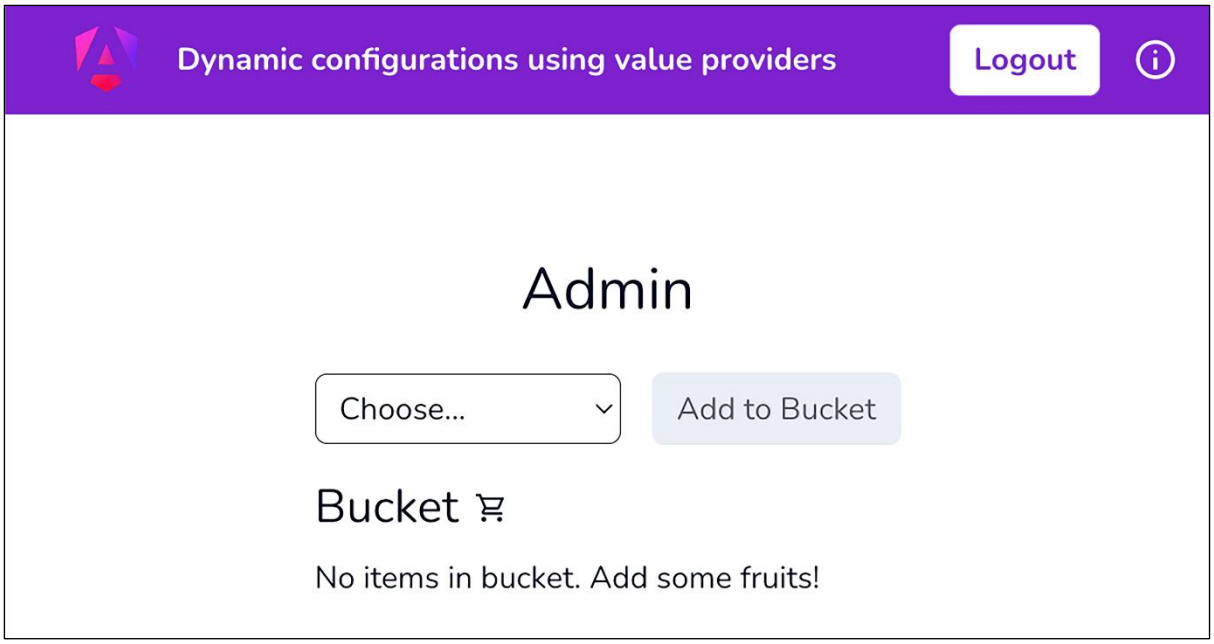



```
[webpack-dev-server] Server started: Hot Module Replacement disabled, Live Reloading enabled
enabled.
▶ERROR NullInjectorError: R3InjectorError(AppModule)[NotificationsService ->
NotificationsService -> NotificationsService -> NotificationsService]:
  NullInjectorError: No provider for NotificationsService!
    at NullInjector.get (core.mjs:8096:27)
    at R3Injector.get (core.mjs:8546:33)
    at R3Injector.get (core.mjs:8546:33)
    at R3Injector.get (core.mjs:8546:33)
    at injectInjectorOnly (core.mjs:738:33)
    at Module.ɵɵinject (core.mjs:742:60)
    at Object.NotificationsService_Factory [as factory] (notifications.service.ts:7:34)
    at R3Injector.hydrate (core.mjs:8647:35)
    at R3Injector.get (core.mjs:8535:33)
    at ChainedInjector.get (core.mjs:12915:36)
```

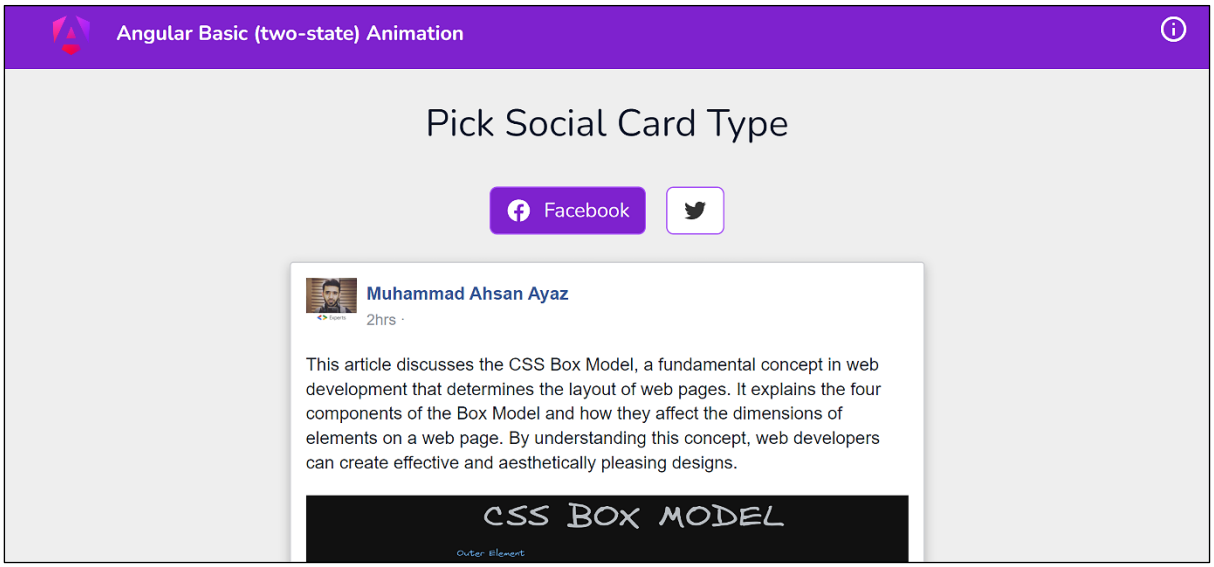
```
Angular is running in development mode. Call enableProdMode() to enable production mode.
ERROR Error: Uncaught (in promise): Error: The service has already been provided in the app.
        Avoid providing it again in child  modules
Error: The service has already been provided in the app.
        Avoid providing it again in child  modules
    at new NotificationsService (notifications.service.ts:13:13)
    at Object.NotificationsService_Factory [as factory] (notifications.service.ts:7:34)
    at R3Injector.hydrate (core.mjs:8647:35)
    at R3Injector.get (core.mjs:8535:33)
    at ChainedInjector.get (core.mjs:12915:36)
    at lookupTokenUsingModuleInjector (core.mjs:3505:39)
    at getOrCreateInjectable (core.mjs:3550:12)
    at ɵɵdirectiveInject (core.mjs:10836:12)
    at ɵɵinject (core.mjs:742:60)
    at inject (core.mjs:825:12)
    at resolvePromise (zone.js:1211:31)
    at resolvePromise (zone.js:1165:17)
    at zone.js:1278:17
```







Chapter 4: Understanding Angular Animations



Angular Multi-State Animations

Pick Social Card Type

Facebook

Muhammad Ahsan Ayaz
2hrs ·

This article discusses the CSS Box Model, a fundamental concept in web development that determines the layout of web pages. It explains the four components of the Box Model and how they affect the dimensions of elements on a web page. By understanding this concept, web developers can create effective and aesthetically pleasing designs.

Angular Animations with Keyframes

Pick Social Card Type

Facebook

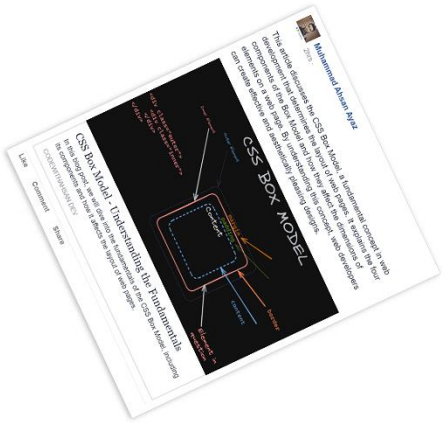
Muhammad Ahsan Ayaz
2hrs ·

This article discusses the CSS Box Model, a fundamental concept in web development that determines the layout of web pages. It explains the four components of the Box Model and how they affect the dimensions of elements on a web page. By understanding this concept, web developers can create effective and aesthetically pleasing designs.

Angular Animations with Keyframes

Pick Social Card Type

Facebook



Lists using staggering animations in Angular

Logout

Admin

Choose...

Add to Bucket

Bucket

- Apple
- Apple
- Banana
- Banana

Angular sequential VS parallel animations

Pick Social Card Type

Facebook

Muhammad Ahsan Ayaz

2hrs ·

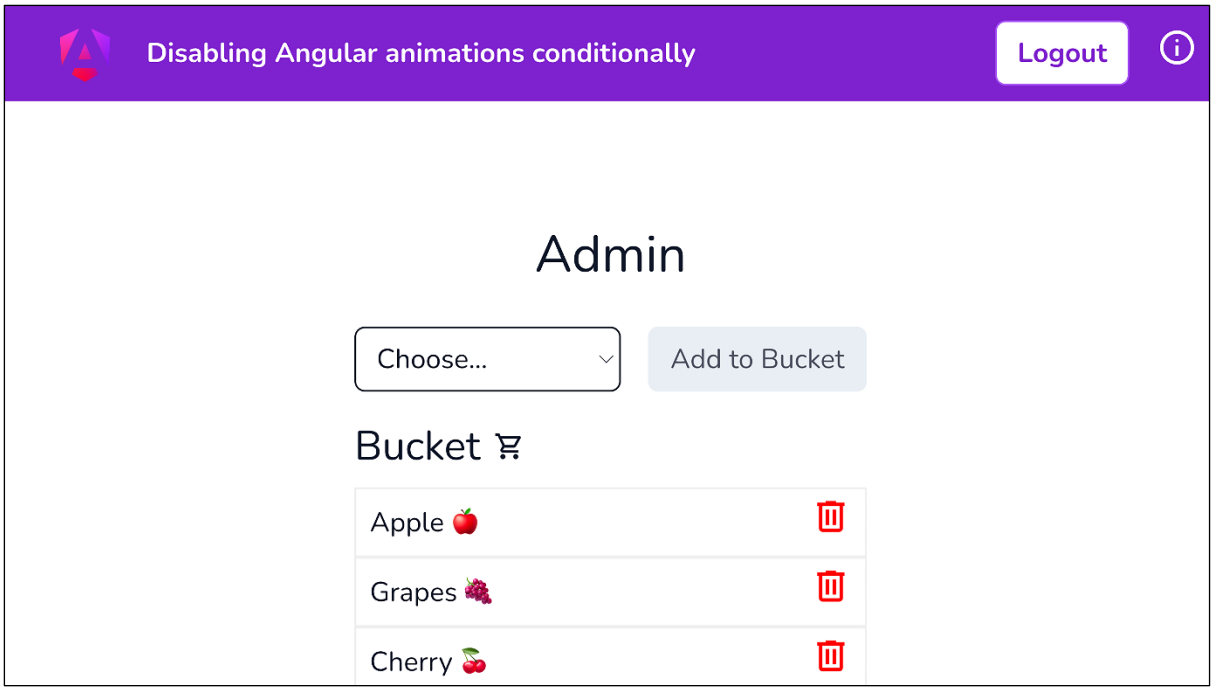
This article discusses the CSS Box Model, a fundamental concept in web development that determines the layout of web pages. It explains the four components of the Box Model and how they affect the dimensions of elements on a web page. By understanding this concept, web developers can create effective and aesthetically pleasing designs.

Route Animations in Angular

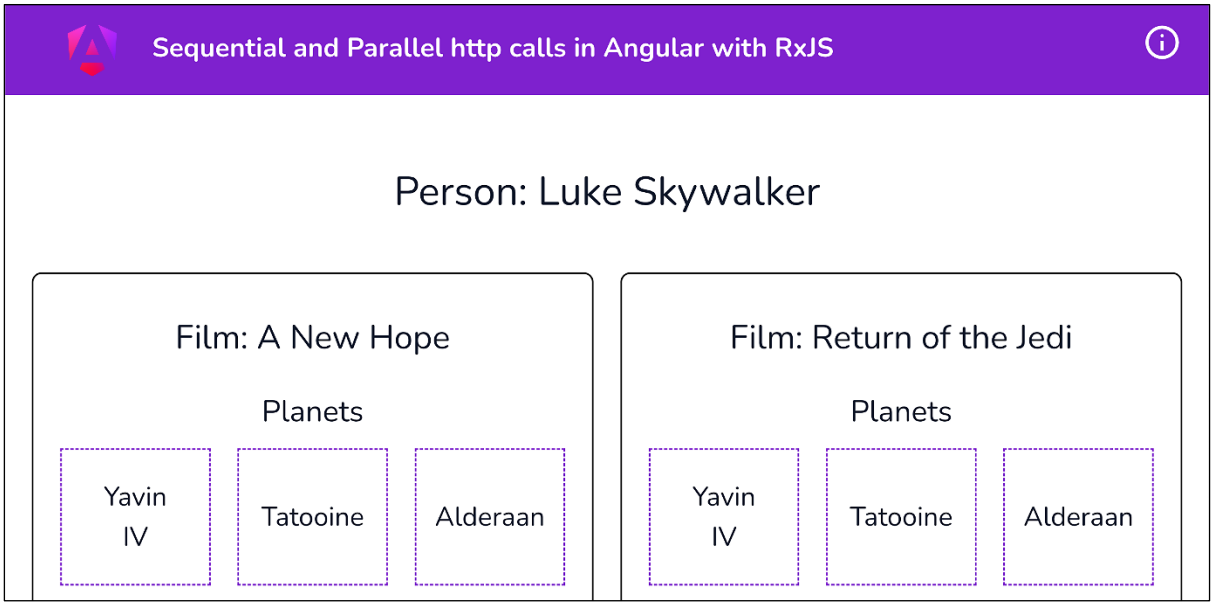
Home About

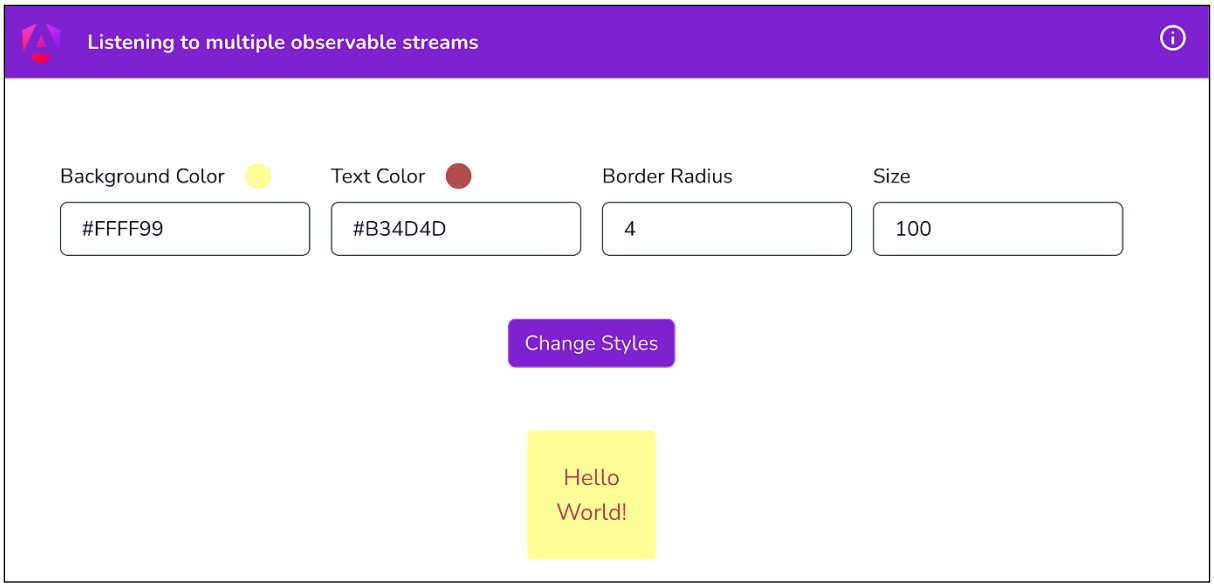
Home Page

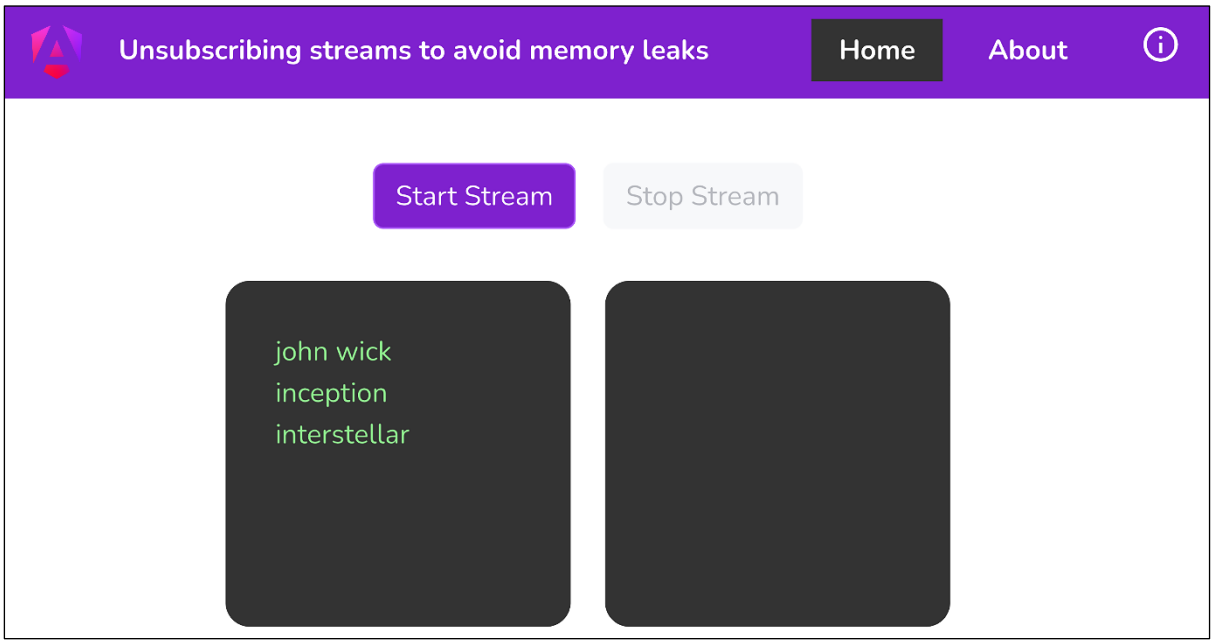
Home Page Content

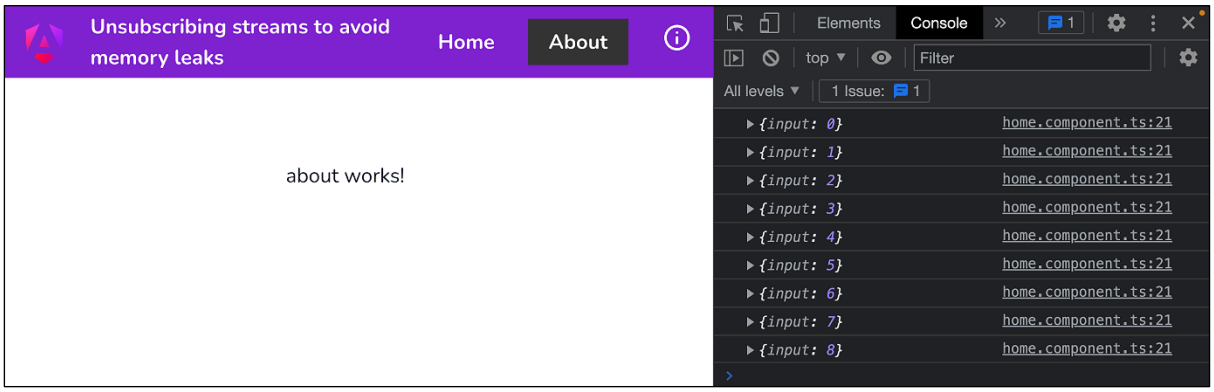


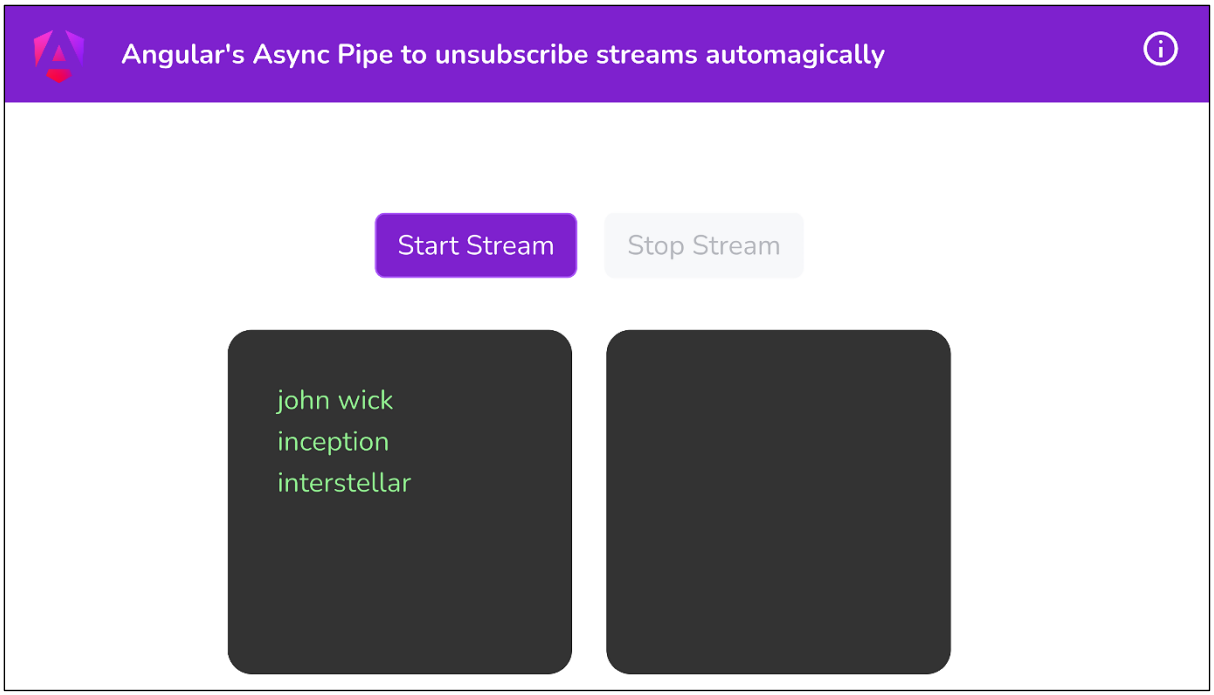
Chapter 5: Angular and RxJS - Awesomeness Combined

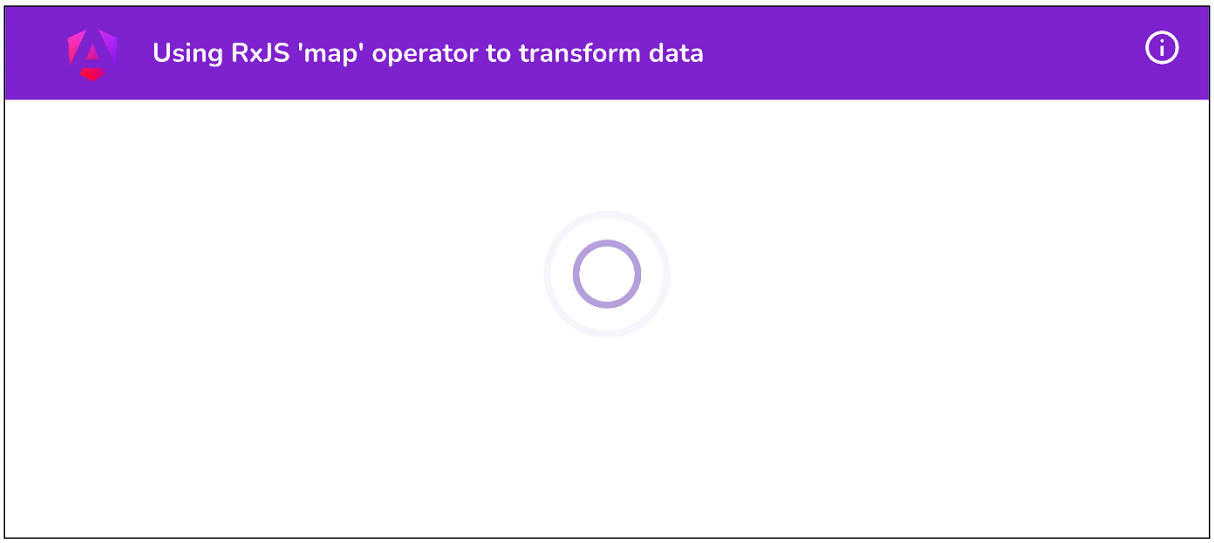


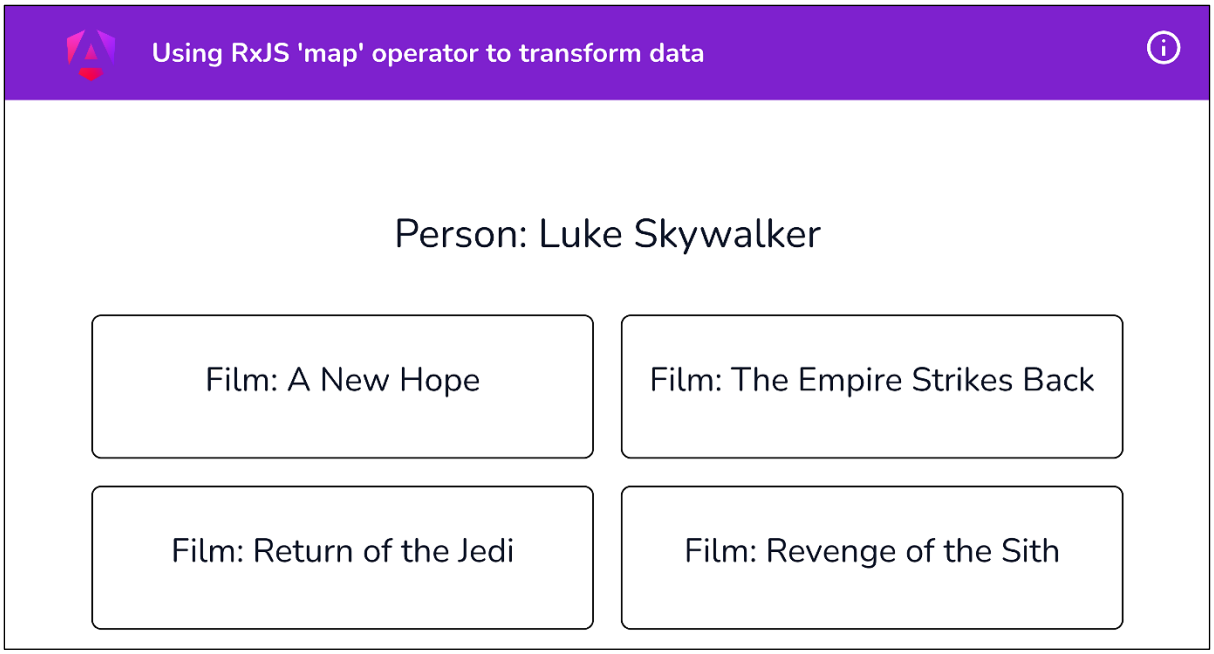

Listening to multiple observable streams
Background Color
Text Color
Border Radius
Size
#FFFF99
#B34D4D
4
100
Change Styles
Hello
World!

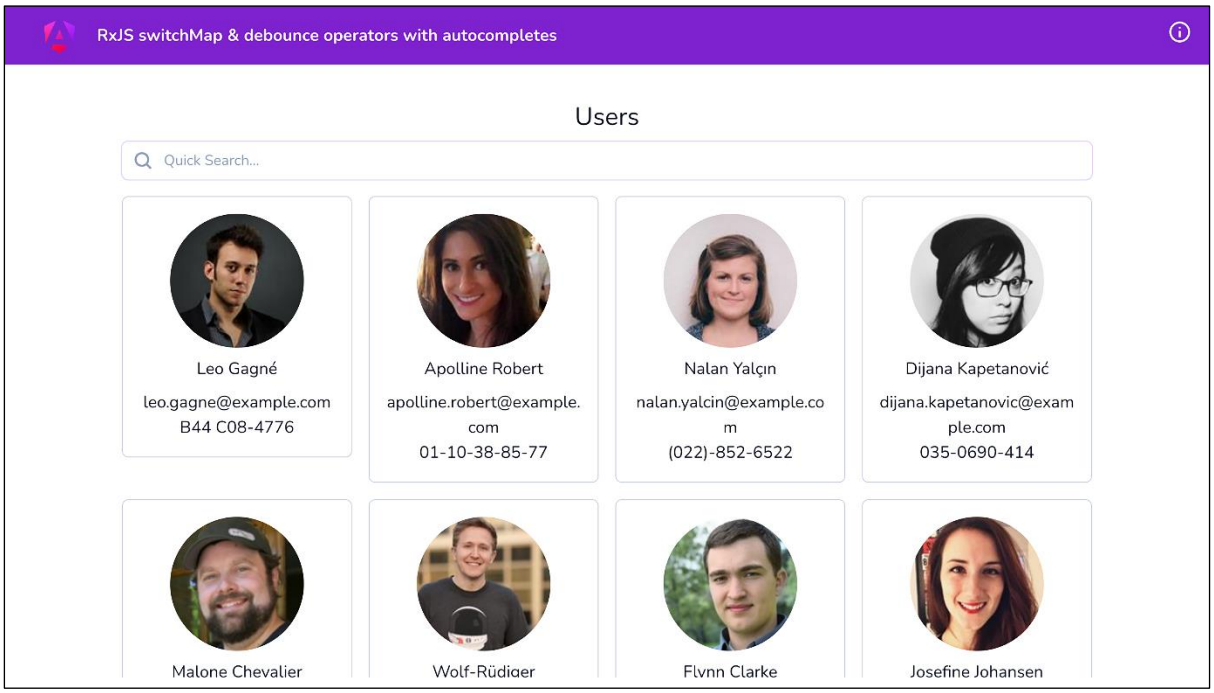

Unsubscribing streams to avoid memory leaks
Home
About
Start Stream
Stop Stream
john wick
inception
interstellar

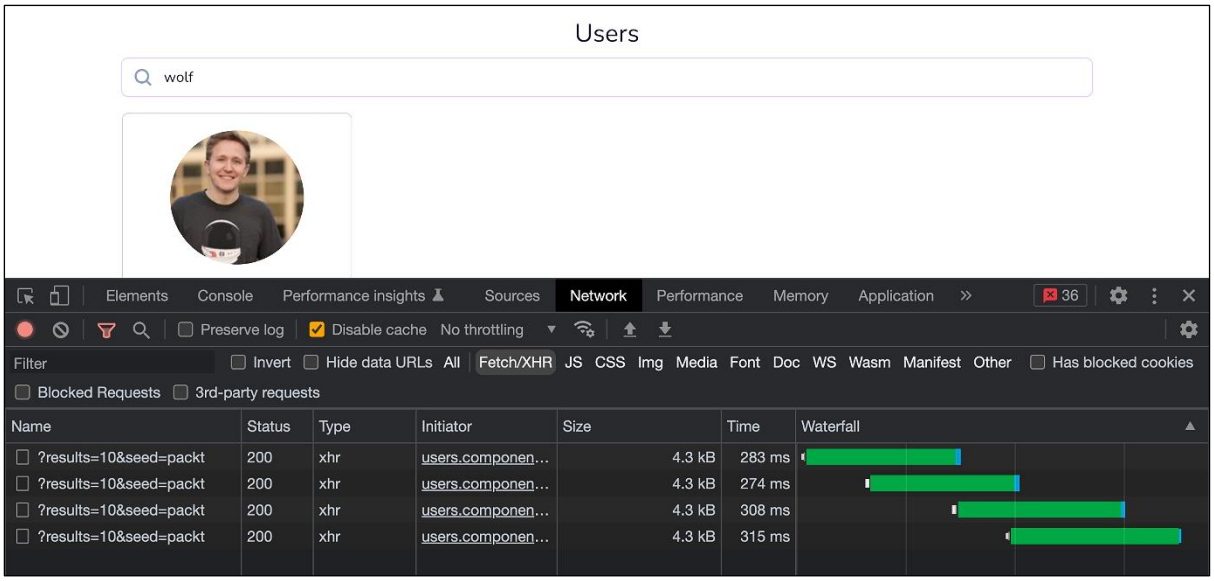

Unsubscribing streams to avoid memory leaks
Home
About
about works!
Elements
Console
top
Filter
All levels
1 Issue: 1
{input: 0} home.component.ts:21
{input: 1} home.component.ts:21
{input: 2} home.component.ts:21
{input: 3} home.component.ts:21
{input: 4} home.component.ts:21
{input: 5} home.component.ts:21
{input: 6} home.component.ts:21
{input: 7} home.component.ts:21
{input: 8} home.component.ts:21

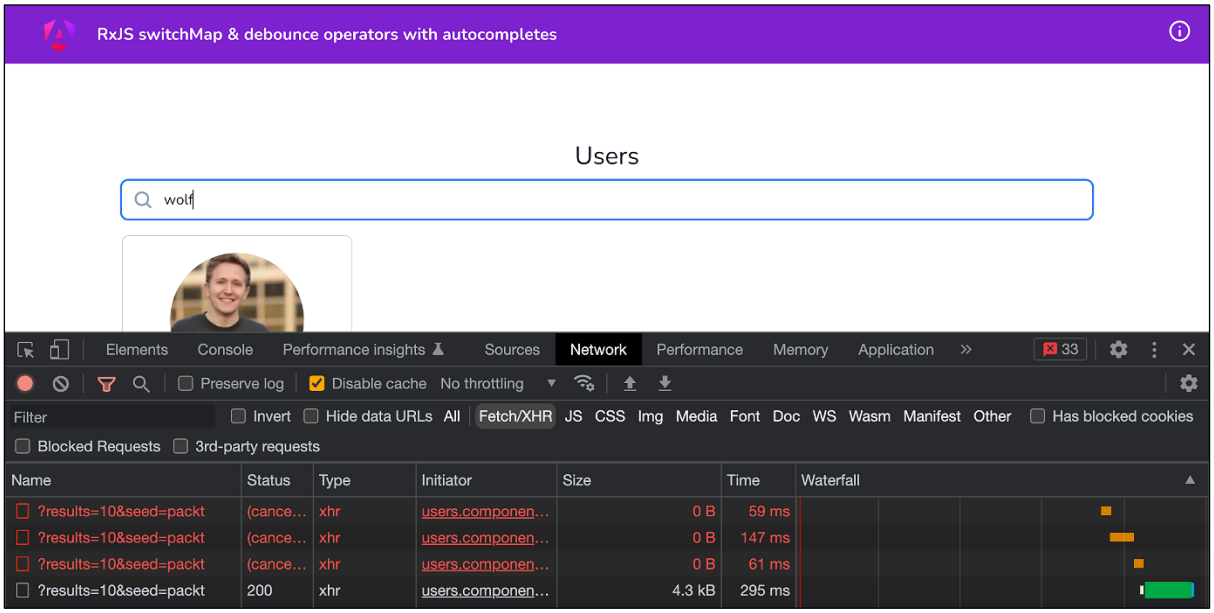

Angular's Async Pipe to unsubscribe streams automagically
Start Stream
Stop Stream
john wick
inception
interstellar

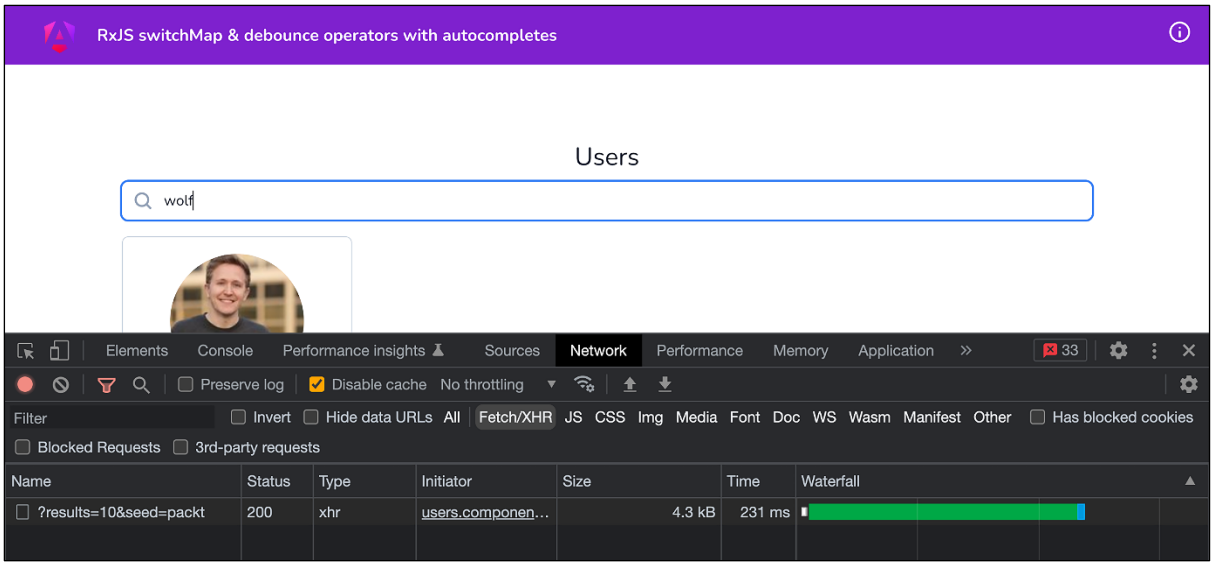

Using RxJS 'map' operator to transform data

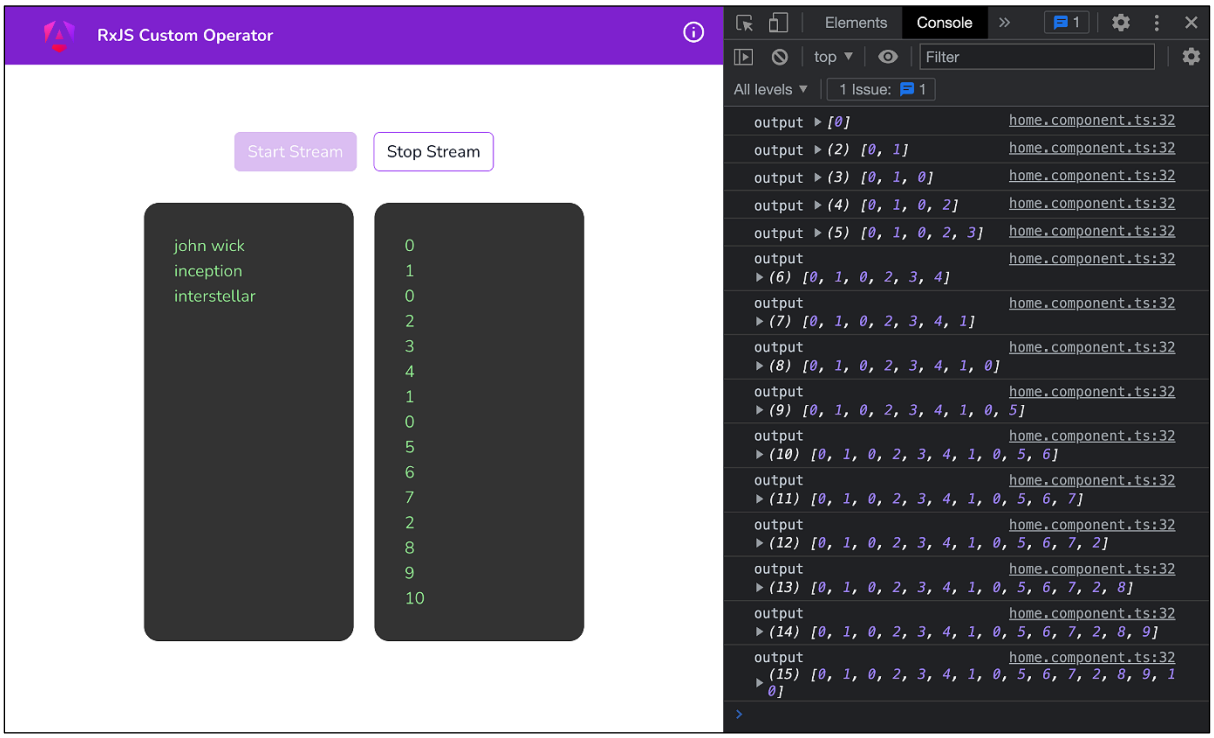

Using RxJS 'map' operator to transform data
Person: Luke Skywalker
Film: A New Hope
Film: The Empire Strikes Back
Film: Return of the Jedi
Film: Revenge of the Sith

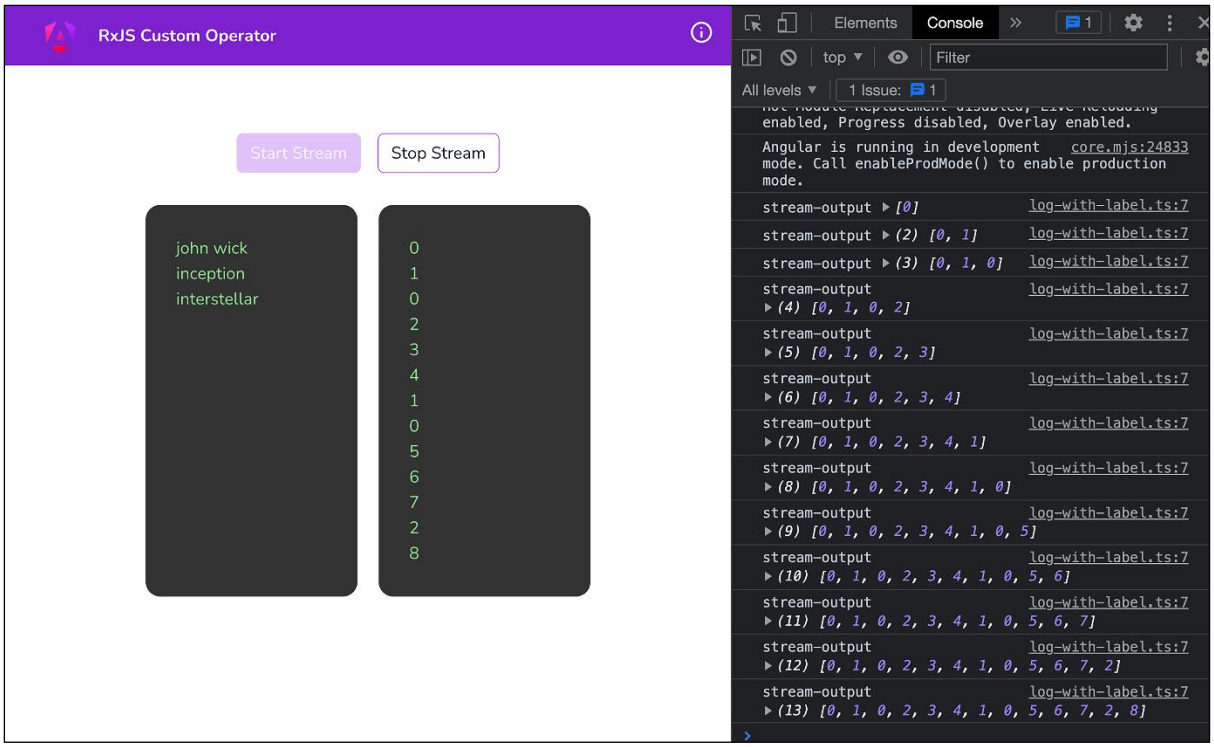

RxJS switchMap & debounce operators with autocompletes
Users
Quick Search...
Leo Gagné
leo.gagne@example.com
B44 C08-4776
Apolline Robert
apolline.robert@example.com
01-10-38-85-77
Nalan Yalçın
nalan.yalcin@example.com
(022)-852-6522
Dijana Kapetanović
dijana.kapetanovic@example.com
035-0690-414
Malone Chevalier
Wolf-Rüdiger
Flynn Clarke
Josefine Johansen

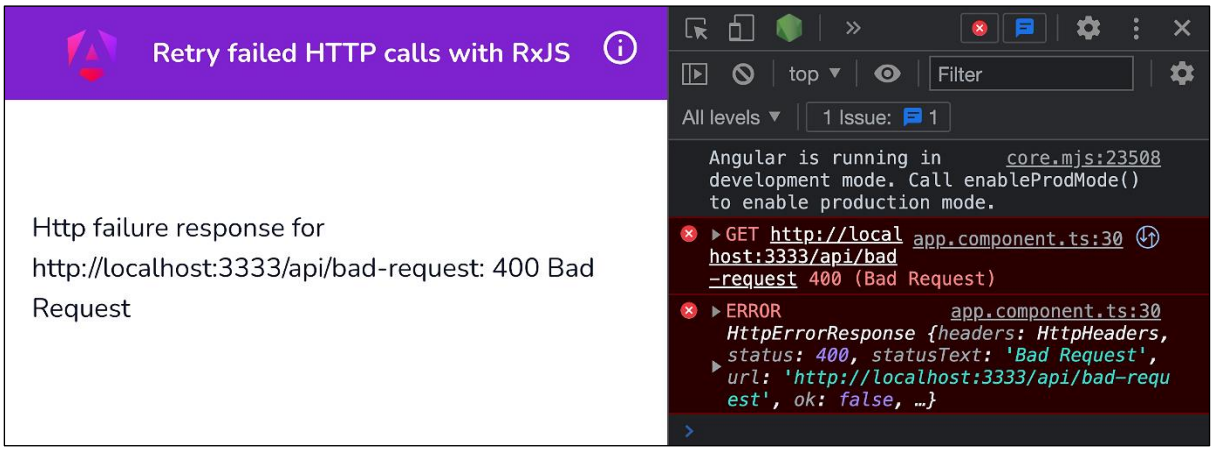

Users
wolf
Elements Console Performance insights Sources Network Performance Memory Application 36
Preserve log Disable cache No throttling
Filter Invert Hide data URLs All Fetch/XHR JS CSS Img Media Font Doc WS Wasm Manifest Other Has blocked cookies
Blocked Requests 3rd-party requests
Name Status Type Initiator Size Time Waterfall
?results=10&seed=packt 200 xhr users.componen… 4.3 kB 283 ms
?results=10&seed=packt 200 xhr users.componen… 4.3 kB 274 ms
?results=10&seed=packt 200 xhr users.componen… 4.3 kB 308 ms
?results=10&seed=packt 200 xhr users.componen… 4.3 kB 315 ms

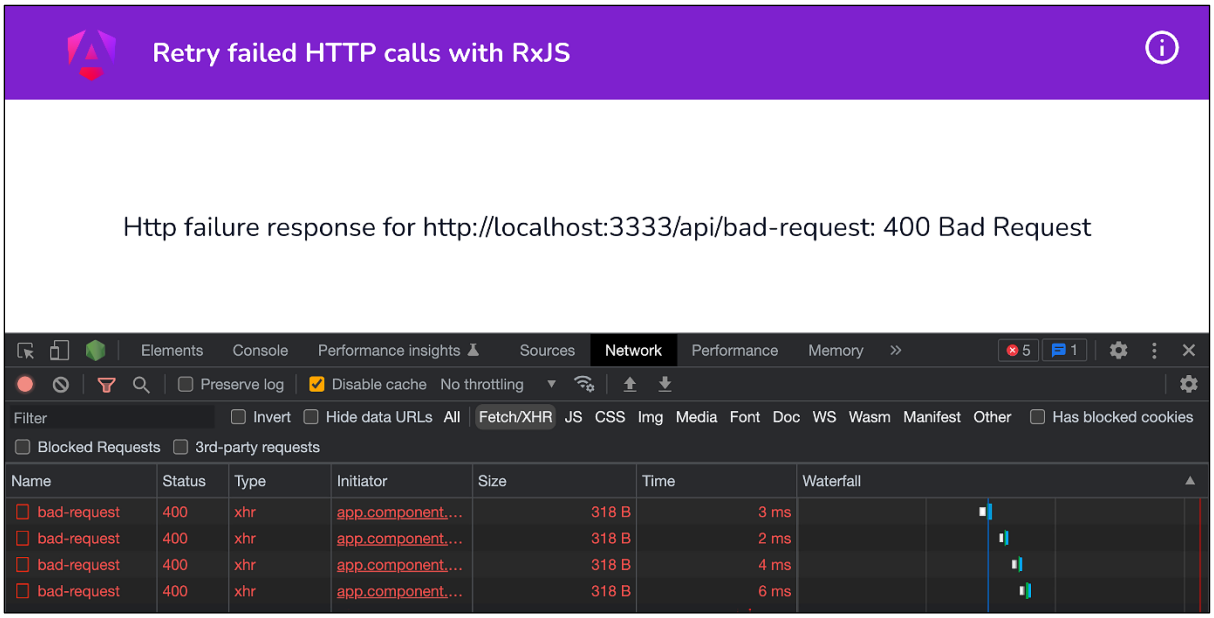

RxJS switchMap & debounce operators with autocompletes
Users
wolf
Elements Console Performance insights Sources Network Performance Memory Application 33
Preserve log Disable cache No throttling
Filter Invert Hide data URLs All Fetch/XHR JS CSS Img Media Font Doc WS Wasm Manifest Other Has blocked cookies
Blocked Requests 3rd-party requests
Name Status Type Initiator Size Time Waterfall
?results=10&seed=packt (cance… xhr users.componen… 0 B 59 ms
?results=10&seed=packt (cance… xhr users.componen… 0 B 147 ms
?results=10&seed=packt (cance… xhr users.componen… 0 B 61 ms
?results=10&seed=packt 200 xhr users.componen… 4.3 kB 295 ms

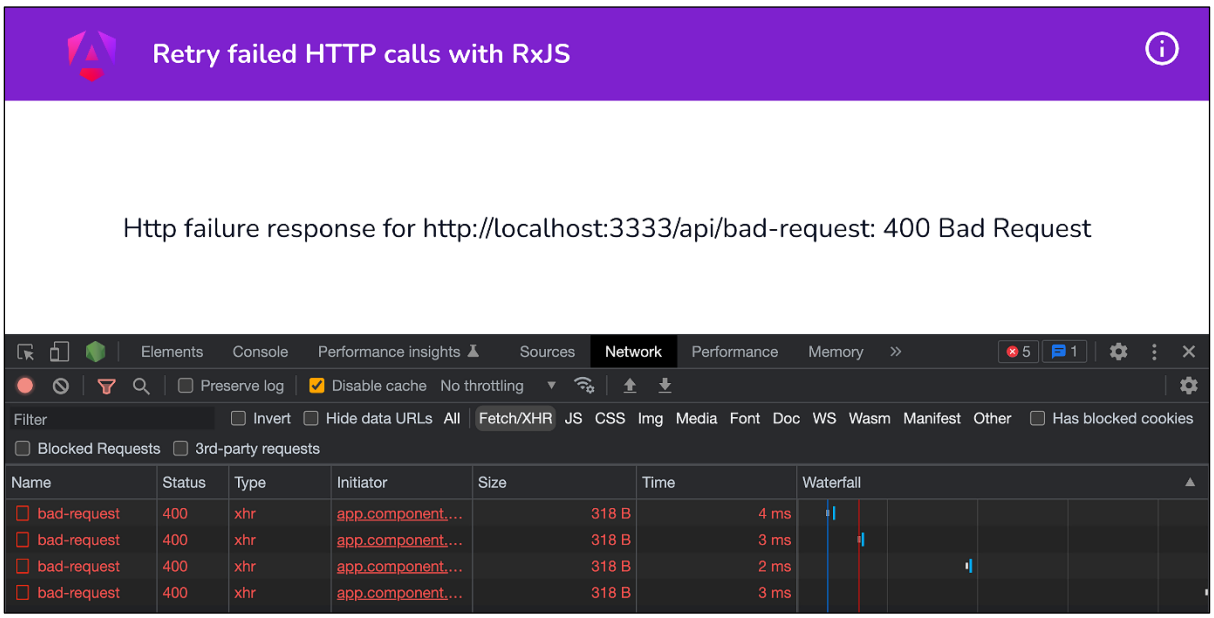

RxJS switchMap & debounce operators with autocompletes
Users
wolf
Elements
Console
Performance insights
Sources
Network
Performance
Memory
Application
33
Preserve log
Disable cache
No throttling
Filter
Invert
Hide data URLs
All
Fetch/XHR
JS
CSS
Img
Media
Font
Doc
WS
Wasm
Manifest
Other
Has blocked cookies
Blocked Requests
3rd-party requests
Name
Status
Type
Initiator
Size
Time
Waterfall
?results=10&seed=packt
200
xhr
users.componen…
4.3 kB
231 ms


RxJS Custom Operator
Start Stream
Stop Stream
john wick
inception
interstellar
0
1
0
2
3
4
1
0
5
6
7
2
8
9
10
Elements
Console
1
top
Filter
All levels
1 Issue: 1
output ▶ [0] home.component.ts:32
output ▶ (2) [0, 1] home.component.ts:32
output ▶ (3) [0, 1, 0] home.component.ts:32
output ▶ (4) [0, 1, 0, 2] home.component.ts:32
output ▶ (5) [0, 1, 0, 2, 3] home.component.ts:32
output ▶ (6) [0, 1, 0, 2, 3, 4] home.component.ts:32
output ▶ (7) [0, 1, 0, 2, 3, 4, 1] home.component.ts:32
output ▶ (8) [0, 1, 0, 2, 3, 4, 1, 0] home.component.ts:32
output ▶ (9) [0, 1, 0, 2, 3, 4, 1, 0, 5] home.component.ts:32
output ▶ (10) [0, 1, 0, 2, 3, 4, 1, 0, 5, 6] home.component.ts:32
output ▶ (11) [0, 1, 0, 2, 3, 4, 1, 0, 5, 6, 7] home.component.ts:32
output ▶ (12) [0, 1, 0, 2, 3, 4, 1, 0, 5, 6, 7, 2] home.component.ts:32
output ▶ (13) [0, 1, 0, 2, 3, 4, 1, 0, 5, 6, 7, 2, 8] home.component.ts:32
output ▶ (14) [0, 1, 0, 2, 3, 4, 1, 0, 5, 6, 7, 2, 8, 9] home.component.ts:32
output ▶ (15) [0, 1, 0, 2, 3, 4, 1, 0, 5, 6, 7, 2, 8, 9, 10] home.component.ts:32

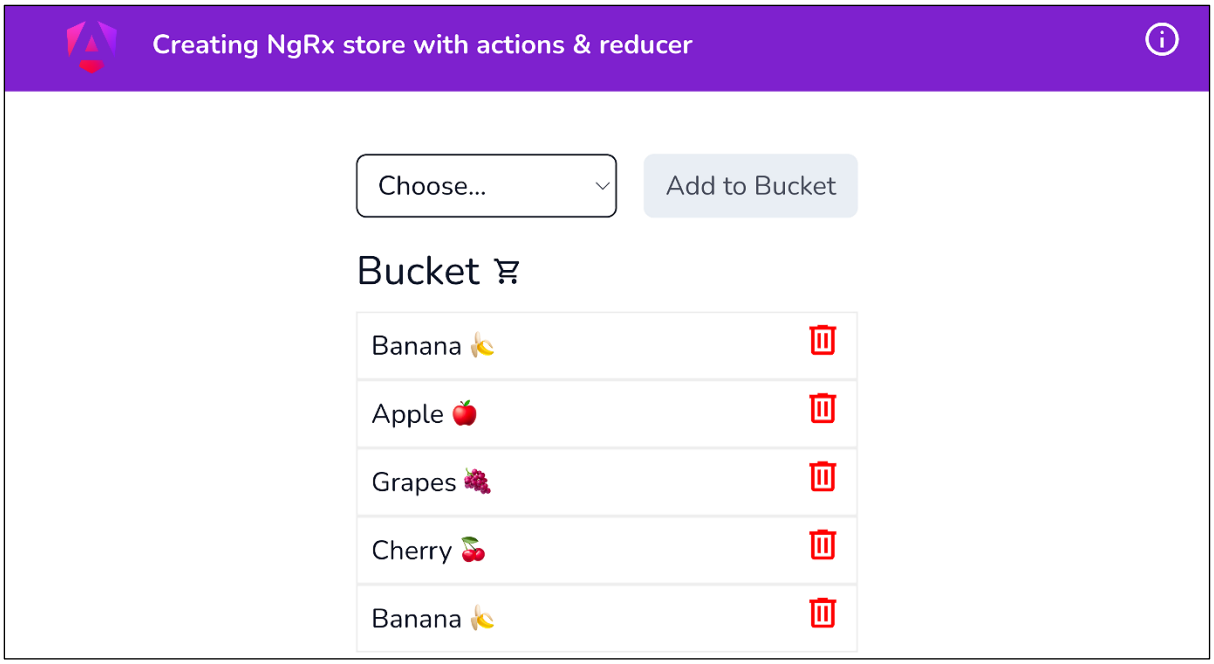

RxJS Custom Operator
Start Stream
Stop Stream
john wick
inception
interstellar
0
1
0
2
3
4
1
0
5
6
7
2
8
Elements
Console
top
Filter
All levels
1 Issue: 1
Angular is running in development mode. Call enableProdMode() to enable production mode.
core.mjs:24833
stream-output ▸ [0] log-with-label.ts:7
stream-output ▸ (2) [0, 1] log-with-label.ts:7
stream-output ▸ (3) [0, 1, 0] log-with-label.ts:7
stream-output ▸ (4) [0, 1, 0, 2] log-with-label.ts:7
stream-output ▸ (5) [0, 1, 0, 2, 3] log-with-label.ts:7
stream-output ▸ (6) [0, 1, 0, 2, 3, 4] log-with-label.ts:7
stream-output ▸ (7) [0, 1, 0, 2, 3, 4, 1] log-with-label.ts:7
stream-output ▸ (8) [0, 1, 0, 2, 3, 4, 1, 0] log-with-label.ts:7
stream-output ▸ (9) [0, 1, 0, 2, 3, 4, 1, 0, 5] log-with-label.ts:7
stream-output ▸ (10) [0, 1, 0, 2, 3, 4, 1, 0, 5, 6] log-with-label.ts:7
stream-output ▸ (11) [0, 1, 0, 2, 3, 4, 1, 0, 5, 6, 7] log-with-label.ts:7
stream-output ▸ (12) [0, 1, 0, 2, 3, 4, 1, 0, 5, 6, 7, 2] log-with-label.ts:7
stream-output ▸ (13) [0, 1, 0, 2, 3, 4, 1, 0, 5, 6, 7, 2, 8] log-with-label.ts:7

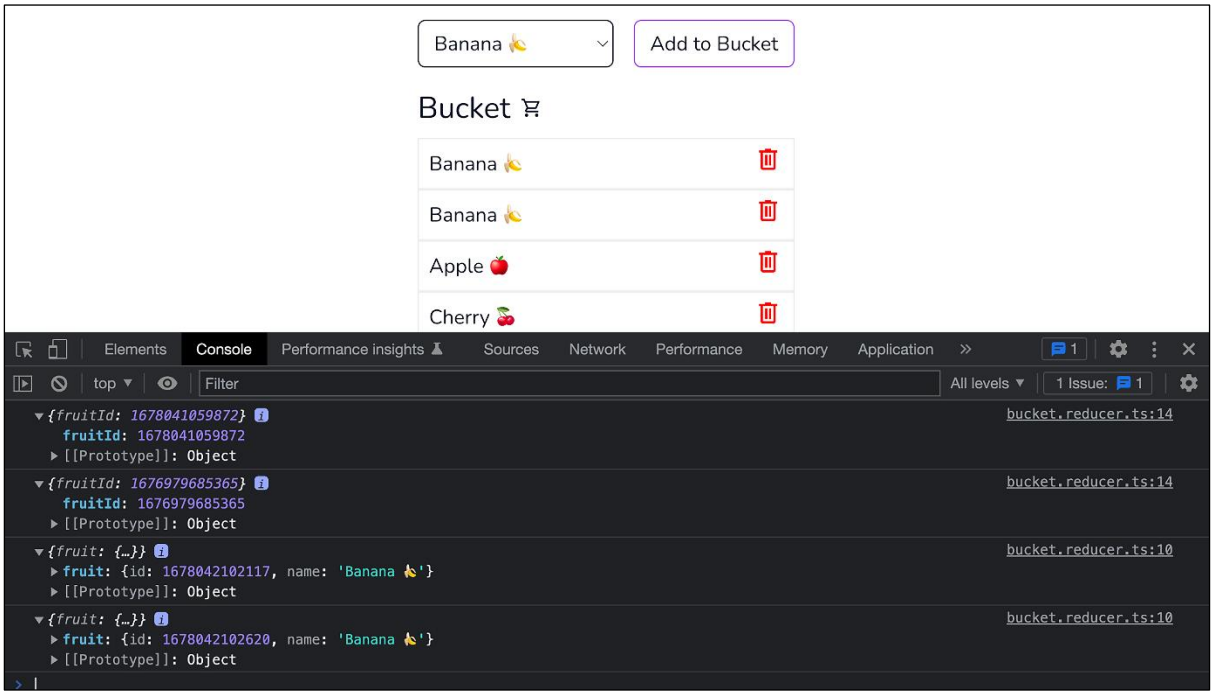

Retry failed HTTP calls with RxJS
Http failure response for http://localhost:3333/api/bad-request: 400 Bad Request
top
Filter
All levels
1 Issue: 1
Angular is running in development mode. Call enableProdMode() to enable production mode.
core.mjs:23508
GET http://localhost:3333/api/bad-request 400 (Bad Request)
app.component.ts:30
ERROR
app.component.ts:30
HttpErrorResponse {headers: HttpHeaders, status: 400, statusText: 'Bad Request', url: 'http://localhost:3333/api/bad-request', ok: false, …}

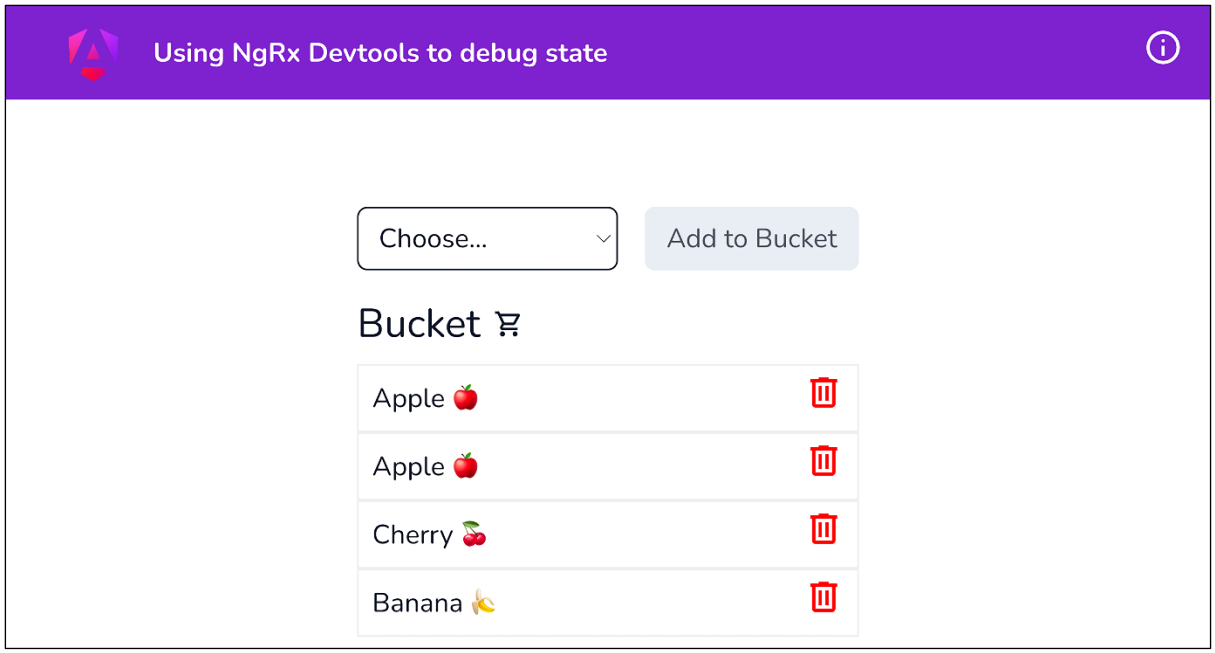


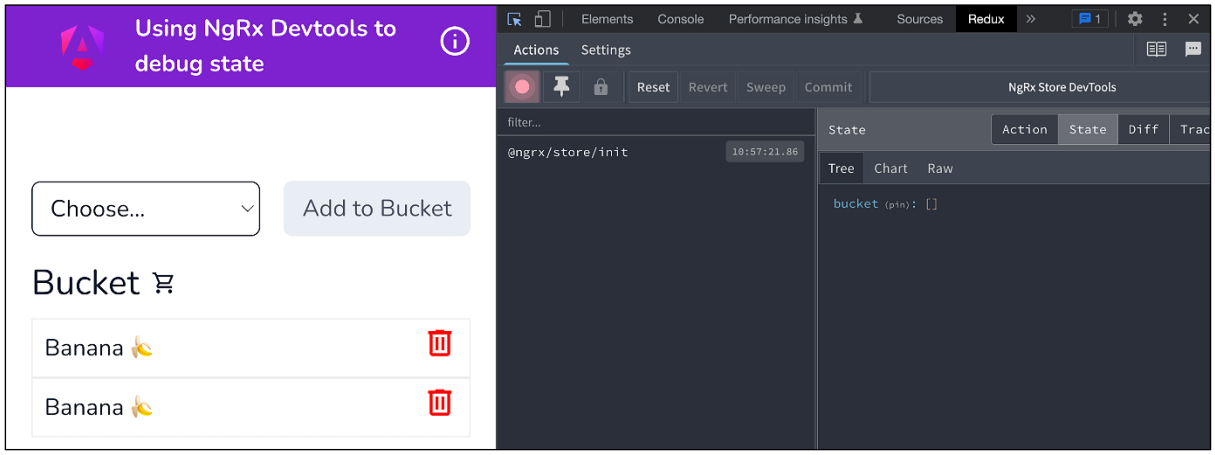


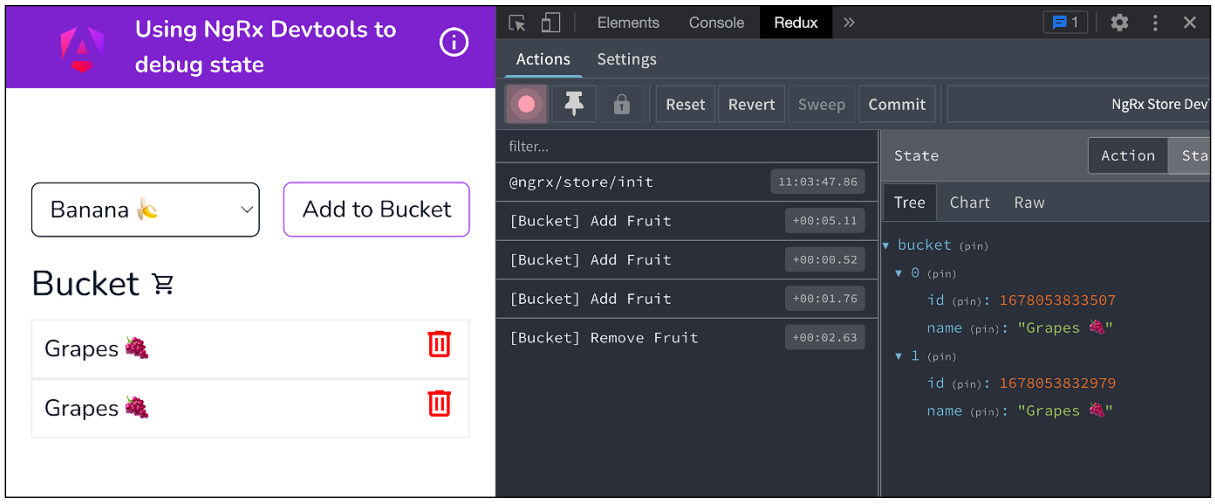
Chapter 6: Reactive State Management with NgRx

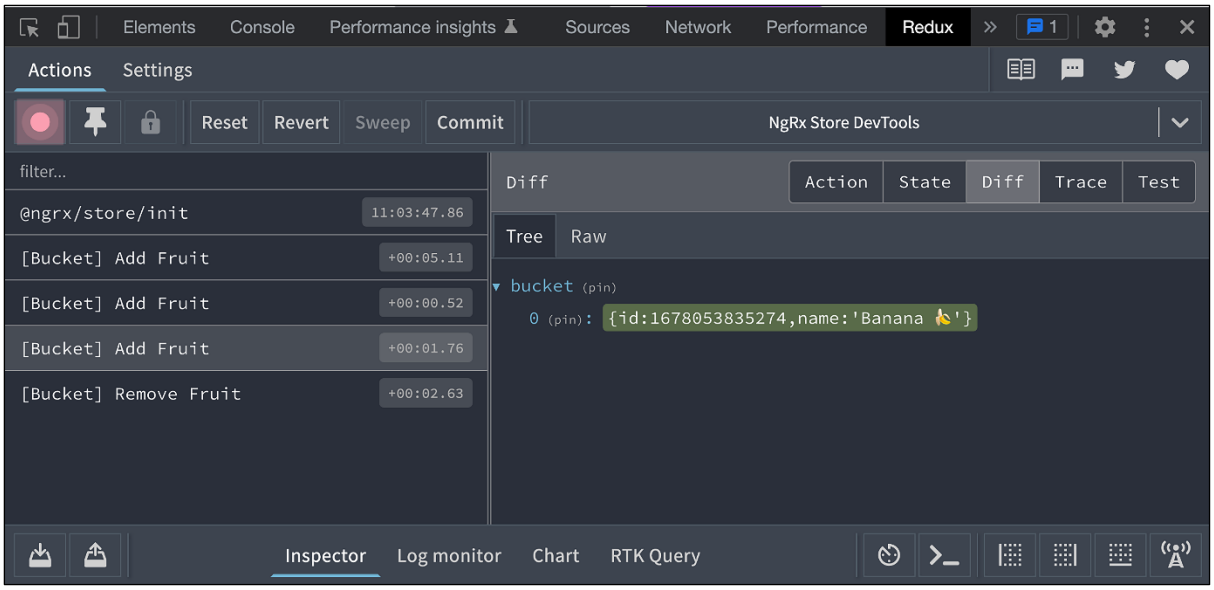

Creating NgRx store with actions & reducer
Choose...
Add to Bucket
Bucket
Banana
Apple
Grapes
Cherry
Banana

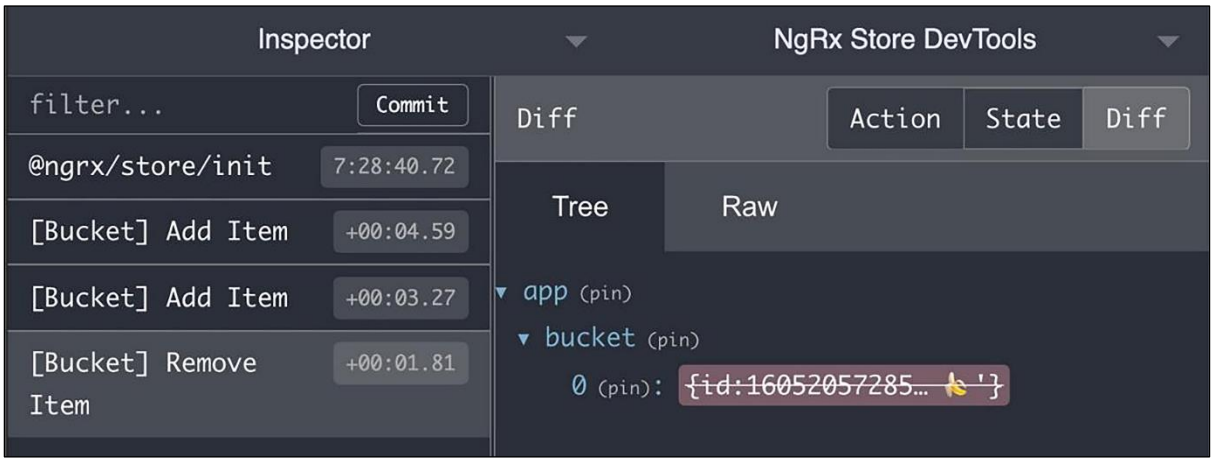

Banana
Add to Bucket
Bucket
Banana
Banana
Apple
Cherry
Elements
Console
Performance insights
Sources
Network
Performance
Memory
Application
top
Filter
All levels
1 Issue: 1
{fruitId: 1678041059872}
fruitId: 1678041059872
[[Prototype]]: Object
bucket.reducer.ts:14
{fruitId: 1676979685365}
fruitId: 1676979685365
[[Prototype]]: Object
bucket.reducer.ts:14
{fruit: {…}}
fruit: {id: 1678042102117, name: 'Banana'}
[[Prototype]]: Object
bucket.reducer.ts:10
{fruit: {…}}
fruit: {id: 1678042102620, name: 'Banana'}
[[Prototype]]: Object
bucket.reducer.ts:10

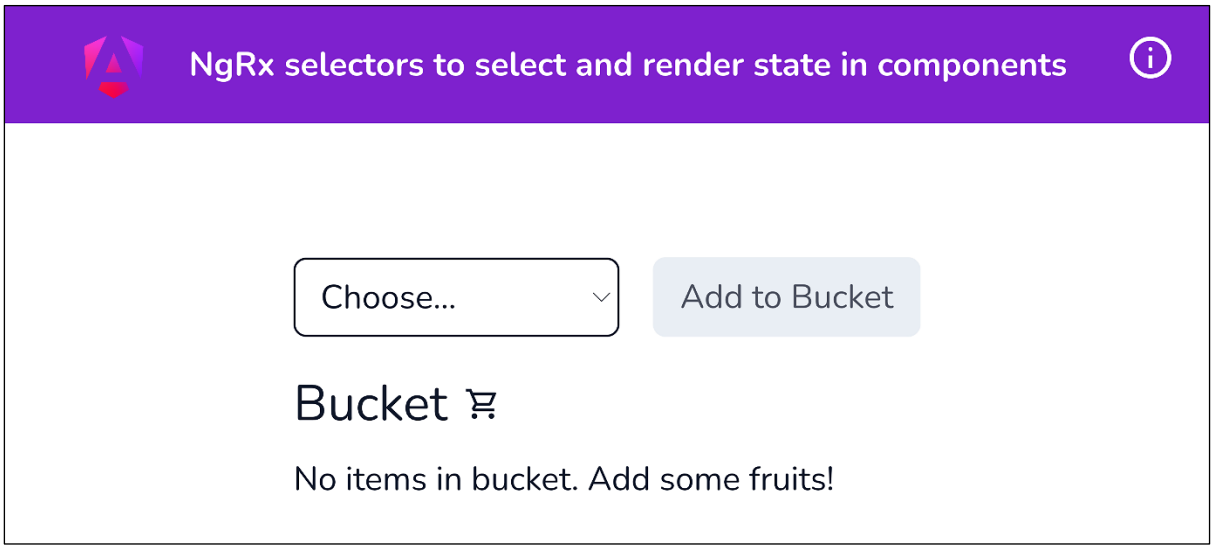

Using NgRx Devtools to debug state
Choose...
Add to Bucket
Bucket
Apple
Apple
Cherry
Banana

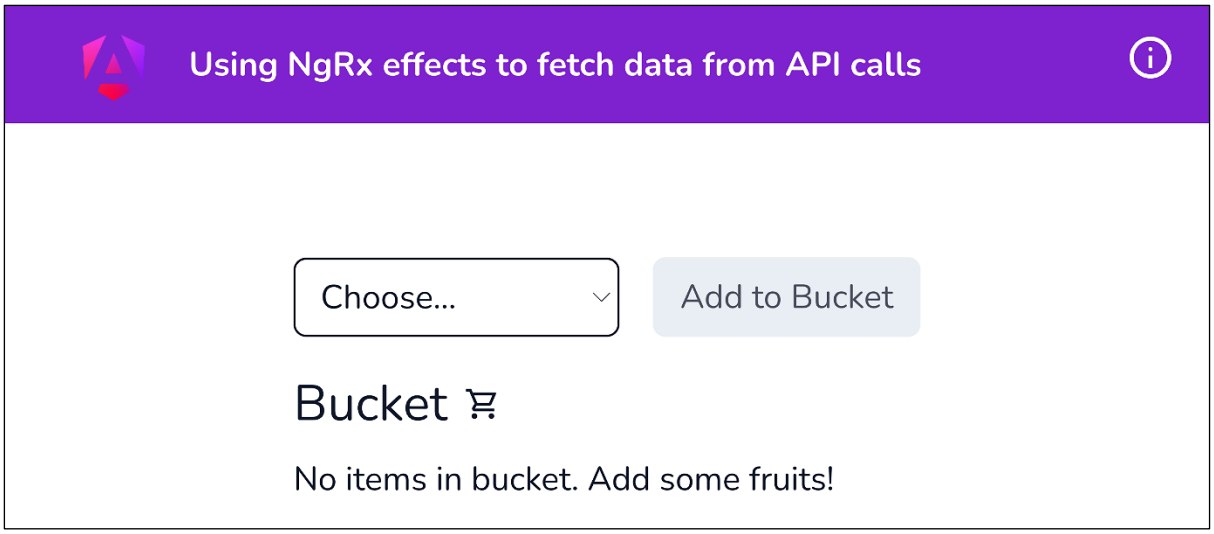

Using NgRx Devtools to debug state
Choose...
Add to Bucket
Bucket
Banana
Banana
Elements
Console
Performance insights
Sources
Redux
Actions
Settings
Reset
Revert
Sweep
Commit
NgRx Store DevTools
filter...
@ngrx/store/init
10:57:21.86
State
Action
State
Diff
Tree
Chart
Raw
bucket (pin): []

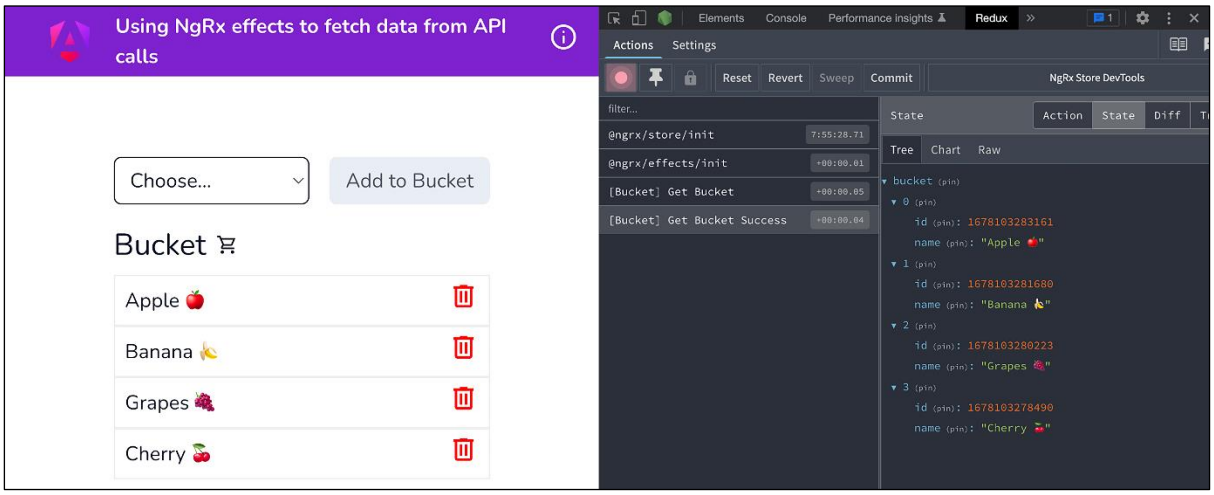

Using NgRx Devtools to debug state
Banana
Add to Bucket
Bucket
Grapes
Grapes
Elements
Console
Redux
Actions
Settings
Reset
Revert
Sweep
Commit
filter...
@ngrx/store/init
11:03:47.86
[Bucket] Add Fruit
+00:05.11
[Bucket] Add Fruit
+00:00.52
[Bucket] Add Fruit
+00:01.76
[Bucket] Remove Fruit
+00:02.63
State
Action
Tree
Chart
Raw
bucket (pin)
0 (pin)
id (pin): 1678053833507
name (pin): "Grapes"
1 (pin)
id (pin): 1678053832979
name (pin): "Grapes"

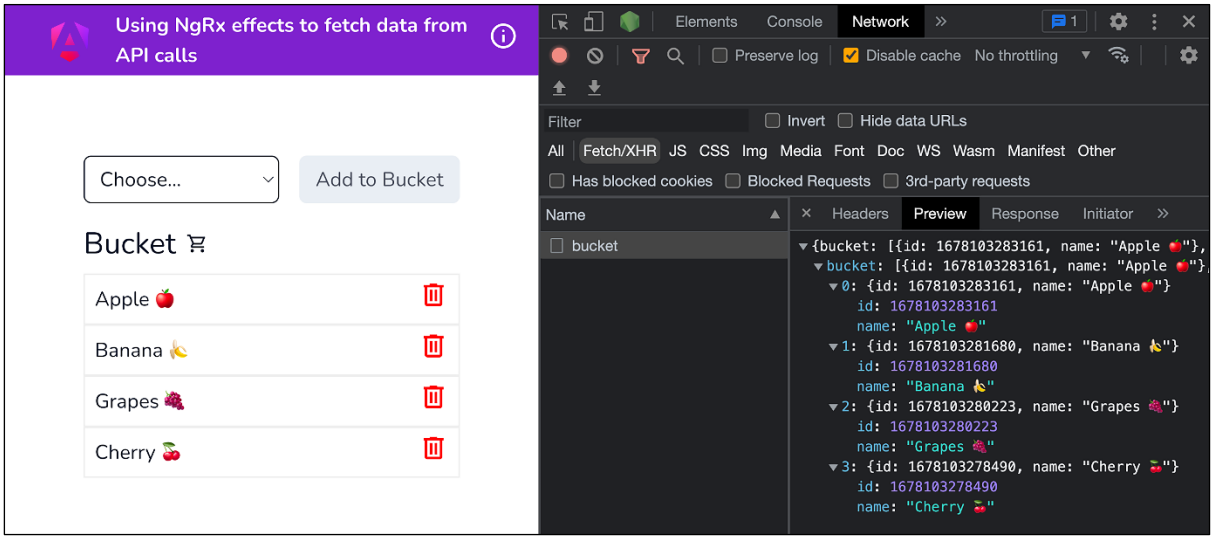

Elements
Console
Performance insights
Sources
Network
Performance
Redux
Actions
Settings
Reset
Revert
Sweep
Commit
NgRx Store DevTools
filter...
@ngrx/store/init
11:03:47.86
[Bucket] Add Fruit
+00:05.11
[Bucket] Add Fruit
+00:00.52
[Bucket] Add Fruit
+00:01.76
[Bucket] Remove Fruit
+00:02.63
Diff
Action
State
Diff
Trace
Test
Tree
Raw
bucket (pin)
0 (pin): {id:1678053835274,name:'Banana 🍌'}
Inspector
Log monitor
Chart
RTK Query

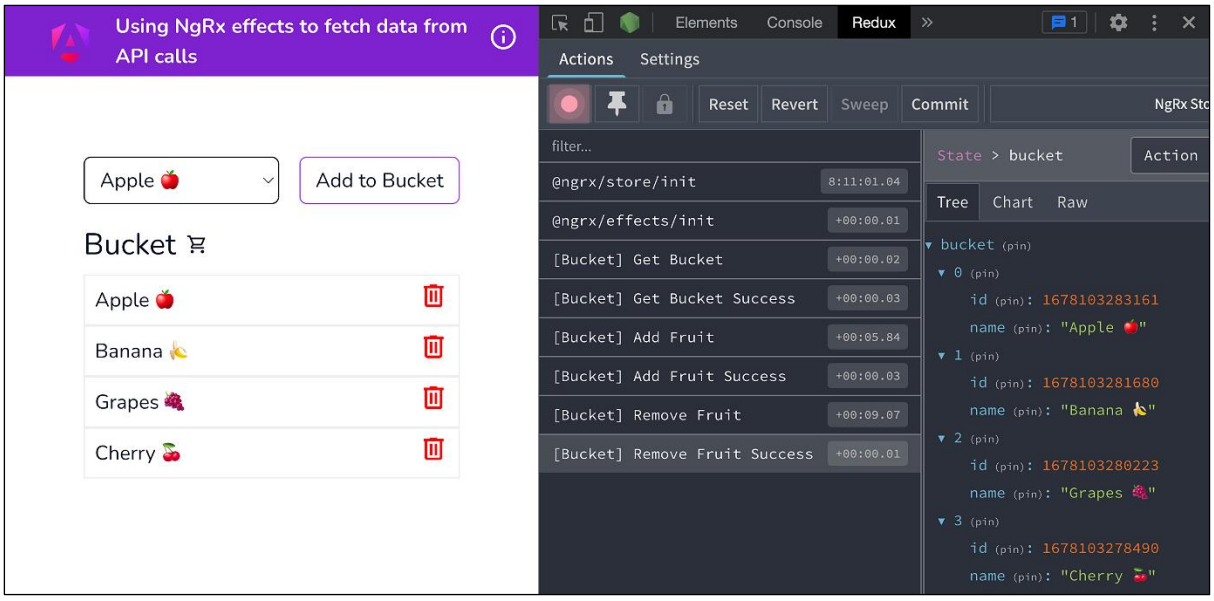

Inspector
NgRx Store DevTools
filter...
Commit
@ngrx/store/init
7:28:40.72
[Bucket] Add Item
+00:04.59
[Bucket] Add Item
+00:03.27
[Bucket] Remove Item
+00:01.81
Diff
Action
State
Diff
Tree
Raw
app (pin)
bucket (pin)
0 (pin): {id:16052057285… 🍌'}

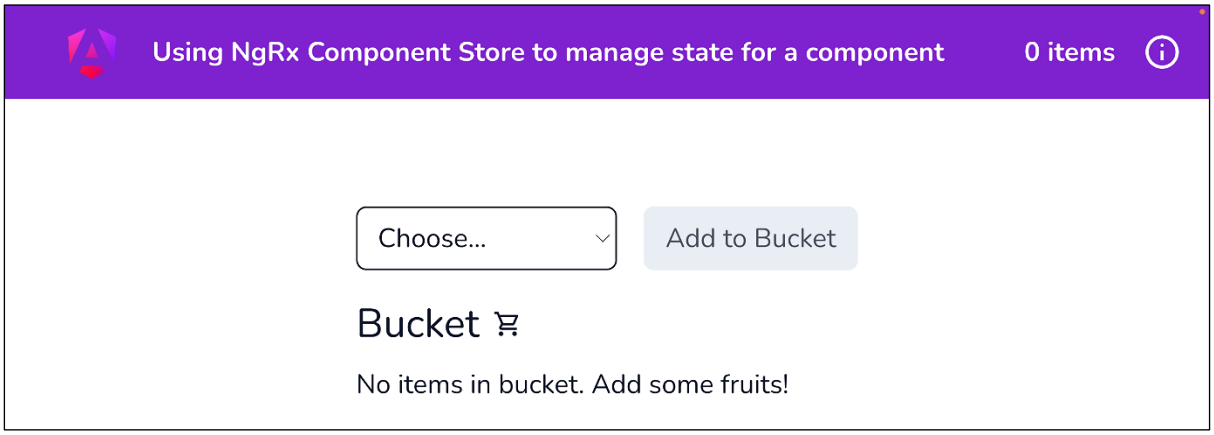

NgRx selectors to select and render state in components
Choose...
Add to Bucket
Bucket
No items in bucket. Add some fruits!

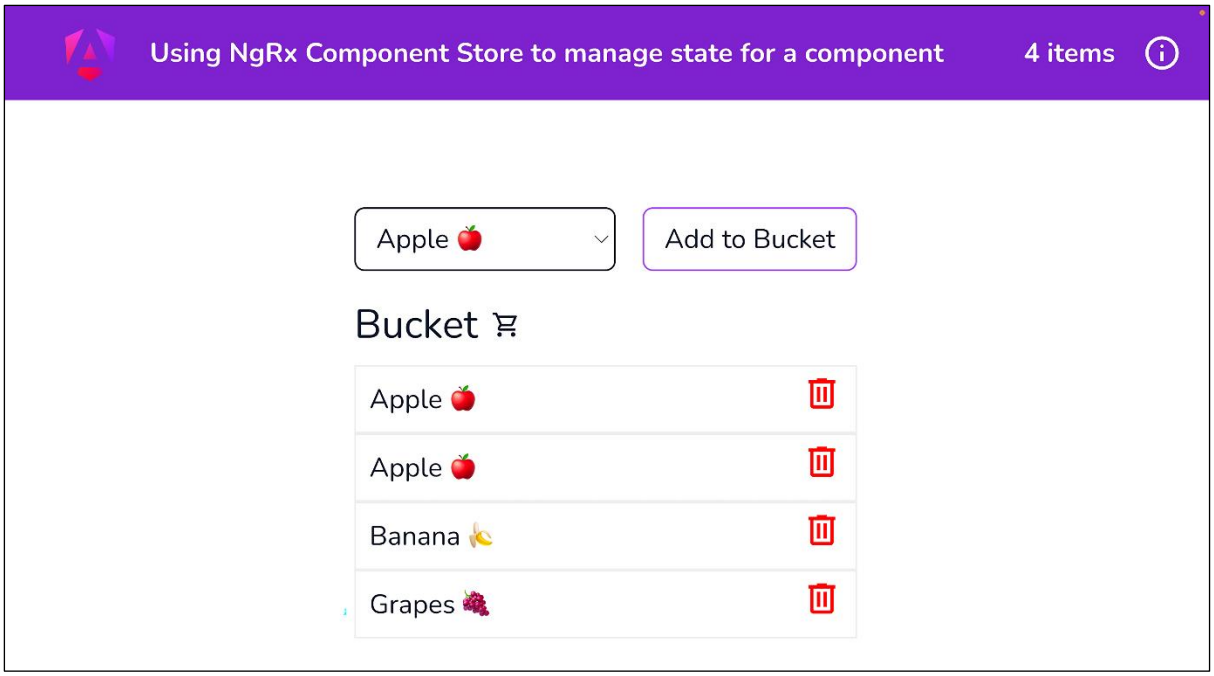

Using NgRx effects to fetch data from API calls
Choose...
Add to Bucket
Bucket
No items in bucket. Add some fruits!


Using NgRx effects to fetch data from API calls
Choose...
Add to Bucket
Bucket
Apple
Banana
Grapes
Cherry
Elements
Console
Performance insights
Redux
Actions
Settings
Reset
Revert
Sweep
Commit
NgRx Store DevTools
@ngrx/store/init
@ngrx/effects/init
[Bucket] Get Bucket
[Bucket] Get Bucket Success
State
Action
State
Diff
Tree
Chart
Raw

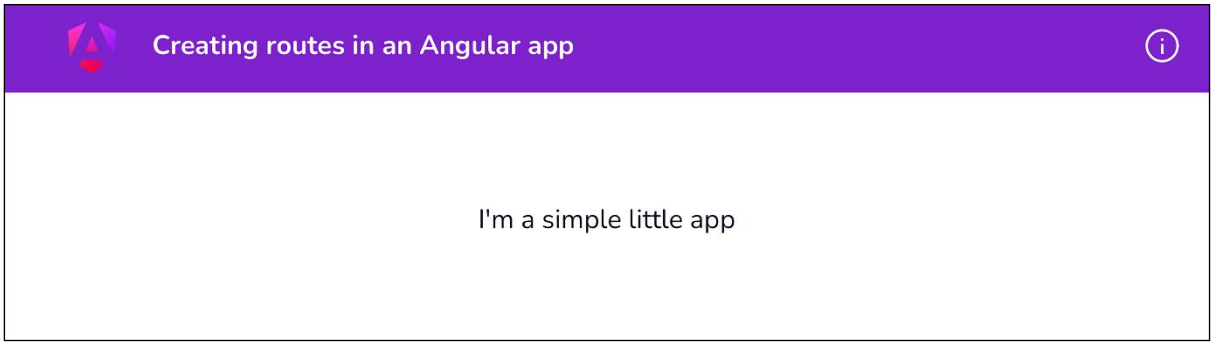

Using NgRx effects to fetch data from API calls
Choose...
Add to Bucket
Bucket
Apple
Banana
Grapes
Cherry
Elements
Console
Network
Preserve log
Disable cache
No throttling
Filter
Invert
Hide data URLs
All
Fetch/XHR
JS
CSS
Img
Media
Font
Doc
WS
Wasm
Manifest
Other
Has blocked cookies
Blocked Requests
3rd-party requests
Name
bucket
Headers
Preview
Response
Initiator

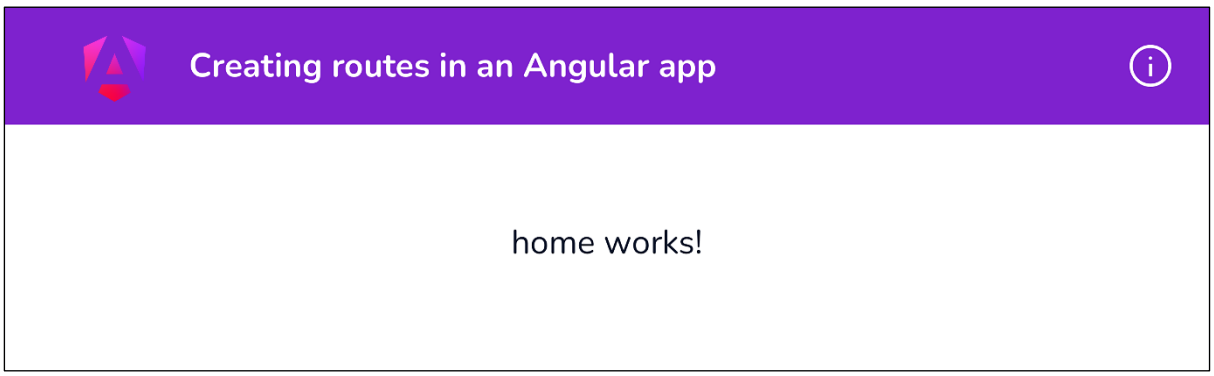

Using NgRx effects to fetch data from API calls
Apple
Add to Bucket
Bucket
Apple
Banana
Grapes
Cherry
Elements
Console
Redux
Actions
Settings
Reset
Revert
Sweep
Commit
filter...
@ngrx/store/init
@ngrx/effects/init
[Bucket] Get Bucket
[Bucket] Get Bucket Success
[Bucket] Add Fruit
[Bucket] Add Fruit Success
[Bucket] Remove Fruit
[Bucket] Remove Fruit Success
State > bucket
Action
Tree
Chart
Raw
bucket
id: 1678103283161
name: "Apple"
id: 1678103281680
name: "Banana"
id: 1678103280223
name: "Grapes"
id: 1678103278490
name: "Cherry"

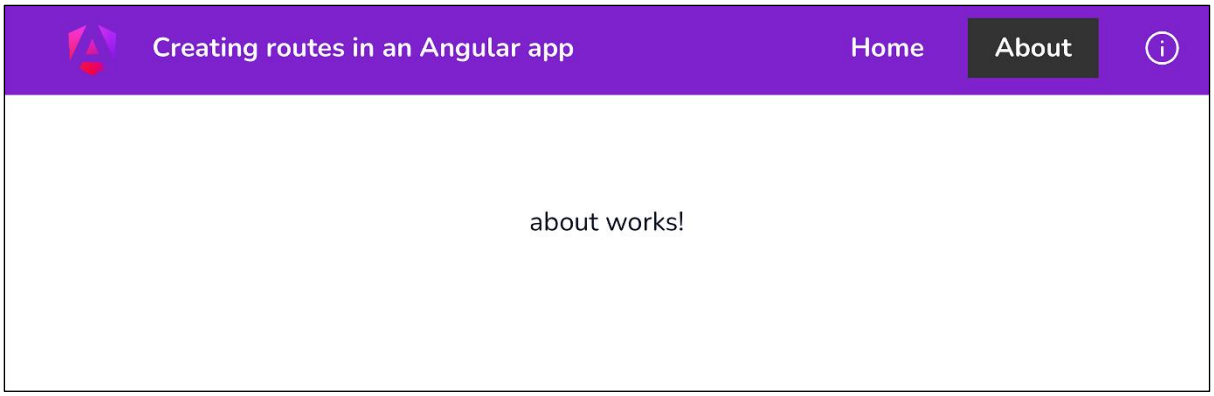

Using NgRx Component Store to manage state for a component
0 items
Choose...
Add to Bucket
Bucket
No items in bucket. Add some fruits!

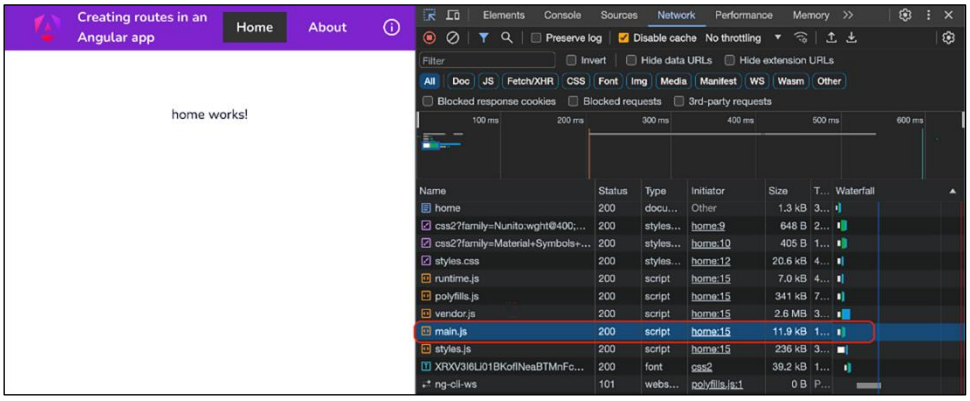


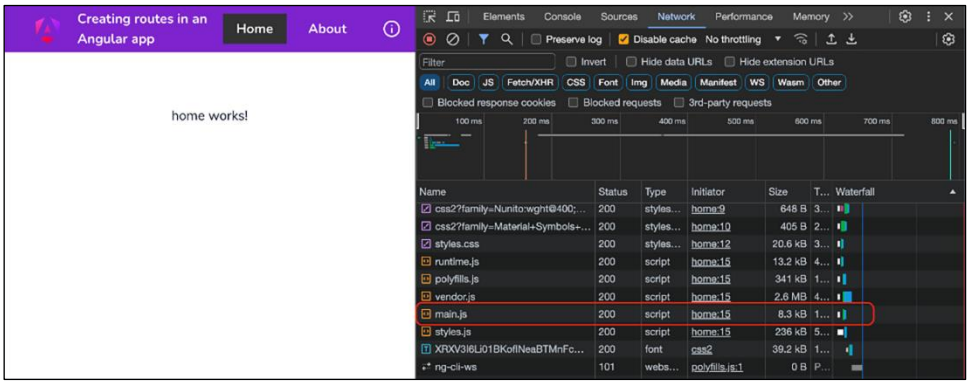
Chapter 7: Understanding Angular Navigation and Routing

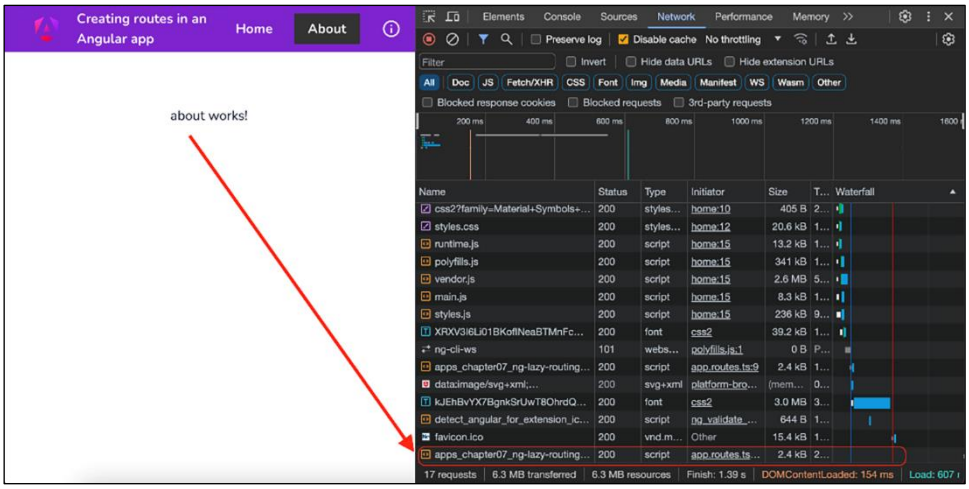


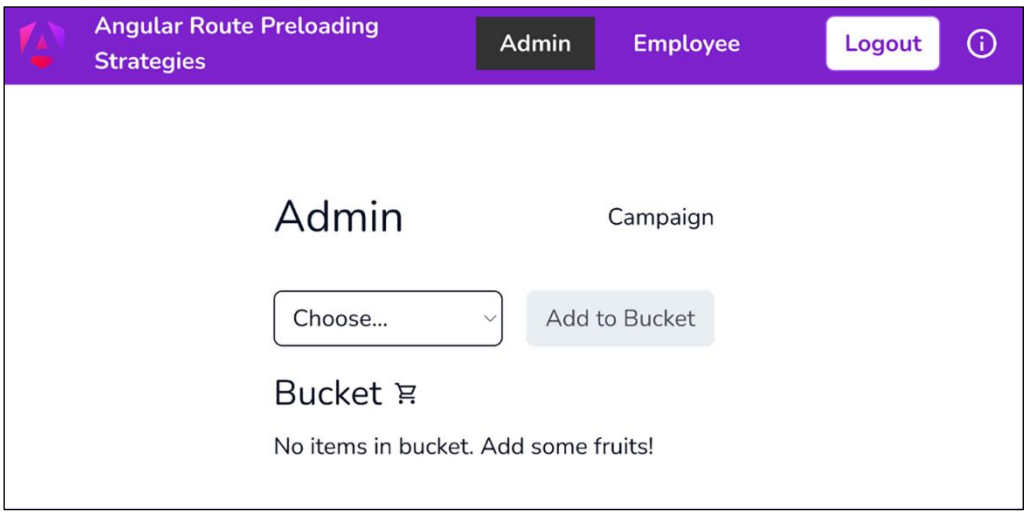


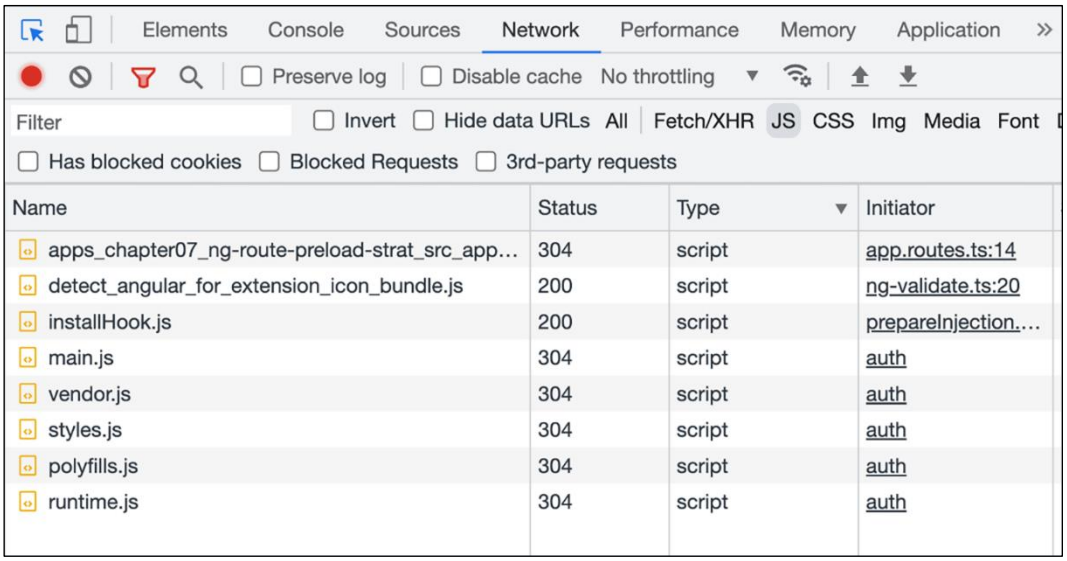

Creating routes in an Angular app
Home
About
about works!


Creating routes in an Angular app
Home
About
home works!
Elements
Console
Sources
Network
Performance
Memory
Name
Status
Type
Initiator
Size
Waterfall
home
200
Other
1.3 kB
styles.css
200
home:12
20.6 kB
runtime.js
200
script
home:15
7.0 kB
polyfills.js
341 kB
vendor.js
2.6 MB
main.js
11.9 kB
styles.js
236 kB
ng-cli-ws
101
polyfills.js:1
0 B


Creating routes in an Angular app
Home
About
home works!
Elements
Console
Sources
Network
Performance
Memory
Name
Status
Type
Initiator
Size
Waterfall
styles.css
200
home:12
20.6 kB
runtime.js
13.2 kB
polyfills.js
341 kB
vendor.js
2.6 MB
main.js
8.3 kB
styles.js
236 kB
ng-cli-ws
101
polyfills.js:1
0 B

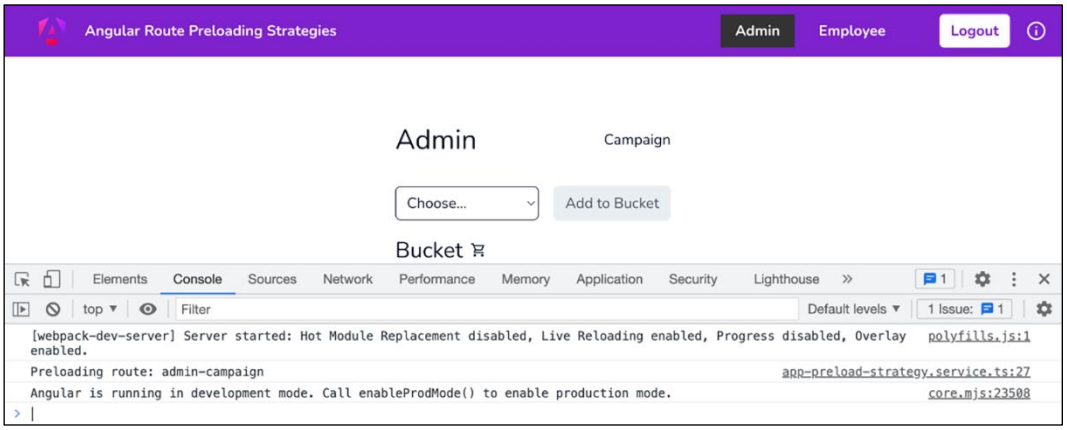

Creating routes in an Angular app
Home
About
about works!
Elements
Console
Sources
Network
Performance
Memory
Preserve log
Disable cache
No throttling
Filter
Invert
Hide data URLs
Hide extension URLs
All
Doc
JS
Fetch/XHR
CSS
Font
Img
Media
Manifest
WS
Wasm
Other
Blocked response cookies
Blocked requests
3rd-party requests
Name
Status
Type
Initiator
Size
Waterfall
17 requests
6.3 MB transferred
6.3 MB resources
Finish: 1.39 s
DOMContentLoaded: 154 ms

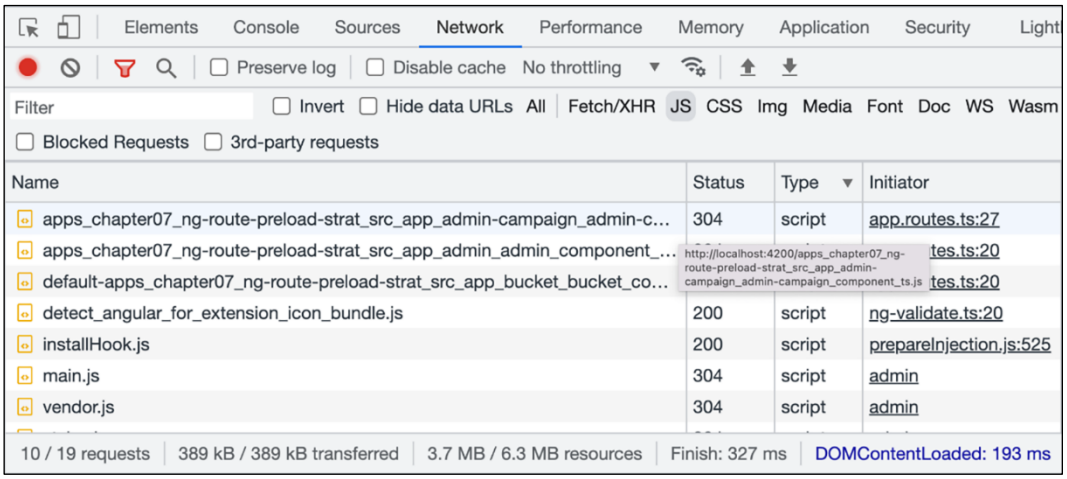

Angular Route Preloading Strategies
Admin
Employee
Logout
Admin
Campaign
Choose...
Add to Bucket
Bucket
No items in bucket. Add some fruits!

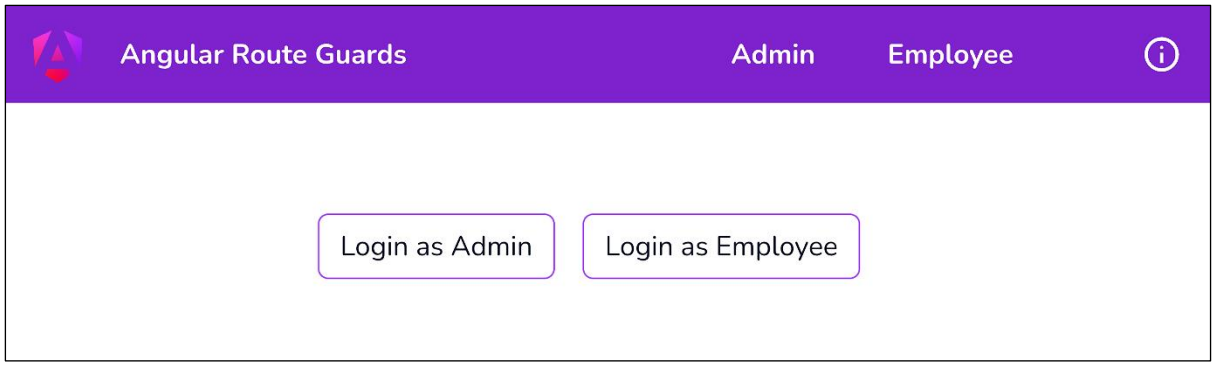

Elements
Console
Sources
Network
Performance
Memory
Application
Preserve log
Disable cache
No throttling
Filter
Invert
Hide data URLs
All
Fetch/XHR
JS
CSS
Img
Media
Font
Has blocked cookies
Blocked Requests
3rd-party requests
Name
Status
Type
Initiator
apps_chapter07_ng-route-preload-strat_src_app...
304
script
app.routes.ts:14
detect_angular_for_extension_icon_bundle.js
200
script
ng-validate.ts:20
installHook.js
200
script
prepareInjection....
main.js
304
script
auth
vendor.js
304
script
auth
styles.js
304
script
auth
polyfills.js
304
script
auth
runtime.js
304
script
auth

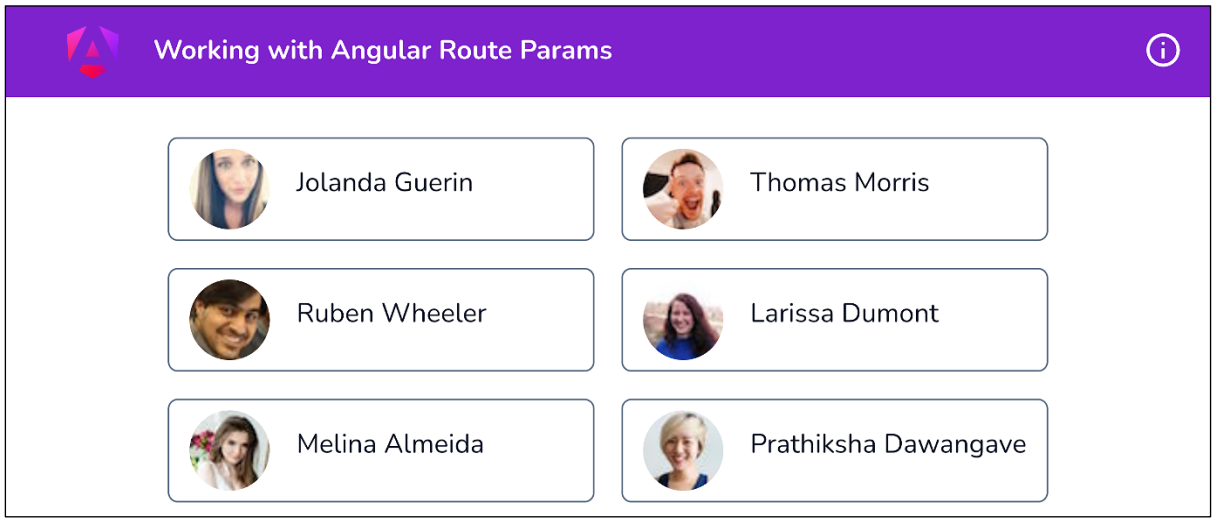
Name	Status	Type	Initiator
apps_chapter07_ng-route-preload-strat_src_app_employee-campaign_...	304	script	app.routes.ts:39
apps_chapter07_ng-route-preload-strat_src_app_employee_employee_...	304	script	app.routes.ts:32
apps_chapter07_ng-route-preload-strat_src_app_admin-campaign_ad...	304	script	app.routes.ts:26
apps_chapter07_ng-route-preload-strat_src_app_auth_auth_componen...	304	script	app.routes.ts:14
apps_chapter07_ng-route-preload-strat_src_app_admin_admin_compo...	304	script	app.routes.ts:20
default-apps_chapter07_ng-route-preload-strat_src_app_bucket_bucke...	304	script	app.routes.ts:20
detect_angular_for_extension_icon_bundle.js	200	script	ng-validate.ts:20
installHook.js	200	script	prepareInjection.js:525
main.js	304	script	admin
vendor.js	304	script	admin
styles.js	304	script	admin
polyfills.js	304	script	admin

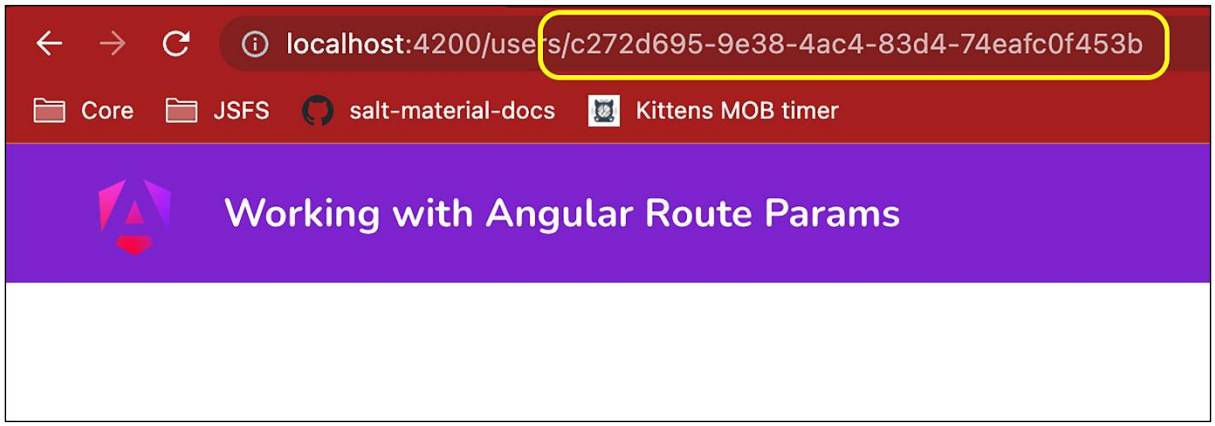
13 / 25 requests | 389 kB / 390 kB transferred | 3.7 MB / 6.4 MB resources | Finish: 331 ms | DOMContentLoaded: 192 ms | Load: 223 ms

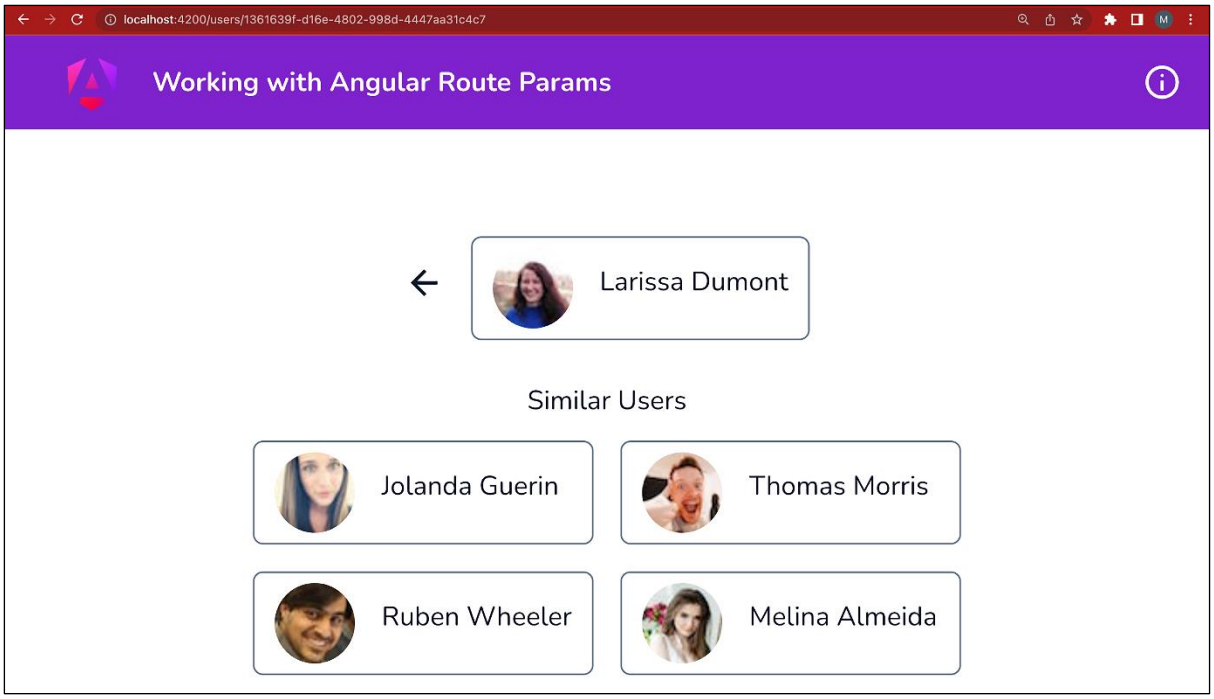


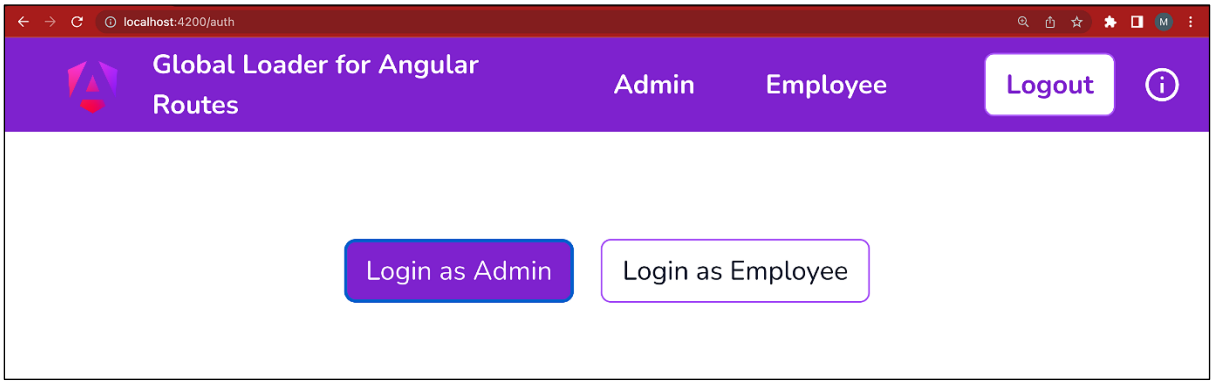



Angular Route Guards
Admin
Employee
Login as Admin
Login as Employee

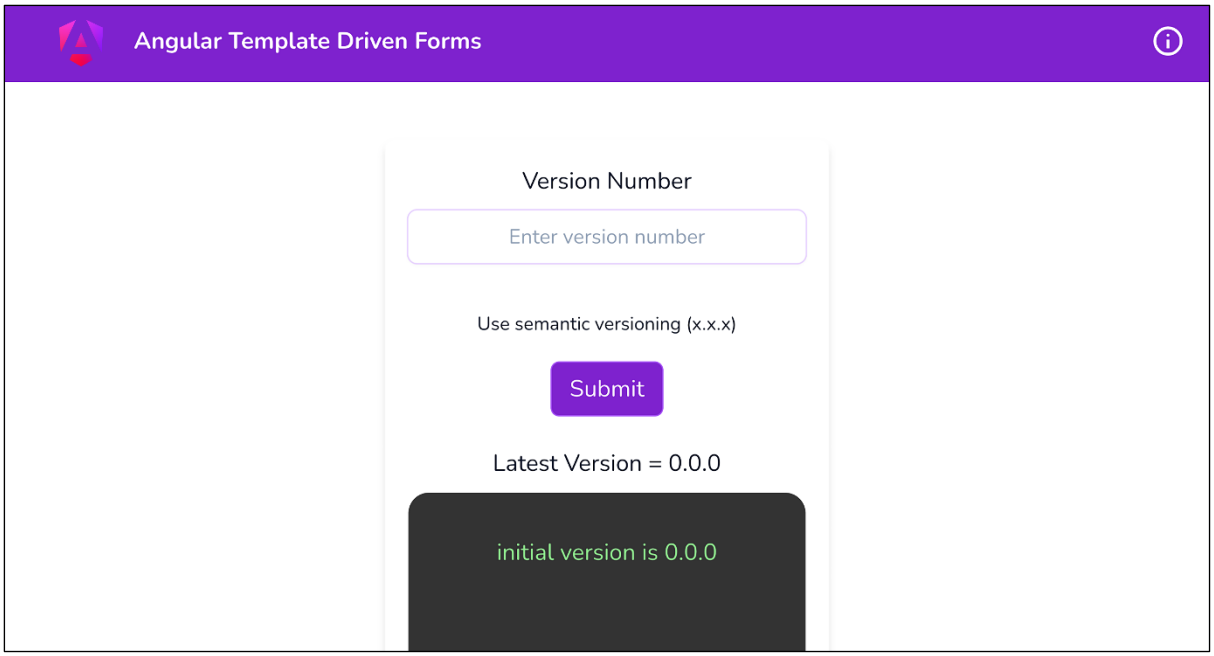

Working with Angular Route Params
Jolanda Guerin
Thomas Morris
Ruben Wheeler
Larissa Dumont
Melina Almeida
Prathiksha Dawangave

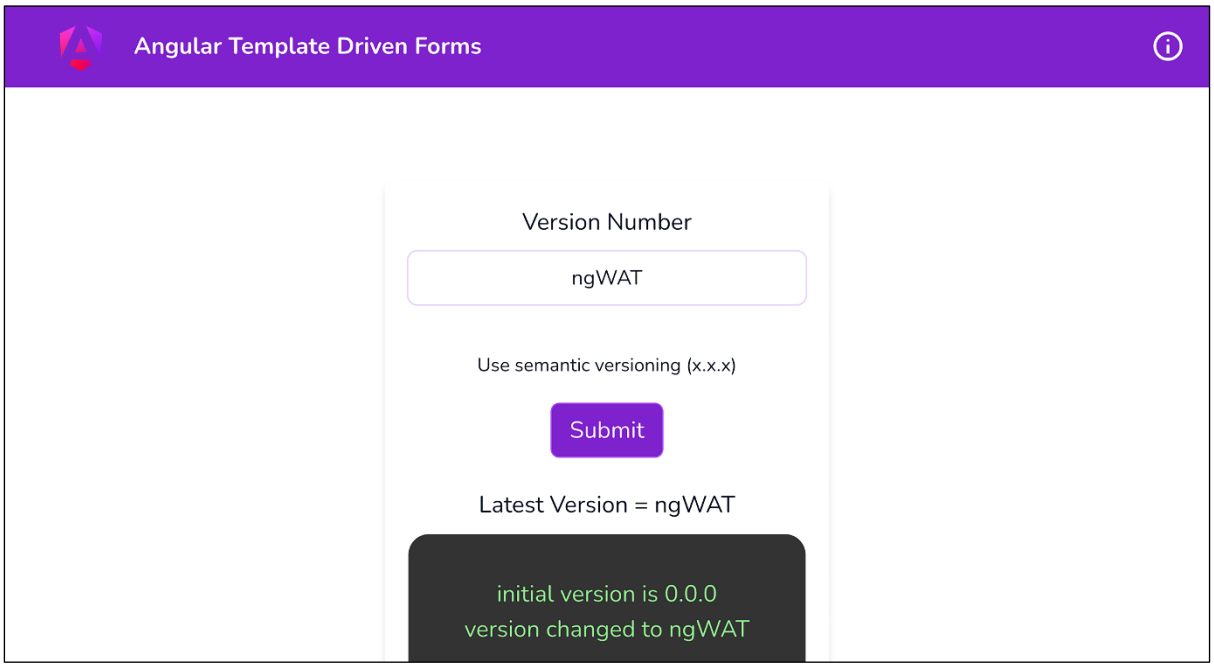

localhost:4200/users/c272d695-9e38-4ac4-83d4-74eafc0f453b
Core
JSFS
salt-material-docs
Kittens MOB timer
Working with Angular Route Params

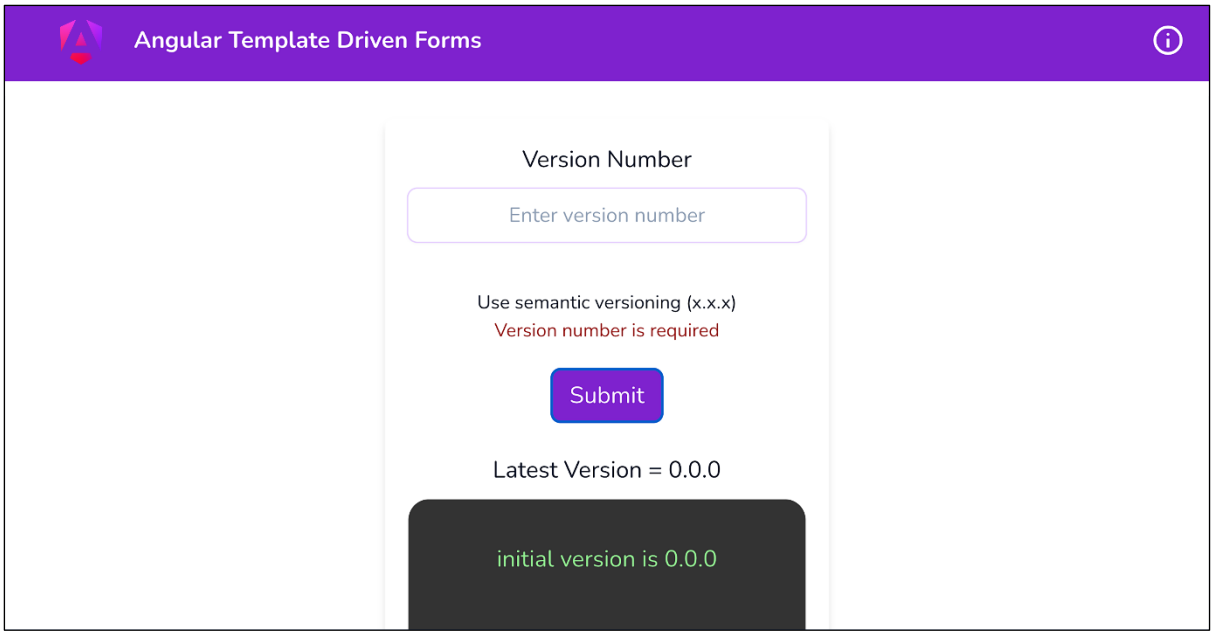


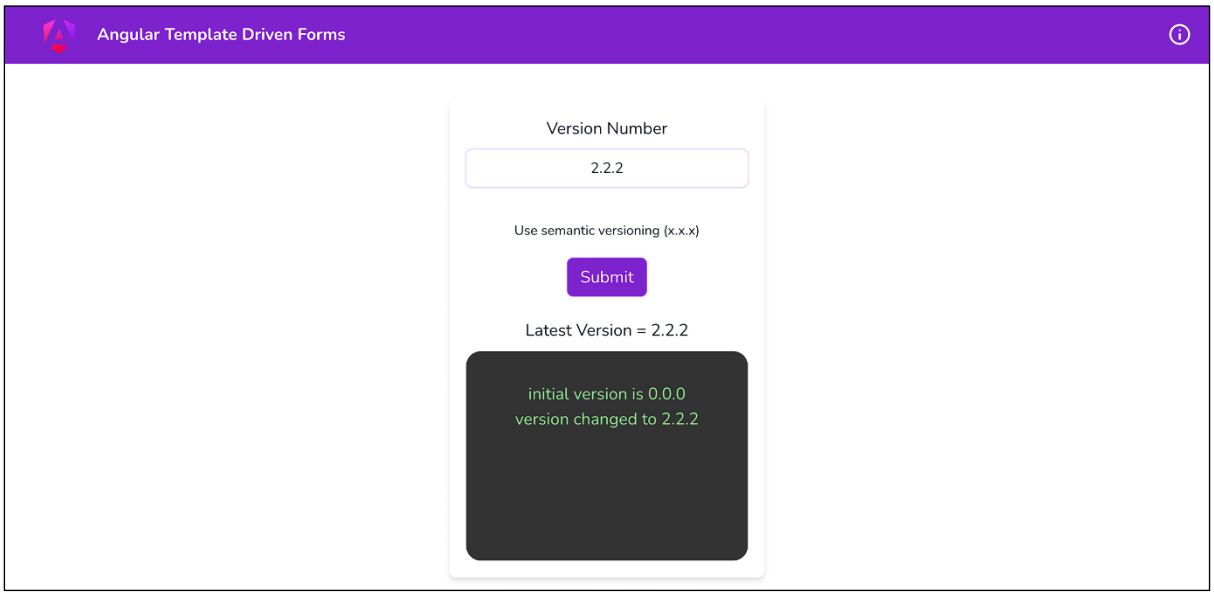


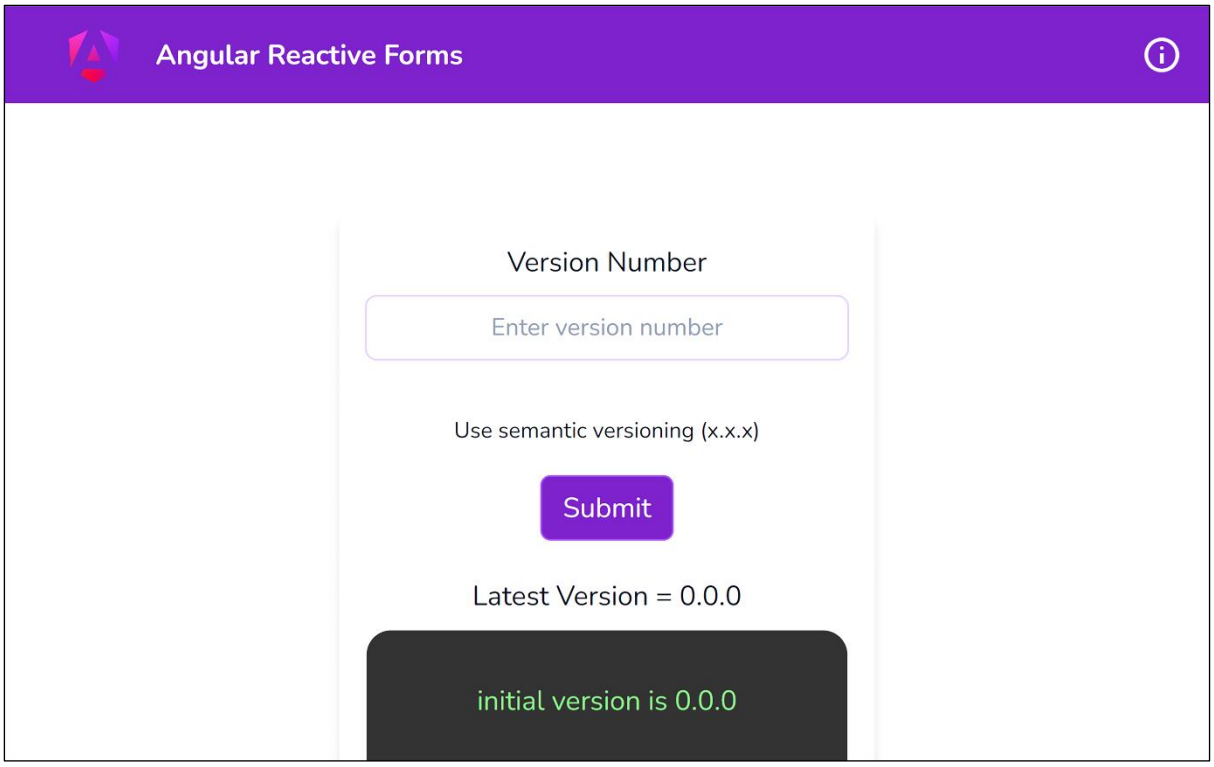
Chapter 8: Mastering Angular Forms

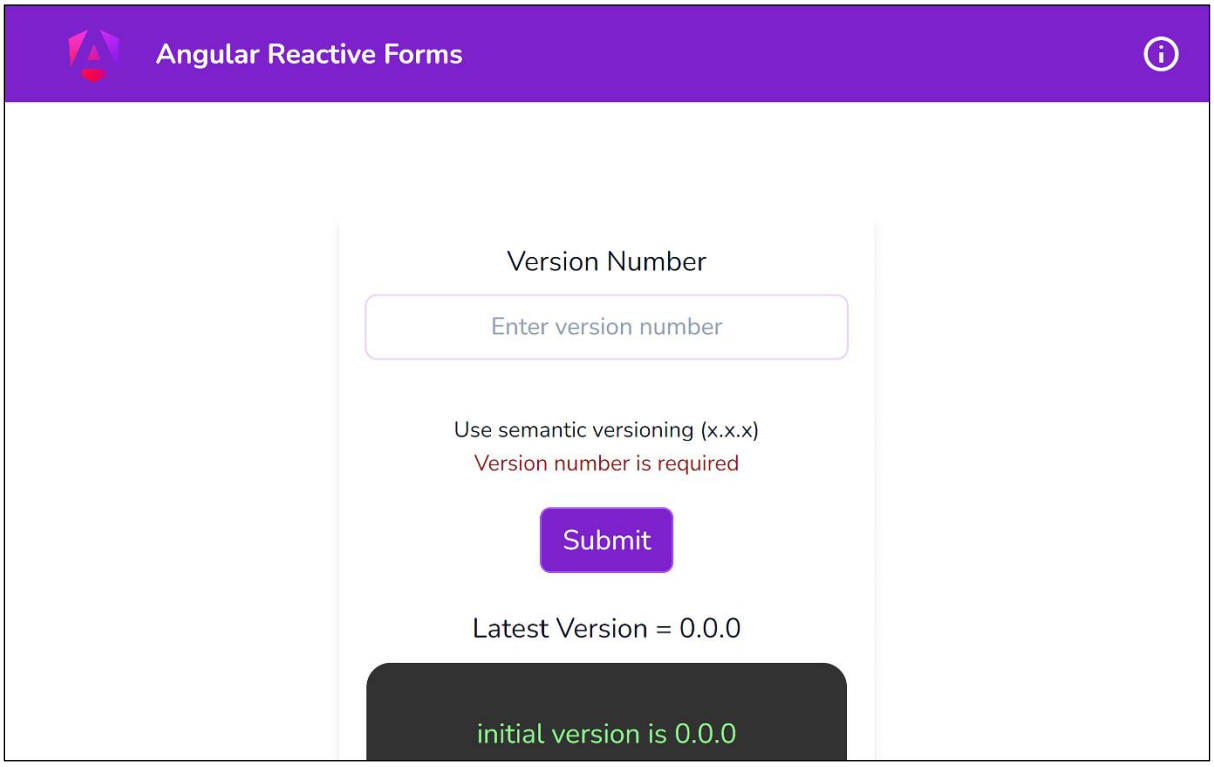

Angular Template Driven Forms
Version Number
Enter version number
Use semantic versioning (x.x.x)
Submit
Latest Version = 0.0.0
initial version is 0.0.0

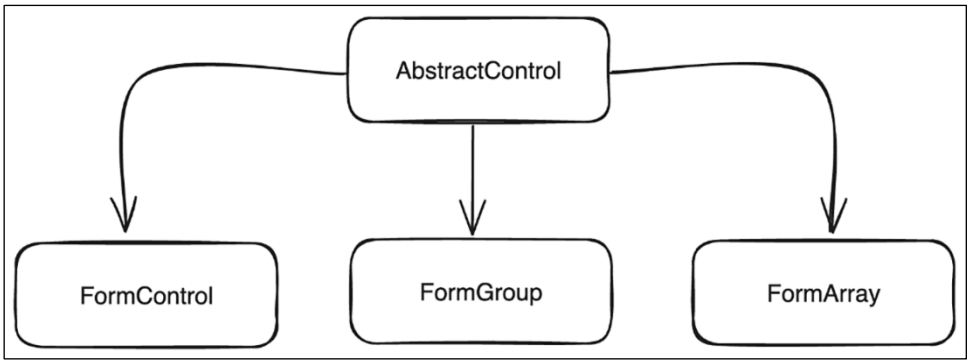

Angular Template Driven Forms
Version Number
ngWAT
Use semantic versioning (x.x.x)
Submit
Latest Version = ngWAT
initial version is 0.0.0
version changed to ngWAT

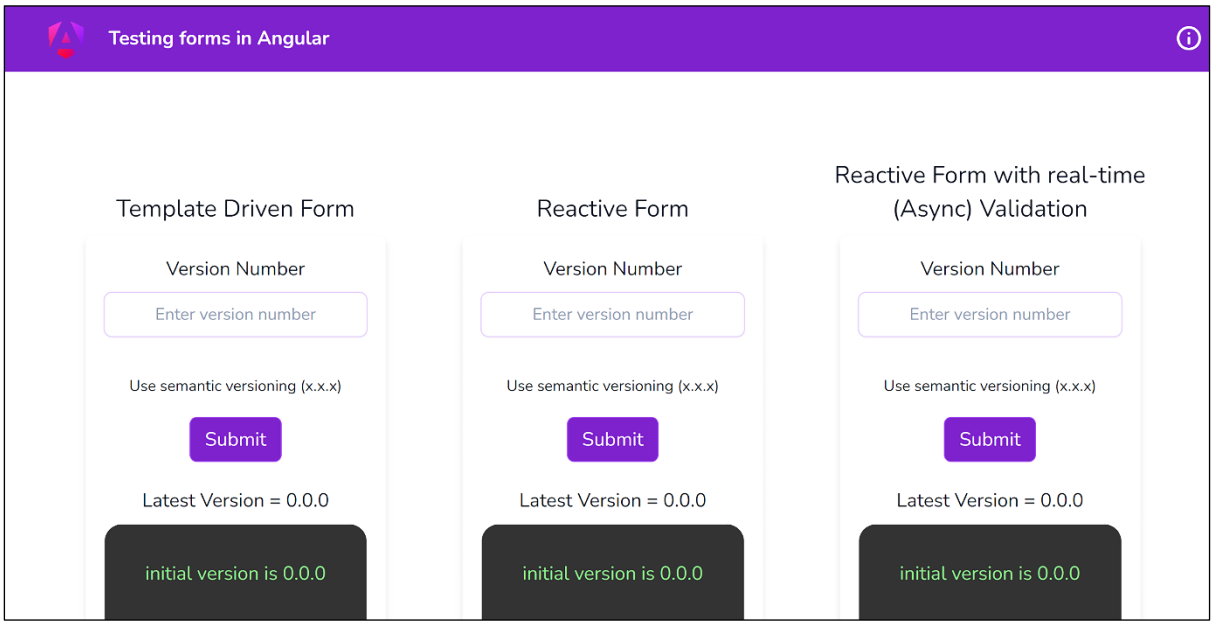

Angular Template Driven Forms
Version Number
Enter version number
Use semantic versioning (x.x.x)
Version number is required
Submit
Latest Version = 0.0.0
initial version is 0.0.0


Angular Template Driven Forms
Version Number
2.2.2
Use semantic versioning (x.x.x)
Submit
Latest Version = 2.2.2
initial version is 0.0.0
version changed to 2.2.2


Angular Reactive Forms
Version Number
Enter version number
Use semantic versioning (x.x.x)
Submit
Latest Version = 0.0.0
initial version is 0.0.0


Angular Reactive Forms
Version Number
Enter version number
Use semantic versioning (x.x.x)
Version number is required
Submit
Latest Version = 0.0.0
initial version is 0.0.0



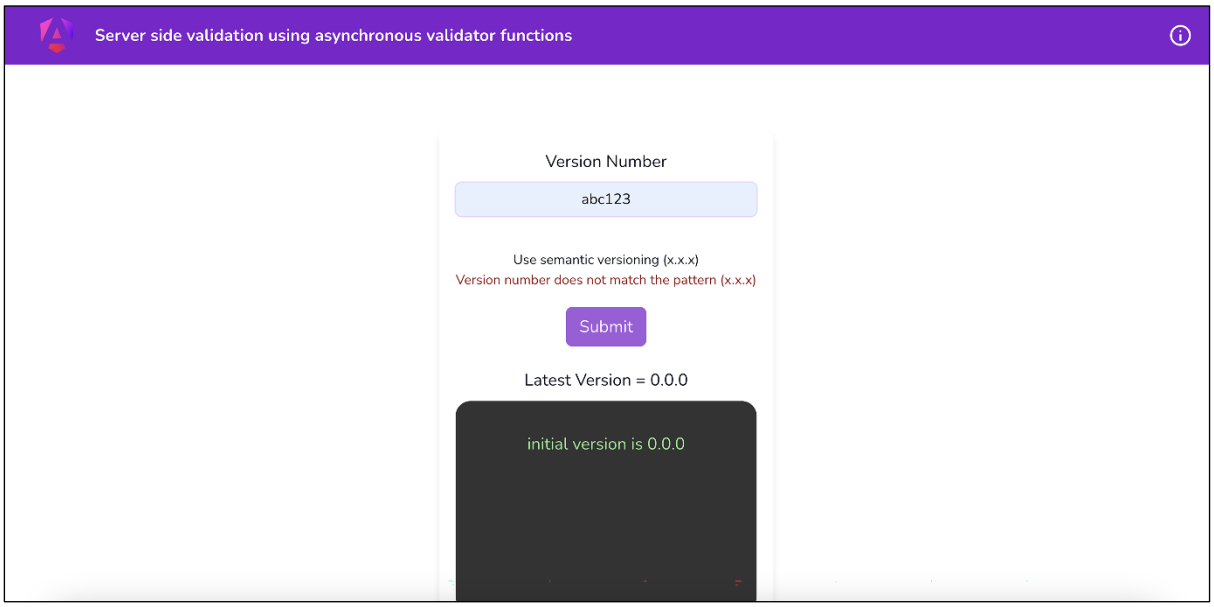


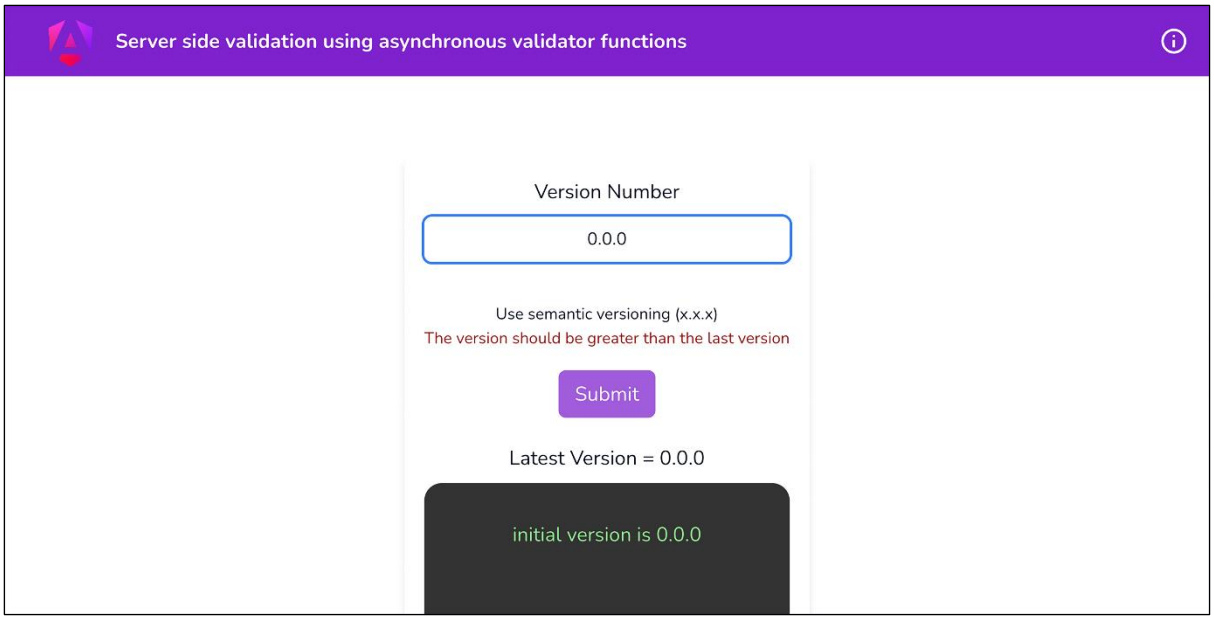

```
},
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/form-validation.service.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/vc-logs/vc-logs.compo
nent.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/version-control-rf/ve
rsion-control-rf.component.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/version-control-tdf/v
ersion-control-tdf.component.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/app.component.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/version-control-rf-as
ync/version-control-rf-async.component.spec.ts

Test Suites: 6 passed, 6 total
Tests:       6 passed, 6 total
Snapshots:   0 total
Time:        4.741 s
Ran all test suites related to changed files.
```

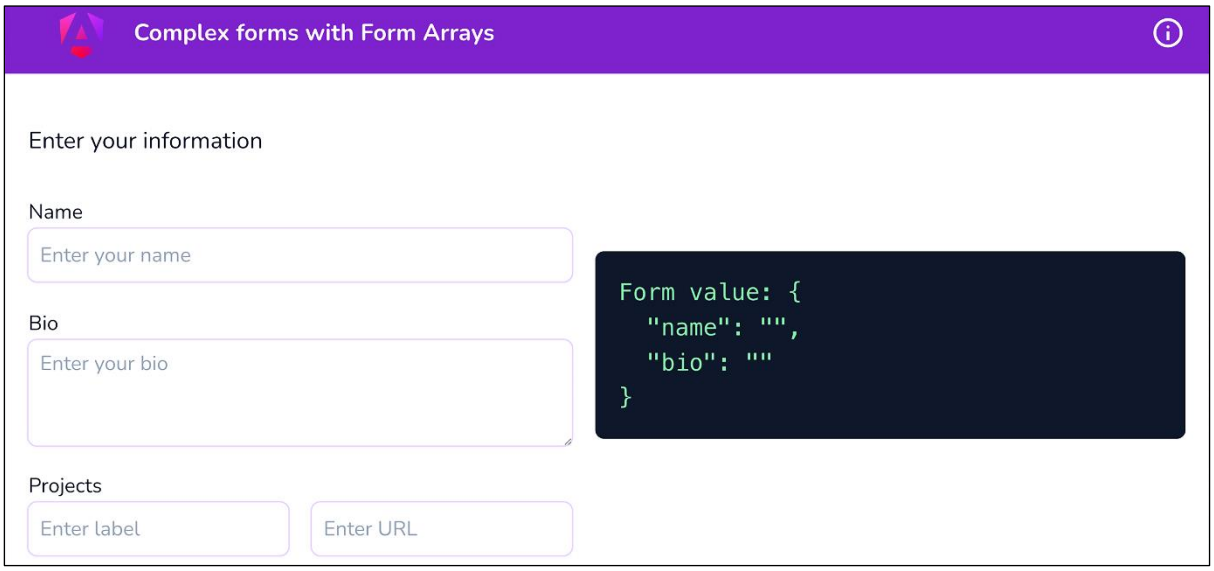
```
},
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/form-validation.service.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/version-control-rf/version-control-rf.component.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/vc-logs/vc-logs.component.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/app.component.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/version-control-rf-async/version-control-rf-async.component.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/version-control-tdf/version-control-tdf.component.spec.ts

Test Suites: 6 passed, 6 total
Tests:       7 passed, 7 total
Snapshots:   0 total
Time:        5.016 s
```

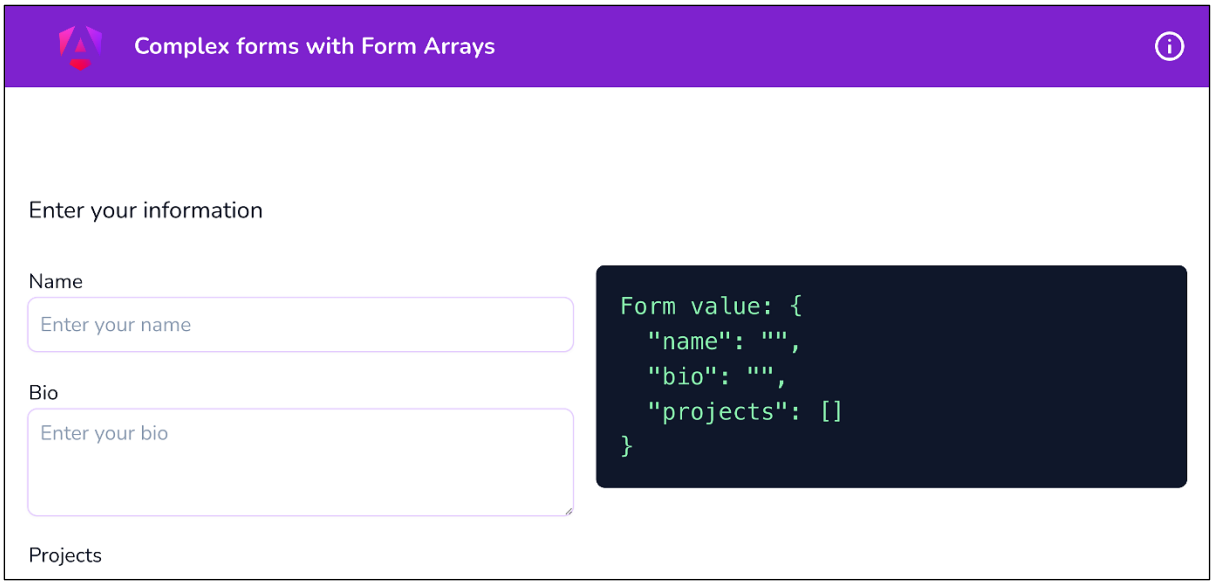
```
      67 |     fixture.detectChanges();

      at src/app/components/version-control-rf-async/version-control-rf-async.component.spec.ts:64:13
      at _ZoneDelegate.Object.<anonymous>._ZoneDelegate.invoke (../../../node_modules/zone.js/bundles/zone-testing-bundle.umd.js:412:30)
      at ProxyZoneSpec.Object.<anonymous>.ProxyZoneSpec.onInvoke (../../../node_modules/zone.js/bundles/zone-testing-bundle.umd.js:3833:43)
      at _ZoneDelegate.Object.<anonymous>._ZoneDelegate.invoke (../../../node_modules/zone.js/bundles/zone-testing-bundle.umd.js:411:56)
      at Zone.Object.<anonymous>.Zone.run (../../../node_modules/zone.js/bundles/zone-testing-bundle.umd.js:169:47)
      at Object.wrappedFunc (../../../node_modules/zone.js/bundles/zone-testing-bundle.umd.js:4333:34)

Test Suites: 1 failed, 5 passed, 6 total
Tests:       2 failed, 13 passed, 15 total
Snapshots:   0 total
Time:        4.606 s
Ran all test suites related to changed files.
```

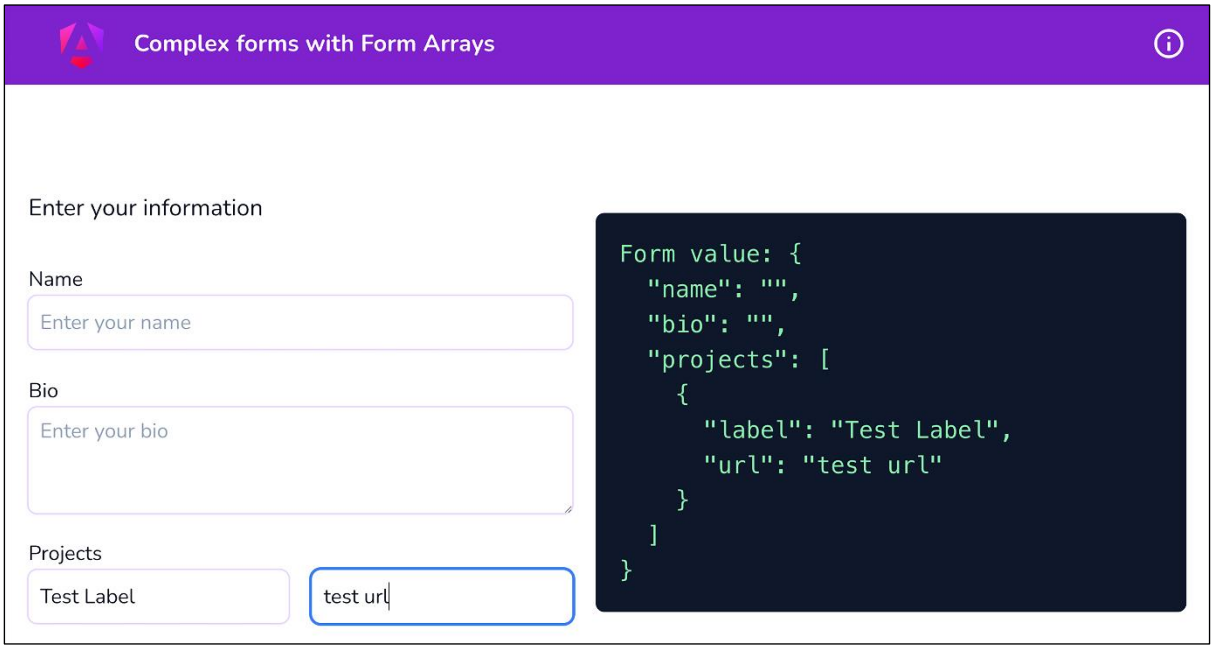
```
},
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/vc-logs/vc-logs.component.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/form-validation.service.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/version-control-rf/version-control-rf.component.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/version-control-rf-async/version-control-rf-async.component.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/app.component.spec.ts
 PASS  ng-testing-forms  apps/chapter08/ng-testing-forms/src/app/components/version-control-tdf/version-control-tdf.component.spec.ts

Test Suites: 6 passed, 6 total
Tests:       15 passed, 15 total
Snapshots:   0 total
Time:        4.978 s
```

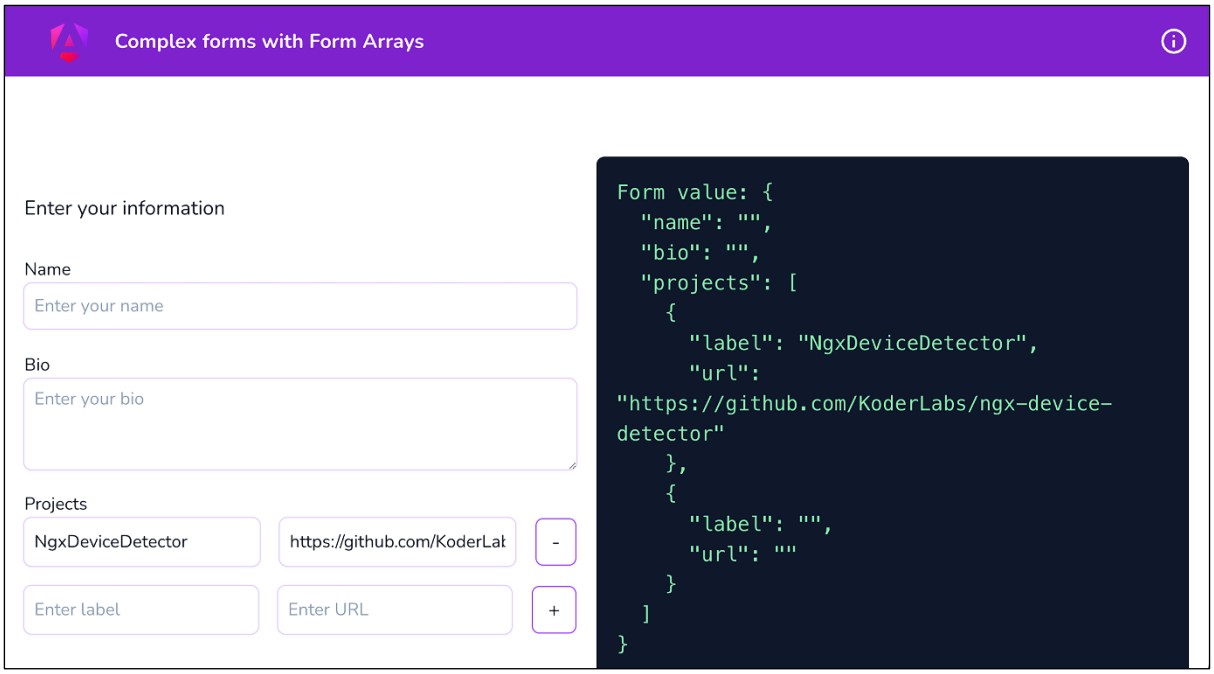


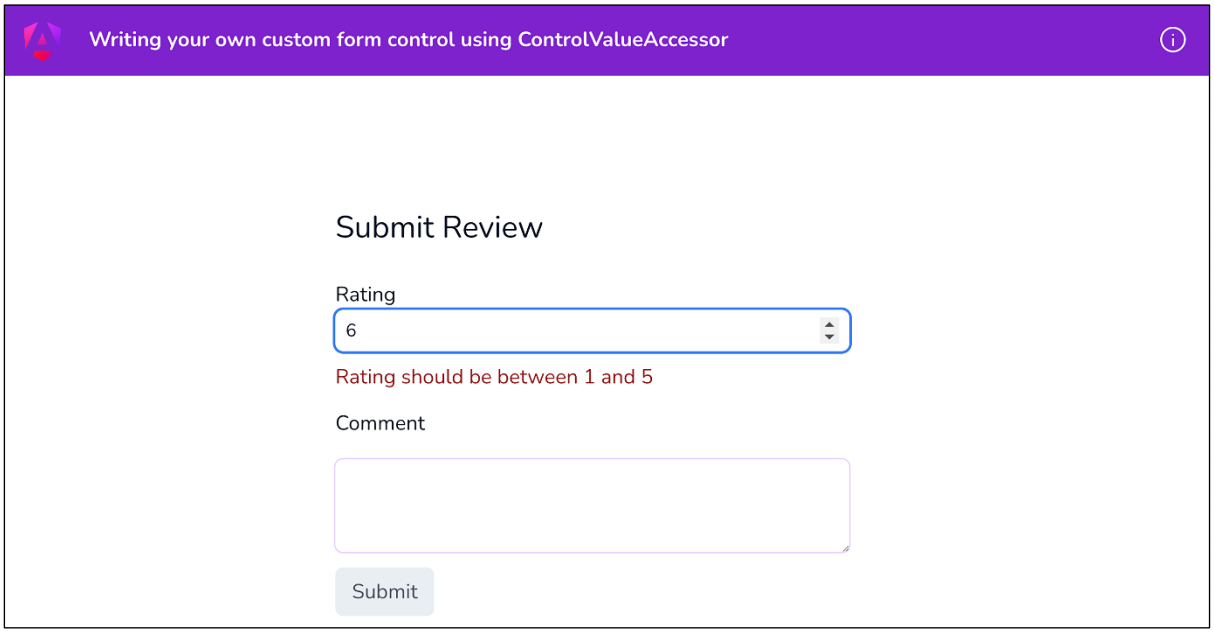

Server side validation using asynchronous validator functions
Version Number
0.0.0
Use semantic versioning (x.x.x)
The version should be greater than the last version
Submit
Latest Version = 0.0.0
initial version is 0.0.0

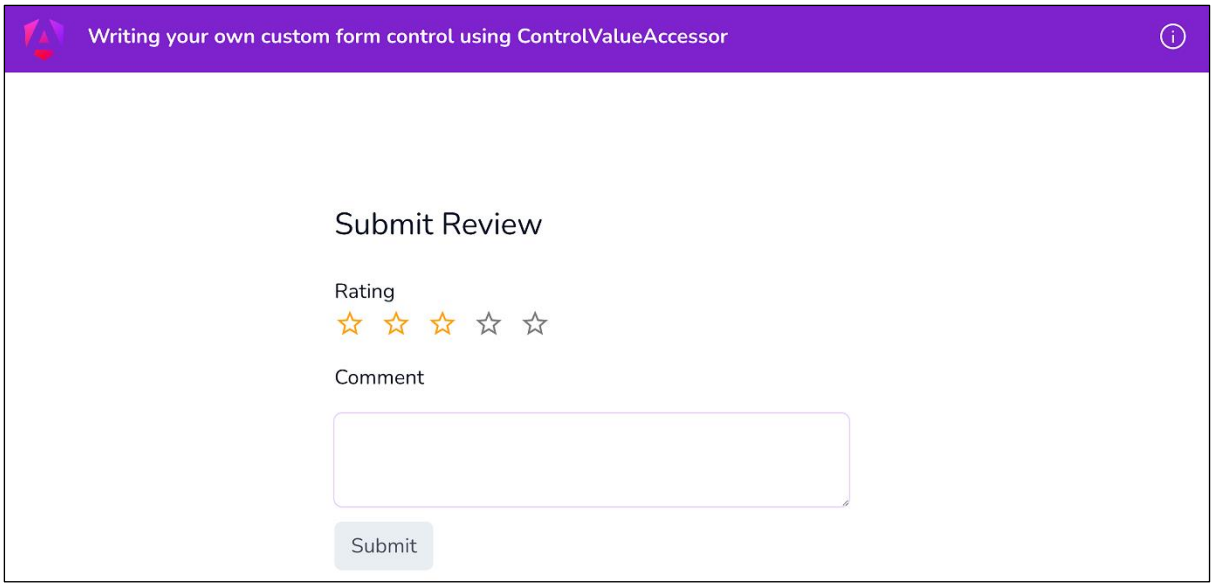

Complex forms with Form Arrays
Enter your information
Name
Enter your name
Bio
Enter your bio
Projects
Enter label
Enter URL
Form value: {
"name": "",
"bio": ""
}

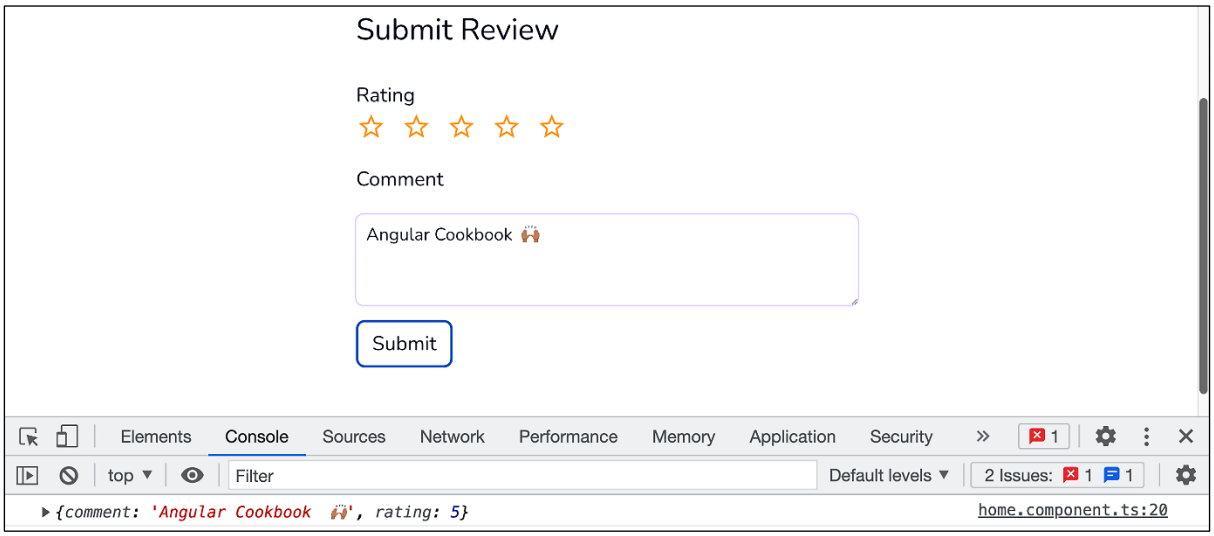

Complex forms with Form Arrays
Enter your information
Name
Enter your name
Bio
Enter your bio
Projects
Form value: {
"name": "",
"bio": "",
"projects": []
}


Complex forms with Form Arrays
Enter your information
Name
Enter your name
Bio
Enter your bio
Projects
Test Label
test url
Form value: {
"name": "",
"bio": "",
"projects": [
{
"label": "Test Label",
"url": "test url"
}
]
}

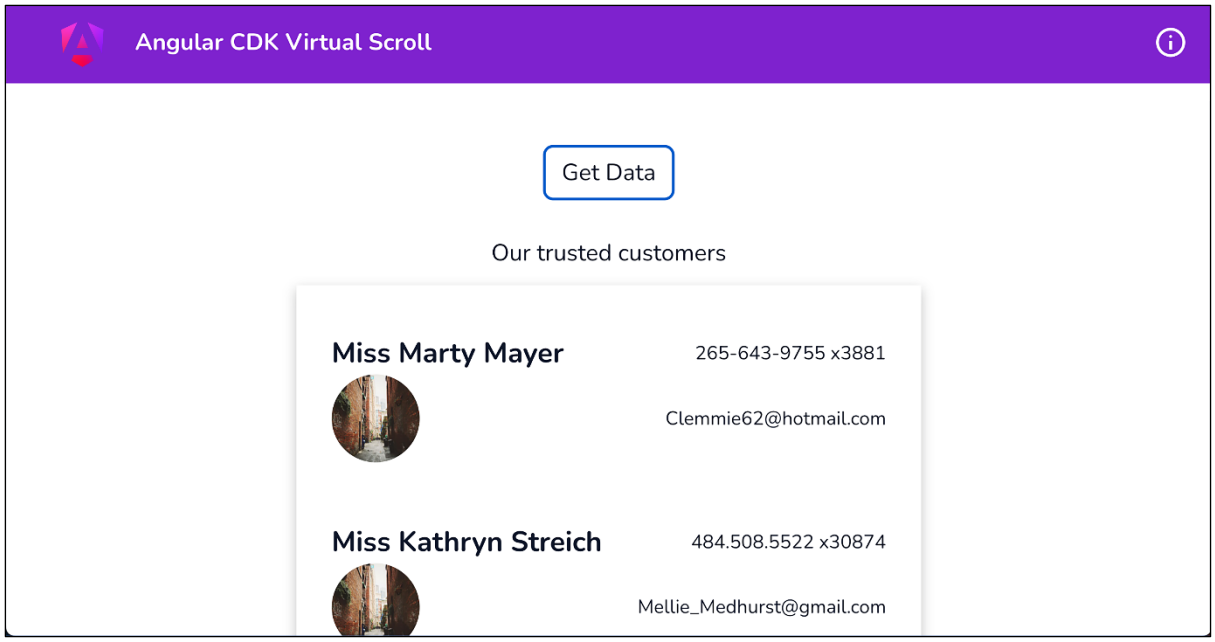

Complex forms with Form Arrays
Enter your information
Name
Enter your name
Bio
Enter your bio
Projects
NgxDeviceDetector
https://github.com/KoderLat
-
Enter label
Enter URL
+
Form value: {
"name": "",
"bio": "",
"projects": [
{
"label": "NgxDeviceDetector",
"url":
"https://github.com/KoderLabs/ngx-device-
detector"
},
{
"label": "",
"url": ""
}
]
}

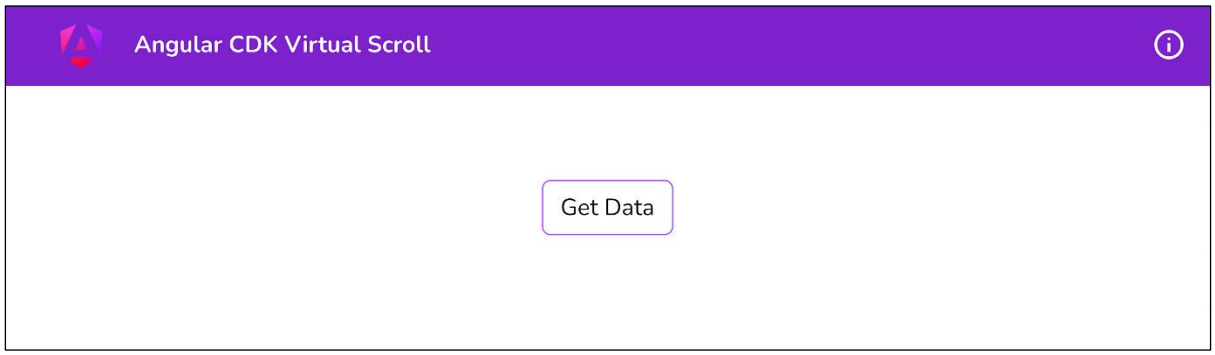

Writing your own custom form control using ControlValueAccessor
Submit Review
Rating
6
Rating should be between 1 and 5
Comment
Submit

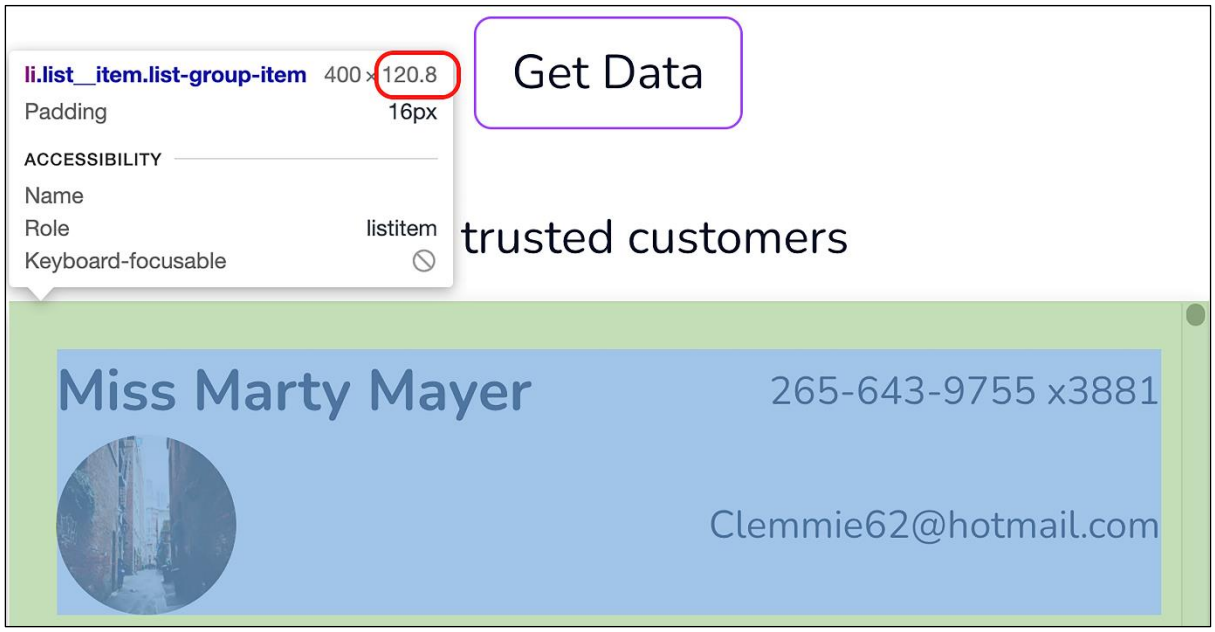


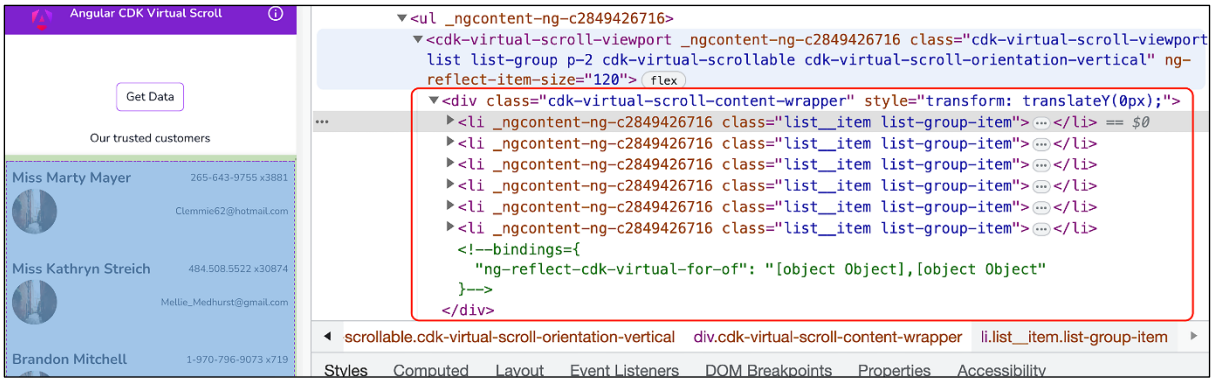


Chapter 9: Angular and the Angular CDK


Angular CDK Virtual Scroll
Get Data
Our trusted customers
Miss Marty Mayer
265-643-9755 x3881
Clemmie62@hotmail.com
Miss Kathryn Streich
484.508.5522 x30874
Mellie_Medhurst@gmail.com

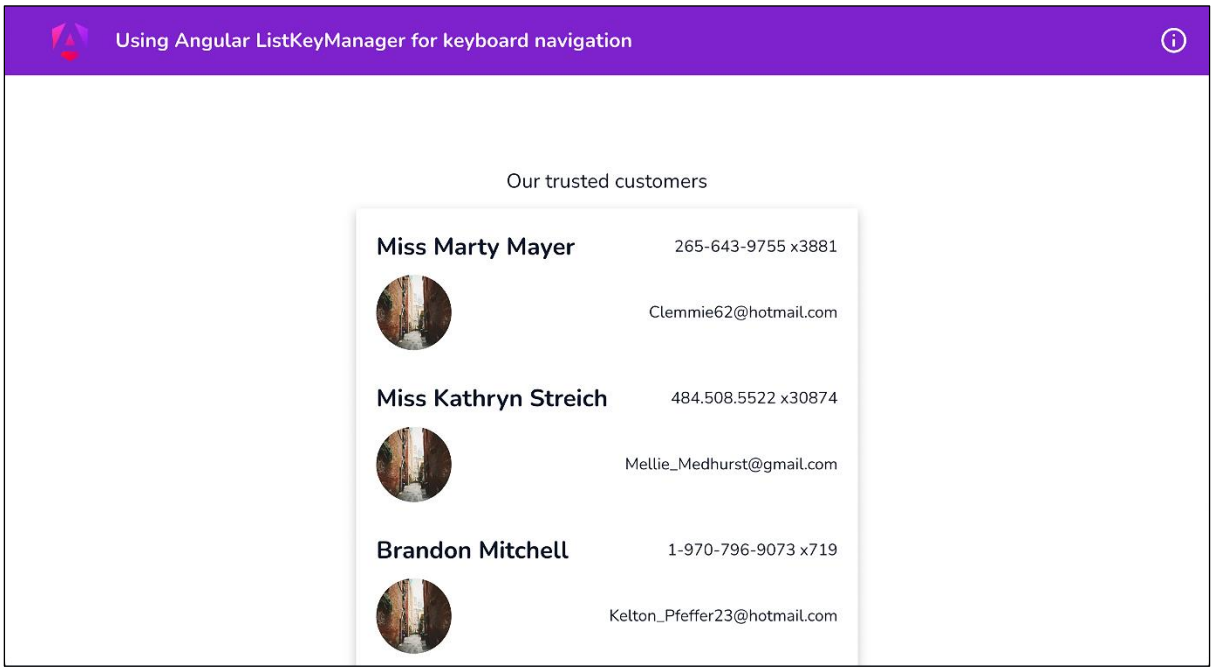

Angular CDK Virtual Scroll
Get Data

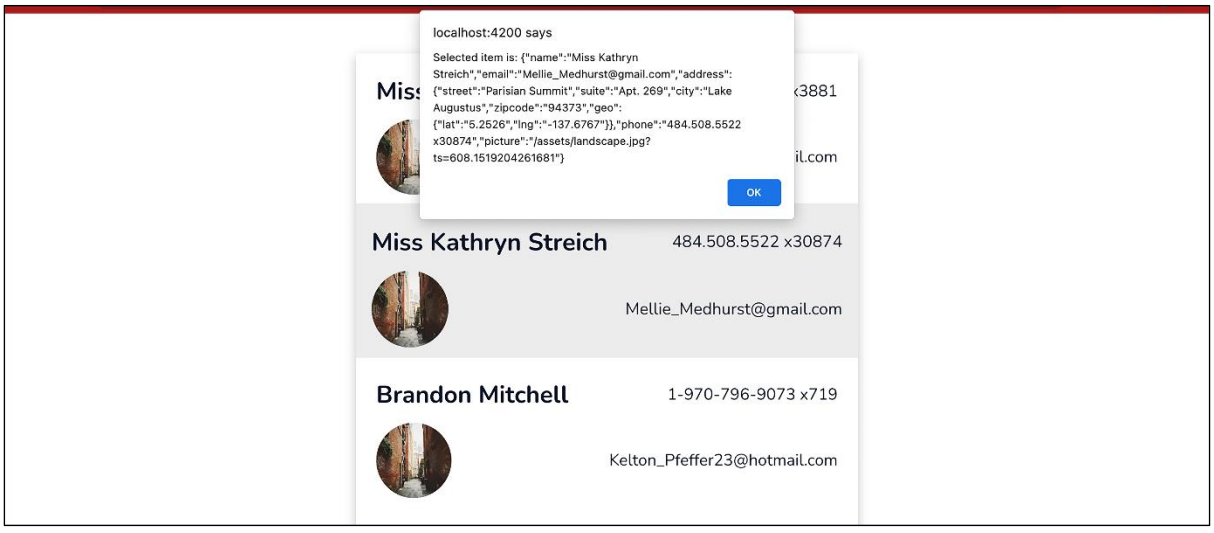

li.list__item.list-group-item 400 × 120.8
Padding 16px
ACCESSIBILITY
Name
Role listitem
Keyboard-focusable
Get Data
trusted customers
Miss Marty Mayer
265-643-9755 x3881
Clemmie62@hotmail.com

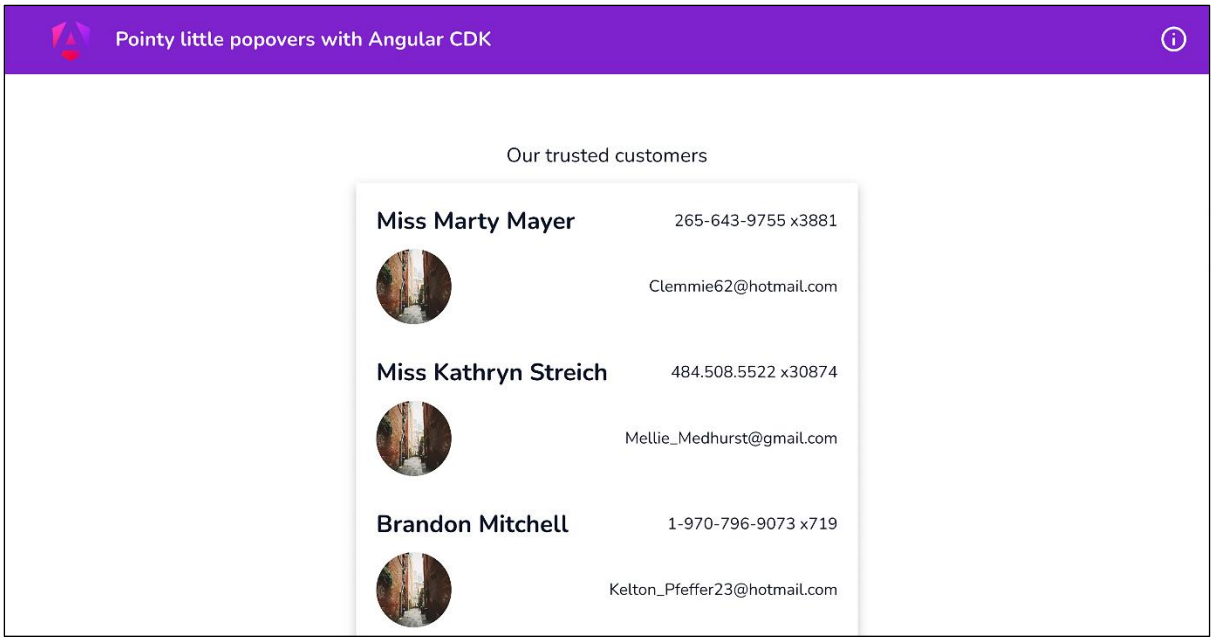

Angular CDK Virtual Scroll
Get Data
Our trusted customers
Miss Marty Mayer
265-643-9755 x3881
Clemmie62@hotmail.com
Miss Kathryn Streich
484.508.5522 x30874
Mellie_Medhurst@gmail.com
Brandon Mitchell
1-970-796-9073 x719
<ul _ngcontent-ng-c2849426716>
<cdk-virtual-scroll-viewport _ngcontent-ng-c2849426716 class="cdk-virtual-scroll-viewport list list-group p-2 cdk-virtual-scrollable cdk-virtual-scroll-orientation-vertical" ng-reflect-item-size="120">
flex

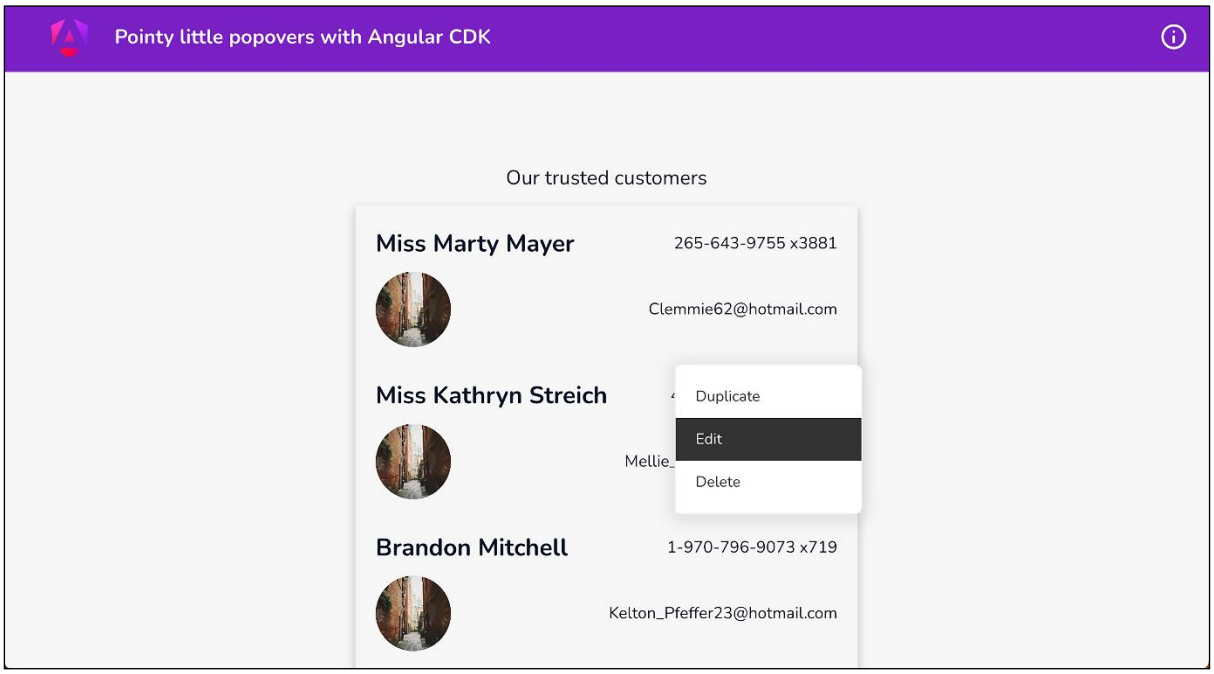
<li _ngcontent-ng-c2849426716 class="list__item list-group-item">
<!--bindings={
"ng-reflect-cdk-virtual-for-of": "[object Object],[object Object"
}-->

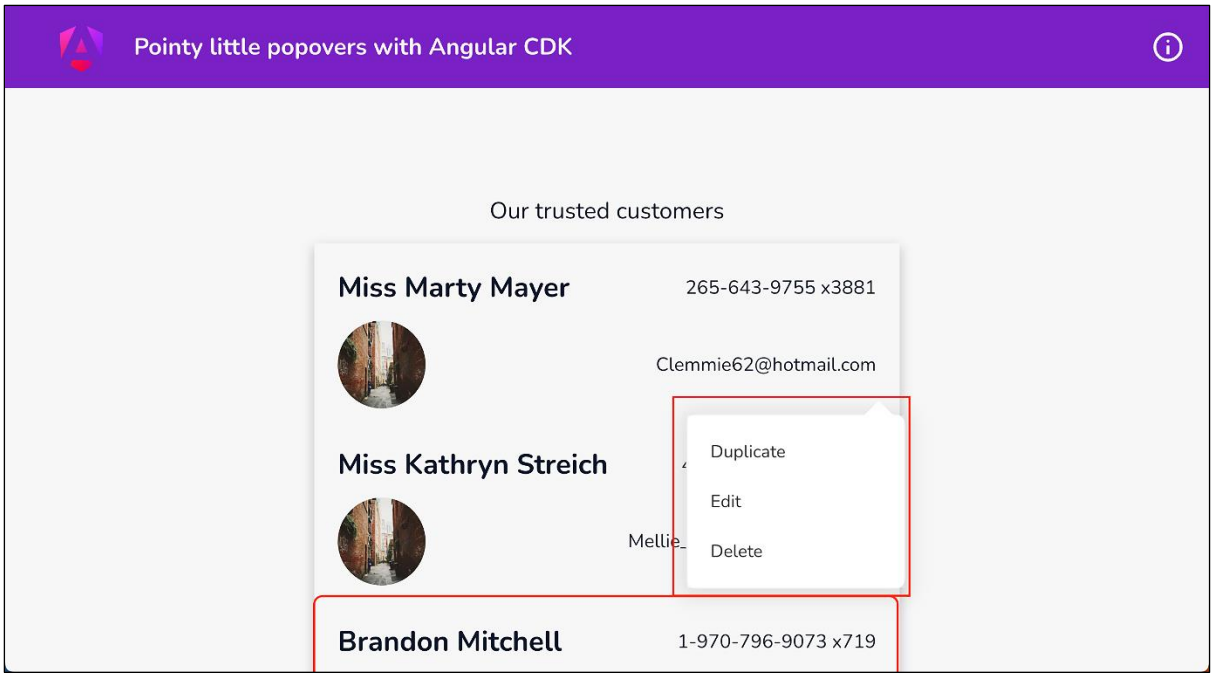
scrollable.cdk-virtual-scroll-orientation-vertical
div.cdk-virtual-scroll-content-wrapper
li.list__item.list-group-item
Styles
Computed
Layout
Event Listeners
DOM Breakpoints
Properties
Accessibility

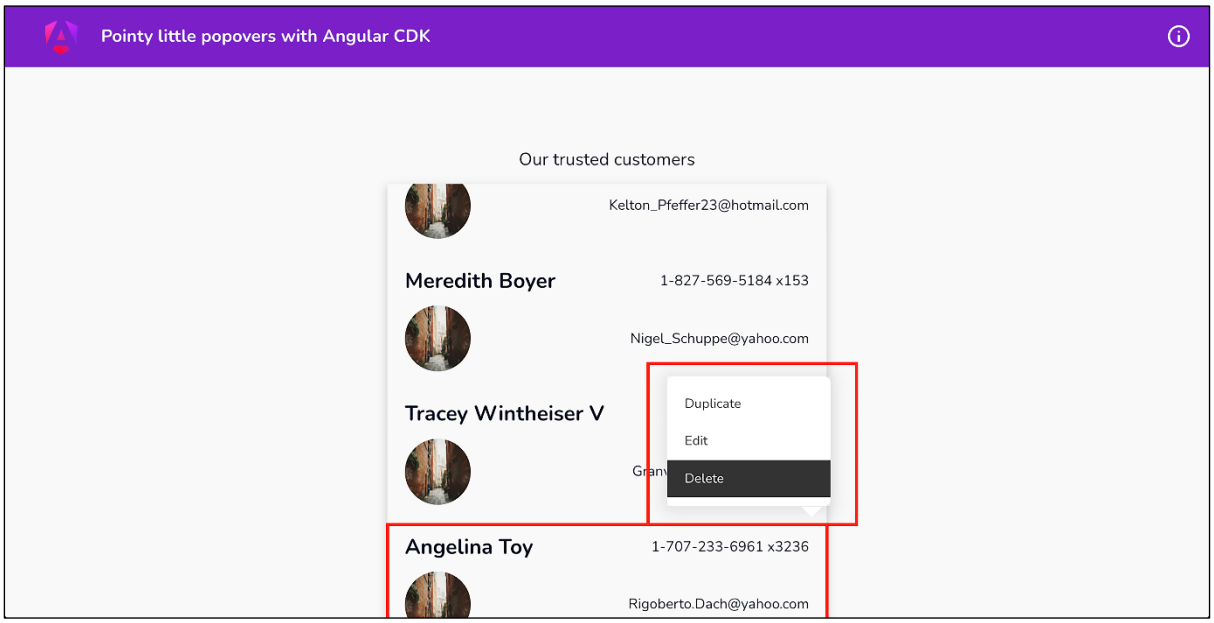

Using Angular ListKeyManager for keyboard navigation
Our trusted customers
Miss Marty Mayer
265-643-9755 x3881
Clemmie62@hotmail.com
Miss Kathryn Streich
484.508.5522 x30874
Mellie_Medhurst@gmail.com
Brandon Mitchell
1-970-796-9073 x719
Kelton_Pfeffer23@hotmail.com

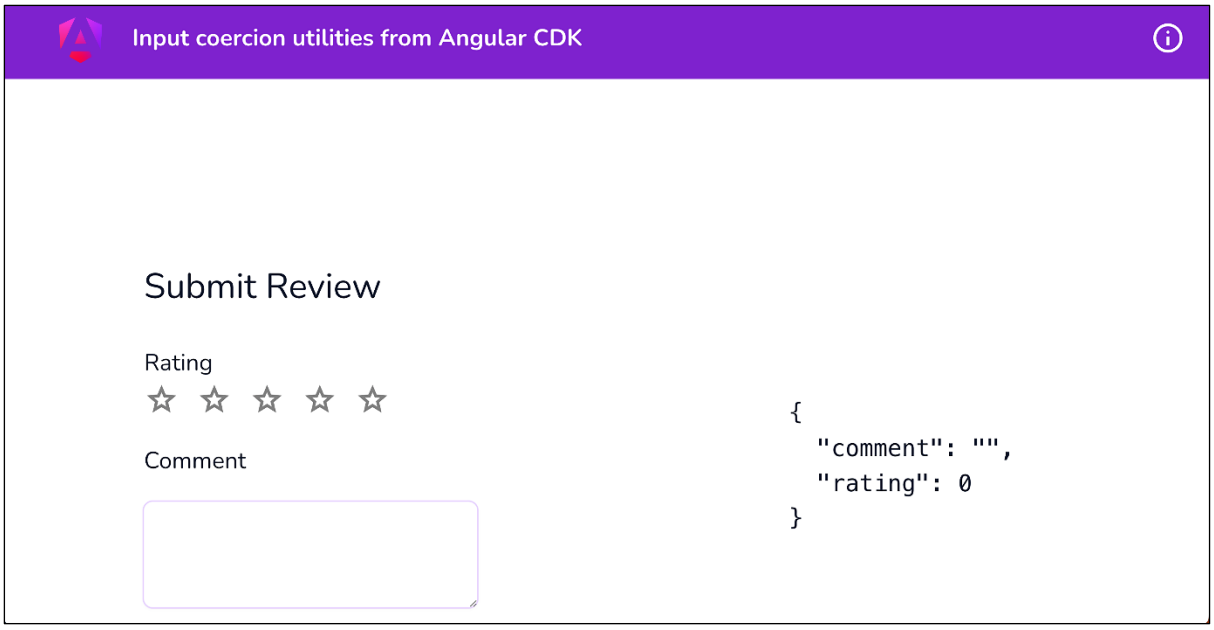

localhost:4200 says
Selected item is: {"name":"Miss Kathryn Streich","email":"Mellie_Medhurst@gmail.com","address":{"street":"Parisian Summit","suite":"Apt. 269","city":"Lake Augustus","zipcode":"94373","geo":{"lat":"5.2526","lng":"-137.6767"}},"phone":"484.508.5522 x30874","picture":"/assets/landscape.jpg?ts=608.1519204261681"}
OK
Miss Kathryn Streich
484.508.5522 x30874
Mellie_Medhurst@gmail.com
Brandon Mitchell
1-970-796-9073 x719
Kelton_Pfeffer23@hotmail.com

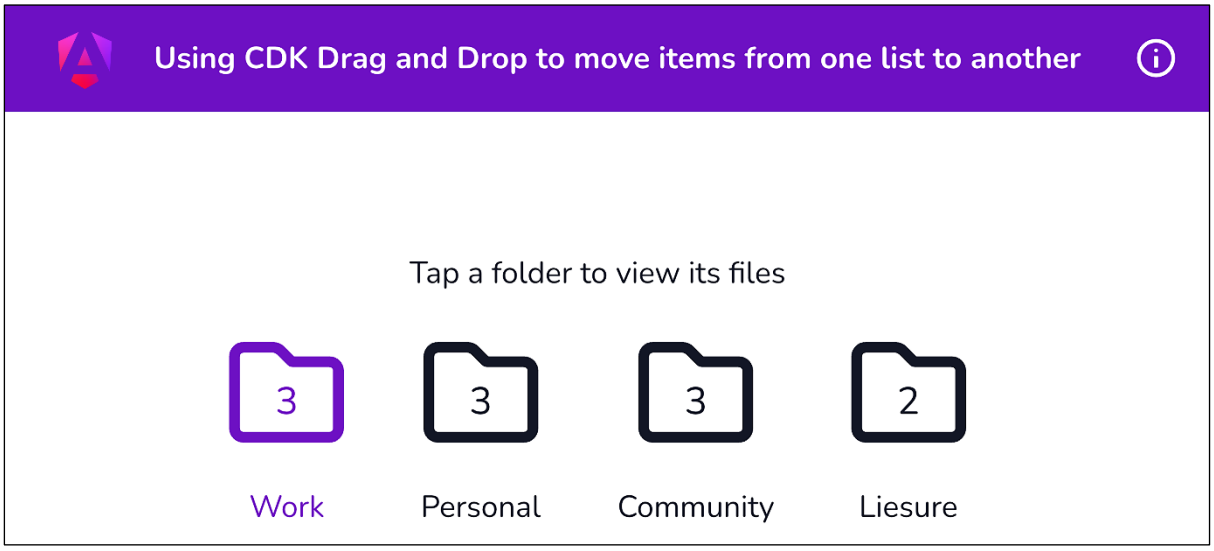

Pointy little popovers with Angular CDK
Our trusted customers
Miss Marty Mayer
265-643-9755 x3881
Clemmie62@hotmail.com
Miss Kathryn Streich
484.508.5522 x30874
Mellie_Medhurst@gmail.com
Brandon Mitchell
1-970-796-9073 x719
Kelton_Pfeffer23@hotmail.com

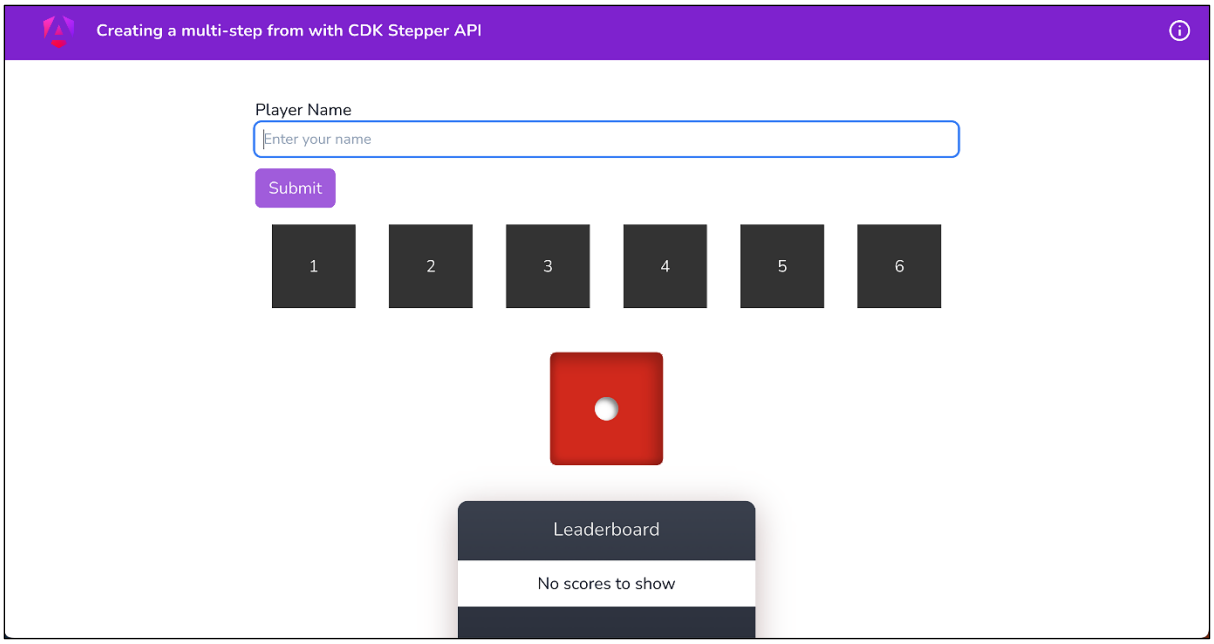

Pointy little popovers with Angular CDK
Our trusted customers
Miss Marty Mayer
265-643-9755 x3881
Clemmie62@hotmail.com
Miss Kathryn Streich
Duplicate
Edit
Delete
Mellie_
Brandon Mitchell
1-970-796-9073 x719
Kelton_Pfeffer23@hotmail.com

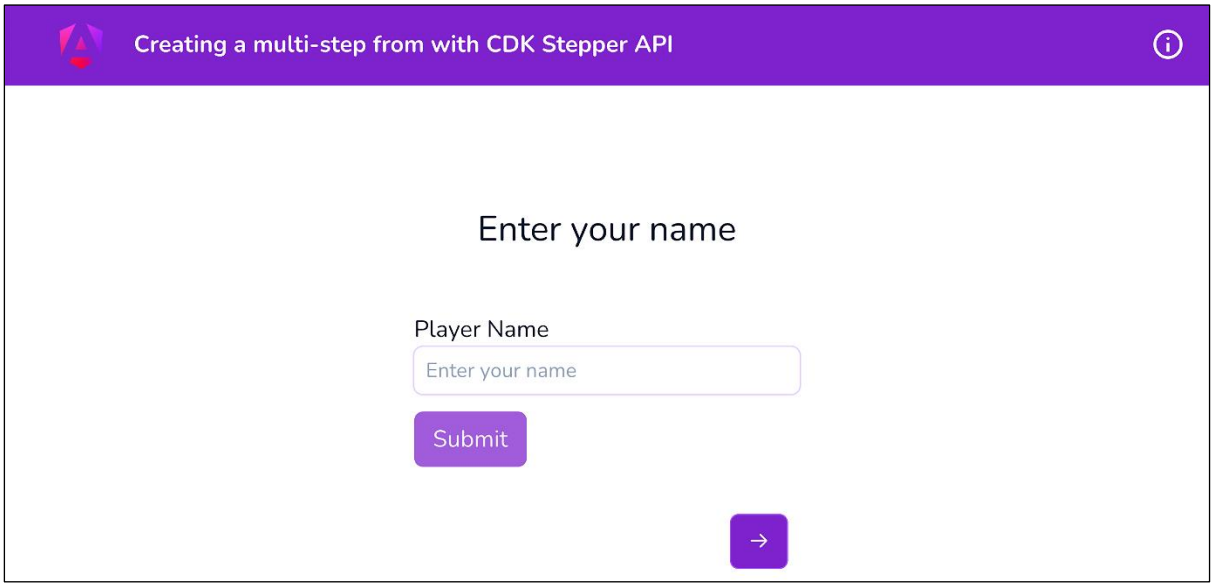

Pointy little popovers with Angular CDK
Our trusted customers
Miss Marty Mayer
265-643-9755 x3881
Clemmie62@hotmail.com
Miss Kathryn Streich
Mellie_
Duplicate
Edit
Delete
Brandon Mitchell
1-970-796-9073 x719


Pointy little popovers with Angular CDK
Our trusted customers
Kelton_Pfeffer23@hotmail.com
Meredith Boyer
1-827-569-5184 x153
Nigel_Schuppe@yahoo.com
Tracey Wintheiser V
Gran
Duplicate
Edit
Delete
Angelina Toy
1-707-233-6961 x3236
Rigoberto.Dach@yahoo.com


Input coercion utilities from Angular CDK
Submit Review
Rating
Comment
{
"comment": "",
"rating": 0
}


Using CDK Drag and Drop to move items from one list to another
Tap a folder to view its files
3
Work
3
Personal
3
Community
2
Liesure


Creating a multi-step from with CDK Stepper API
Player Name
Enter your name
Submit
1
2
3
4
5
6
Leaderboard
No scores to show


Creating a multi-step from with CDK Stepper API
Enter your name
Player Name
Enter your name
Submit

Creating a multi-step from with CDK Stepper API

Results

Leaderboard

1 Ahsan 50

Accessible Listbox interactions using CDK Listbox directives

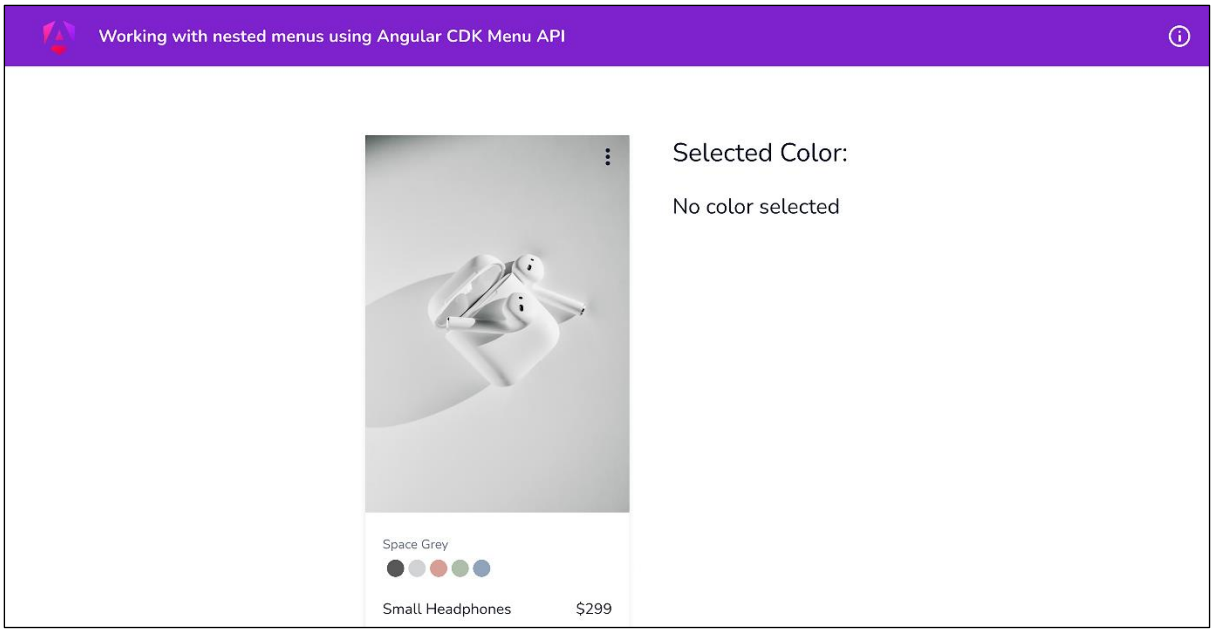
Space Grey

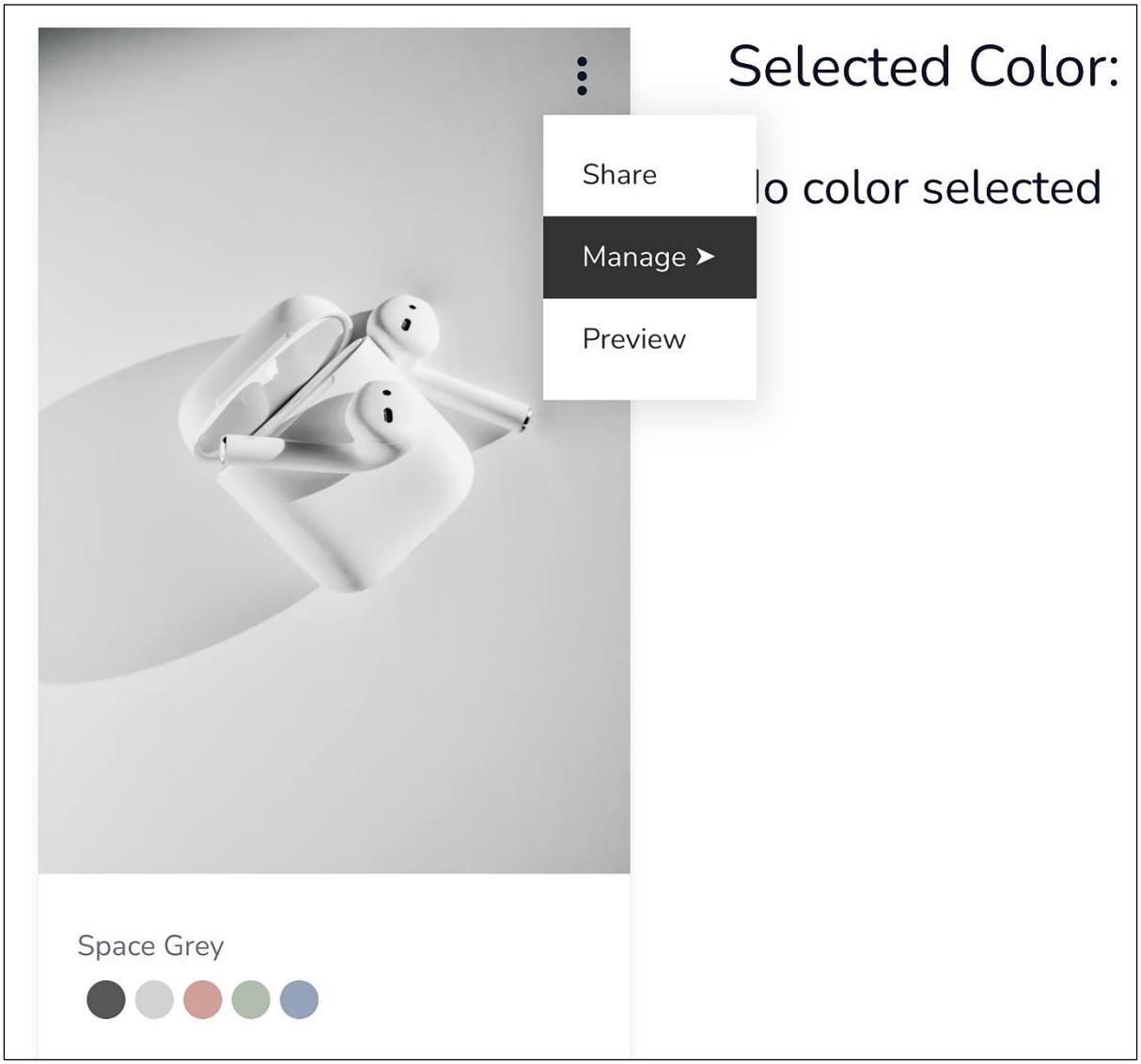
Small Headphones $299

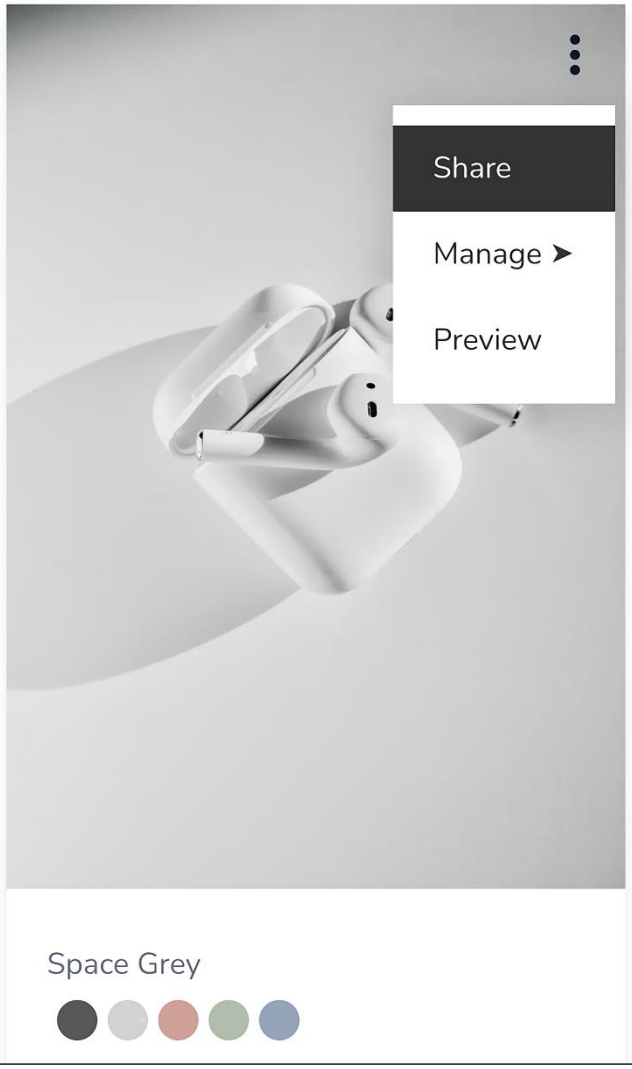
Add to Cart

Selected Color:

No color selected


Working with nested menus using Angular CDK Menu API
Selected Color:
No color selected
Space Grey
Small Headphones
$299

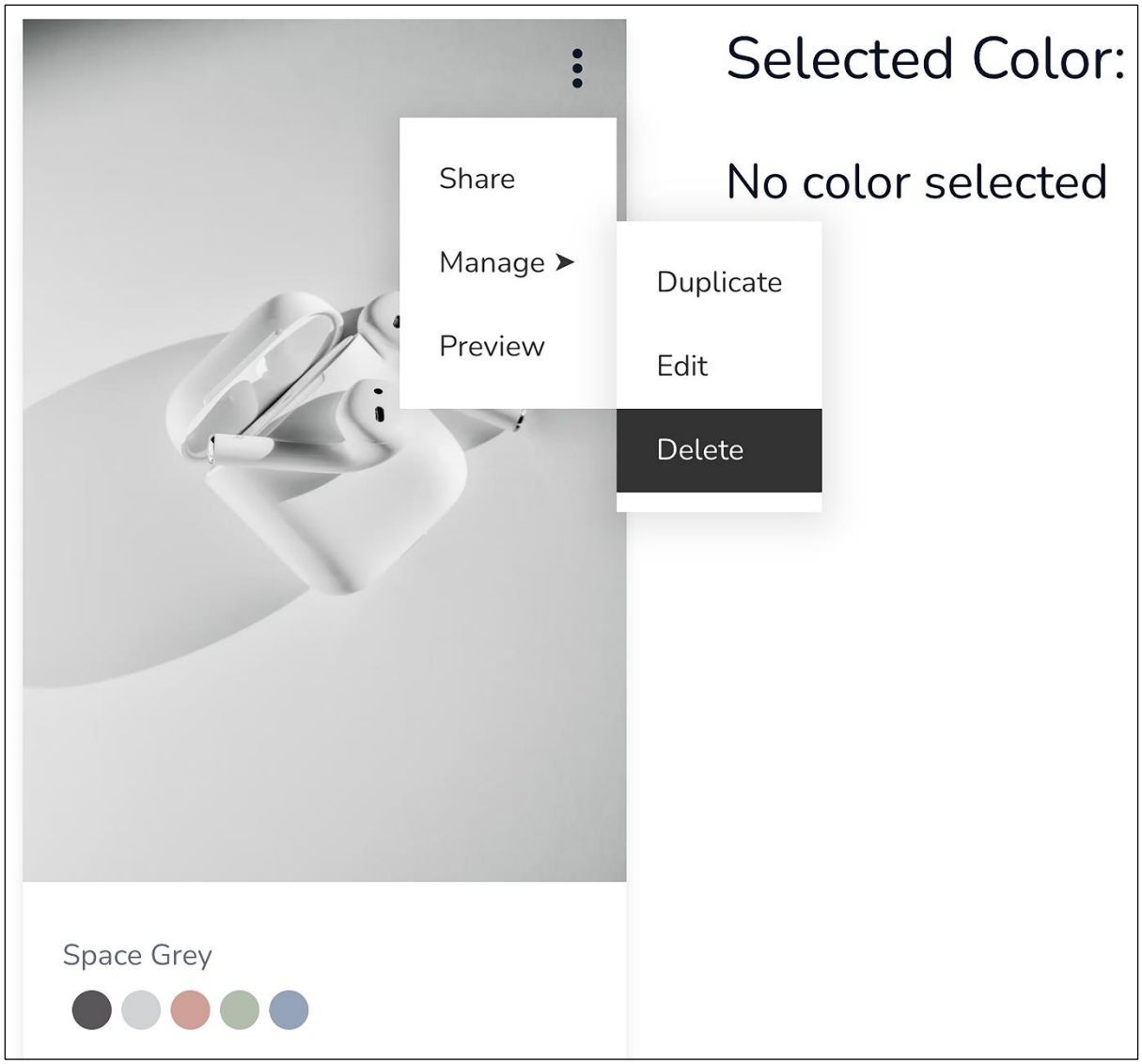

Selected Color:
Share
Manage
Preview
Space Grey



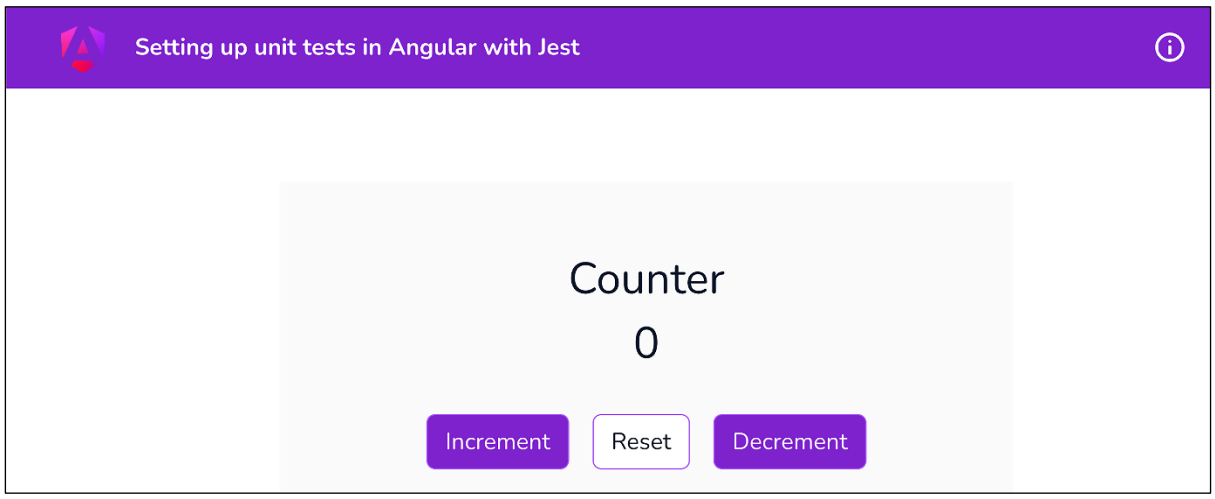
Space Grey

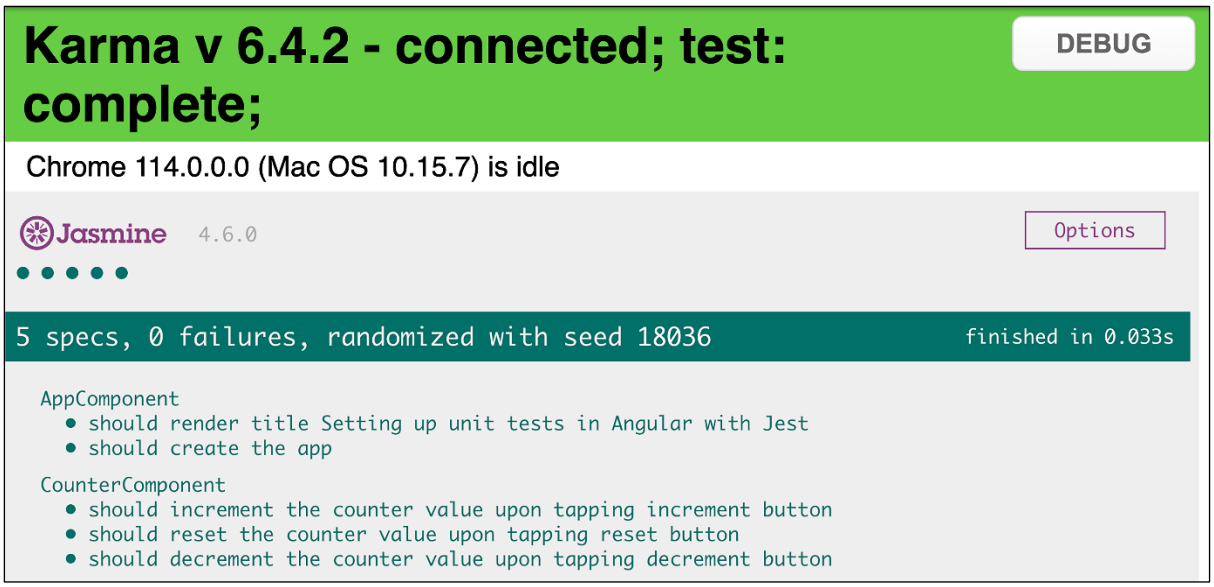
Selected Color:

No color selected

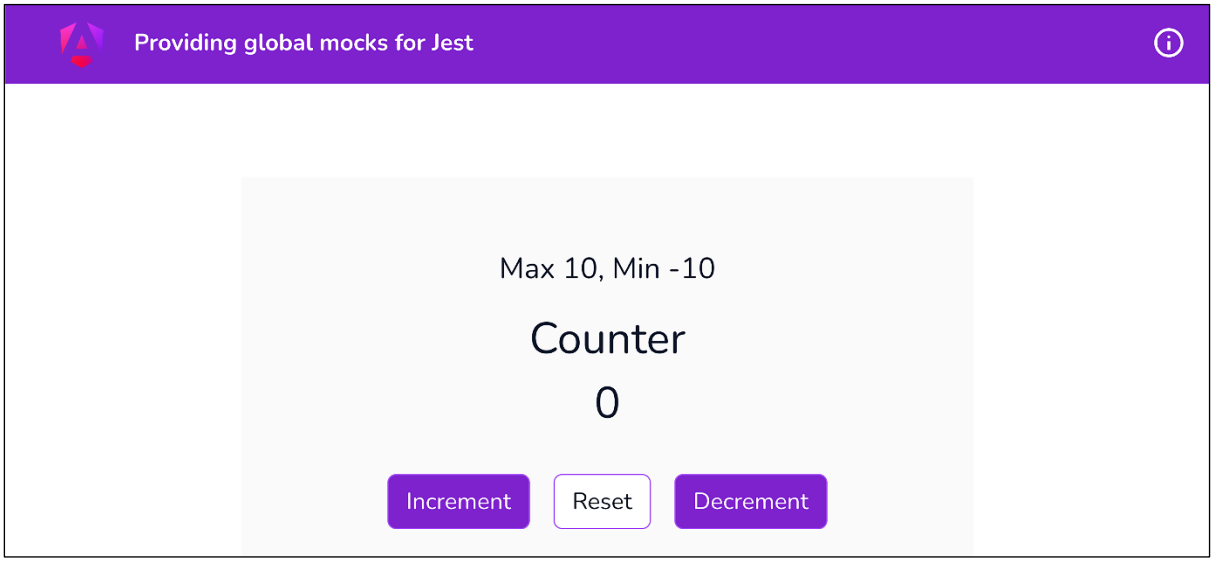


Chapter 10: Writing Unit Tests in Angular with Jest

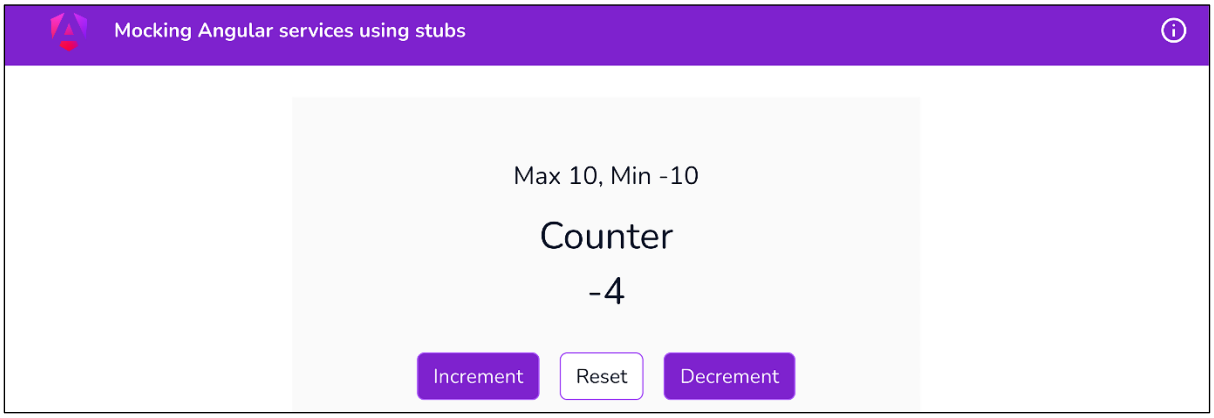




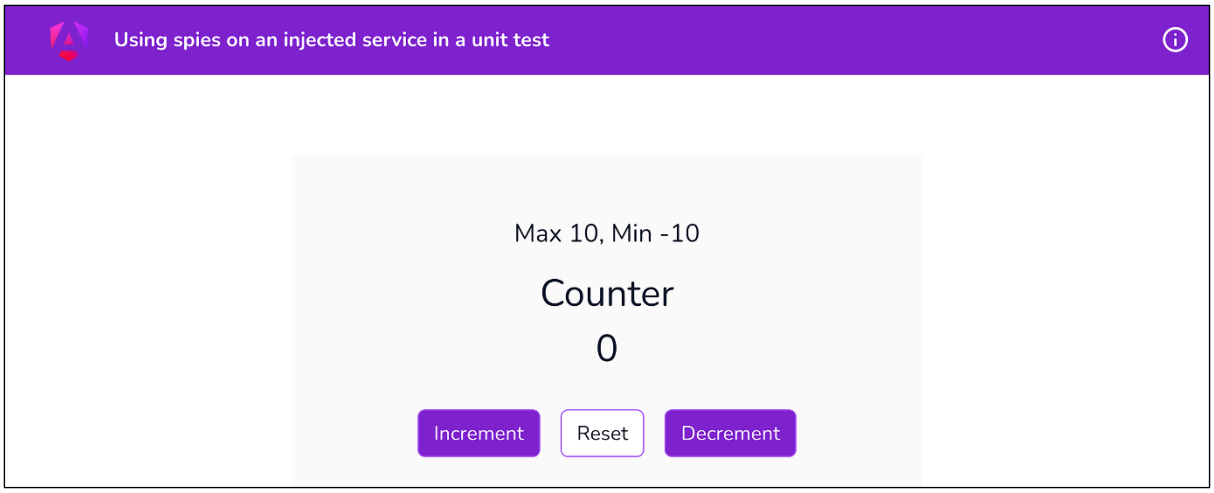

```
> ng-jest-setup@0.0.0 test
> jest

 PASS  src/app/app.component.spec.ts
 PASS  src/app/counter/counter.component.spec.ts

Test Suites: 2 passed, 2 total
Tests:       5 passed, 5 total
Snapshots:   0 total
Time:        0.952 s, estimated 1 s
Ran all test suites.
```

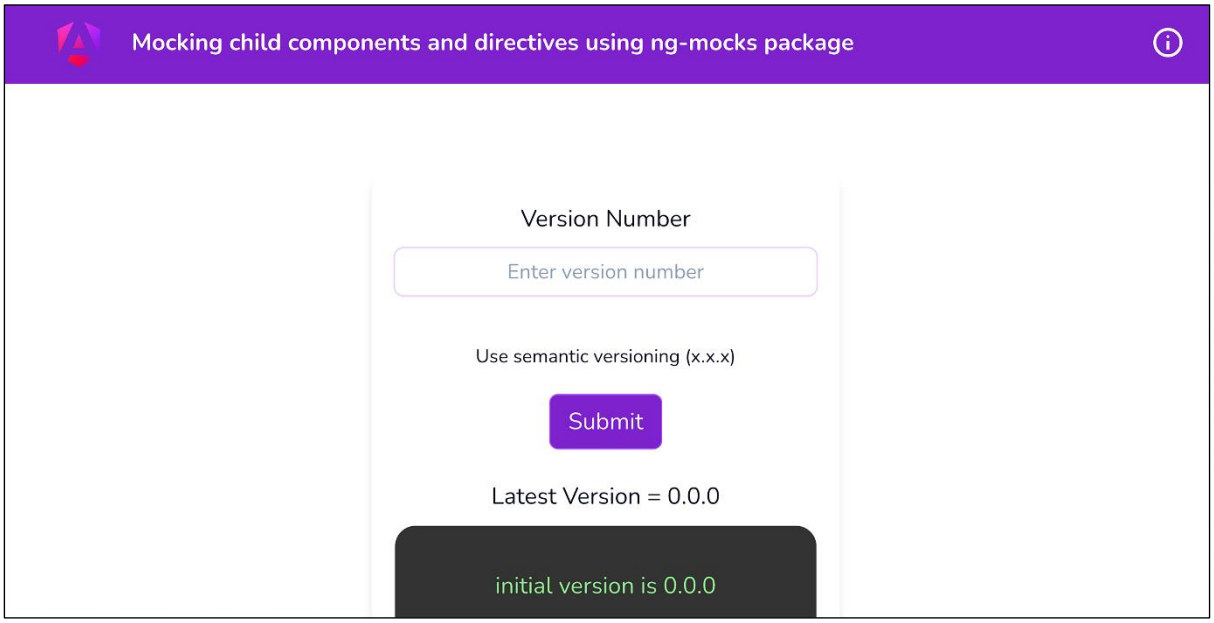


```
FAIL ng-jest-global-mocks apps/chapter10/ng-jest-global-mocks/src/app/counter/
counter.component.spec.ts
  ● CounterComponent › should call the localStorage.getItem method on component in
it

    expect(received).toHaveBeenCalled()

    Matcher error: received value must be a mock or spy function

    Received has type:  function
    Received has value: [Function getItem]

      57 |     const spy = jest.spyOn(localStorage, 'getItem');
      58 |     fixture.detectChanges();
    > 59 |     expect(spy).toHaveBeenCalled();
         |                 ^
      60 |   });
      61 |
      62 |
```




```
  ● CounterComponent › should call the localStorage.getItem method on component in
it

    expect(jest.fn()).toHaveBeenCalled()

    Expected number of calls: >= 1
    Received number of calls:    0

      63 |     jest.spyOn(localStorage, 'getItem');
      64 |     component.ngOnInit();
    > 65 |     expect(localStorage.getItem).toHaveBeenCalled();
         |                                  ^
      66 |   });
      67 |
      68 |   it('should retrieve the last saved value from localStorage on compone
nt init', () => {

      at src/app/counter/counter.component.spec.ts:65:34
      at _ZoneDelegate.Object.<anonymous>._ZoneDelegate.invoke (../../../node_modu
les/zone.js/bundles/zone-testing-bundle.umd.js:416:30)
```

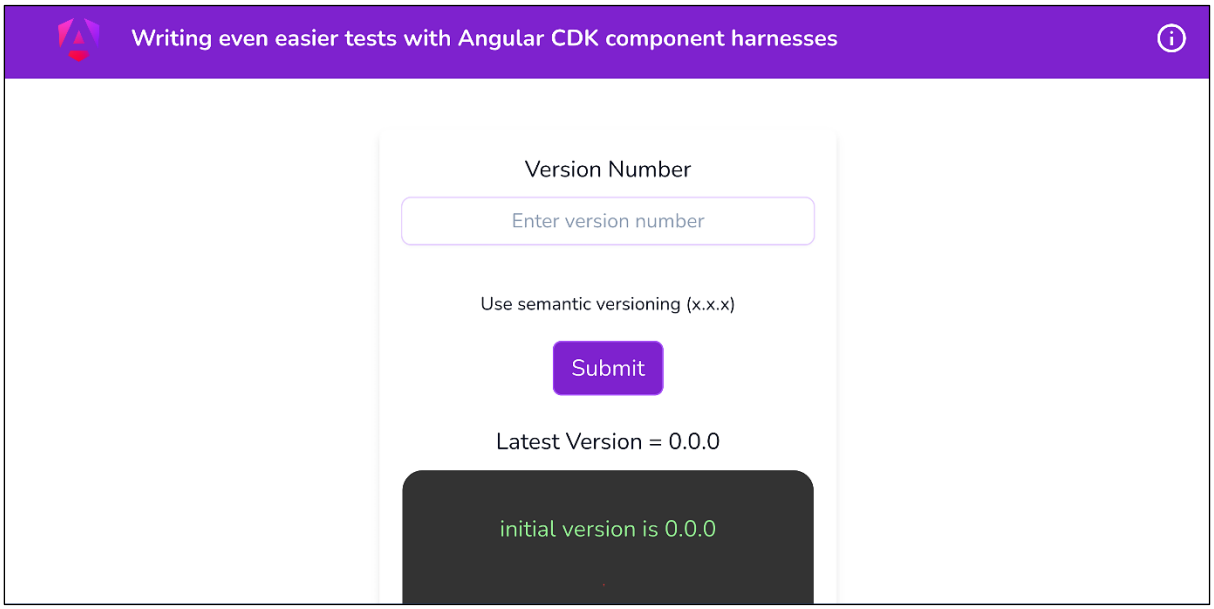




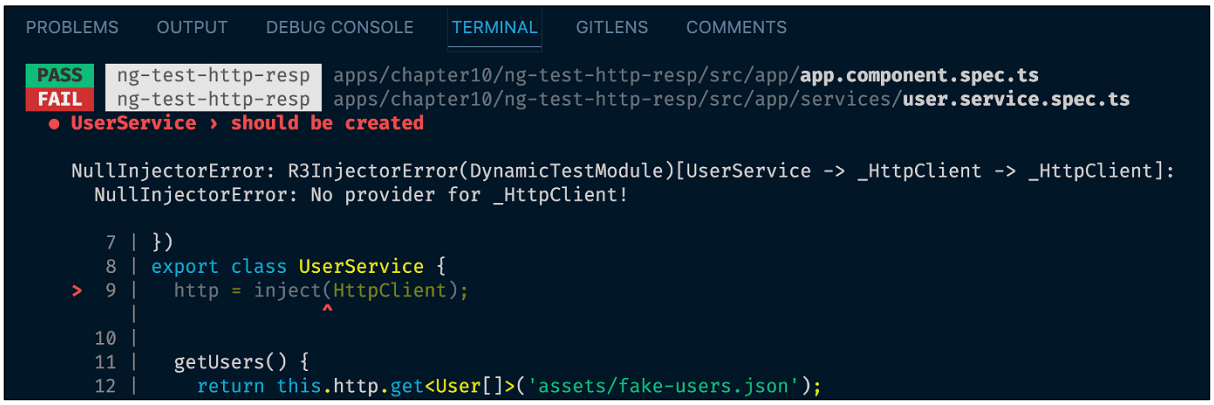

```
PASS  ng-test-ng-mocks apps/chapter10/ng-test-ng-mocks/src/app/components/version-control/version-control.component.spec.ts
FAIL  ng-test-ng-mocks apps/chapter10/ng-test-ng-mocks/src/app/app.component.spec.ts
  ● AppComponent › should render title

    NG0304: 'app-version-control' is not a known element (used in the 'AppComponent' component template):
    1. If 'app-version-control' is an Angular component, then verify that it is a part of an @NgModule where this component is declared.
    2. If 'app-version-control' is a Web Component then add 'CUSTOM_ELEMENTS_SCHEMA' to the '@NgModule.schemas' of this component to suppress this message.
```

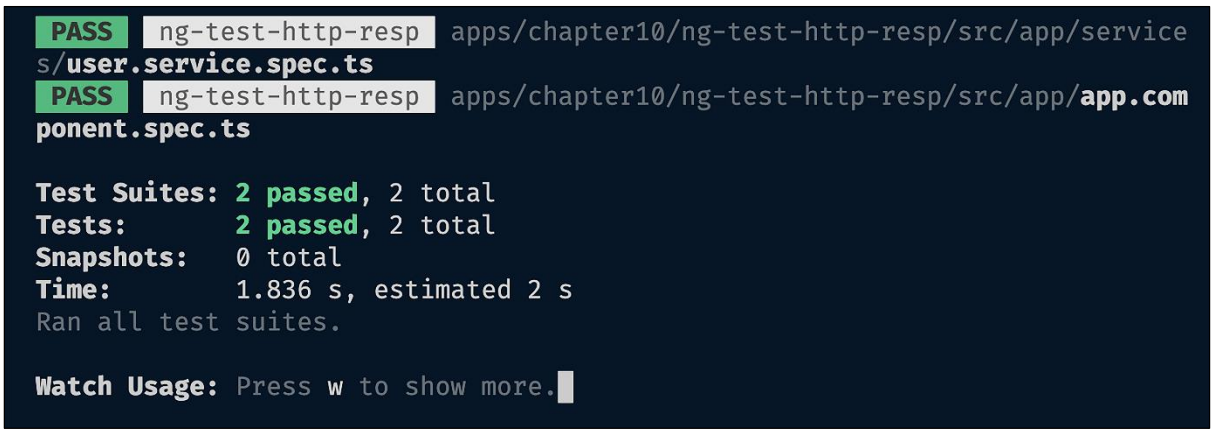
```
ode_modules/zone.js/bundles/zone-testing-bundle.umd.js:415:56)
      at Zone.Object.<anonymous>.Zone.run (../../../node_modules/zone.js/b
undles/zone-testing-bundle.umd.js:173:47)
      at Object.wrappedFunc (../../../node_modules/zone.js/bundles/zone-te
sting-bundle.umd.js:4208:34)

Test Suites: 1 failed, 2 skipped, 1 of 3 total
Tests:       1 failed, 2 skipped, 3 total
Snapshots:   0 total
Time:        2.003 s
Ran all test suites with tests matching "App".

Watch Usage: Press w to show more.
```

```
PASS  ng-test-ng-mocks  apps/chapter10/ng-test-ng-mocks/src/app/app.comp
onent.spec.ts

Test Suites: 2 skipped, 1 passed, 1 of 3 total
Tests:       2 skipped, 1 passed, 3 total
Snapshots:   0 total
Time:        2.154 s
Ran all test suites with tests matching "App".

Watch Usage: Press w to show more.
```

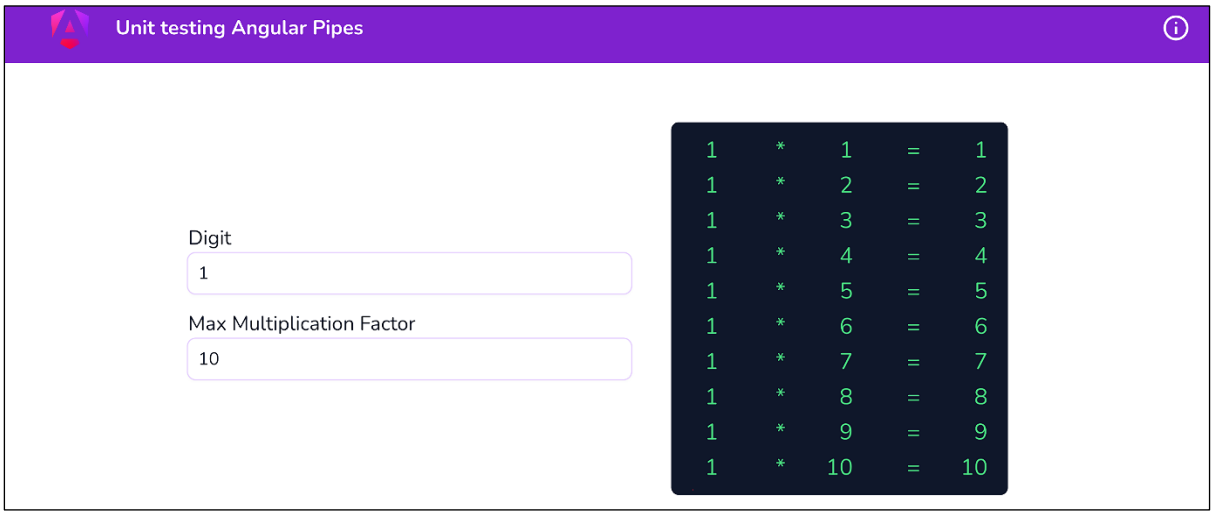


Unit Testing responses from HTTP calls
HTTP Response
[
{
"id": 1,
"name": "Leanne Graham",
"username": "Bret",
"email": "Sincere@april.biz",
"address": {
"street": "Kulas Light",
"suite": "Apt. 556",
"city": "Gwenborough",
"zipcode": "92998-3874",

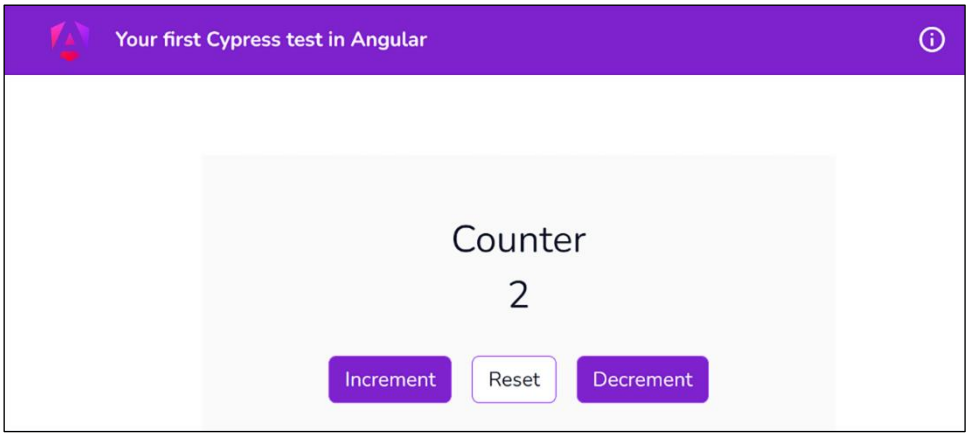

PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
GITLENS
COMMENTS
PASS ng-test-http-resp apps/chapter10/ng-test-http-resp/src/app/app.component.spec.ts
FAIL ng-test-http-resp apps/chapter10/ng-test-http-resp/src/app/services/user.service.spec.ts
● UserService › should be created
NullInjectorError: R3InjectorError(DynamicTestModule)[UserService -> _HttpClient -> _HttpClient]:
NullInjectorError: No provider for _HttpClient!
7 | })
8 | export class UserService {
> 9 | http = inject(HttpClient);
^
10 |
11 | getUsers() {
12 | return this.http.get<User[]>('assets/fake-users.json');

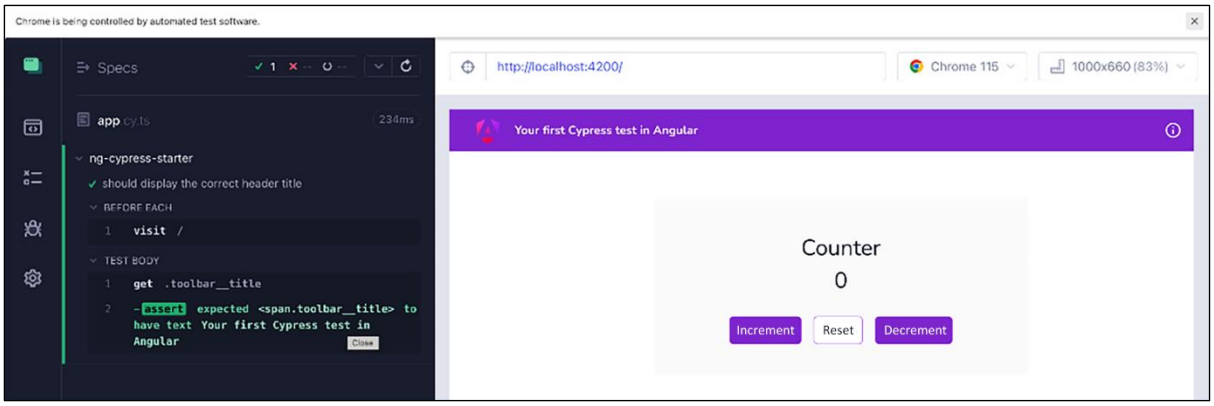

PASS ng-test-http-resp apps/chapter10/ng-test-http-resp/src/app/services/user.service.spec.ts
PASS ng-test-http-resp apps/chapter10/ng-test-http-resp/src/app/app.component.spec.ts
Test Suites: 2 passed, 2 total
Tests: 2 passed, 2 total
Snapshots: 0 total
Time: 1.836 s, estimated 2 s
Ran all test suites.
Watch Usage: Press w to show more.

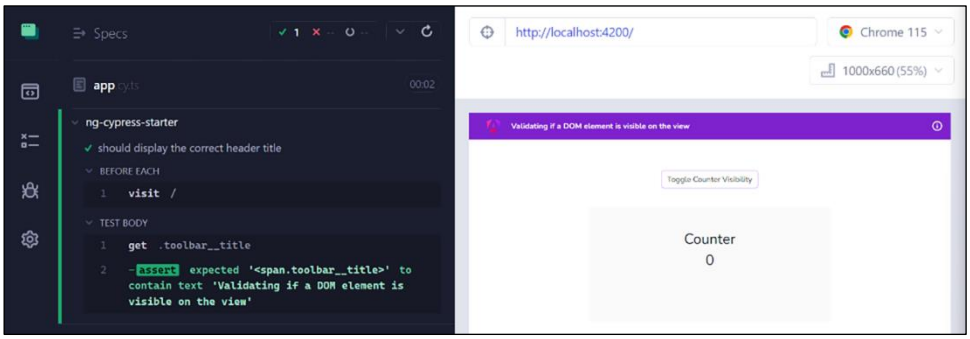
```
PASS  ng-test-http-resp  apps/chapter10/ng-test-http-resp/src/app/app.component.spec.ts
PASS  ng-test-http-resp  apps/chapter10/ng-test-http-resp/src/app/services/user.service.spec.ts

Test Suites: 2 passed, 2 total
Tests:       3 passed, 3 total
Snapshots:   0 total
Time:        2.713 s
Ran all test suites.

Watch Usage: Press w to show more.
```

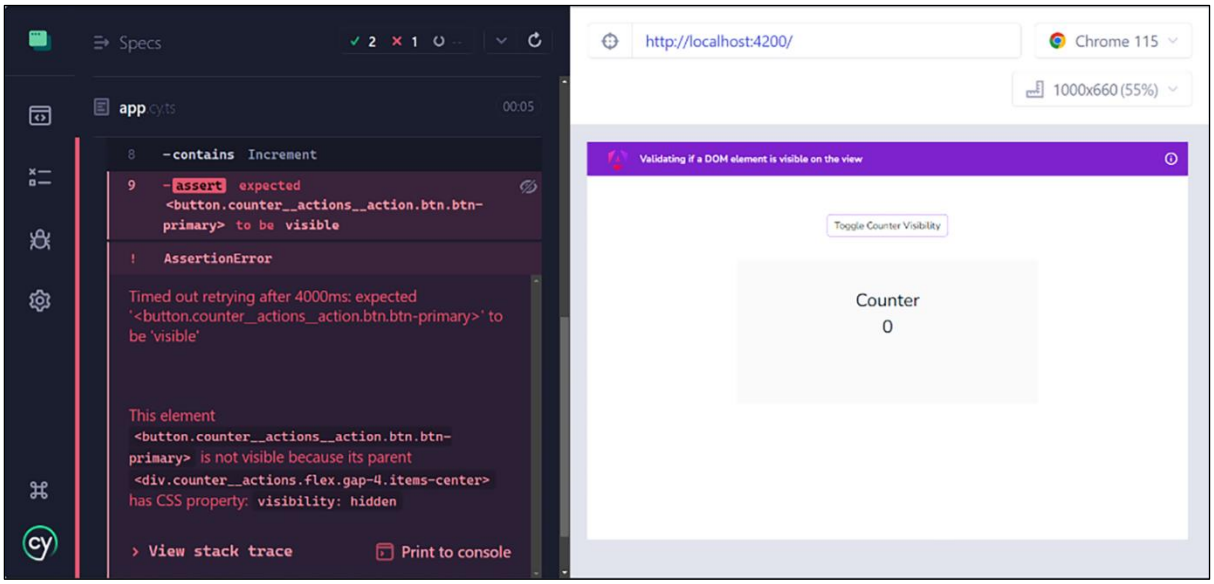


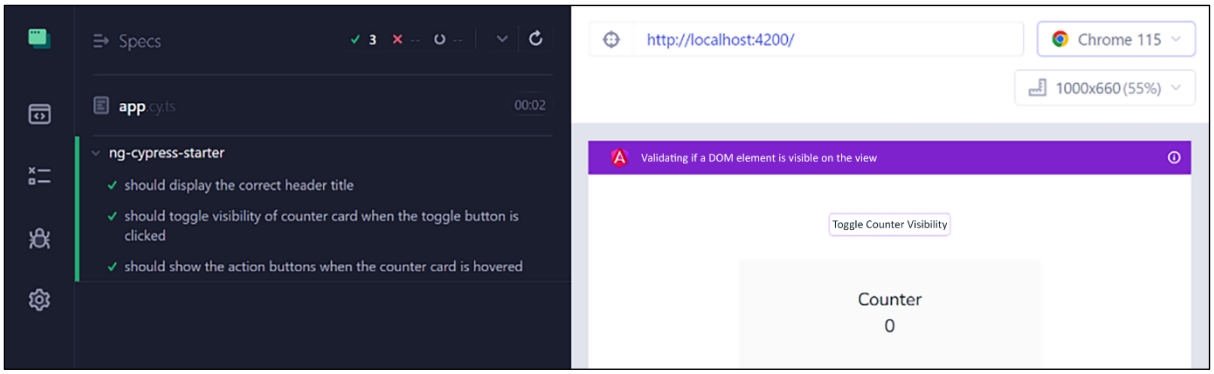
Chapter 11: E2E Tests in Angular with Cypress

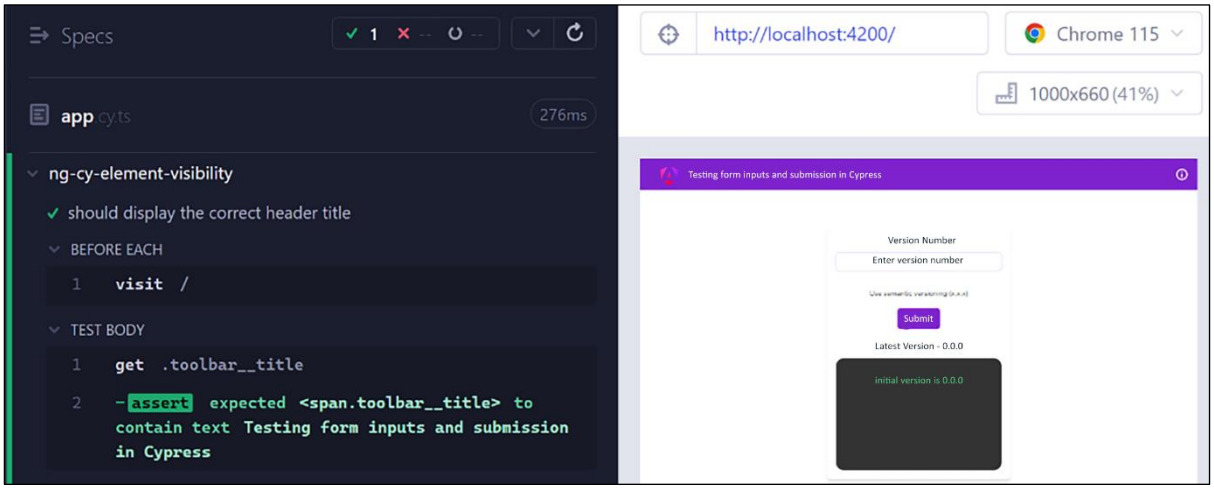


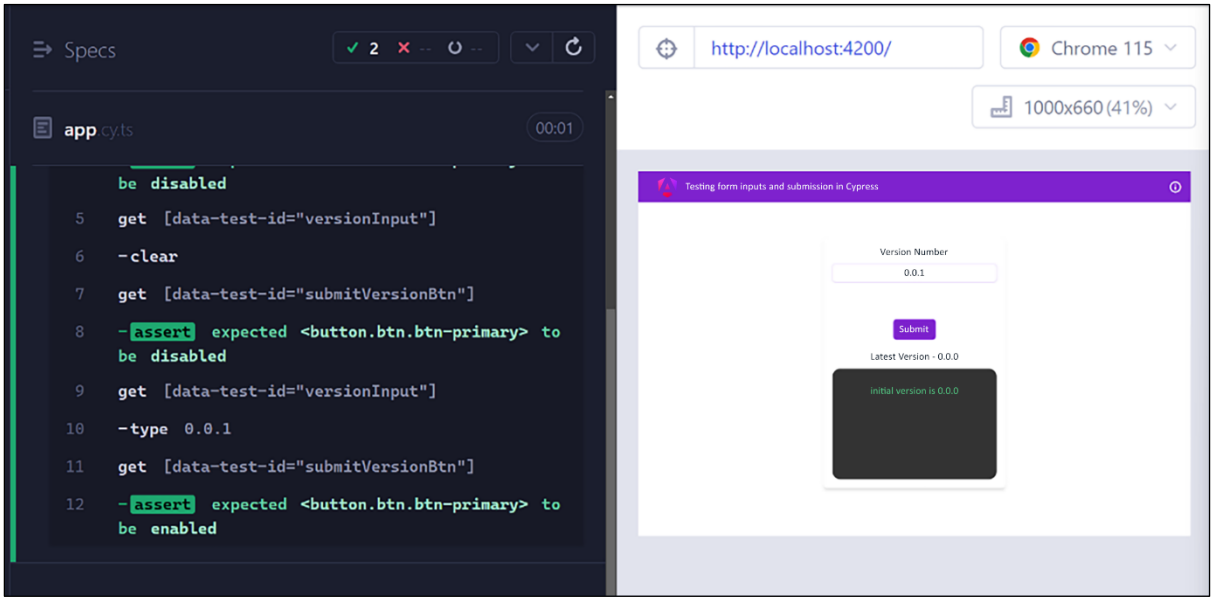

Chrome is being controlled by automated test software.
Specs
1
app.cy.ts
234ms
ng-cypress-starter
should display the correct header title
BEFORE EACH
1 visit /
TEST BODY
1 get .toolbar__title
2 -assert expected <span.toolbar__title> to have text Your first Cypress test in Angular
Close
http://localhost:4200/
Chrome 115
1000x660 (83%)
Your first Cypress test in Angular
Counter
0
Increment
Reset
Decrement

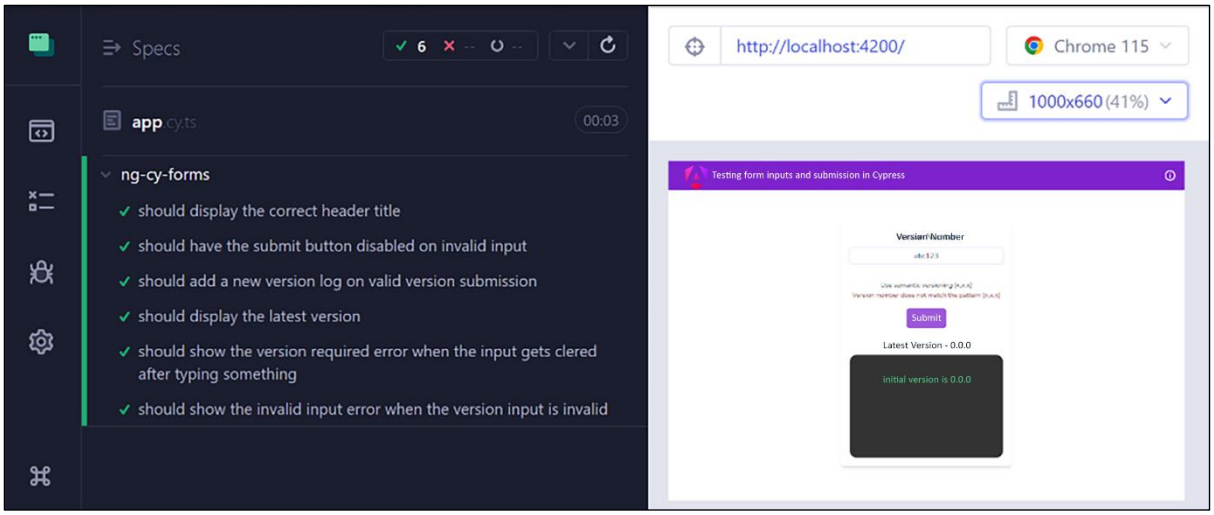

Specs
1
app.cy.ts
00:02
ng-cypress-starter
should display the correct header title
BEFORE EACH
1 visit /
TEST BODY
1 get .toolbar__title
2 -assert expected '<span.toolbar__title>' to contain text 'Validating if a DOM element is visible on the view'
http://localhost:4200/
Chrome 115
1000x660 (55%)
Validating if a DOM element is visible on the view
Toggle Counter Visibility
Counter
0

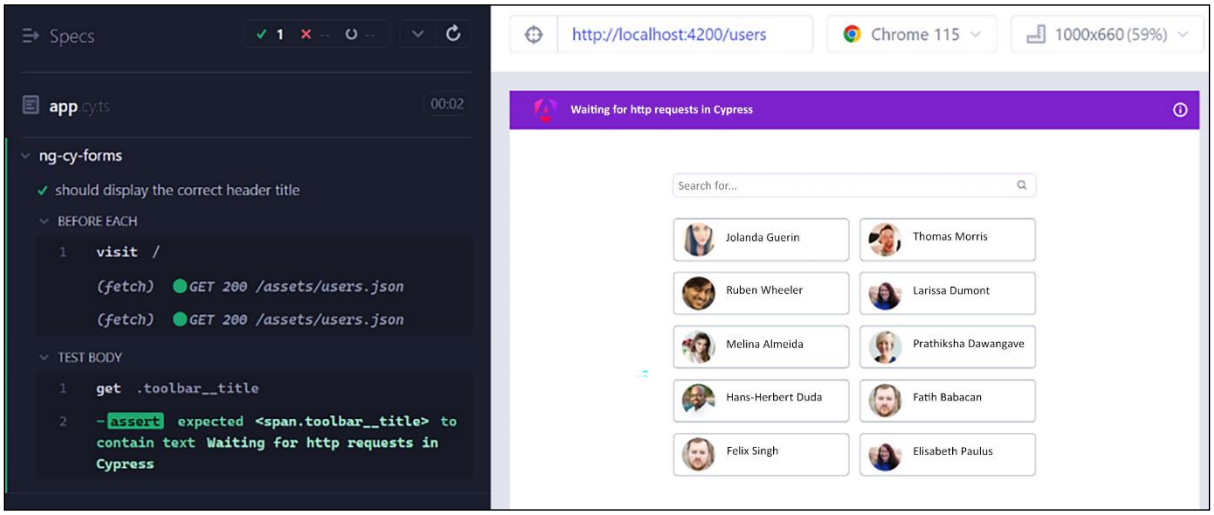

Specs
2
1
app.cy.ts
00:05
8 -contains Increment
9 -assert expected <button.counter__actions__action.btn.btn-primary> to be visible
! AssertionError
Timed out retrying after 4000ms: expected '<button.counter__actions__action.btn.btn-primary>' to be 'visible'
This element <button.counter__actions__action.btn.btn-primary> is not visible because its parent <div.counter__actions.flex.gap-4.items-center> has CSS property: visibility: hidden
› View stack trace
Print to console
http://localhost:4200/
Chrome 115
1000x660 (55%)
Validating if a DOM element is visible on the view
Toggle Counter Visibility
Counter
0

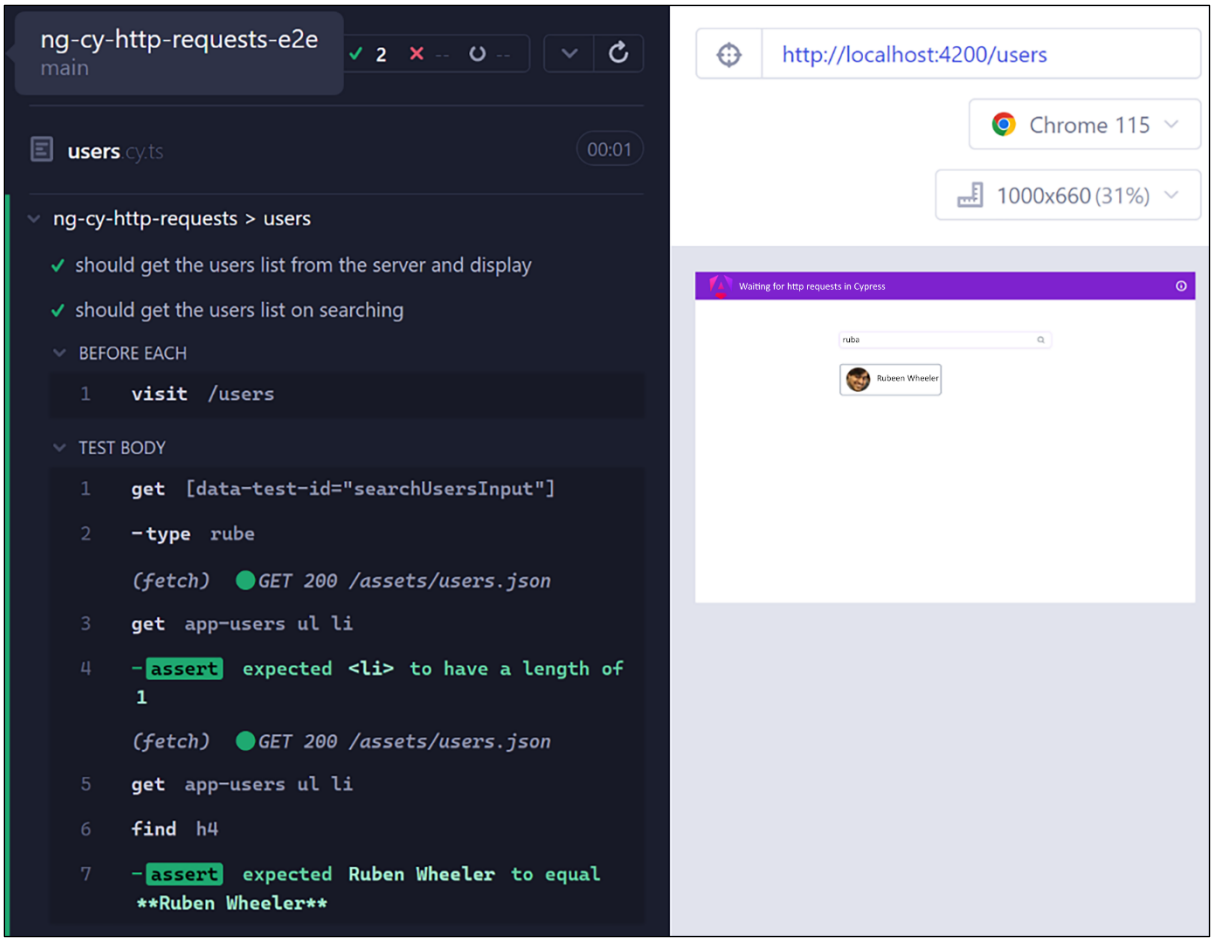

Specs
3
app.cy.ts
00:02
ng-cypress-starter
should display the correct header title
should toggle visibility of counter card when the toggle button is clicked
should show the action buttons when the counter card is hovered
http://localhost:4200/
Chrome 115
1000x660 (55%)
Validating if a DOM element is visible on the view
Toggle Counter Visibility
Counter
0

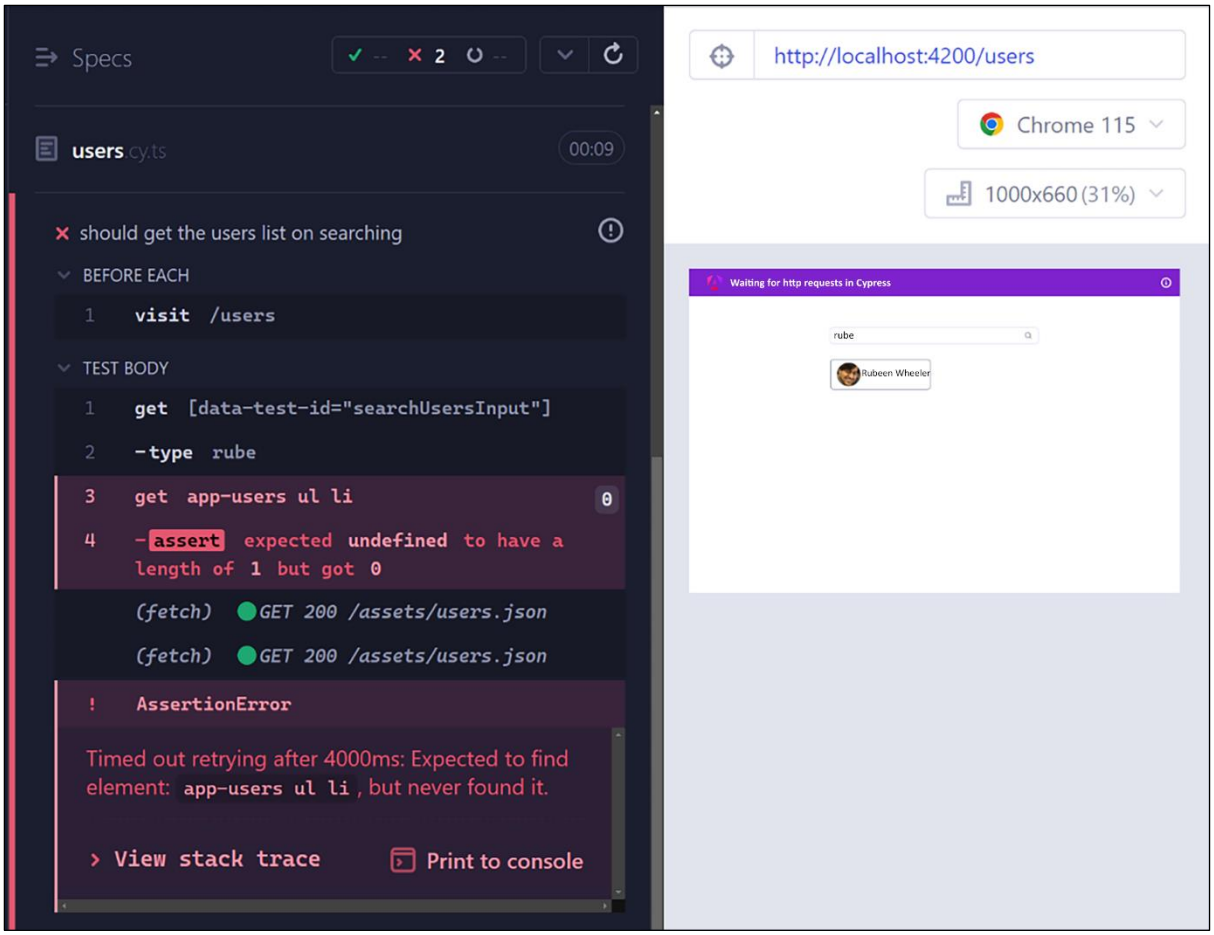

Specs
1
app.cy.ts
276ms
ng-cy-element-visibility
should display the correct header title
BEFORE EACH
1 visit /
TEST BODY
1 get .toolbar__title
2 -assert expected <span.toolbar__title> to contain text Testing form inputs and submission in Cypress
http://localhost:4200/
Chrome 115
1000x660 (41%)
Testing form inputs and submission in Cypress
Version Number
Enter version number
Submit
Latest Version - 0.0.0
initial version is 0.0.0

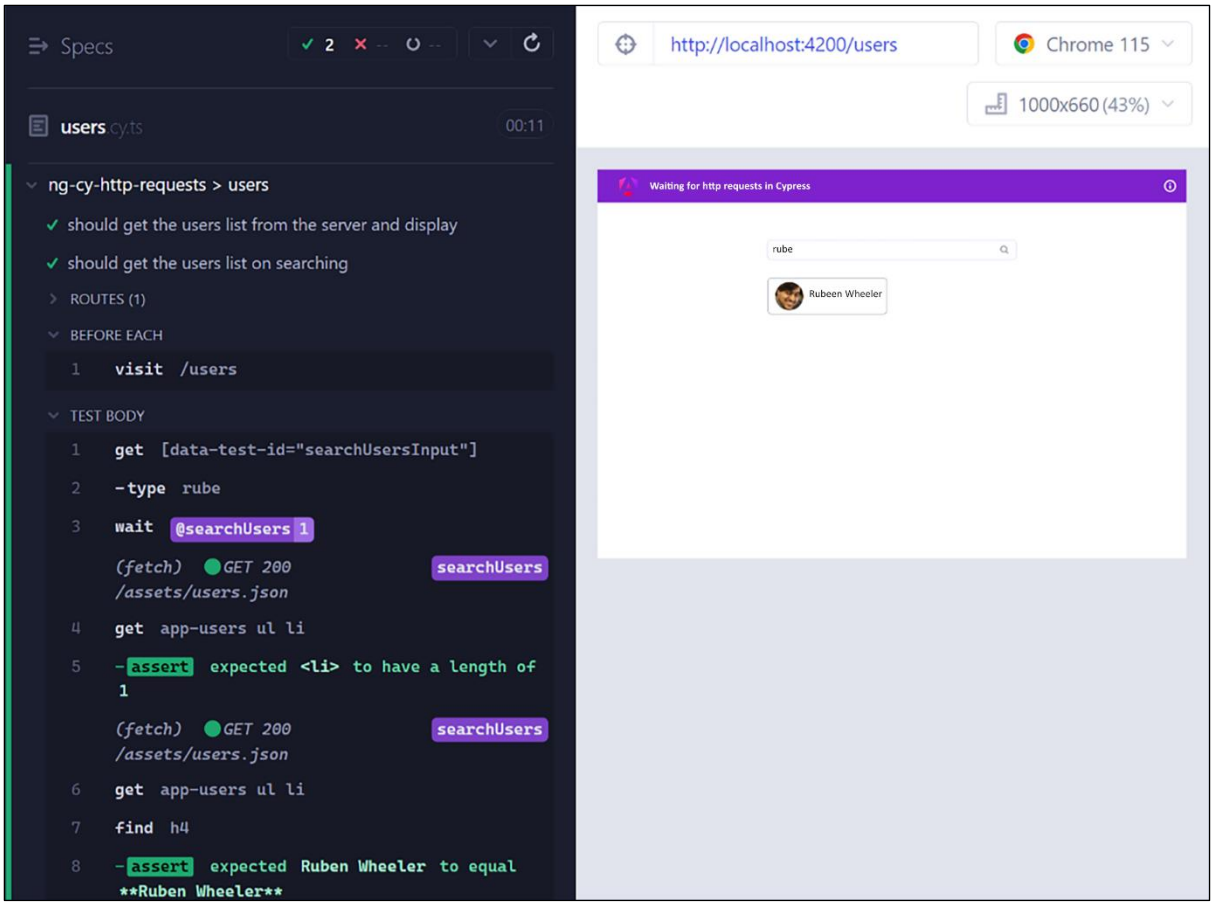

Specs
2
app.cy.ts
00:01
be disabled
5 get [data-test-id="versionInput"]
6 -clear
7 get [data-test-id="submitVersionBtn"]
8 -assert expected <button.btn.btn-primary> to be disabled
9 get [data-test-id="versionInput"]
10 -type 0.0.1
11 get [data-test-id="submitVersionBtn"]
12 -assert expected <button.btn.btn-primary> to be enabled
http://localhost:4200/
Chrome 115
1000x660 (41%)
Testing form inputs and submission in Cypress
Version Number
0.0.1
Submit
Latest Version - 0.0.0
initial version is 0.0.0

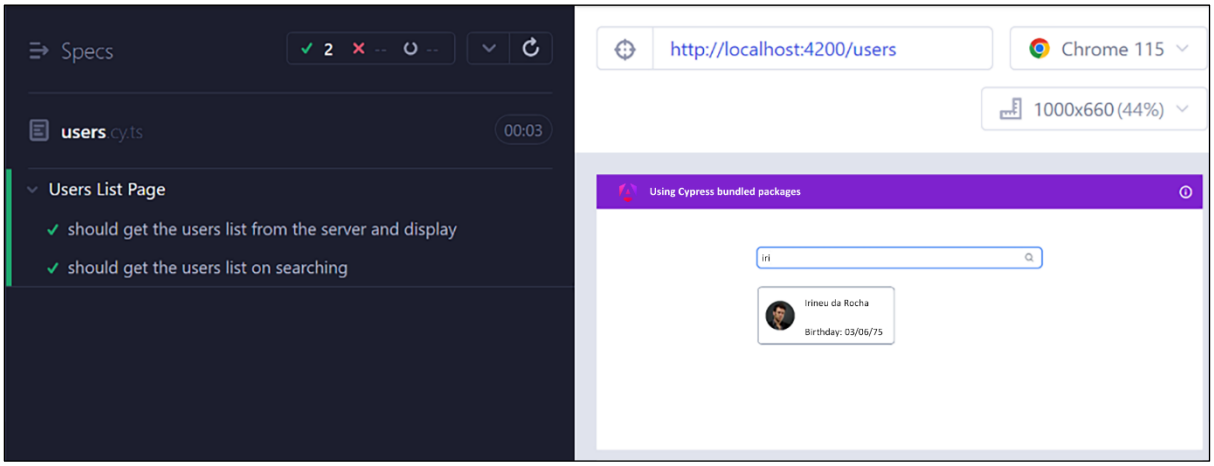

Specs
6
app.cy.ts
00:03
ng-cy-forms
should display the correct header title
should have the submit button disabled on invalid input
should add a new version log on valid version submission
should display the latest version
should show the version required error when the input gets clered after typing something
should show the invalid input error when the version input is invalid
http://localhost:4200/
Chrome 115
1000x660 (41%)
Testing form inputs and submission in Cypress
Version Number
Submit
Latest Version - 0.0.0
initial version is 0.0.0


Specs
1
app.cy.ts
00:02
ng-cy-forms
should display the correct header title
BEFORE EACH
1 visit /
(fetch) GET 200 /assets/users.json
(fetch) GET 200 /assets/users.json
TEST BODY
1 get .toolbar__title
2 -assert expected <span.toolbar__title> to contain text Waiting for http requests in Cypress
http://localhost:4200/users
Chrome 115
1000x660 (59%)
Waiting for http requests in Cypress
Search for...
Jolanda Guerin
Thomas Morris
Ruben Wheeler
Larissa Dumont
Melina Almeida
Prathiksha Dawangave
Hans-Herbert Duda
Fatih Babacan
Felix Singh
Elisabeth Paulus


ng-cy-http-requests-e2e
main
2
users cy.ts
00:01
ng-cy-http-requests > users
should get the users list from the server and display
should get the users list on searching
BEFORE EACH
1 visit /users
TEST BODY
1 get [data-test-id="searchUsersInput"]
2 -type rube
(fetch) GET 200 /assets/users.json
3 get app-users ul li
4 -assert expected <li> to have a length of 1
(fetch) GET 200 /assets/users.json
5 get app-users ul li
6 find h4
7 -assert expected Ruben Wheeler to equal **Ruben Wheeler**
http://localhost:4200/users
Chrome 115
1000x660 (31%)
Waiting for http requests in Cypress
rube
Rubeen Wheeler

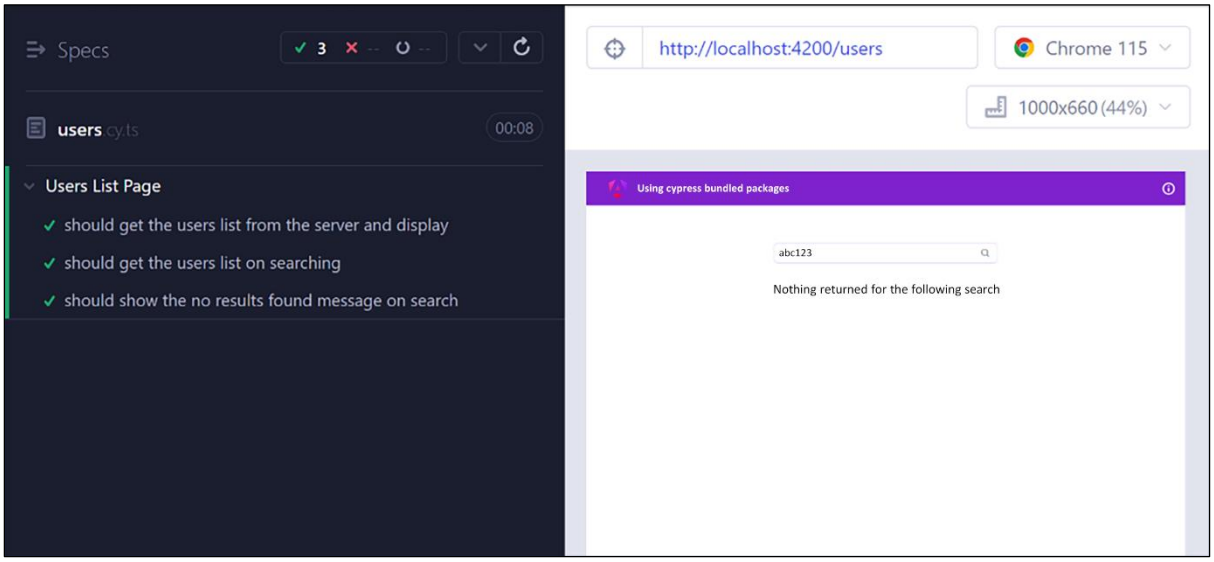

Specs
2
users cy.ts
00:09
should get the users list on searching
BEFORE EACH
1 visit /users
TEST BODY
1 get [data-test-id="searchUsersInput"]
2 -type rube
3 get app-users ul li
0
4 -assert expected undefined to have a length of 1 but got 0
(fetch) GET 200 /assets/users.json
(fetch) GET 200 /assets/users.json
! AssertionError
Timed out retrying after 4000ms: Expected to find element: app-users ul li , but never found it.
› View stack trace
Print to console
http://localhost:4200/users
Chrome 115
1000x660 (31%)
Waiting for http requests in Cypress
rube
Rubeen Wheeler

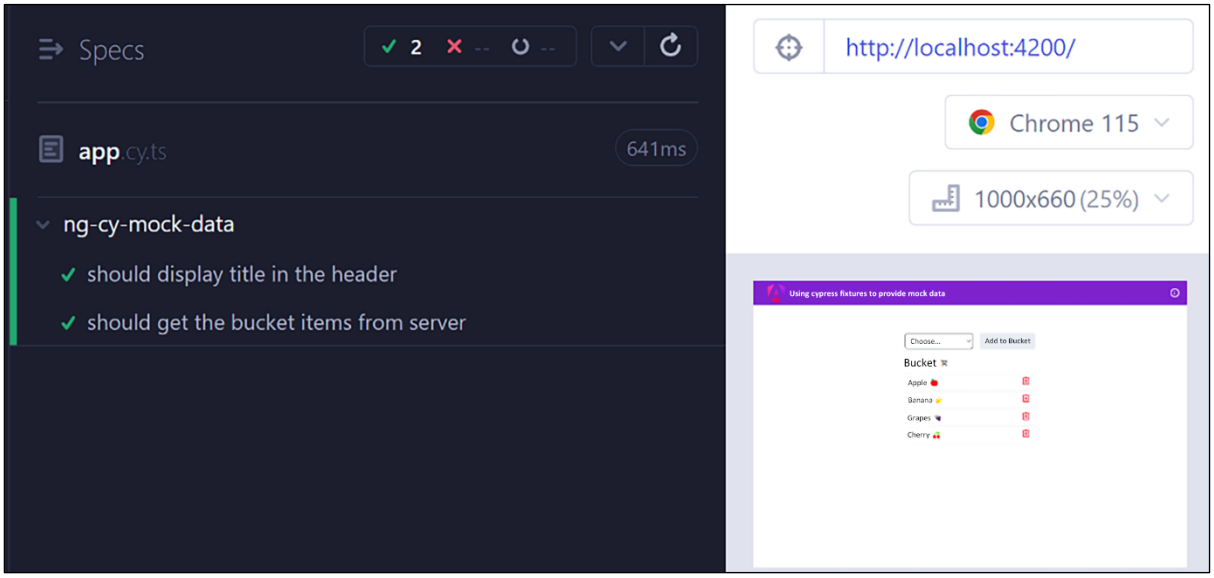


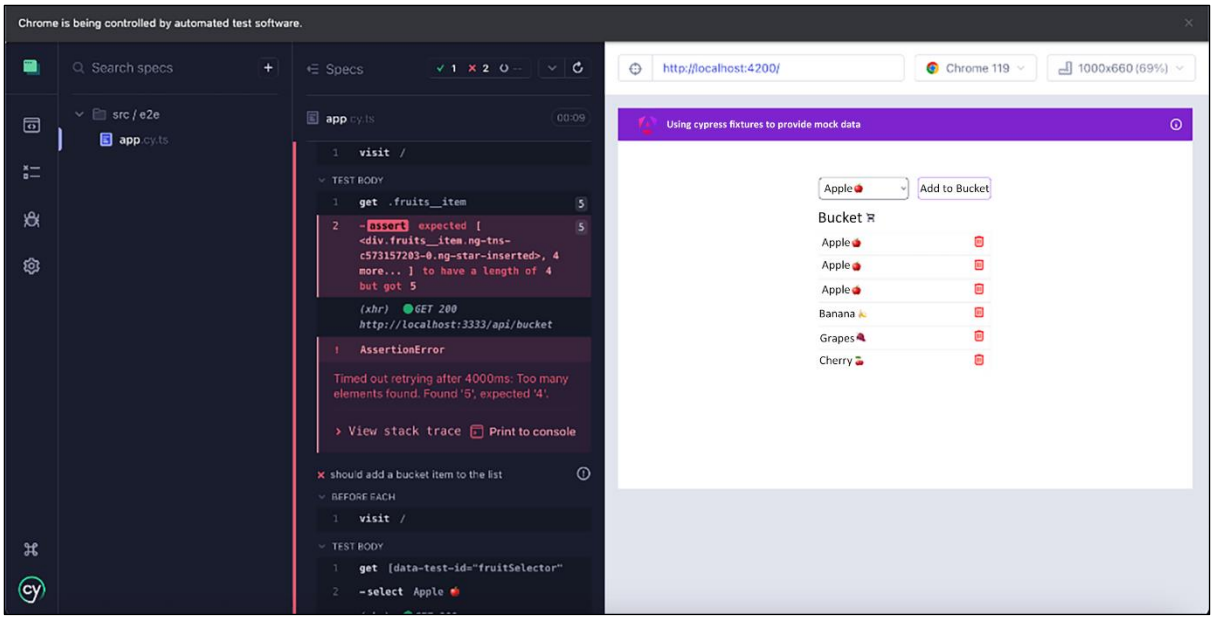


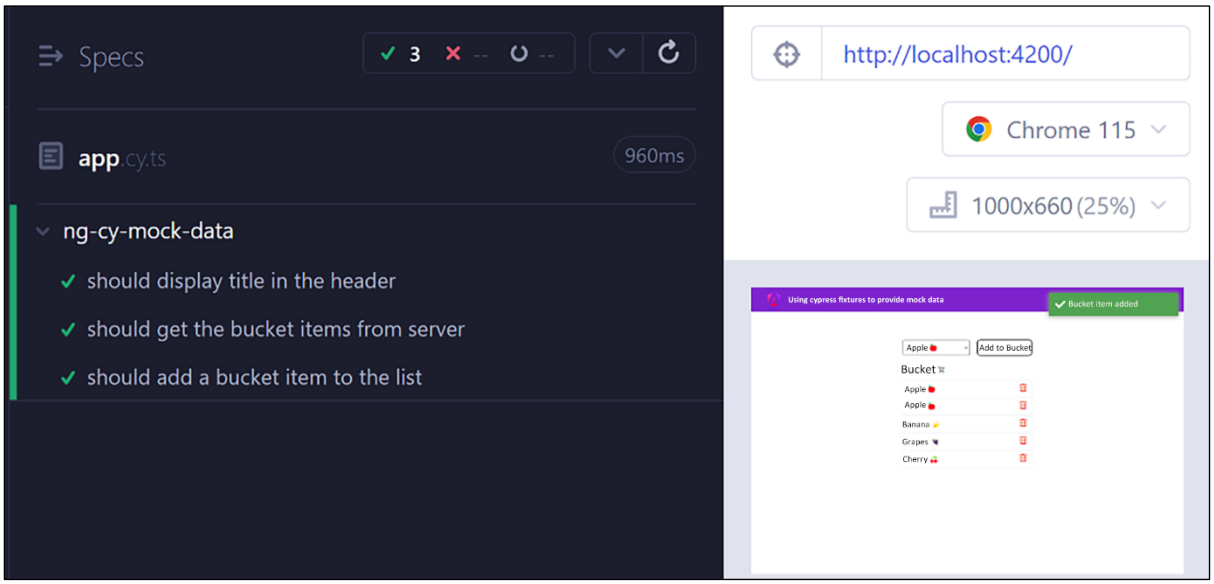

```
[webpack-dev-server] Server started: Hot Module Replacement disabled,  polyfills.js:1
Live Reloading enabled, Progress disabled, Overlay enabled.
Angular is running in development mode.                                 core.mjs:25537
                                                                        tests?p=src\e2e\users.cy.ts:37
  jQuery.fn.init [
▶ input#Search.w-full.rounded-md.border-gray-200.py-2.5.pe-10.shadow-sm.sm:text-sm, pr
  evObject: jQuery.fn.init(1)]
>
```

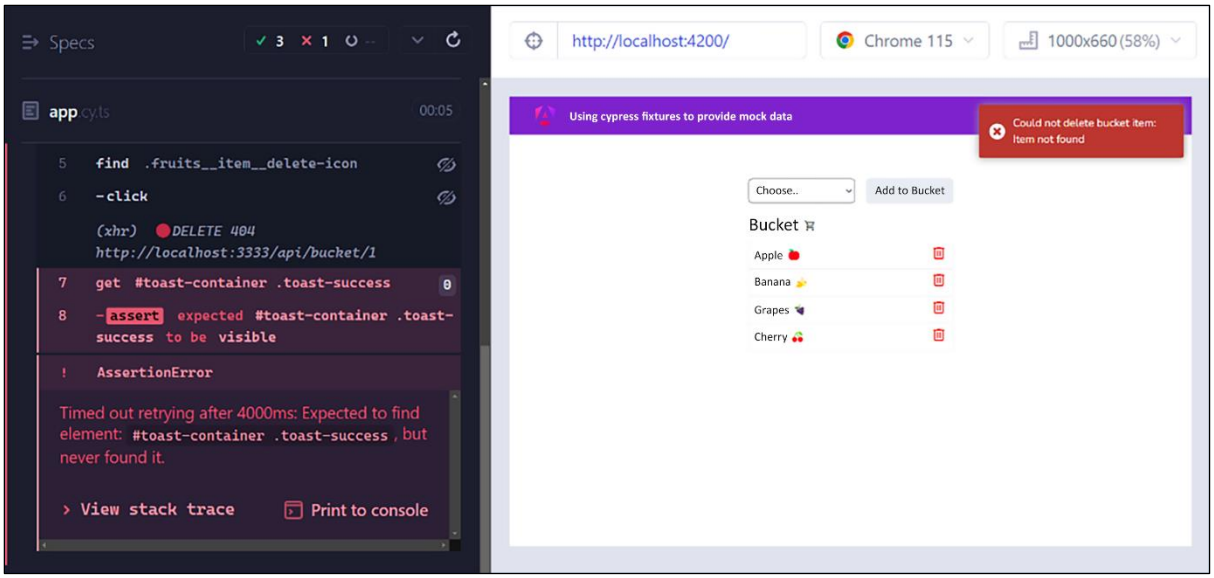
```
Angular is running in development mode.                    VM36461 vendor.js:46424
[webpack-dev-server] Server started: Hot Module Replacement disabled,   polyfills.js:1
Live Reloading enabled, Progress disabled, Overlay enabled.
Angular is running in development mode.                    core.mjs:25537
                                                  tests?p=src\e2e\users.cy.ts:42
▶ jQuery.fn.init [h2.text-xl, prevObject: jQuery.fn.init(1), selector: '[data-test-id
  ="noResultsFoundMessage"]']
>
```

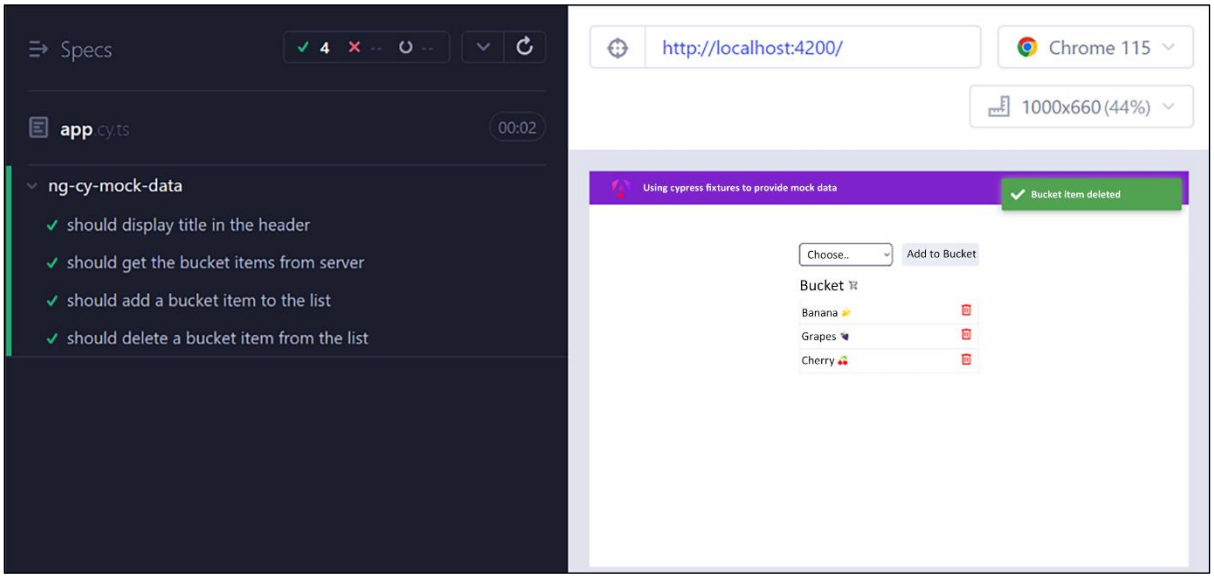




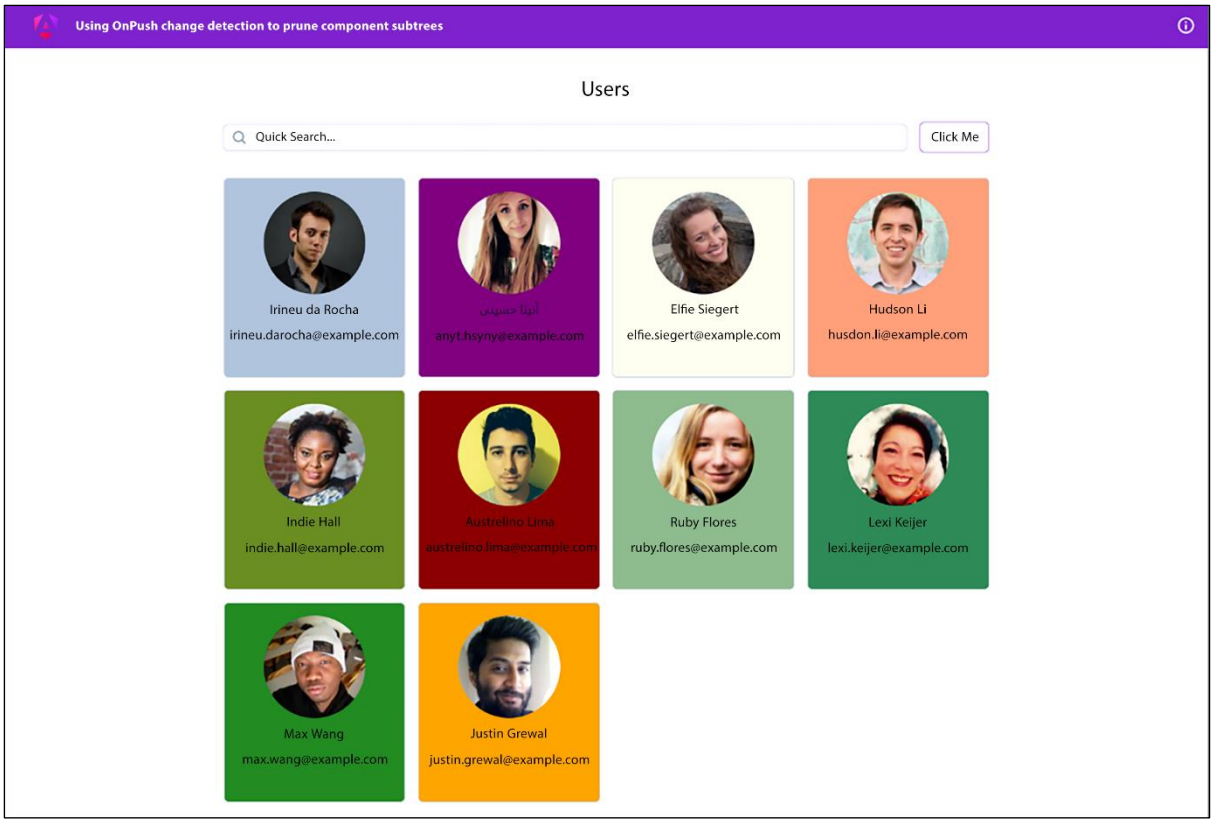

Chrome is being controlled by automated test software.
Search specs
src / e2e
app.cy.ts
Specs
app.cy.ts
00:09
visit /
TEST BODY
get .fruits__item
-assert expected [<div.fruits__item.ng-tns-c573157203-0.ng-star-inserted>, 4 more...] to have a length of 4 but got 5
(xhr) GET 200 http://localhost:3333/api/bucket
AssertionError
Timed out retrying after 4000ms: Too many elements found. Found '5', expected '4'.
View stack trace
Print to console
should add a bucket item to the list
BEFORE EACH
visit /
TEST BODY
get [data-test-id="fruitSelector"
-select Apple
http://localhost:4200/
Chrome 119
1000x660 (69%)
Using cypress fixtures to provide mock data
Apple
Add to Bucket
Bucket
Apple
Apple
Apple
Banana
Grapes
Cherry

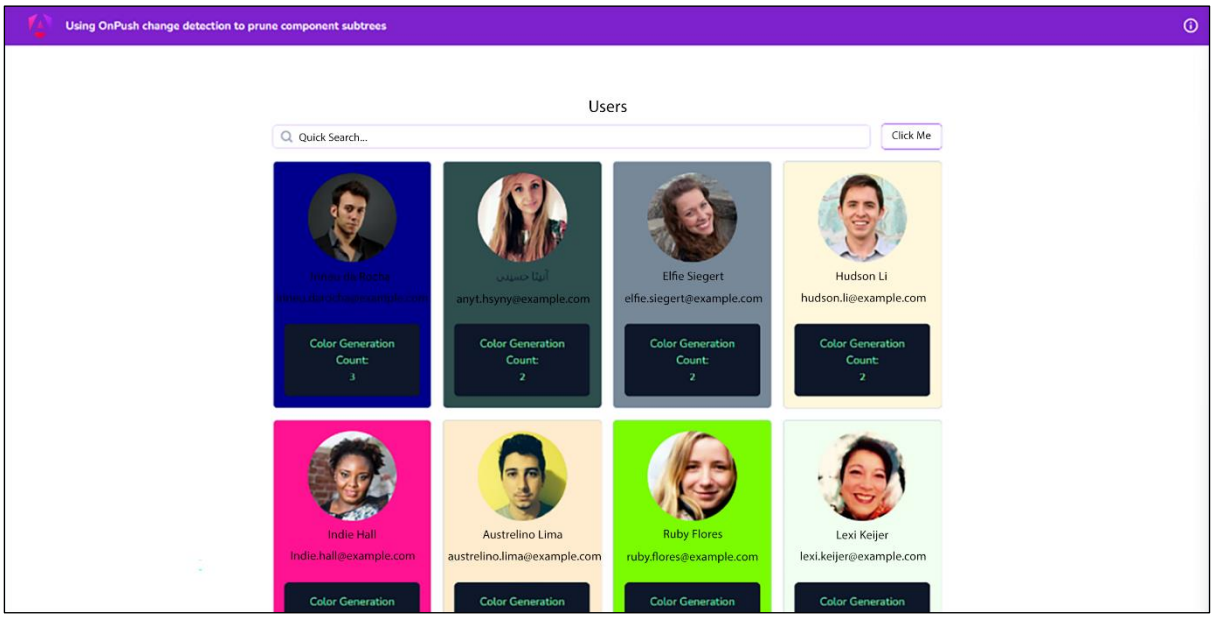

Specs
3
app.cy.ts
960ms
ng-cy-mock-data
should display title in the header
should get the bucket items from server
should add a bucket item to the list
http://localhost:4200/
Chrome 115
1000x660 (25%)
Using cypress fixtures to provide mock data
Bucket item added
Apple
Add to Bucket
Bucket
Apple
Apple
Banana
Grapes
Cherry

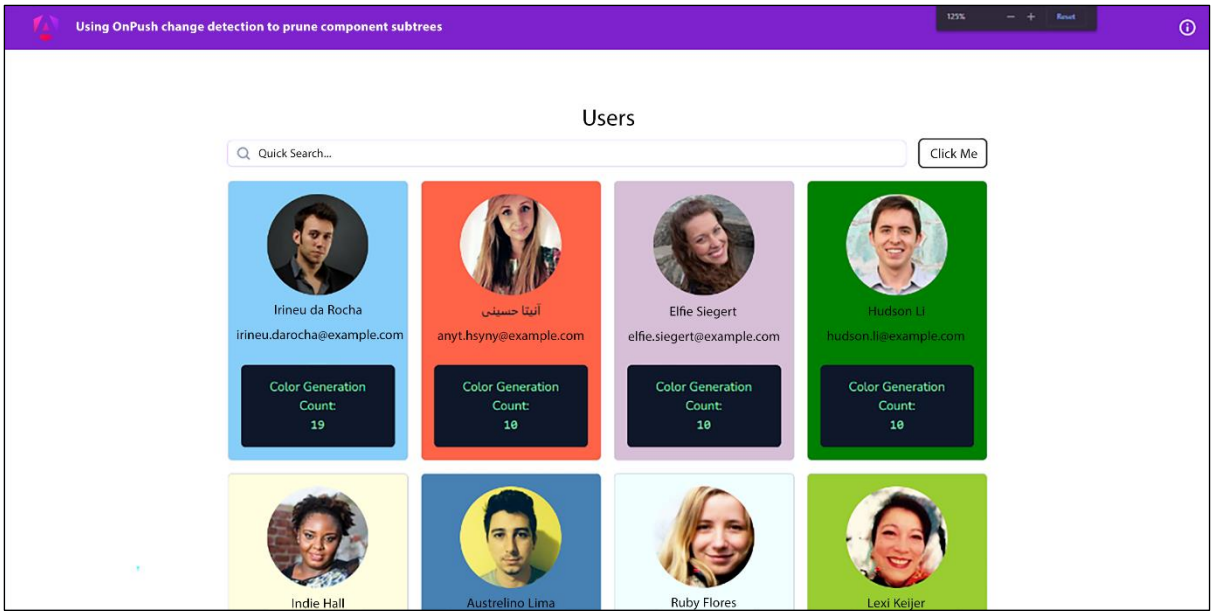


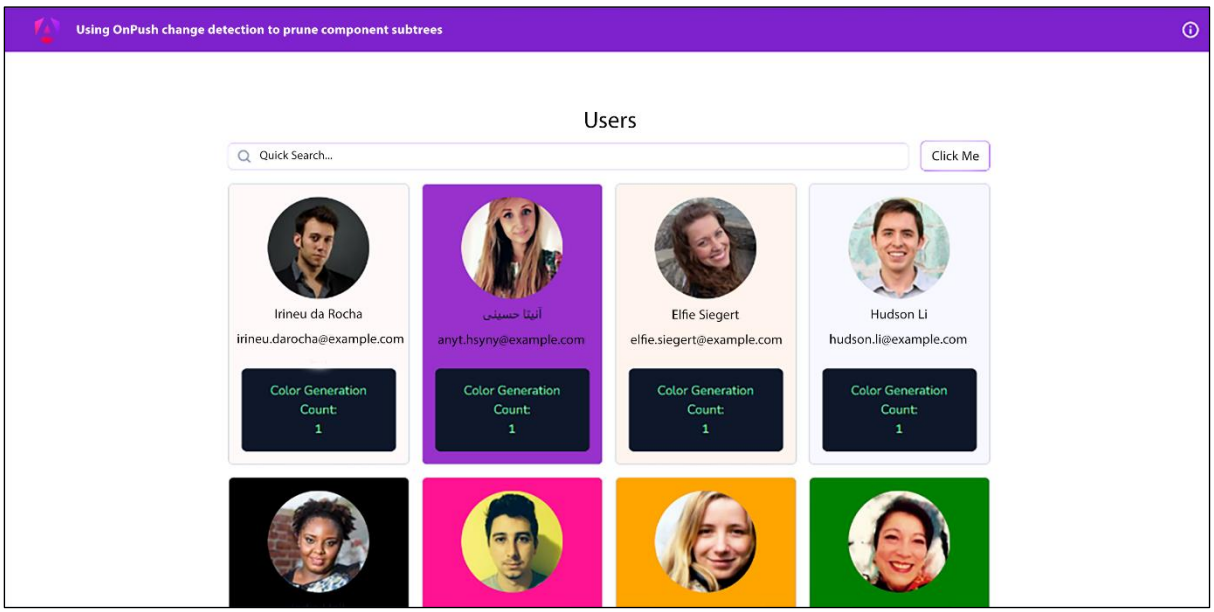


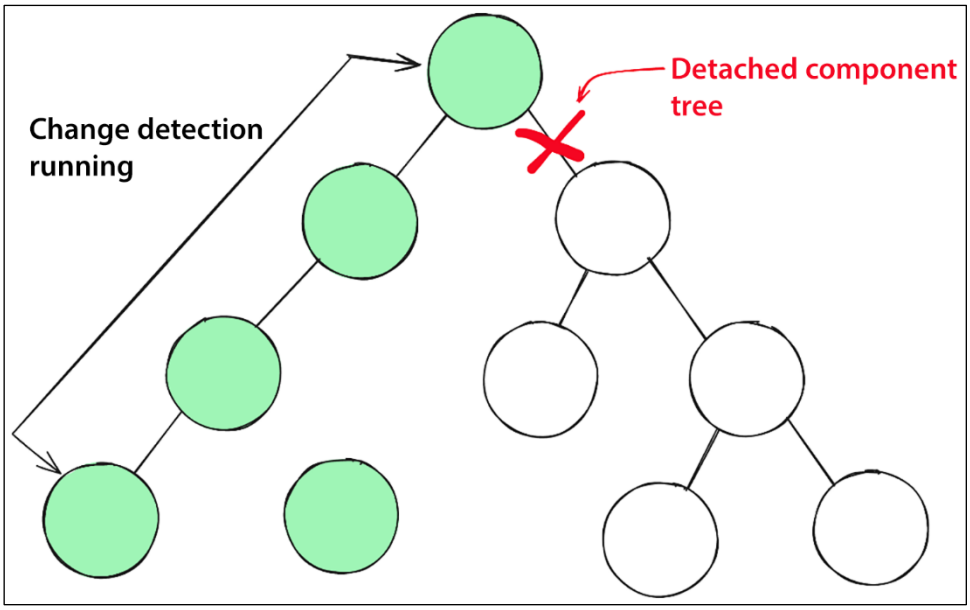
Chapter 12: Performance Optimization in Angular

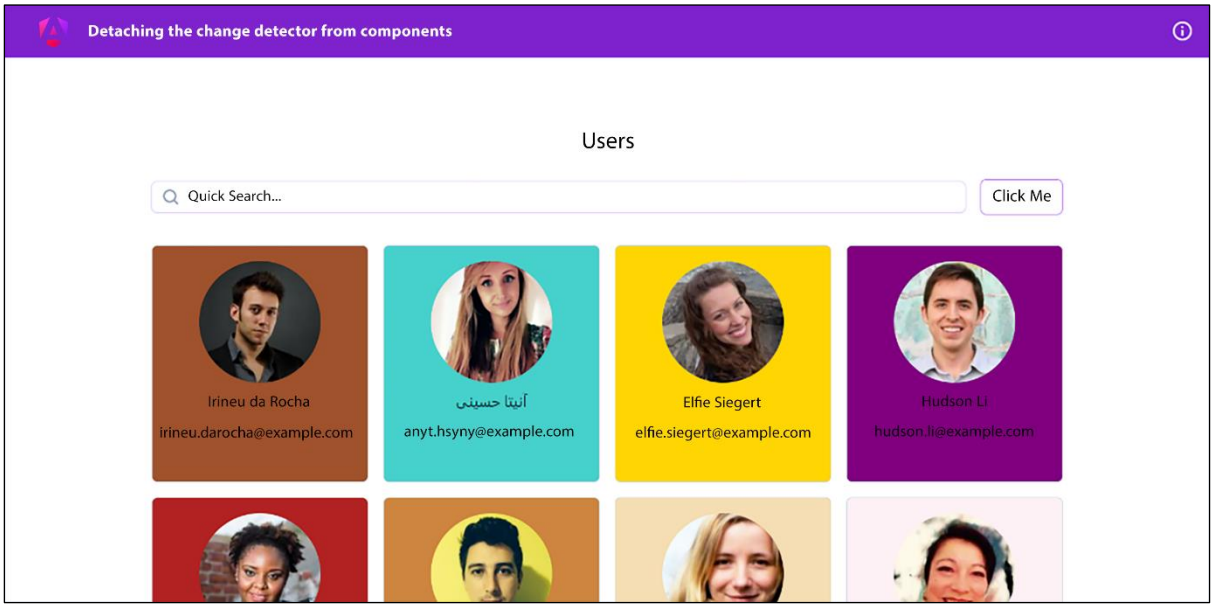

Using OnPush change detection to prune component subtrees
Users
Quick Search...
Click Me
Irineu da Rocha
irineu.darocha@example.com
آنیتا حسینی
anyt.hsyny@example.com
Elfie Siegert
elfie.siegert@example.com
Hudson Li
husdon.li@example.com
Indie Hall
indie.hall@example.com
Austrelino Lima
austrelino.lima@example.com
Ruby Flores
ruby.flores@example.com
Lexi Keijer
lexi.keijer@example.com
Max Wang
max.wang@example.com
Justin Grewal
justin.grewal@example.com

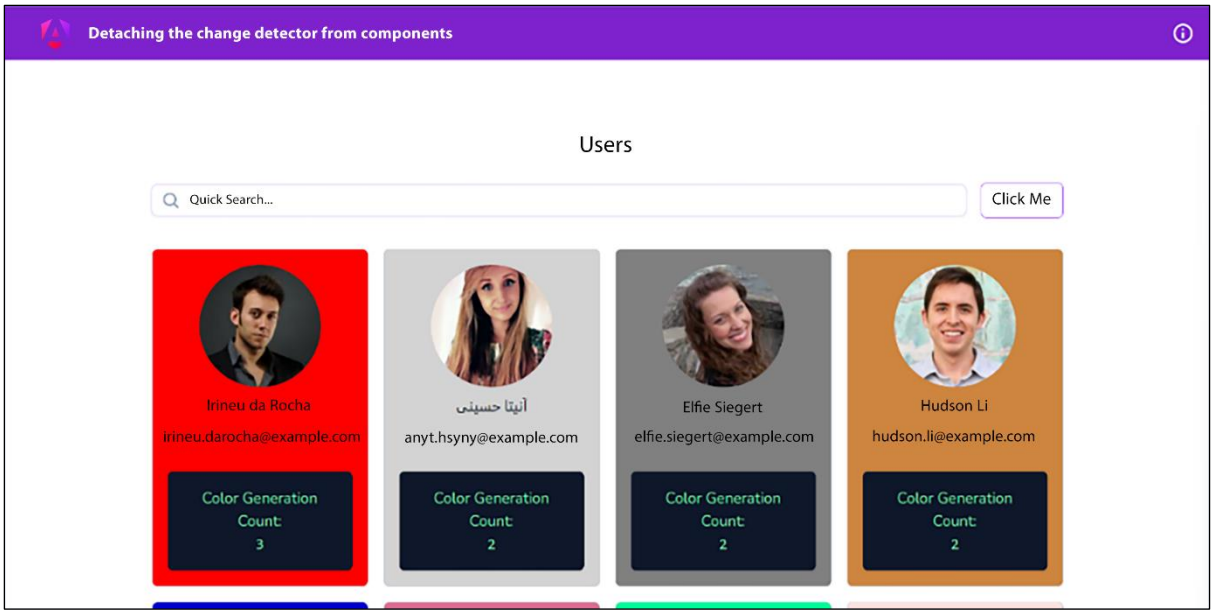

Using OnPush change detection to prune component subtrees
Users
Quick Search...
Click Me
Color Generation
Count:
3
Color Generation
Count:
2
Color Generation
Count:
2
Color Generation
Count:
2
anyt.hsyny@example.com
Elfie Siegert
elfie.siegert@example.com
Hudson Li
hudson.li@example.com
Indie Hall
Indie.hall@example.com
Austrelino Lima
austrelino.lima@example.com
Ruby Flores
ruby.flores@example.com
Lexi Keijer
lexi.keijer@example.com
Color Generation
Color Generation
Color Generation
Color Generation

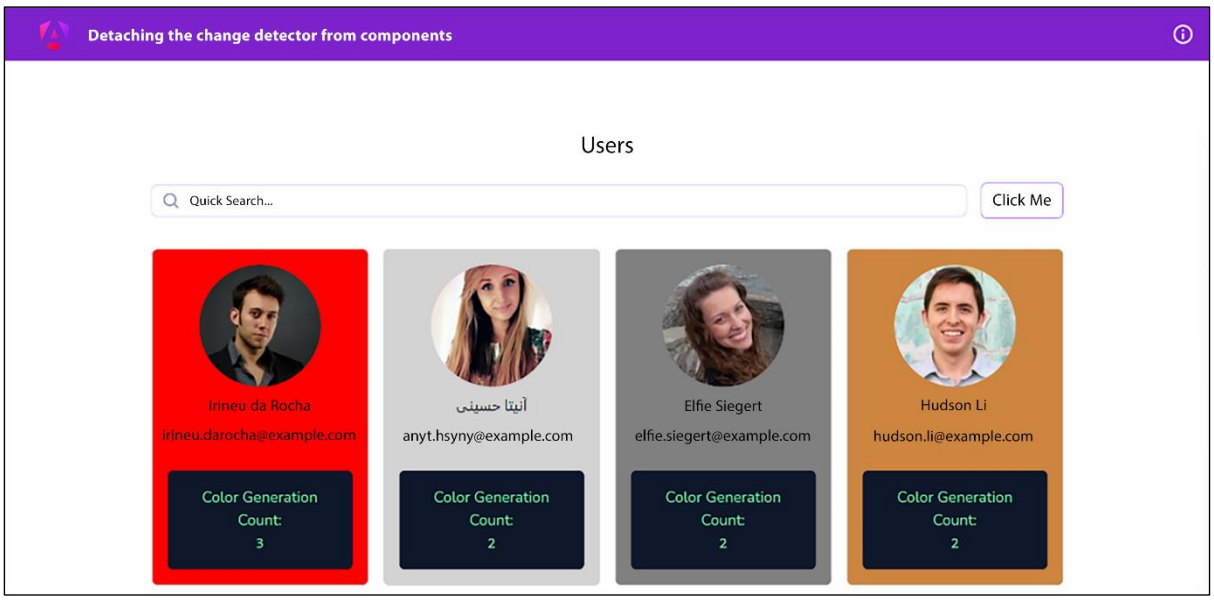

Using OnPush change detection to prune component subtrees
125%
Reset
Users
Quick Search...
Click Me
Irineu da Rocha
irineu.darocha@example.com
Color Generation Count: 19
أنيتا حسيني
anyt.hsyny@example.com
Color Generation Count: 10
Elfie Siegert
elfie.siegert@example.com
Color Generation Count: 10
Hudson Li
hudson.li@example.com
Color Generation Count: 10
Indie Hall
Austrelino Lima
Ruby Flores
Lexi Keijer

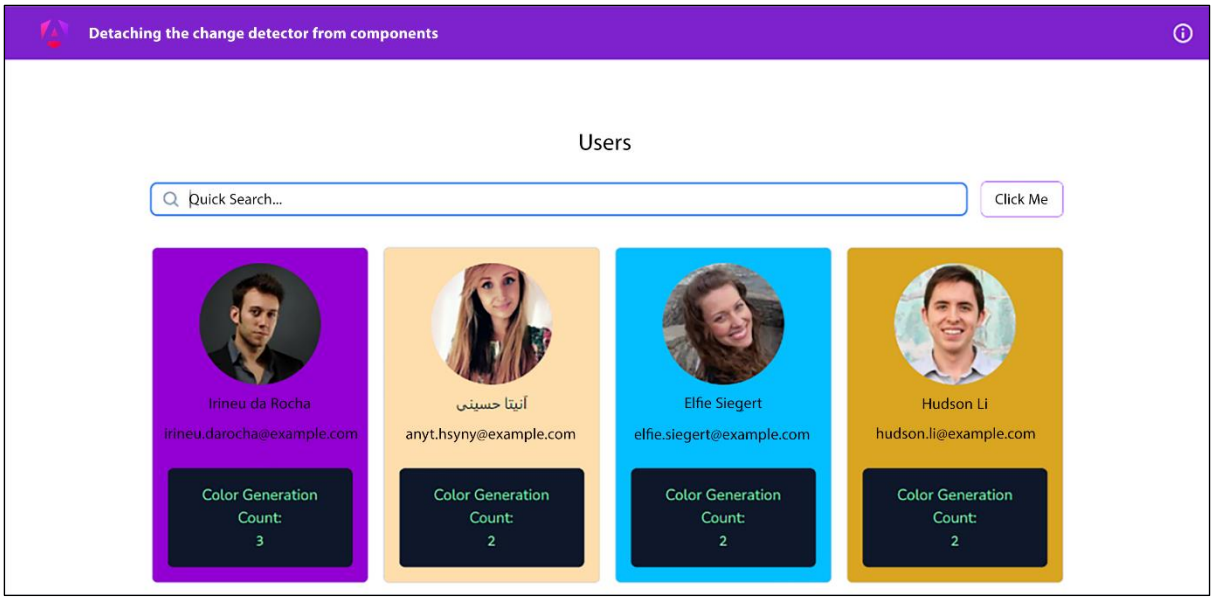

Using OnPush change detection to prune component subtrees
Users
Quick Search...
Click Me
Irineu da Rocha
irineu.darocha@example.com
Color Generation Count: 1
أنيتا حسيني
anyt.hsyny@example.com
Color Generation Count: 1
Elfie Siegert
elfie.siegert@example.com
Color Generation Count: 1
Hudson Li
hudson.li@example.com
Color Generation Count: 1

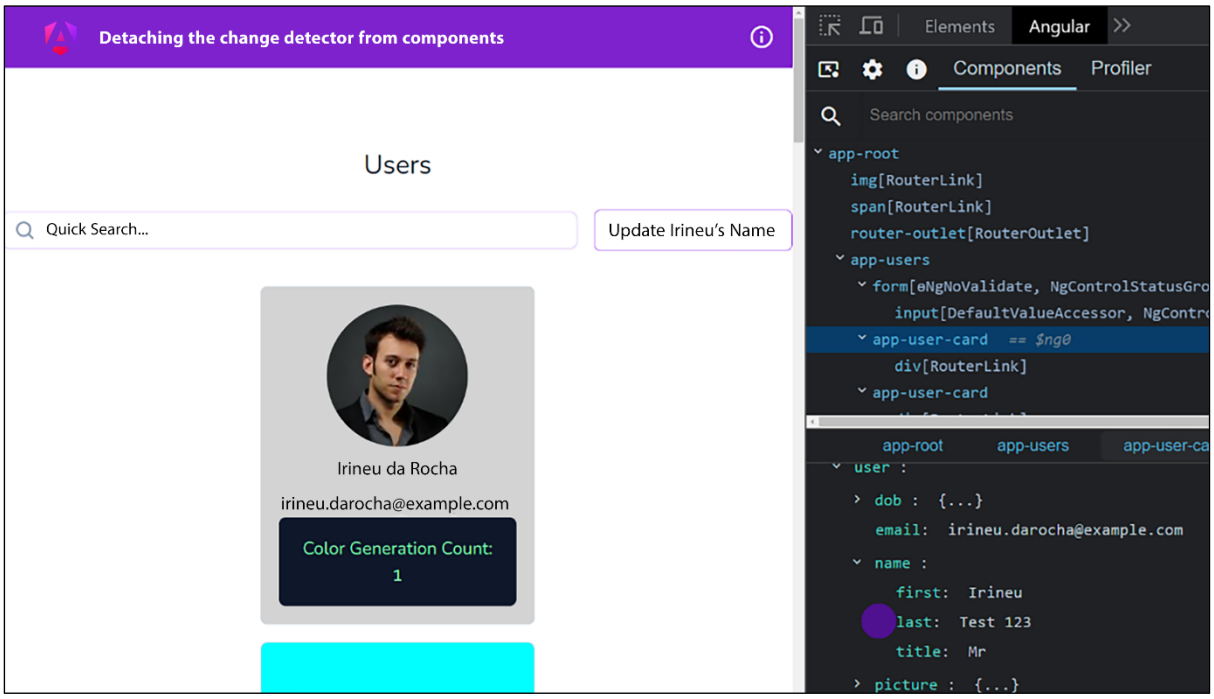

Change detection
running
Detached component
tree

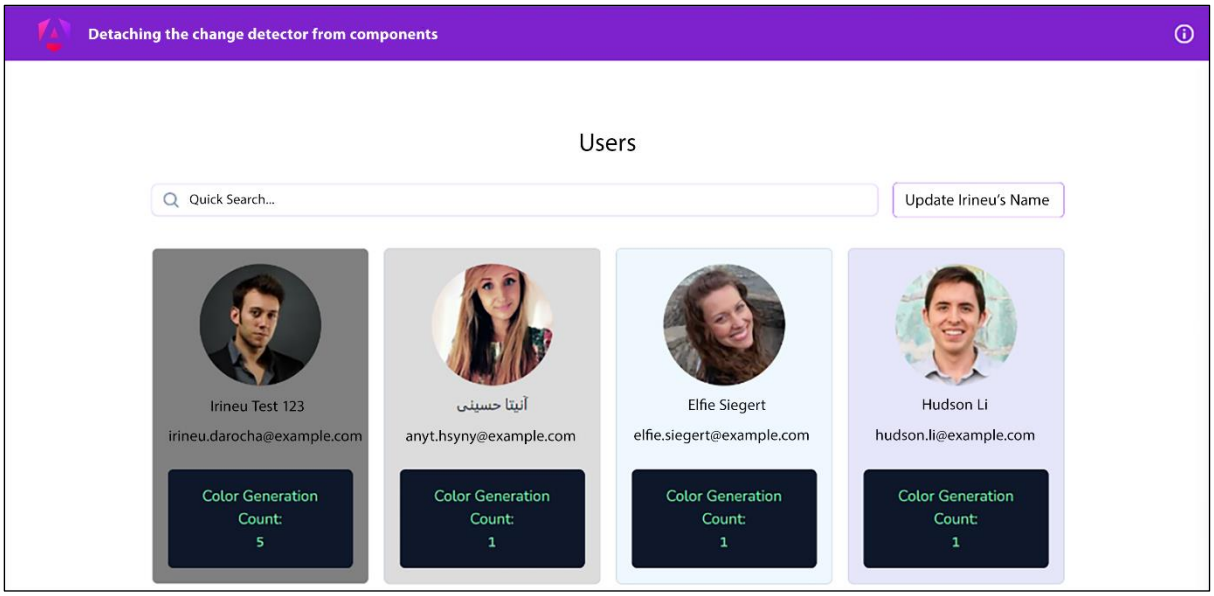

Detaching the change detector from components
Users
Quick Search...
Click Me
Irineu da Rocha
irineu.darocha@example.com
آنیتا حسینی
anyt.hsyny@example.com
Elfie Siegert
elfie.siegert@example.com
Hudson Li
hudson.li@example.com

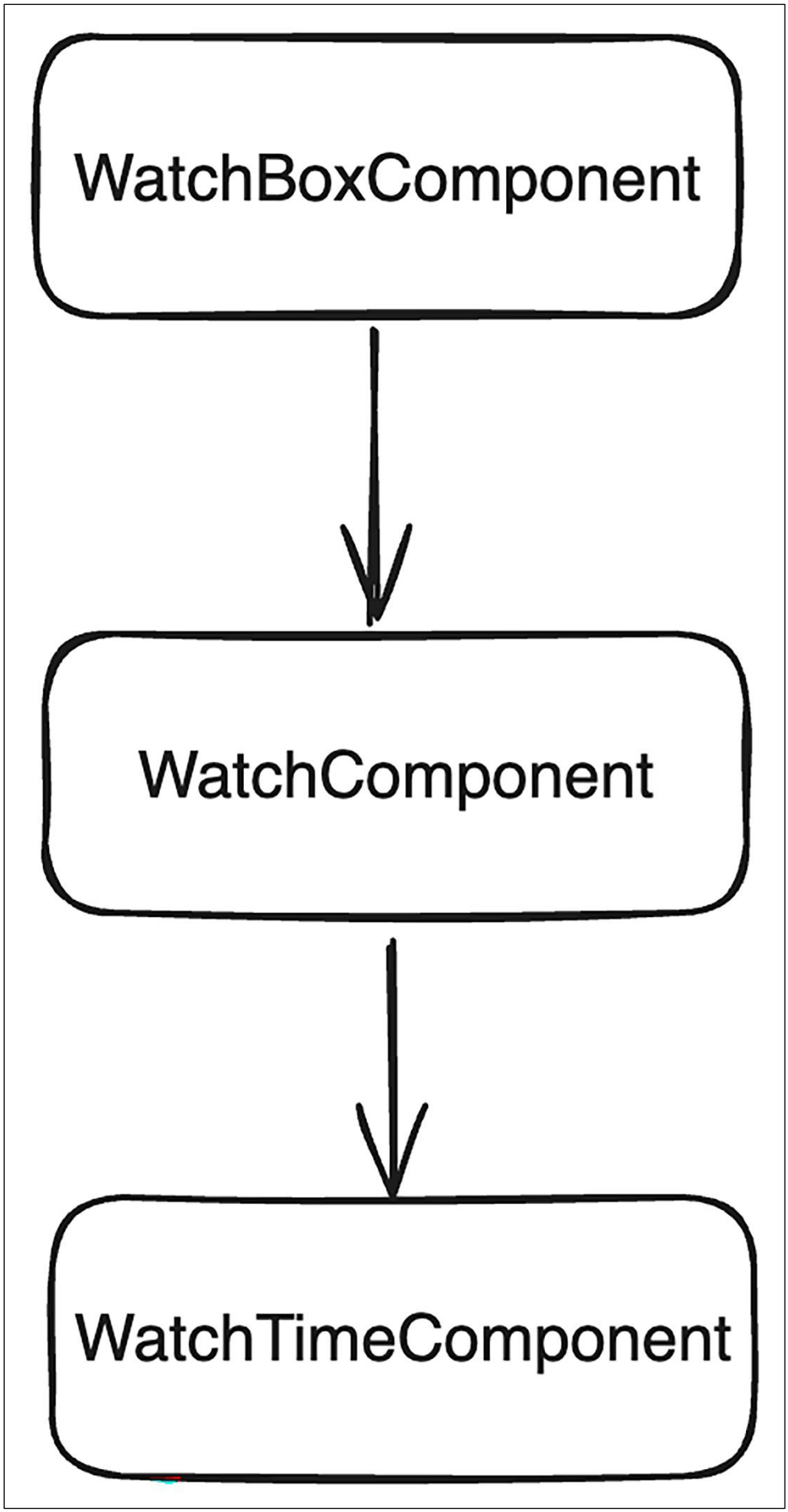

Detaching the change detector from components
Users
Quick Search...
Click Me
Irineu da Rocha
irineu.darocha@example.com
Color Generation Count: 3
آنیتا حسینی
anyt.hsyny@example.com
Color Generation Count: 2
Elfie Siegert
elfie.siegert@example.com
Color Generation Count: 2
Hudson Li
hudson.li@example.com
Color Generation Count: 2

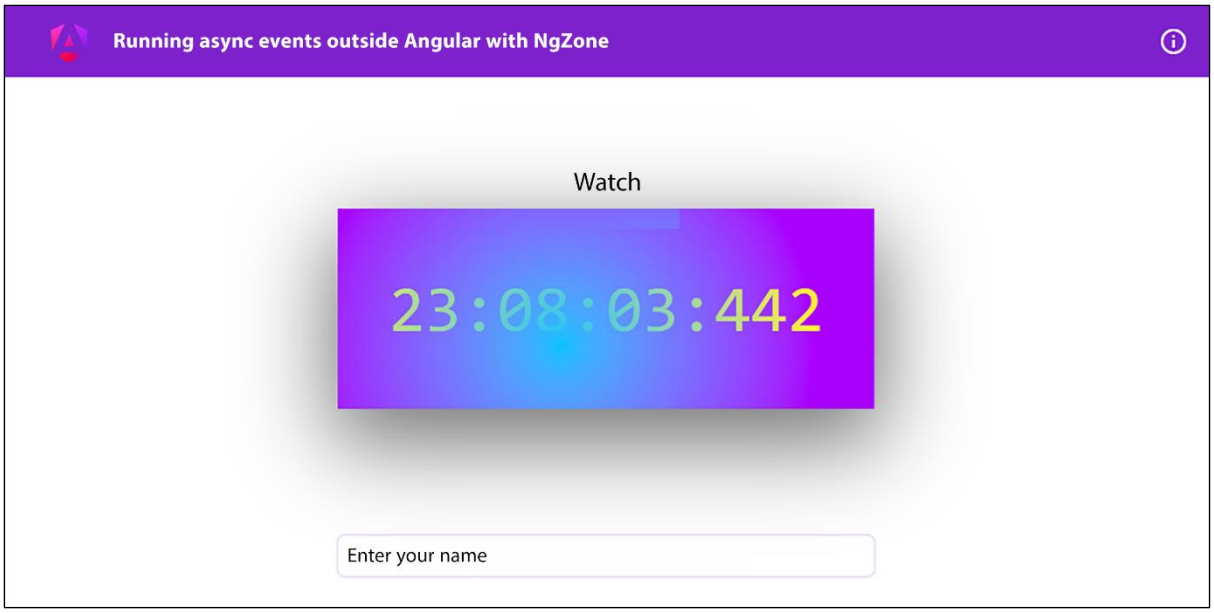

Detaching the change detector from components
Users
Quick Search...
Click Me
Irineu da Rocha
irineu.darocha@example.com
Color Generation Count: 3
آنیتا حسینی
anyt.hsyny@example.com
Color Generation Count: 2
Elfie Siegert
elfie.siegert@example.com
Color Generation Count: 2
Hudson Li
hudson.li@example.com
Color Generation Count: 2


Detaching the change detector from components
Users
Quick Search...
Click Me
Irineu da Rocha
irineu.darocha@example.com
Color Generation Count: 3
آنیتا حسینی
anyt.hsyny@example.com
Color Generation Count: 2
Elfie Siegert
elfie.siegert@example.com
Color Generation Count: 2
Hudson Li
hudson.li@example.com
Color Generation Count: 2


Detaching the change detector from components
Users
Quick Search...
Update Irineu's Name
Irineu da Rocha
irineu.darocha@example.com
Color Generation Count: 1
Elements
Angular
Components
Profiler
Search components
app-root
img[RouterLink]
span[RouterLink]
router-outlet[RouterOutlet]
app-users
app-user-card == $ng0
div[RouterLink]
app-user-card
app-root
app-users
user :
dob : {...}
email: irineu.darocha@example.com
name :
first: Irineu
last: Test 123
title: Mr
picture : {...}

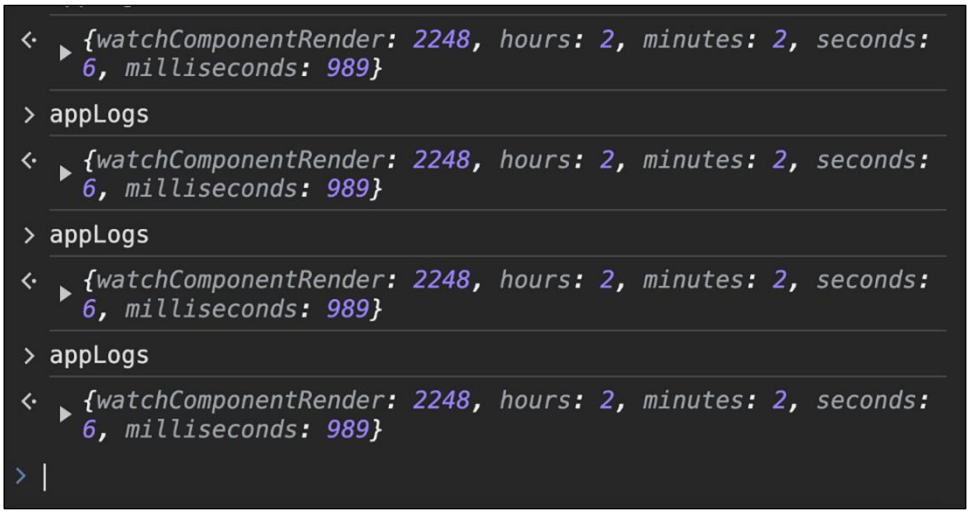

Detaching the change detector from components
Users
Quick Search...
Update Irineu's Name
Irineu Test 123
irineu.darocha@example.com
Color Generation Count: 5
آنیتا حسینی
anyt.hsyny@example.com
Color Generation Count: 1
Elfie Siegert
elfie.siegert@example.com
Color Generation Count: 1
Hudson Li
hudson.li@example.com
Color Generation Count: 1

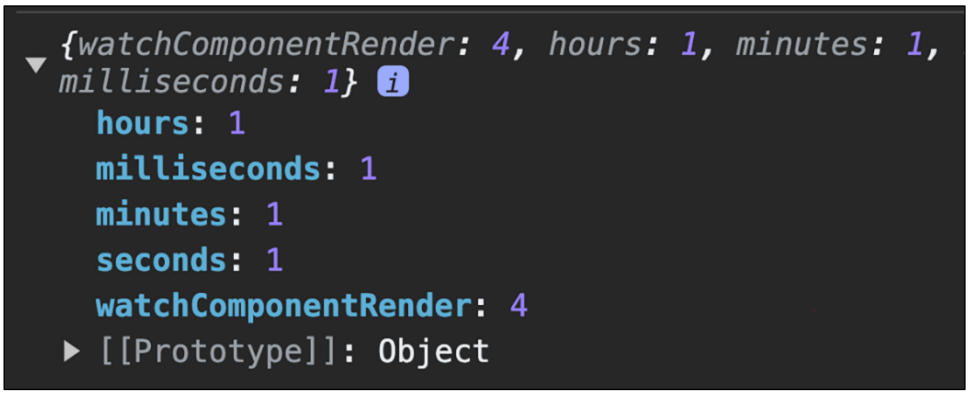

WatchBoxComponent
WatchComponent
WatchTimeComponent

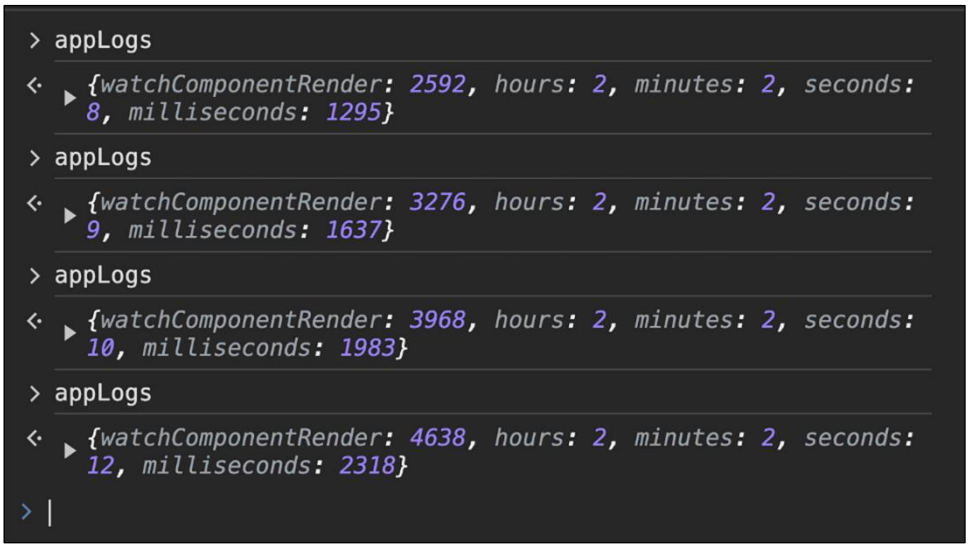



```
> appLogs
< ▼ {watchComponentRender: 5784, hours: 2, minutes: 3,
    hours: 2
    milliseconds: 2823
    minutes: 3
    seconds: 13
    watchComponentRender: 6404
  ▶ [[Prototype]]: Object
```

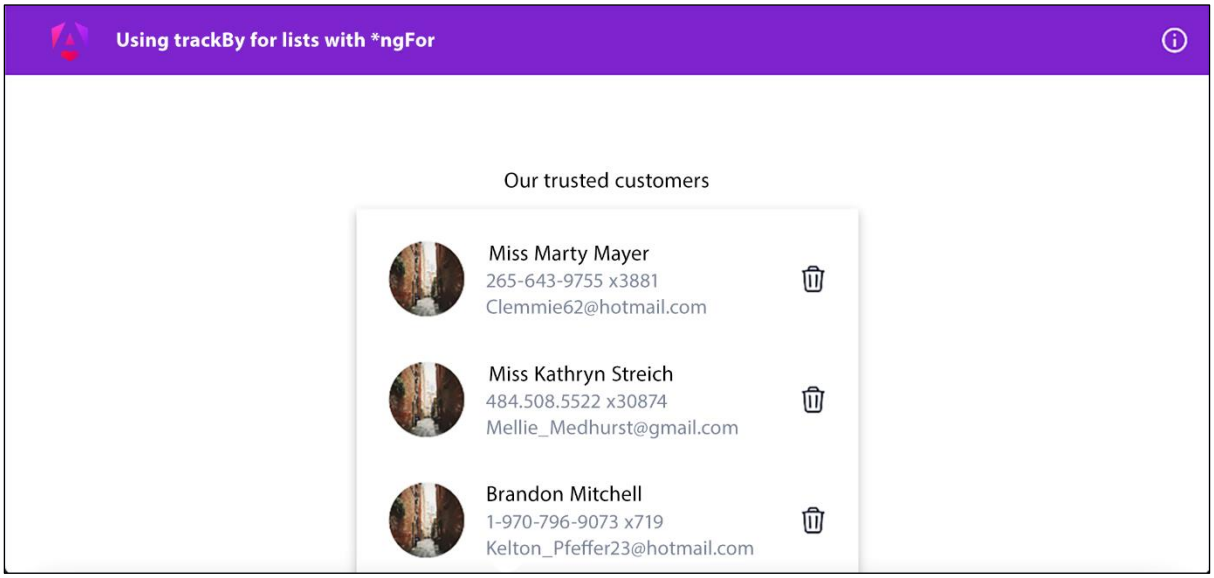
```
< ▶ {watchComponentRender: 2374, hours: 2, minutes: 2, seconds:
  6, milliseconds: 986}
> appLogs
< ▶ {watchComponentRender: 2458, hours: 2, minutes: 2, seconds:
  6, milliseconds: 986}
> appLogs
< ▶ {watchComponentRender: 2556, hours: 2, minutes: 2, seconds:
  6, milliseconds: 986}
> appLogs
< ▶ {watchComponentRender: 2644, hours: 2, minutes: 2, seconds:
  6, milliseconds: 986}
```


{watchComponentRender: 2248, hours: 2, minutes: 2, seconds: 6, milliseconds: 989}
appLogs
{watchComponentRender: 2248, hours: 2, minutes: 2, seconds: 6, milliseconds: 989}
appLogs
{watchComponentRender: 2248, hours: 2, minutes: 2, seconds: 6, milliseconds: 989}
appLogs
{watchComponentRender: 2248, hours: 2, minutes: 2, seconds: 6, milliseconds: 989}

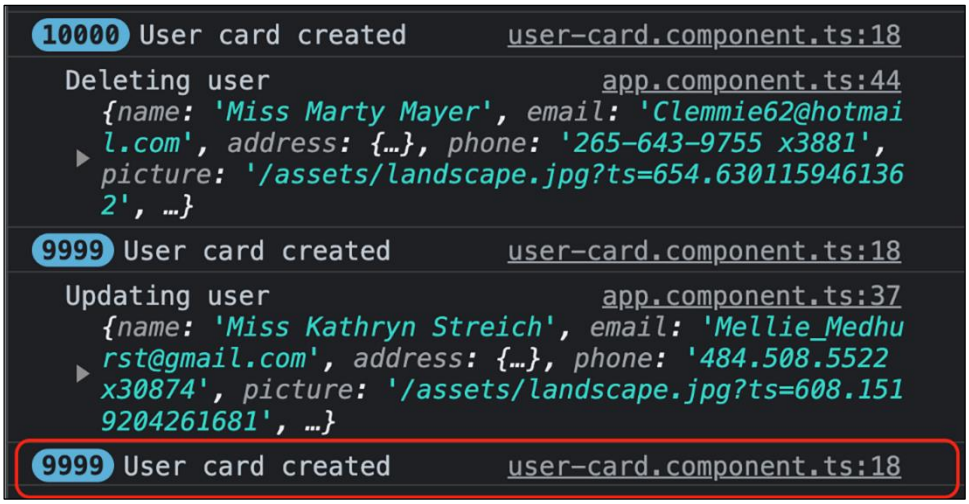

{watchComponentRender: 4, hours: 1, minutes: 1, milliseconds: 1}
hours: 1
milliseconds: 1
minutes: 1
seconds: 1
watchComponentRender: 4
[[Prototype]]: Object

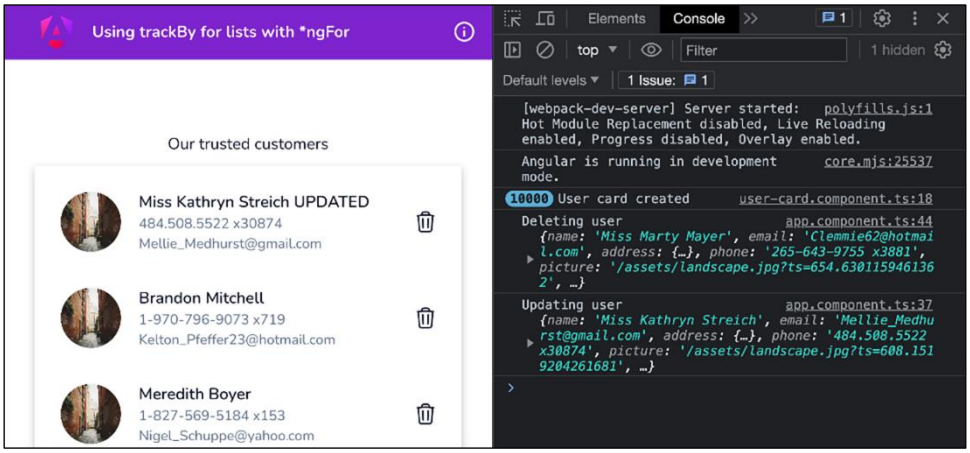

appLogs
{watchComponentRender: 2592, hours: 2, minutes: 2, seconds: 8, milliseconds: 1295}
appLogs
{watchComponentRender: 3276, hours: 2, minutes: 2, seconds: 9, milliseconds: 1637}
appLogs
{watchComponentRender: 3968, hours: 2, minutes: 2, seconds: 10, milliseconds: 1983}
appLogs
{watchComponentRender: 4638, hours: 2, minutes: 2, seconds: 12, milliseconds: 2318}

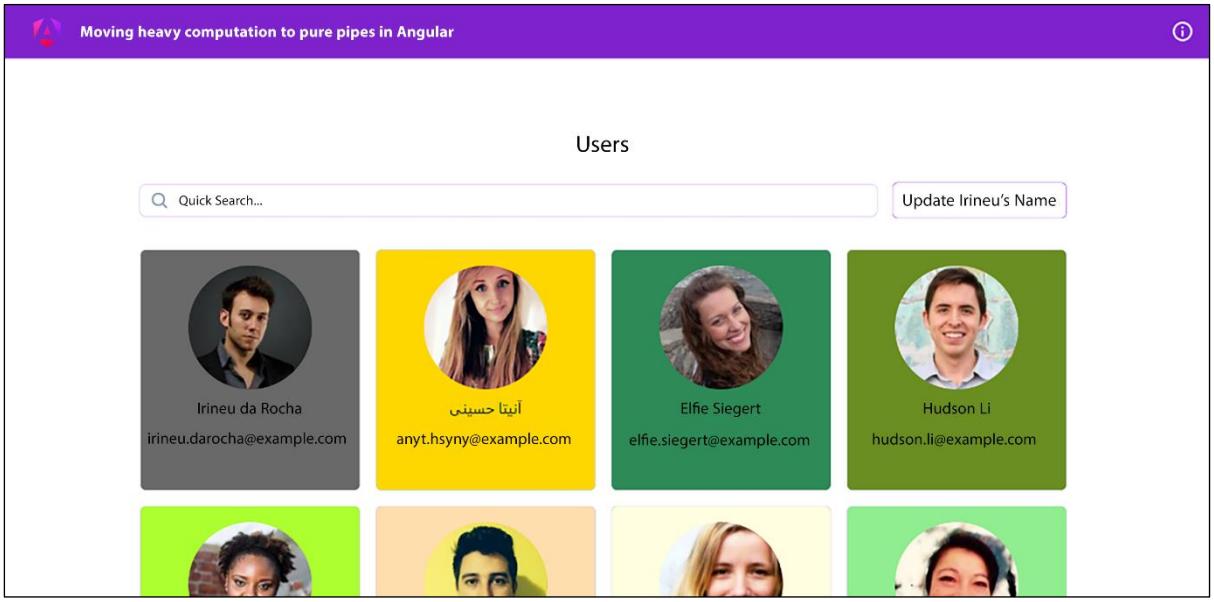
```
> appLogs
< ▶ {watchComponentRender: 1082, hours: 2, minutes: 2, seconds:
  6, milliseconds: 1081}
> appLogs
< ▶ {watchComponentRender: 1402, hours: 2, minutes: 2, seconds:
  7, milliseconds: 1401}
> appLogs
< ▶ {watchComponentRender: 1705, hours: 2, minutes: 2, seconds:
  8, milliseconds: 1704}
> appLogs
< ▶ {watchComponentRender: 1982, hours: 2, minutes: 2, seconds:
  10, milliseconds: 1981}
>
```

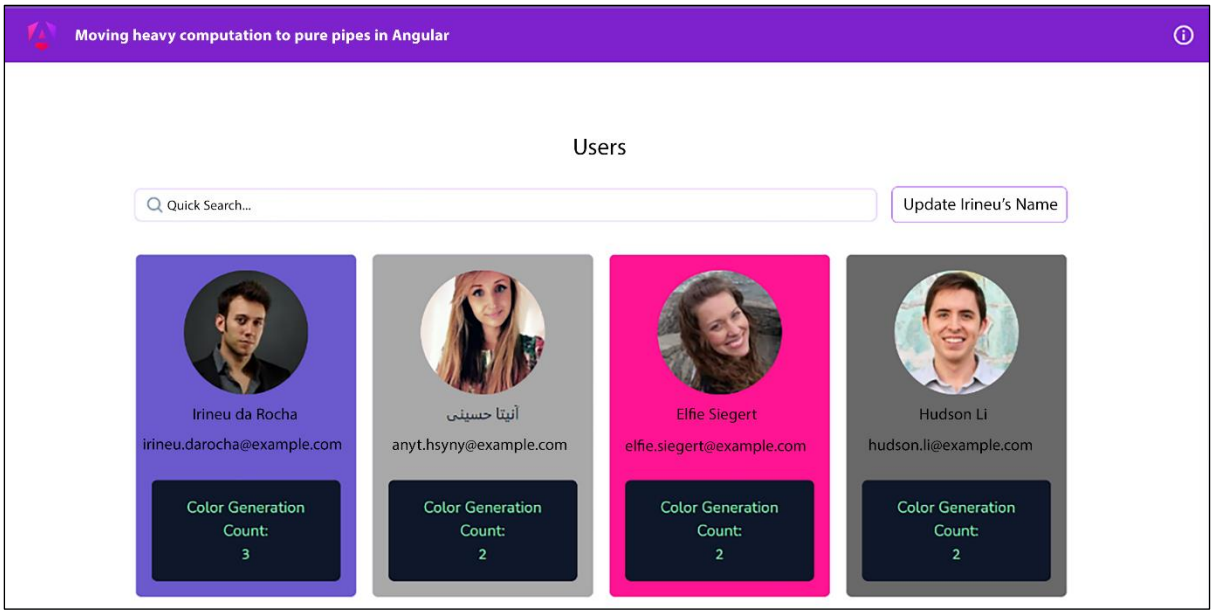


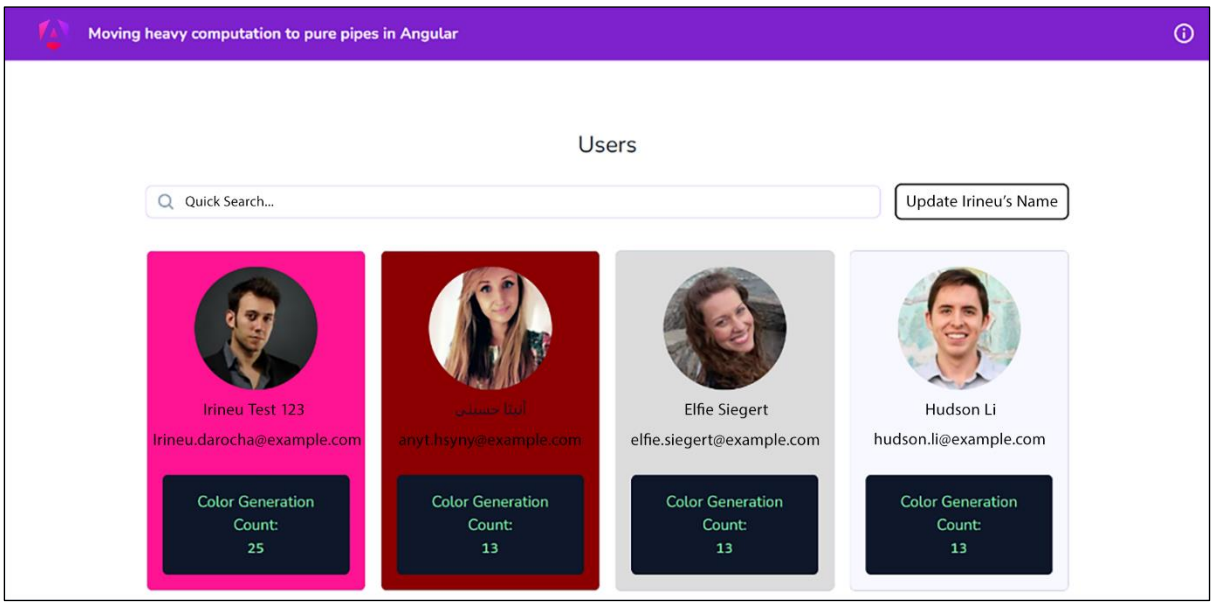

```
Angular is running in development mode.                    core.mjs:25537
10000 User card created                                    user-card.component.ts:18
Deleting user                                              app.component.ts:44
  {name: 'Miss Marty Mayer', email: 'Clemmie62@hotmail.com', address: {…}, phone: '265-643-9755 x3881',
▶ picture: '/assets/landscape.jpg?ts=654.6301159461362', …}
9999 User card created                                     user-card.component.ts:18
```

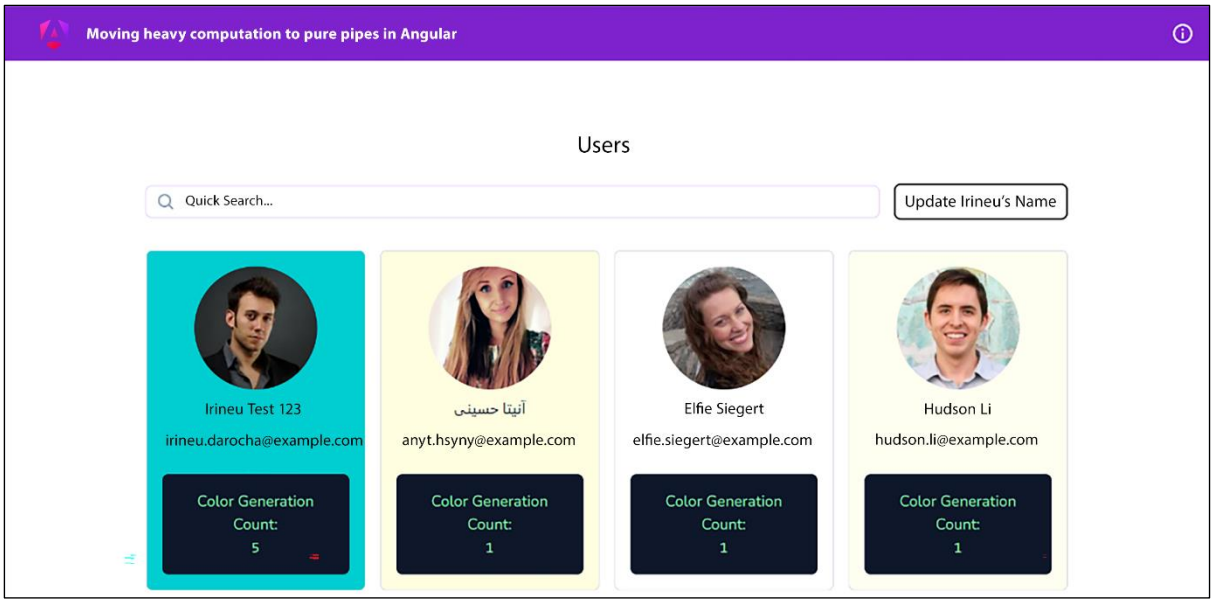

10000 User card created user-card.component.ts:18
Deleting user app.component.ts:44
{name: 'Miss Marty Mayer', email: 'Clemmie62@hotmail.com', address: {…}, phone: '265-643-9755 x3881', picture: '/assets/landscape.jpg?ts=654.630115946136 2', …}
9999 User card created user-card.component.ts:18
Updating user app.component.ts:37
{name: 'Miss Kathryn Streich', email: 'Mellie_Medhurst@gmail.com', address: {…}, phone: '484.508.5522 x30874', picture: '/assets/landscape.jpg?ts=608.151 9204261681', …}
9999 User card created user-card.component.ts:18

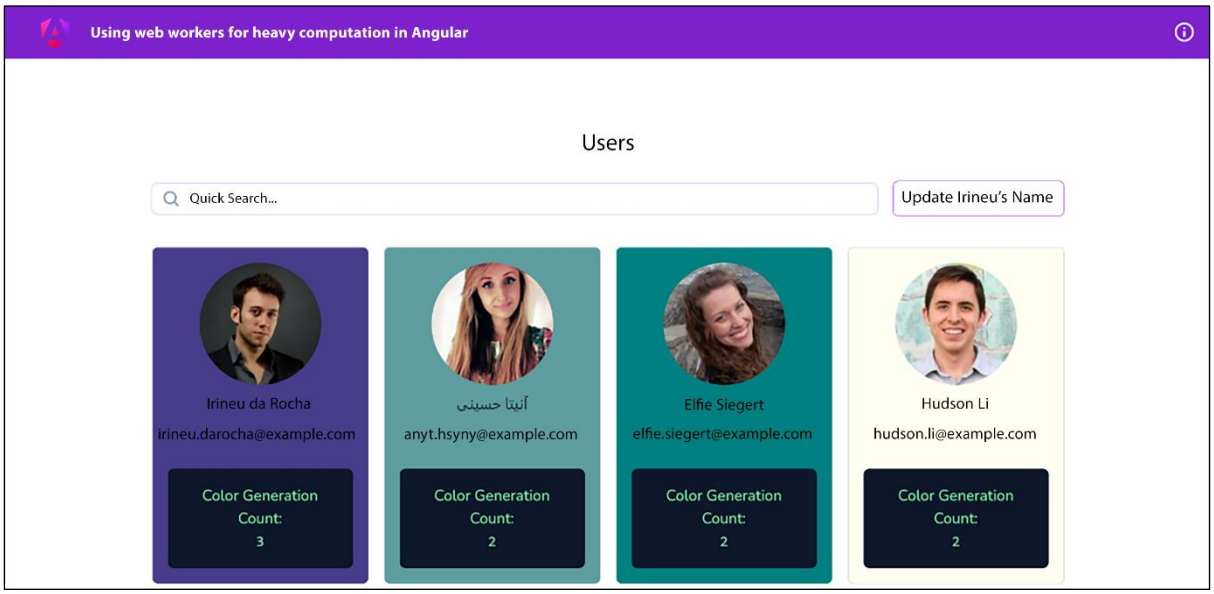

Using trackBy for lists with *ngFor
Our trusted customers
Miss Kathryn Streich UPDATED
484.508.5522 x30874
Mellie_Medhurst@gmail.com
Brandon Mitchell
1-970-796-9073 x719
Kelton_Pfeffer23@hotmail.com
Meredith Boyer
1-827-569-5184 x153
Nigel_Schuppe@yahoo.com
Elements
Console
top
Filter
1 hidden
Default levels
1 Issue: 1
[webpack-dev-server] Server started: polyfills.js:1
Hot Module Replacement disabled, Live Reloading enabled, Progress disabled, Overlay enabled.
Angular is running in development mode. core.mjs:25537
10000 User card created user-card.component.ts:18
Deleting user app.component.ts:44
{name: 'Miss Marty Mayer', email: 'Clemmie62@hotmail.com', address: {…}, phone: '265-643-9755 x3881', picture: '/assets/landscape.jpg?ts=654.630115946136 2', …}
Updating user app.component.ts:37
{name: 'Miss Kathryn Streich', email: 'Mellie_Medhurst@gmail.com', address: {…}, phone: '484.508.5522 x30874', picture: '/assets/landscape.jpg?ts=608.151 9204261681', …}


Moving heavy computation to pure pipes in Angular
Users
Quick Search...
Update Irineu's Name
Irineu da Rocha
irineu.darocha@example.com
آنیتا حسینی
anyt.hsyny@example.com
Elfie Siegert
elfie.siegert@example.com
Hudson Li
hudson.li@example.com


Moving heavy computation to pure pipes in Angular
Users
Quick Search...
Update Irineu's Name
Irineu da Rocha
irineu.darocha@example.com
Color Generation Count: 3
آنیتا حسینی
anyt.hsyny@example.com
Color Generation Count: 2
Elfie Siegert
elfie.siegert@example.com
Color Generation Count: 2
Hudson Li
hudson.li@example.com
Color Generation Count: 2


Moving heavy computation to pure pipes in Angular
Users
Quick Search...
Update Irineu's Name
Irineu Test 123
Irineu.darocha@example.com
Color Generation Count: 25
آنیتا حسینی
anyt.hsyny@example.com
Color Generation Count: 13
Elfie Siegert
elfie.siegert@example.com
Color Generation Count: 13
Hudson Li
hudson.li@example.com
Color Generation Count: 13

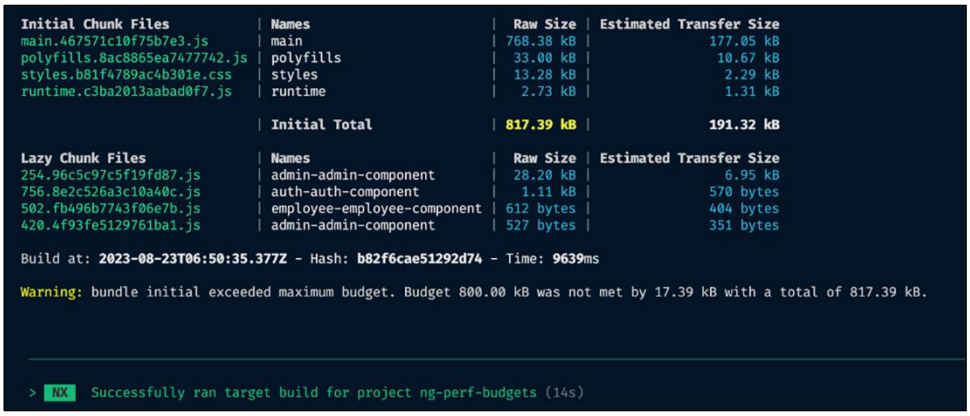

Moving heavy computation to pure pipes in Angular
Users
Quick Search...
Update Irineu's Name
Irineu Test 123
irineu.darocha@example.com
Color Generation Count: 5
آنیتا حسینی
anyt.hsyny@example.com
Color Generation Count: 1
Elfie Siegert
elfie.siegert@example.com
Color Generation Count: 1
Hudson Li
hudson.li@example.com
Color Generation Count: 1


Using web workers for heavy computation in Angular
Users
Quick Search...
Update Irineu's Name
Irineu da Rocha
irineu.darocha@example.com
Color Generation Count: 3
آنیتا حسینی
anyt.hsyny@example.com
Color Generation Count: 2
Elfie Siegert
elfie.siegert@example.com
Color Generation Count: 2
Hudson Li
hudson.li@example.com
Color Generation Count: 2

```
inside the worker ▶ {randomizationCount: 9}                                   random-color.worker.ts:9
inside the worker ▶ {randomizationCount: 9}                                   random-color.worker.ts:9
inside the worker ▶ {randomizationCount: 9}                                   random-color.worker.ts:9
inside the worker ▶ {randomizationCount: 9}                                   random-color.worker.ts:9
inside the worker ▶ {randomizationCount: 9}                                   random-color.worker.ts:9
inside the worker ▶ {randomizationCount: 9}                                   random-color.worker.ts:9
inside the worker ▶ {randomizationCount: 9}                                   random-color.worker.ts:9
inside the worker ▶ {randomizationCount: 9}                                   random-color.worker.ts:9
inside the worker ▶ {randomizationCount: 9}                                   random-color.worker.ts:9
inside the worker ▶ {randomizationCount: 9}                                   random-color.worker.ts:9
received color FloralWhite from worker for user elfie.siegert@example.com     user-card.component.ts:30
received color DarkBlue from worker for user irineu.darocha@example.com       user-card.component.ts:30
received color LemonChiffon from worker for user hudson.li@example.com        user-card.component.ts:30
received color PaleGoldenRod from worker for user max.wang@example.com        user-card.component.ts:30
received color LimeGreen from worker for user anyt.hsyny@example.com          user-card.component.ts:30
received color Beige from worker for user austrelino.lima@example.com         user-card.component.ts:30
received color Black from worker for user indie.hall@example.com              user-card.component.ts:30
received color LightGoldenRodYellow from worker for user ruby.flores@example.com  user-card.component.ts:30
received color Magenta from worker for user lexi.keijer@example.com           user-card.component.ts:30
received color PaleVioletRed from worker for user justin.grewal@example.com   user-card.component.ts:30
>
```

```
> nx run ng-perf-budgets:build:production

✔ Browser application bundle generation complete.
✔ Copying assets complete.
✔ Index html generation complete.

Initial Chunk Files           | Names                     |  Raw Size | Estimated Transfer Size
main.625e7d83cf718aef.js      | main                      | 293.96 kB |                80.08 kB
polyfills.8ac8865ea7477742.js | polyfills                 |  33.00 kB |                10.67 kB
styles.b81f4789ac4b301e.css   | styles                    |  13.28 kB |                 2.29 kB
runtime.c3ba2013aabad0f7.js   | runtime                   |   2.73 kB |                 1.31 kB

                              | Initial Total             | 342.97 kB |                94.35 kB

Lazy Chunk Files              | Names                     |  Raw Size | Estimated Transfer Size
254.96c5c97c5f19fd87.js       | admin-admin-component     |  28.20 kB |                 6.95 kB
756.8e2c526a3c10a40c.js       | auth-auth-component       |   1.11 kB |               570 bytes
502.fb496b7743f06e7b.js       | employee-employee-component | 612 bytes |               404 bytes
420.4f93fe5129761ba1.js       | admin-admin-component     | 527 bytes |               351 bytes

Build at: 2023-08-23T06:31:15.340Z - Hash: 59a3b28d3de27a35 - Time: 6643ms
```

```
✔ Browser application bundle generation complete.

Initial Chunk Files           | Names                     |  Raw Size | Estimated Transfer Size
main.decdb6eab79e5854.js      | main                      |   1.10 MB |               232.17 kB
polyfills.8ac8865ea7477742.js | polyfills                 |  33.00 kB |                10.67 kB
styles.b81f4789ac4b301e.css   | styles                    |  13.28 kB |                 2.29 kB
runtime.5c68c21468bc0c6f.js   | runtime                   |   2.82 kB |                 1.34 kB

                              | Initial Total             |   1.14 MB |               246.48 kB

Lazy Chunk Files              | Names                     |  Raw Size | Estimated Transfer Size
254.96c5c97c5f19fd87.js       | admin-admin-component     |  28.20 kB |                 6.95 kB
756.8e2c526a3c10a40c.js       | auth-auth-component       |   1.11 kB |               570 bytes
502.fb496b7743f06e7b.js       | employee-employee-component | 612 bytes |               404 bytes
420.4f93fe5129761ba1.js       | admin-admin-component     | 527 bytes |               351 bytes

Build at: 2023-08-23T06:36:00.083Z - Hash: 46693707f75ccecc - Time: 10245ms

Warning: bundle initial exceeded maximum budget. Budget 500.00 kB was not met by 670.44 kB with a total of 1.14 MB.


Error: bundle initial exceeded maximum budget. Budget 1.00 MB was not met by 146.44 kB with a total of 1.14 MB.
```



Initial Chunk Files	Names	Raw Size	Estimated Transfer Size
main.467571c10f75b7e3.js	main	768.38 kB	177.05 kB
polyfills.8ac8865ea7477742.js	polyfills	33.00 kB	10.67 kB
styles.b81f4789ac4b301e.css	styles	13.28 kB	2.29 kB
runtime.c3ba2013aabad0f7.js	runtime	2.73 kB	1.31 kB
	Initial Total	**817.39 kB**	**191.32 kB**

Lazy Chunk Files	Names	Raw Size	Estimated Transfer Size
254.96c5c97c5f19fd87.js	admin-admin-component	28.20 kB	6.95 kB
756.8e2c526a3c10a40c.js	auth-auth-component	1.11 kB	570 bytes
502.fb496b7743f06e7b.js	employee-employee-component	612 bytes	404 bytes
420.4f93fe5129761ba1.js	admin-admin-component	527 bytes	351 bytes

Build at: **2023-08-23T06:50:35.377Z** - Hash: **b82f6cae51292d74** - Time: **9639**ms

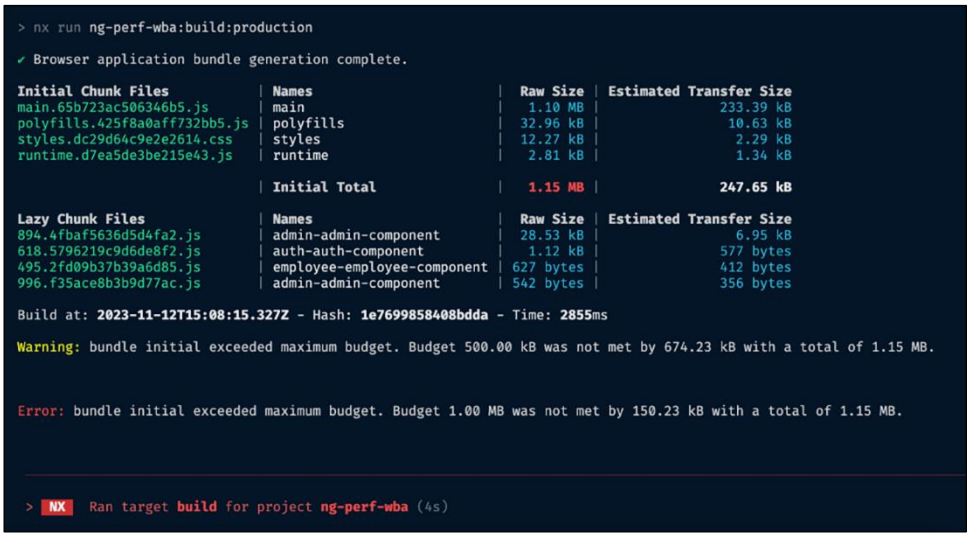
Warning: bundle initial exceeded maximum budget. Budget 800.00 kB was not met by 17.39 kB with a total of 817.39 kB.

> NX Successfully ran target build for project ng-perf-budgets (14s)

Initial Chunk Files	Names	Raw Size	Estimated Transfer Size
main.d6d0840d0d45feba.js	main	293.96 kB	80.13 kB
polyfills.7253f222f37b9cfb.js	polyfills	33.00 kB	10.64 kB
styles.b81f4789ac4b301e.css	styles	13.28 kB	2.29 kB
runtime.6040297220f7f89e.js	runtime	2.72 kB	1.31 kB
	Initial Total	**342.95 kB**	**94.36 kB**

Lazy Chunk Files	Names	Raw Size	Estimated Transfer Size
885.51a6df896448549d.js	admin-admin-component	28.19 kB	6.94 kB
211.ac1c2796a9ccfaeb.js	auth-auth-component	1.10 kB	554 bytes
879.0821cdf499bcc352.js	employee-employee-component	608 bytes	403 bytes
764.df5aaa8fa55de54e.js	admin-admin-component	523 bytes	356 bytes

Build at: **2023-08-24T16:26:04.658Z** - Hash: **41698c156a312dea** - Time: **4996**ms



> nx run ng-perf-wba:build:production

✔ Browser application bundle generation complete.

Initial Chunk Files	Names	Raw Size	Estimated Transfer Size
main.65b723ac506346b5.js	main	1.10 MB	233.39 kB
polyfills.425f8a0aff732bb5.js	polyfills	32.96 kB	10.63 kB
styles.dc29d64c9e2e2614.css	styles	12.27 kB	2.29 kB
runtime.d7ea5de3be215e43.js	runtime	2.81 kB	1.34 kB
	Initial Total	**1.15 MB**	**247.65 kB**

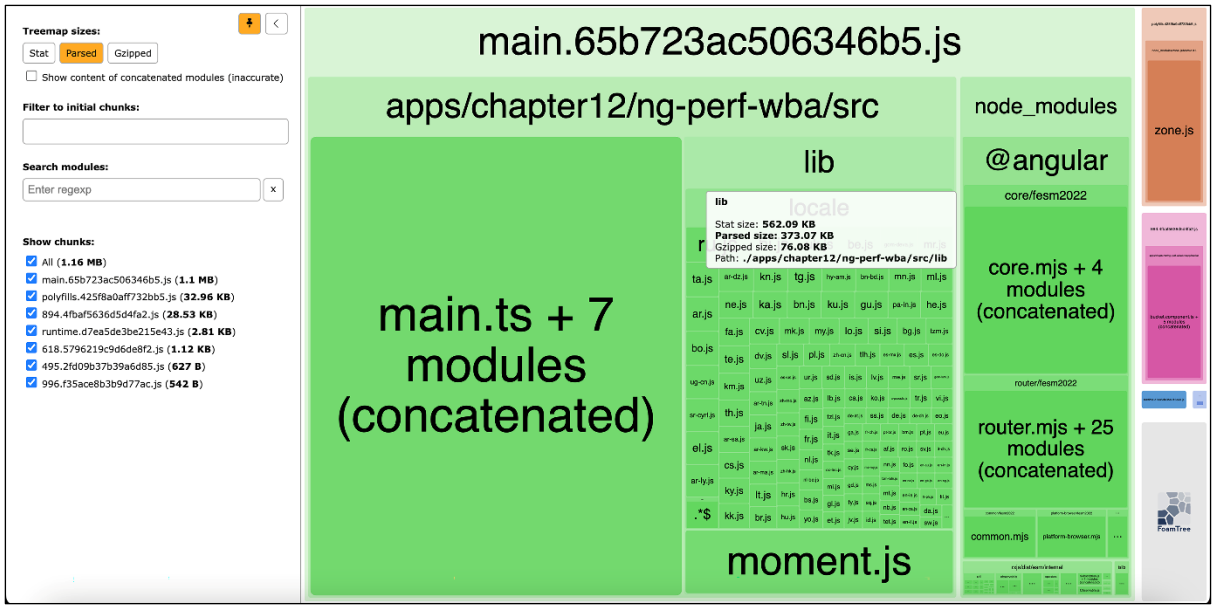
Lazy Chunk Files	Names	Raw Size	Estimated Transfer Size
894.4fbaf5636d5d4fa2.js	admin-admin-component	28.53 kB	6.95 kB
618.5796219c9d6de8f2.js	auth-auth-component	1.12 kB	577 bytes
495.2fd09b37b39a6d85.js	employee-employee-component	627 bytes	412 bytes
996.f35ace8b3b9d77ac.js	admin-admin-component	542 bytes	356 bytes

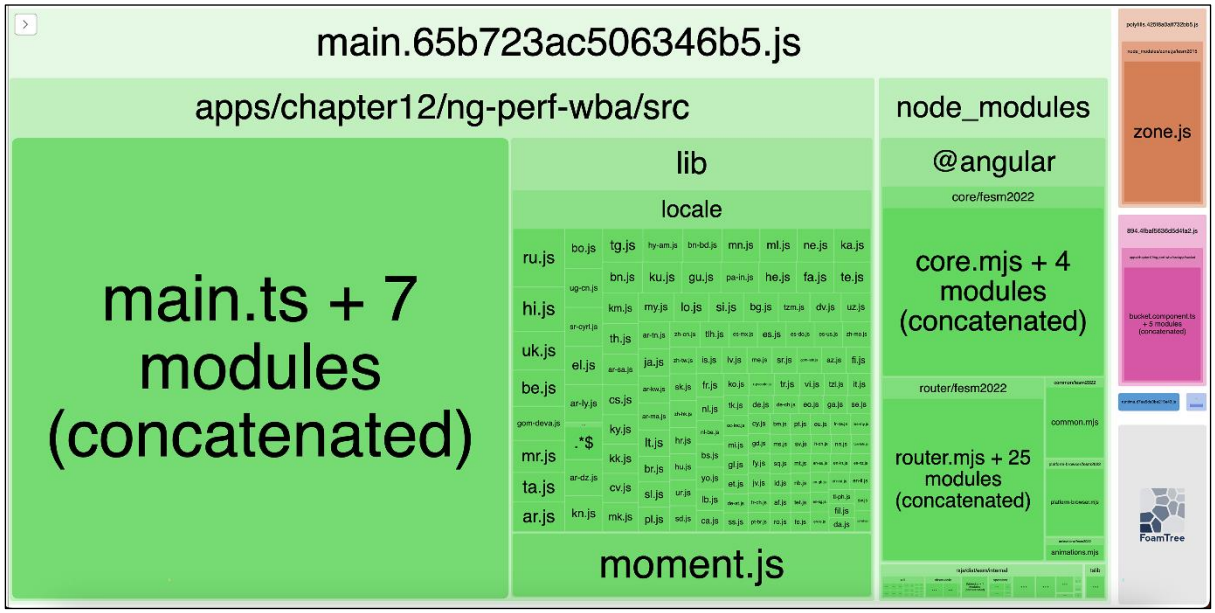
Build at: **2023-11-12T15:08:15.327Z** - Hash: **1e7699858408bdda** - Time: **2855**ms

Warning: bundle initial exceeded maximum budget. Budget 500.00 kB was not met by 674.23 kB with a total of 1.15 MB.

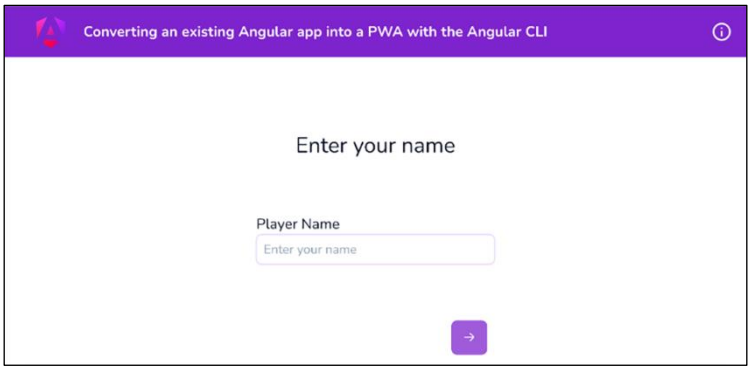
Error: bundle initial exceeded maximum budget. Budget 1.00 MB was not met by 150.23 kB with a total of 1.15 MB.

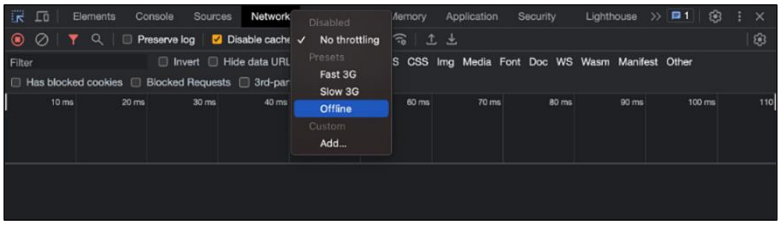
> NX Ran target **build** for project **ng-perf-wba** (4s)

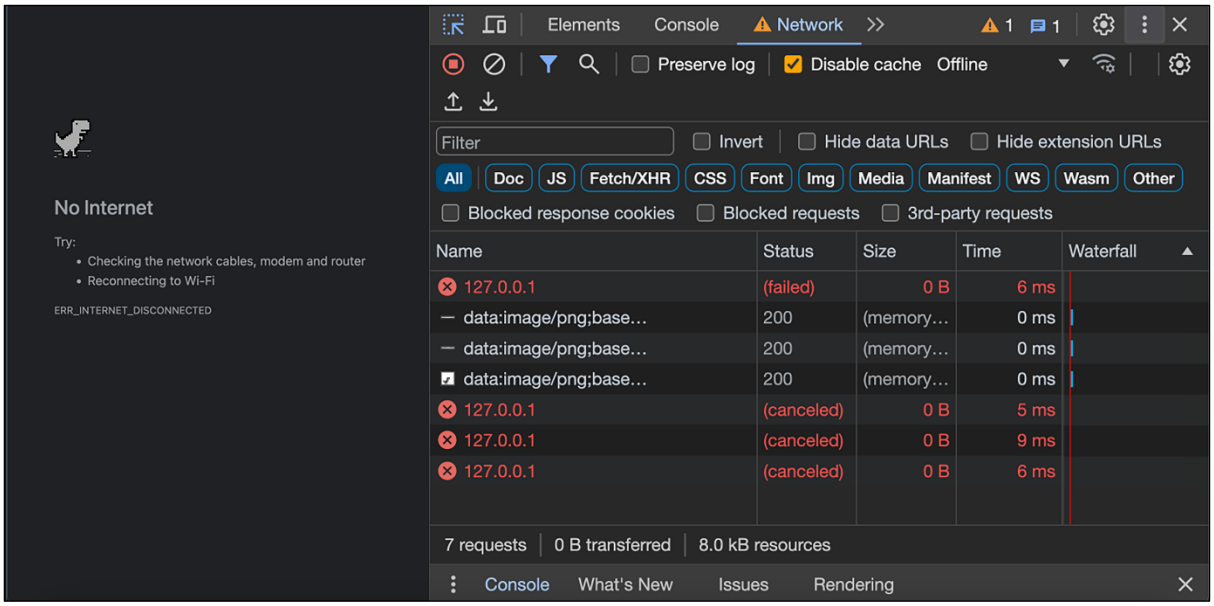


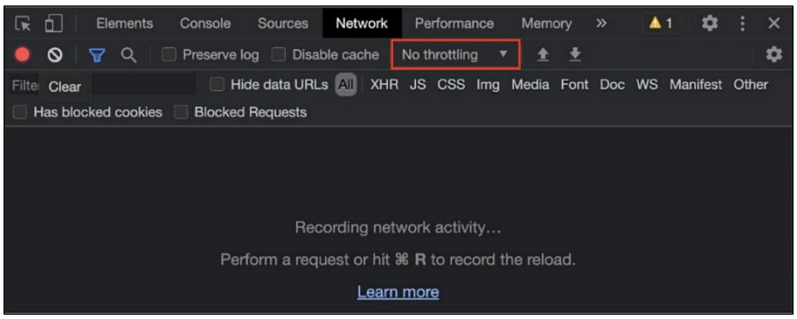


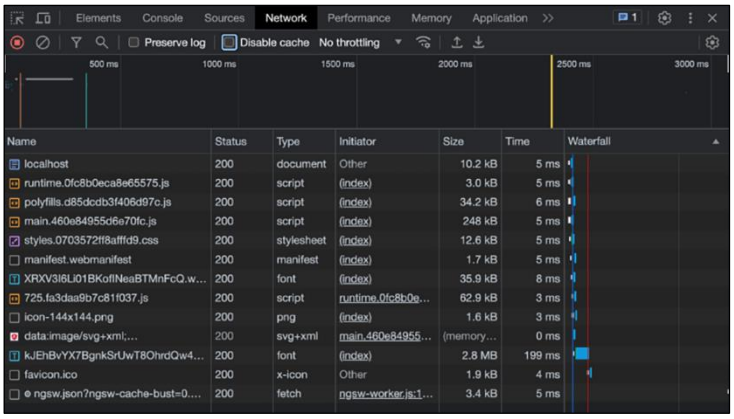
Chapter 13: Building PWAs with Angular

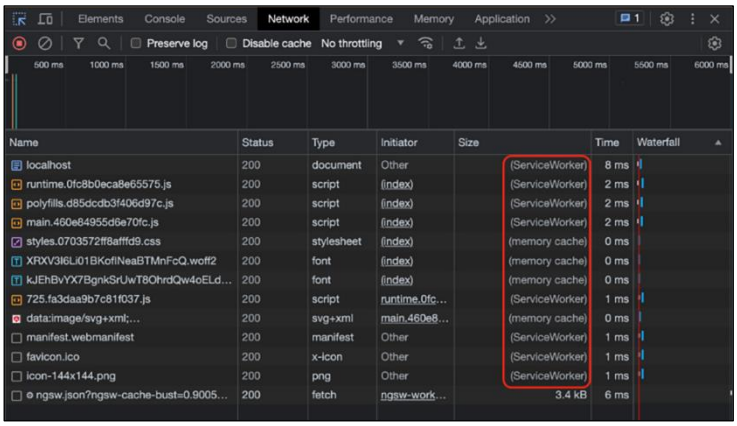

Converting an existing Angular app into a PWA with the Angular CLI
Enter your name
Player Name
Enter your name

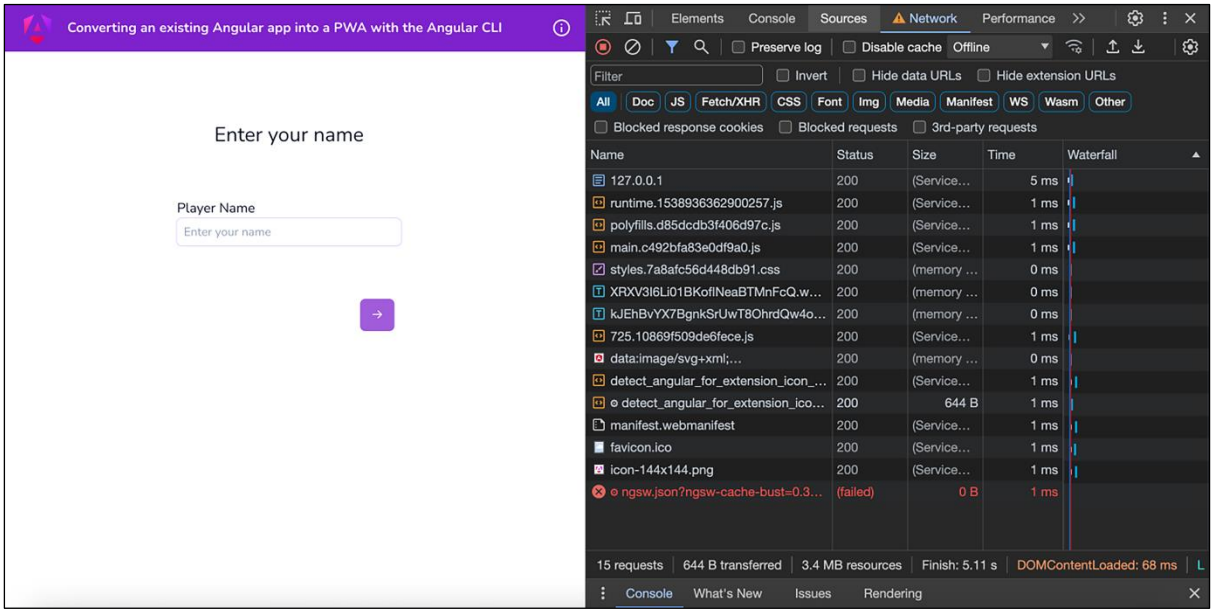

Elements
Console
Sources
Network
Disabled
No throttling
Presets
Fast 3G
Slow 3G
Offline
Custom
Add...
Preserve log
Disable cache
Filter
Invert
Hide data URL
Has blocked cookies
Blocked Requests
Memory
Application
Security
Lighthouse
Img
Media
Font
Doc
WS
Wasm
Manifest
Other

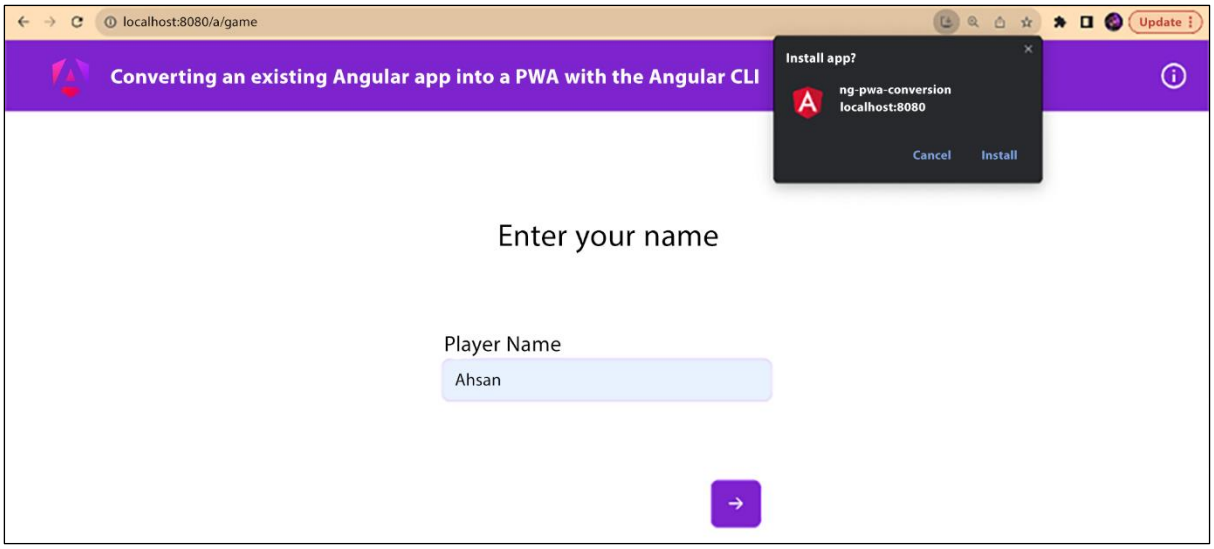

No Internet
Try:
Checking the network cables, modem and router
Reconnecting to Wi-Fi
ERR_INTERNET_DISCONNECTED
Elements
Console
Network
Preserve log
Disable cache
Offline
Filter
Invert
Hide data URLs
Hide extension URLs
All
Doc
JS
Fetch/XHR
CSS
Font
Img
Media
Manifest
WS
Wasm
Other
Blocked response cookies
Blocked requests
3rd-party requests
Name
Status
Size
Time
Waterfall
127.0.0.1
(failed)
0 B
6 ms
data:image/png;base…
200
(memory…
0 ms
data:image/png;base…
200
(memory…
0 ms
data:image/png;base…
200
(memory…
0 ms
127.0.0.1
(canceled)
0 B
5 ms
127.0.0.1
(canceled)
0 B
9 ms
127.0.0.1
(canceled)
0 B
6 ms
7 requests
0 B transferred
8.0 kB resources
Console
What's New
Issues
Rendering

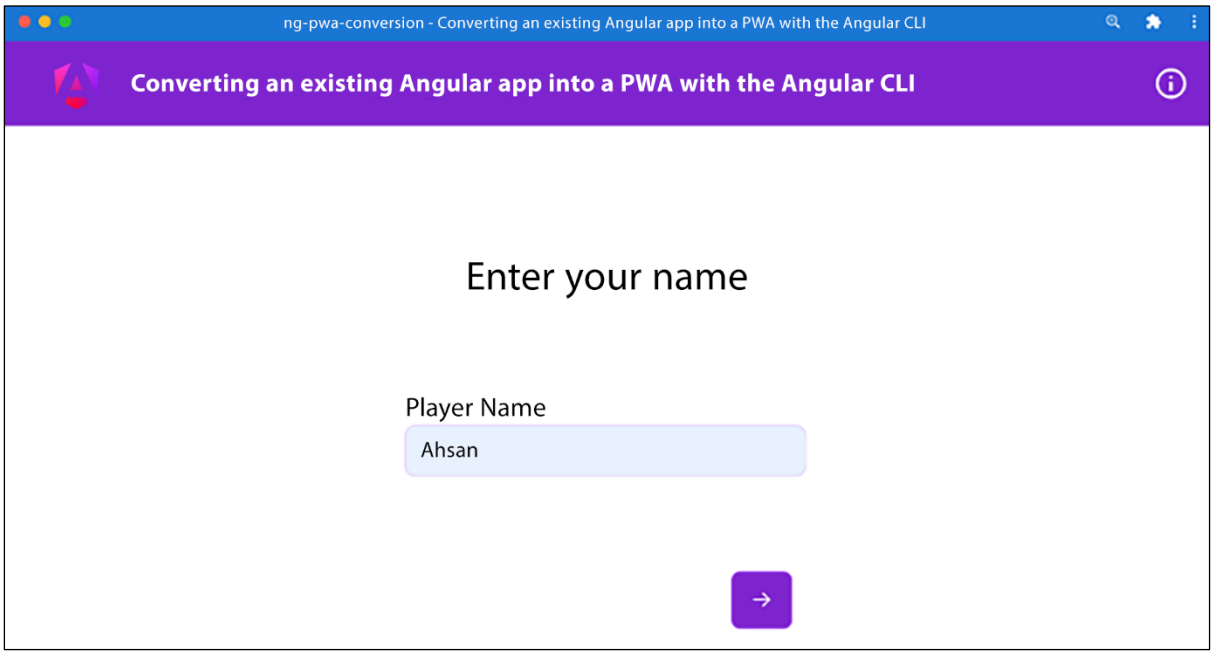

Elements
Console
Sources
Network
Performance
Memory
Preserve log
Disable cache
No throttling
Filter
Clear
Hide data URLs
All
XHR
JS
CSS
Img
Media
Font
Doc
WS
Manifest
Other
Has blocked cookies
Blocked Requests
Recording network activity…
Perform a request or hit ⌘ R to record the reload.
Learn more

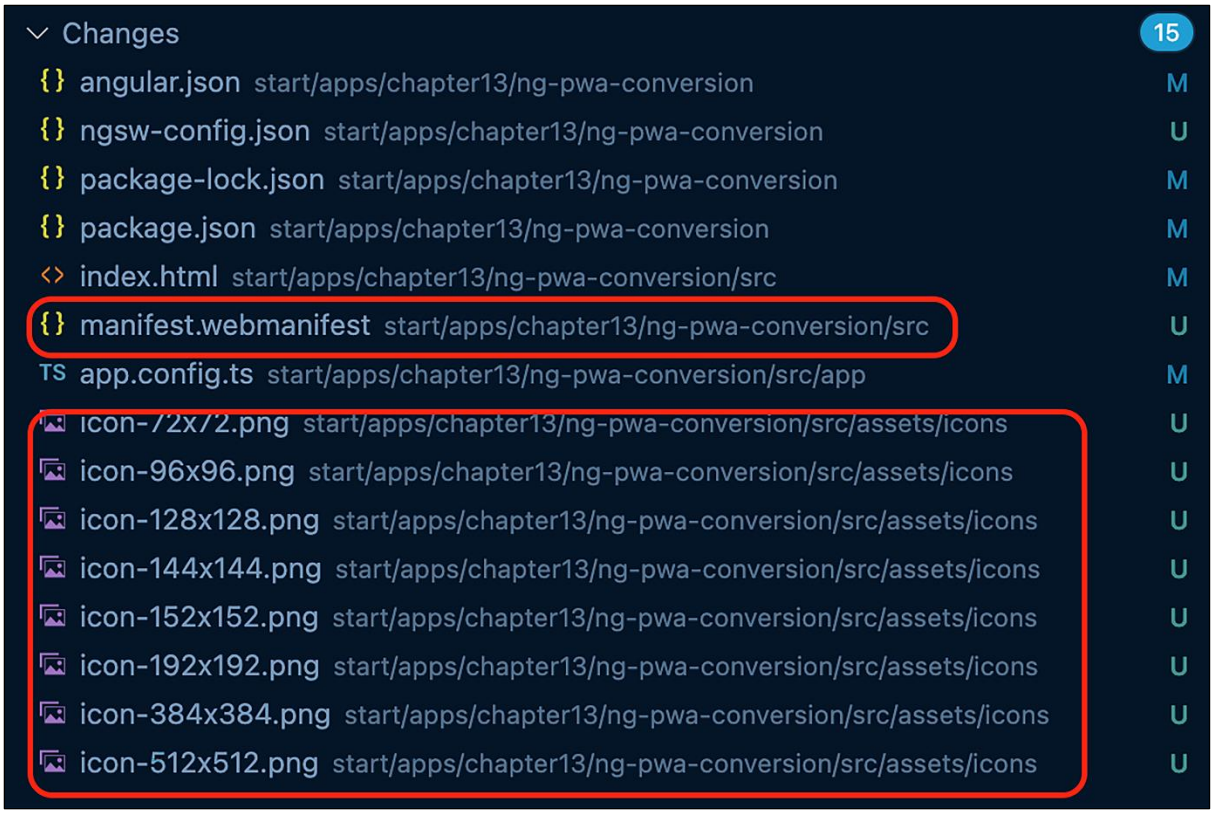

Elements Console Sources Network Performance Memory Application
Preserve log Disable cache No throttling
500 ms 1000 ms 1500 ms 2000 ms 2500 ms 3000 ms
Name Status Type Initiator Size Time Waterfall
localhost 200 document Other 10.2 kB 5 ms
runtime.0fc8b0eca8e65575.js 200 script (index) 3.0 kB 5 ms
polyfills.d85dcdb3f406d97c.js 200 script (index) 34.2 kB 6 ms
main.460e84955d6e70fc.js 200 script (index) 248 kB 5 ms
styles.0703572ff8afffd9.css 200 stylesheet (index) 12.6 kB 5 ms
manifest.webmanifest 200 manifest (index) 1.7 kB 5 ms
XRXV3I6Li01BKofINeaBTMnFcQ.w… 200 font (index) 35.9 kB 8 ms
725.fa3daa9b7c81f037.js 200 script runtime.0fc8b0e… 62.9 kB 3 ms
icon-144x144.png 200 png (index) 1.6 kB 3 ms
data:image/svg+xml;… 200 svg+xml main.460e84955… (memory… 0 ms
kJEhBvYX7BgnkSrUwT8OhrdQw4… 200 font (index) 2.8 MB 199 ms
favicon.ico 200 x-icon Other 1.9 kB 4 ms
ngsw.json?ngsw-cache-bust=0.… 200 fetch ngsw-worker.js:1… 3.4 kB 5 ms

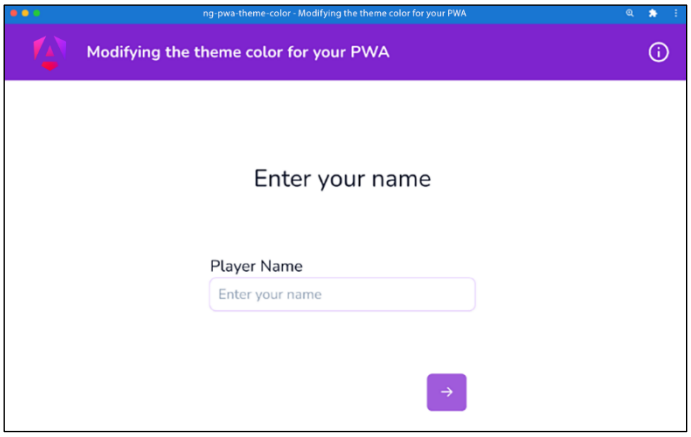

Elements Console Sources Network Performance Memory Application
Preserve log Disable cache No throttling
500 ms 1000 ms 1500 ms 2000 ms 2500 ms 3000 ms 3500 ms 4000 ms 4500 ms 5000 ms 5500 ms 6000 ms
Name Status Type Initiator Size Time Waterfall
localhost 200 document Other (ServiceWorker) 8 ms
runtime.0fc8b0eca8e65575.js 200 script (index) (ServiceWorker) 2 ms
polyfills.d85dcdb3f406d97c.js 200 script (index) (ServiceWorker) 2 ms
main.460e84955d6e70fc.js 200 script (index) (ServiceWorker) 2 ms
styles.0703572ff8afffd9.css 200 stylesheet (index) (memory cache) 0 ms
XRXV3I6Li01BKofINeaBTMnFcQ.woff2 200 font (index) (memory cache) 0 ms
kJEhBvYX7BgnkSrUwT8OhrdQw4oELd… 200 font (index) (memory cache) 0 ms
725.fa3daa9b7c81f037.js 200 script runtime.0fc… (ServiceWorker) 1 ms
data:image/svg+xml;… 200 svg+xml main.460e8… (memory cache) 0 ms
manifest.webmanifest 200 manifest Other (ServiceWorker) 1 ms
favicon.ico 200 x-icon Other (ServiceWorker) 1 ms
icon-144x144.png 200 png Other (ServiceWorker) 1 ms
ngsw.json?ngsw-cache-bust=0.9005… 200 fetch ngsw-work… 3.4 kB 6 ms

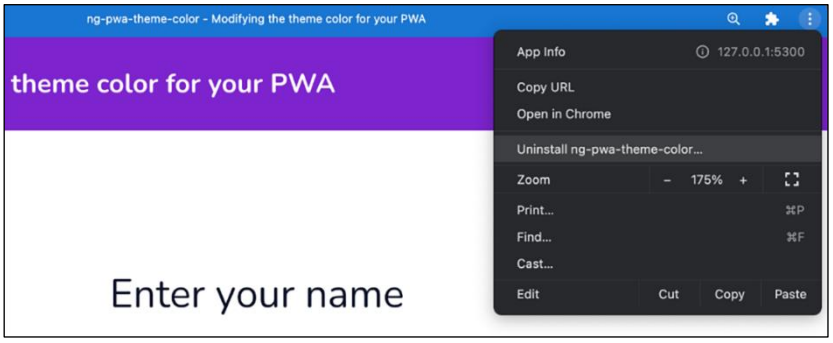

Converting an existing Angular app into a PWA with the Angular CLI
Enter your name
Player Name
Enter your name
Elements Console Sources Network Performance
Preserve log Disable cache Offline
Filter Invert Hide data URLs Hide extension URLs
All Doc JS Fetch/XHR CSS Font Img Media Manifest WS Wasm Other
Blocked response cookies Blocked requests 3rd-party requests
Name Status Size Time Waterfall
127.0.0.1 200 (Service… 5 ms
runtime.1538936362900257.js 200 (Service… 1 ms
polyfills.d85dcdb3f406d97c.js 200 (Service… 1 ms
main.c492bfa83e0df9a0.js 200 (Service… 1 ms
styles.7a8afc56d448db91.css 200 (memory … 0 ms
XRXV3I6Li01BKofINeaBTMnFcQ.w… 200 (memory … 0 ms
kJEhBvYX7BgnkSrUwT8OhrdQw4o… 200 (memory … 0 ms
725.10869f509de6fece.js 200 (Service… 1 ms
data:image/svg+xml;… 200 (memory … 0 ms
detect_angular_for_extension_icon_… 200 (Service… 1 ms
detect_angular_for_extension_ico… 200 644 B 1 ms
manifest.webmanifest 200 (Service… 1 ms
favicon.ico 200 (Service… 1 ms
icon-144x144.png 200 (Service… 1 ms
ngsw.json?ngsw-cache-bust=0.3… (failed) 0 B 1 ms
15 requests 644 B transferred 3.4 MB resources Finish: 5.11 s DOMContentLoaded: 68 ms
Console What's New Issues Rendering

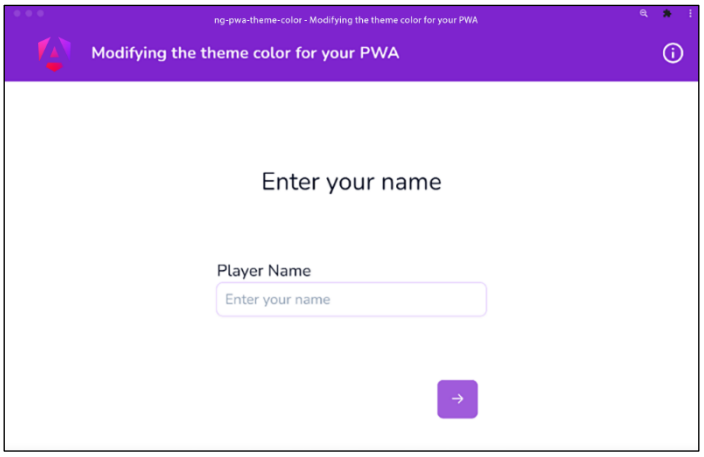

localhost:8080/a/game
Update
Converting an existing Angular app into a PWA with the Angular CLI
Install app?
ng-pwa-conversion
localhost:8080
Cancel
Install
Enter your name
Player Name
Ahsan

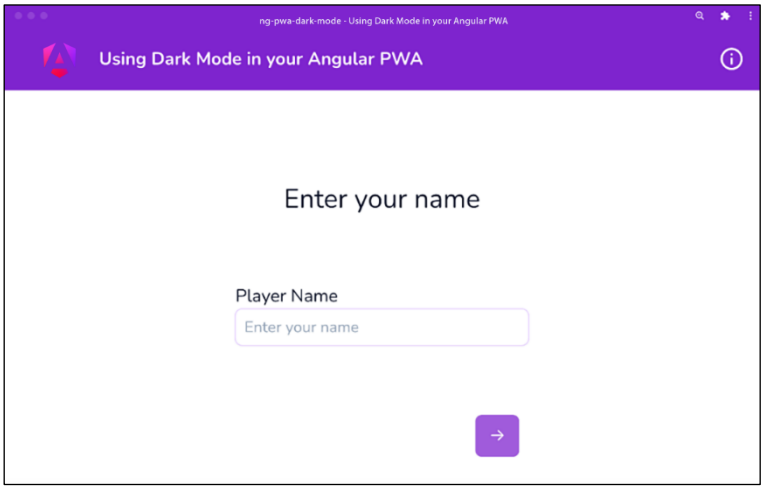

ng-pwa-conversion - Converting an existing Angular app into a PWA with the Angular CLI
Converting an existing Angular app into a PWA with the Angular CLI
Enter your name
Player Name
Ahsan

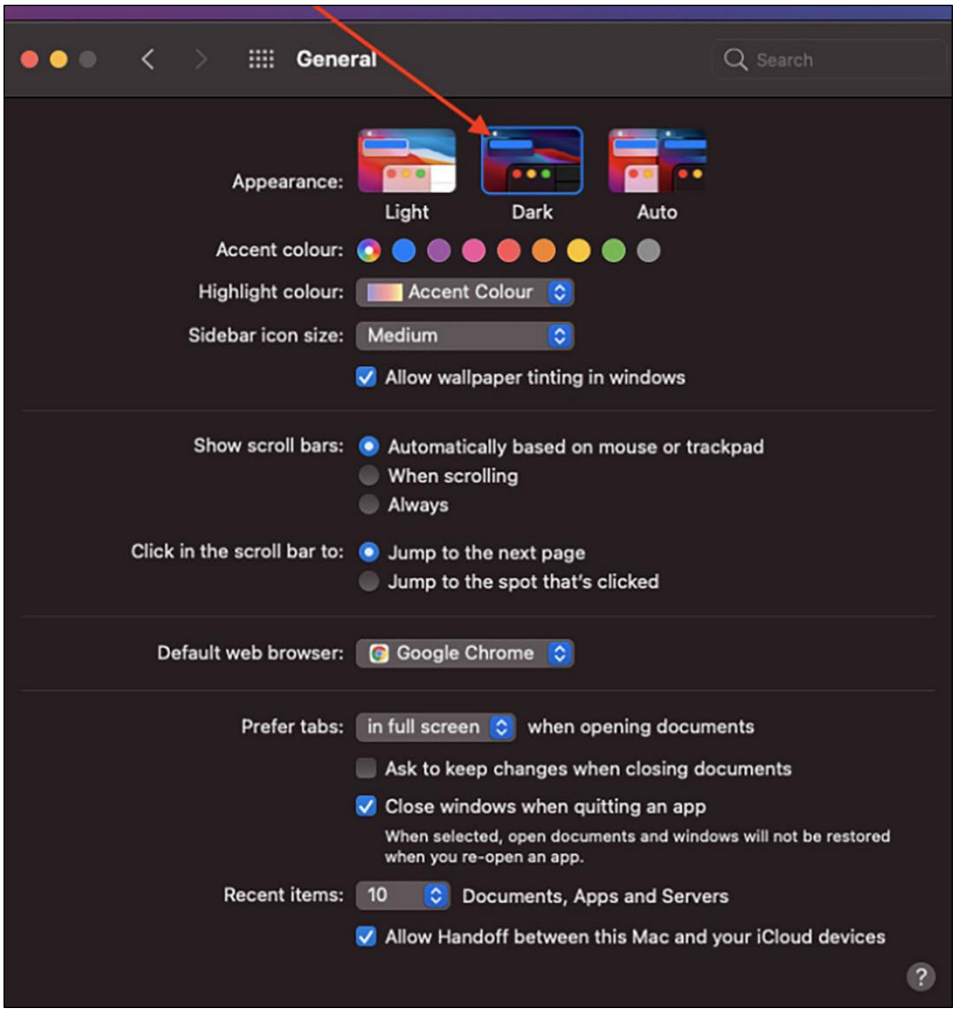

Changes
15
angular.json start/apps/chapter13/ng-pwa-conversion M
ngsw-config.json start/apps/chapter13/ng-pwa-conversion U
package-lock.json start/apps/chapter13/ng-pwa-conversion M
package.json start/apps/chapter13/ng-pwa-conversion M
index.html start/apps/chapter13/ng-pwa-conversion/src M
manifest.webmanifest start/apps/chapter13/ng-pwa-conversion/src U
app.config.ts start/apps/chapter13/ng-pwa-conversion/src/app M
icon-72x72.png start/apps/chapter13/ng-pwa-conversion/src/assets/icons U
icon-96x96.png start/apps/chapter13/ng-pwa-conversion/src/assets/icons U
icon-128x128.png start/apps/chapter13/ng-pwa-conversion/src/assets/icons U
icon-144x144.png start/apps/chapter13/ng-pwa-conversion/src/assets/icons U
icon-152x152.png start/apps/chapter13/ng-pwa-conversion/src/assets/icons U
icon-192x192.png start/apps/chapter13/ng-pwa-conversion/src/assets/icons U
icon-384x384.png start/apps/chapter13/ng-pwa-conversion/src/assets/icons U
icon-512x512.png start/apps/chapter13/ng-pwa-conversion/src/assets/icons U

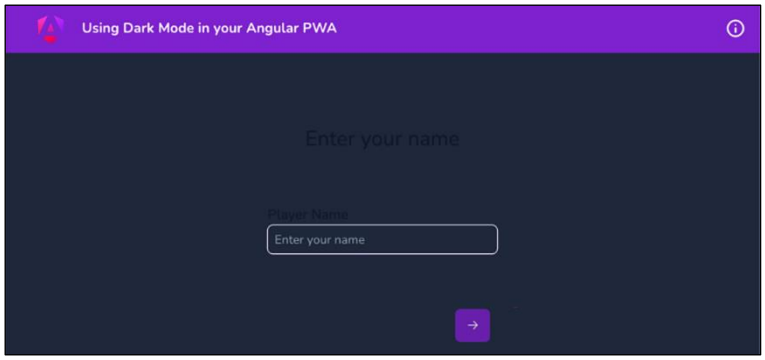

ng-pwa-theme-color - Modifying the theme color for your PWA
Modifying the theme color for your PWA
Enter your name
Player Name
Enter your name

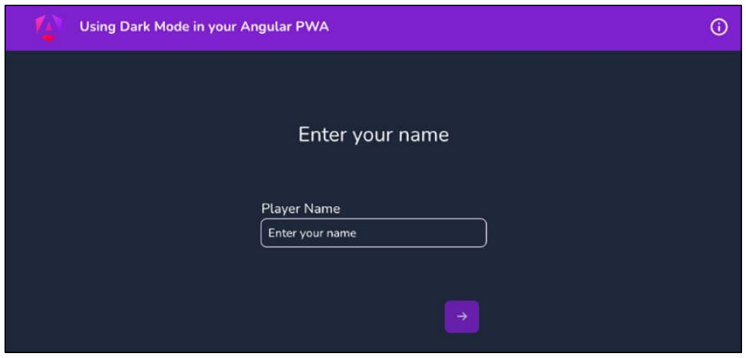

ng-pwa-theme-color - Modifying the theme color for your PWA
theme color for your PWA
Enter your name
App Info
127.0.0.1:5300
Copy URL
Open in Chrome
Uninstall ng-pwa-theme-color...
Zoom
175%
Print...
Find...
Cast...
Edit
Cut
Copy
Paste

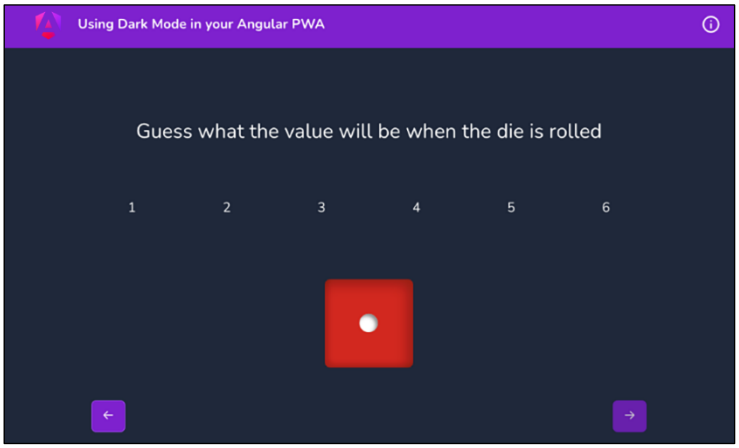

ng-pwa-theme-color - Modifying the theme color for your PWA
Modifying the theme color for your PWA
Enter your name
Player Name
Enter your name

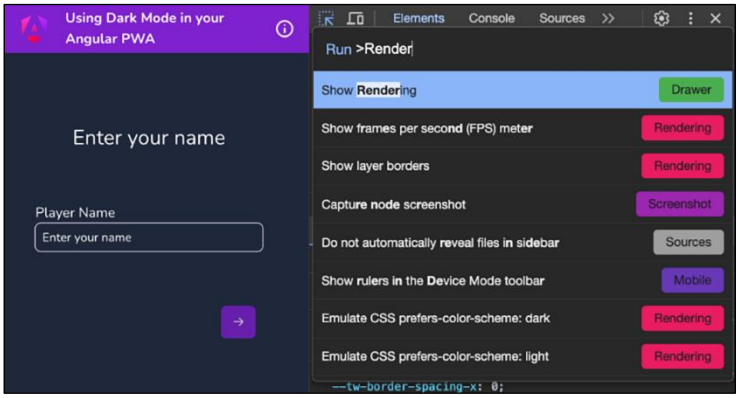

ng-pwa-dark-mode - Using Dark Mode in your Angular PWA
Using Dark Mode in your Angular PWA
Enter your name
Player Name
Enter your name

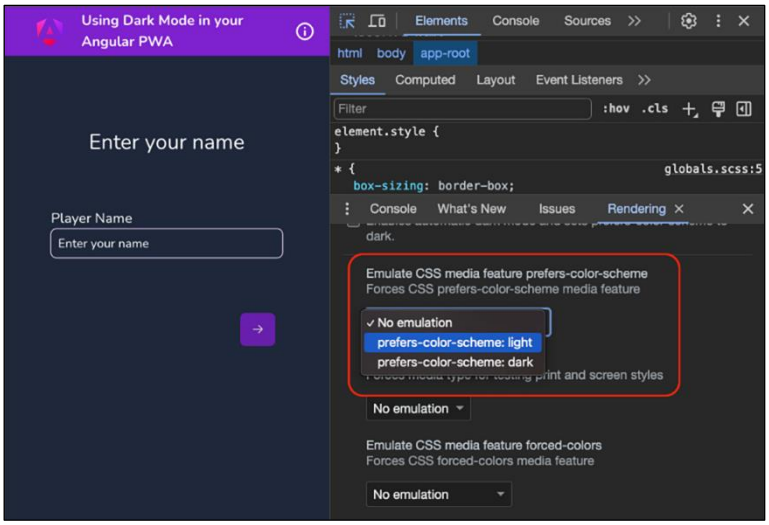

General
Search
Appearance:
Light
Dark
Auto
Accent colour:
Highlight colour:
Accent Colour
Sidebar icon size:
Medium
Allow wallpaper tinting in windows
Show scroll bars:
Automatically based on mouse or trackpad
When scrolling
Always
Click in the scroll bar to:
Jump to the next page
Jump to the spot that's clicked
Default web browser:
Google Chrome
Prefer tabs:
in full screen
when opening documents
Ask to keep changes when closing documents
Close windows when quitting an app
When selected, open documents and windows will not be restored when you re-open an app.
Recent items:
10
Documents, Apps and Servers
Allow Handoff between this Mac and your iCloud devices

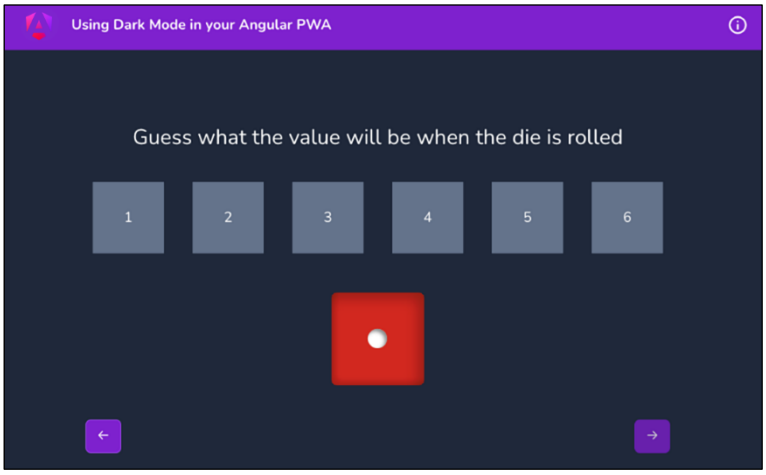

Using Dark Mode in your Angular PWA
Enter your name
Player Name
Enter your name

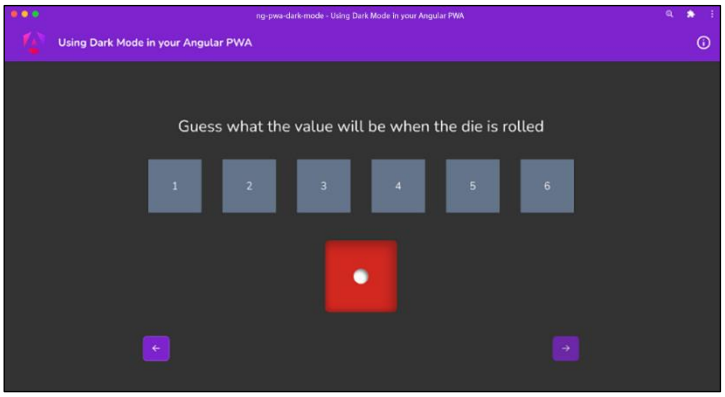

Using Dark Mode in your Angular PWA
Enter your name
Player Name
Enter your name

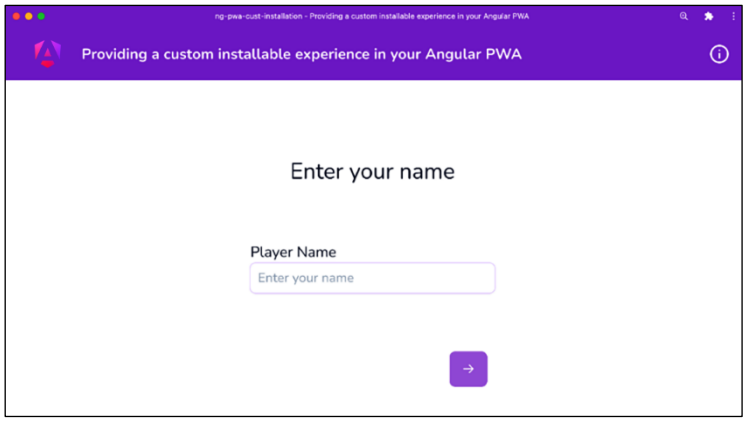

Using Dark Mode in your Angular PWA
Guess what the value will be when the die is rolled
1
2
3
4
5
6

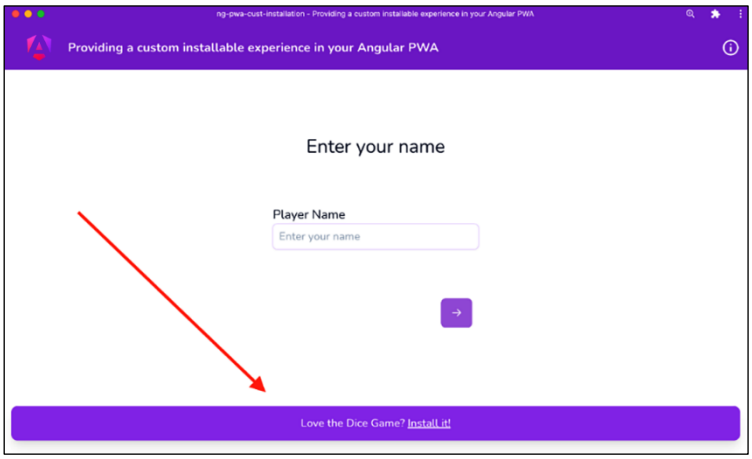

Using Dark Mode in your Angular PWA
Enter your name
Player Name
Enter your name
Elements
Console
Sources
Run >Render
Show Rendering
Drawer
Show frames per second (FPS) meter
Rendering
Show layer borders
Rendering
Capture node screenshot
Screenshot
Do not automatically reveal files in sidebar
Sources
Show rulers in the Device Mode toolbar
Mobile
Emulate CSS prefers-color-scheme: dark
Rendering
Emulate CSS prefers-color-scheme: light
Rendering
--tw-border-spacing-x: 0;

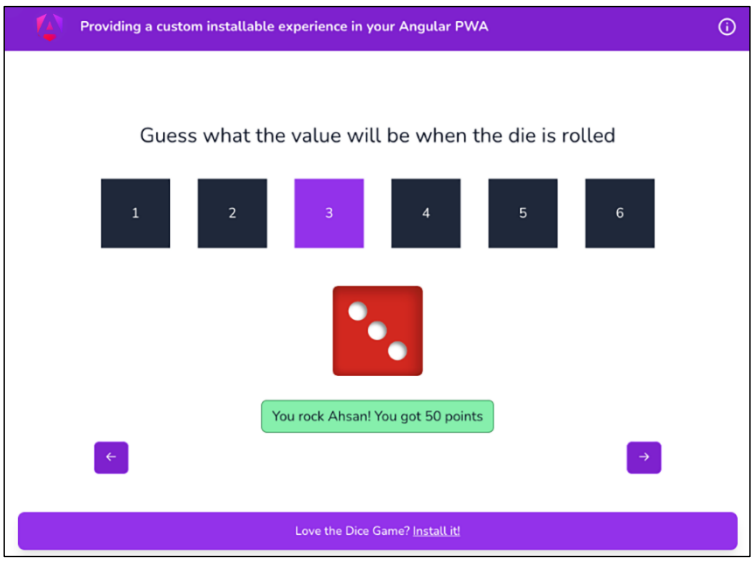

Using Dark Mode in your Angular PWA
Enter your name
Player Name
Enter your name
Elements
Console
Sources
html
body
app-root
Styles
Computed
Layout
Event Listeners
Filter
:hov .cls
element.style {
}
* {
box-sizing: border-box;
globals.scss:5
Console
What's New
Issues
Rendering
dark.
Emulate CSS media feature prefers-color-scheme
Forces CSS prefers-color-scheme media feature
No emulation
prefers-color-scheme: light
prefers-color-scheme: dark
No emulation
Emulate CSS media feature forced-colors
Forces CSS forced-colors media feature
No emulation

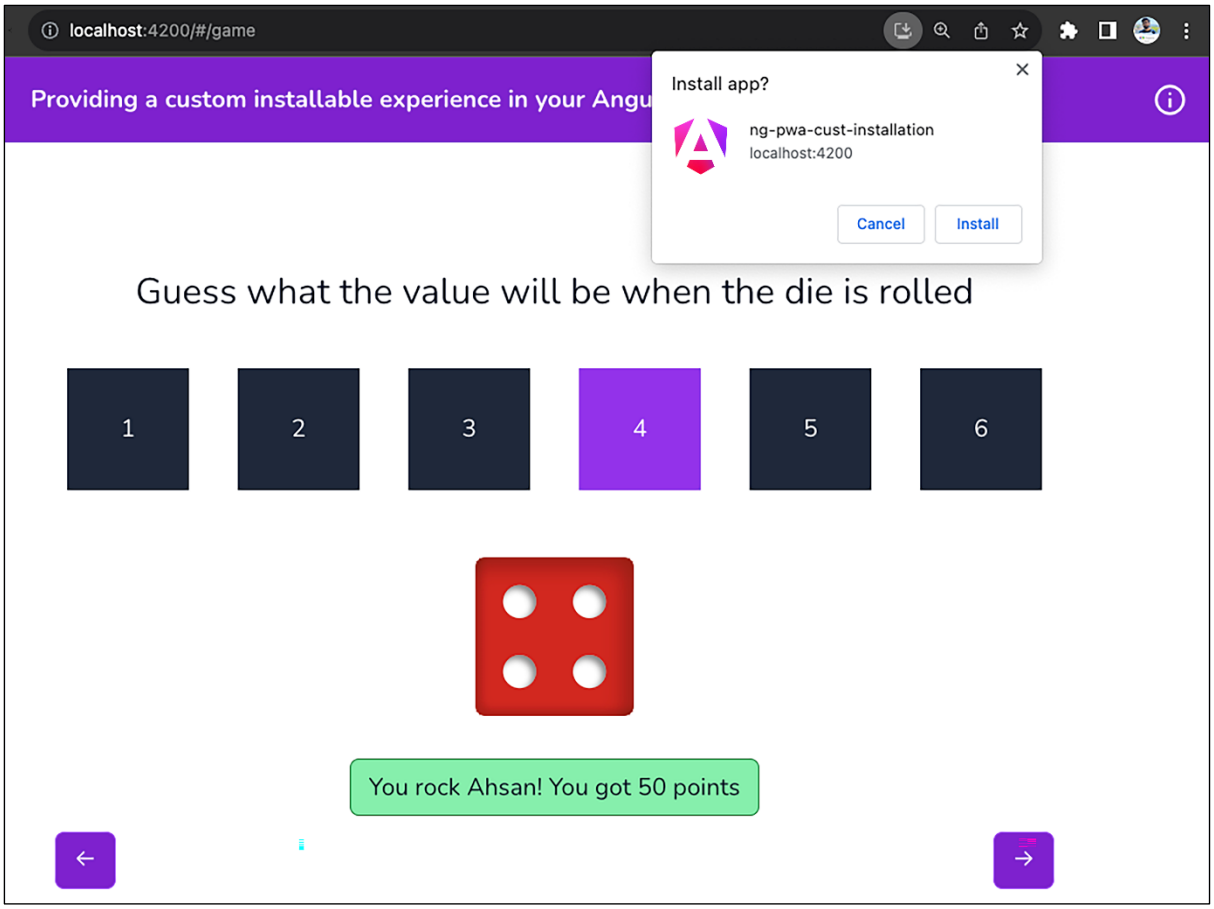

Using Dark Mode in your Angular PWA
Guess what the value will be when the die is rolled
1
2
3
4
5
6

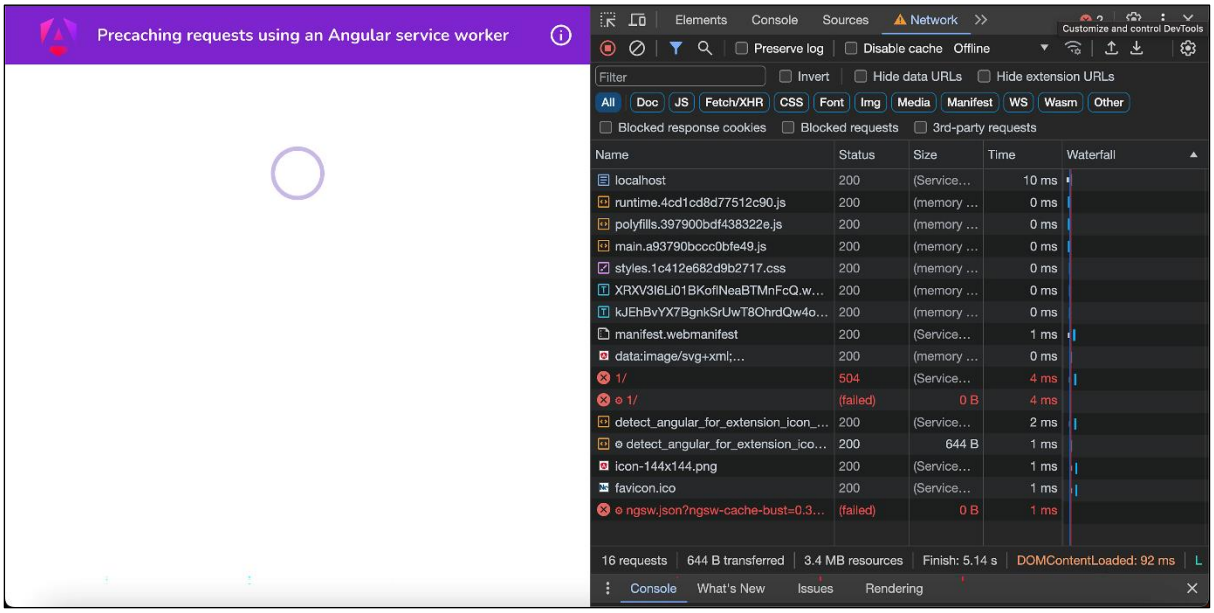

ng-pwa-dark-mode - Using Dark Mode in your Angular PWA
Using Dark Mode in your Angular PWA
Guess what the value will be when the die is rolled
1
2
3
4
5
6

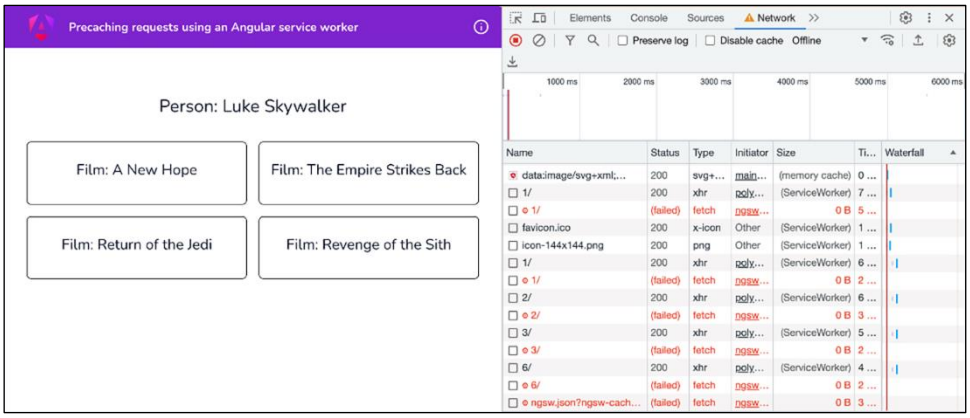

ng-pwa-cust-installation - Providing a custom installable experience in your Angular PWA
Providing a custom installable experience in your Angular PWA
Enter your name
Player Name
Enter your name

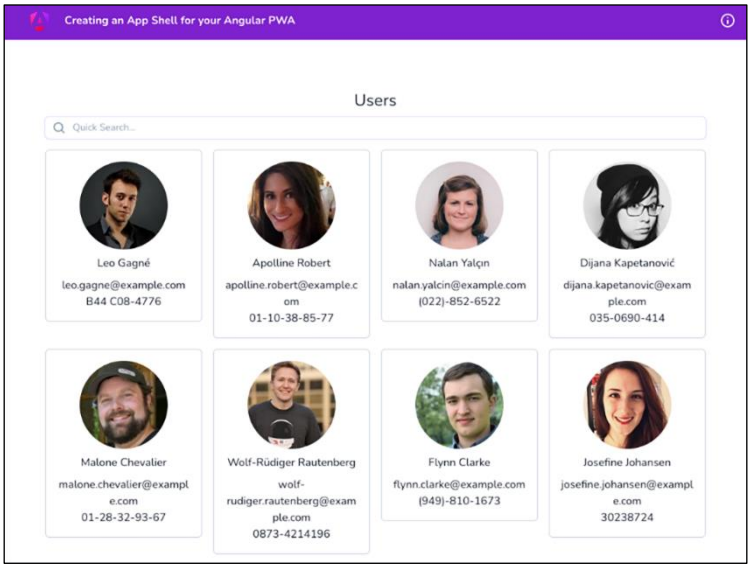

ng-pwa-cust-installation - Providing a custom installable experience in your Angular PWA
Providing a custom installable experience in your Angular PWA
Enter your name
Player Name
Enter your name
Love the Dice Game? Install it!

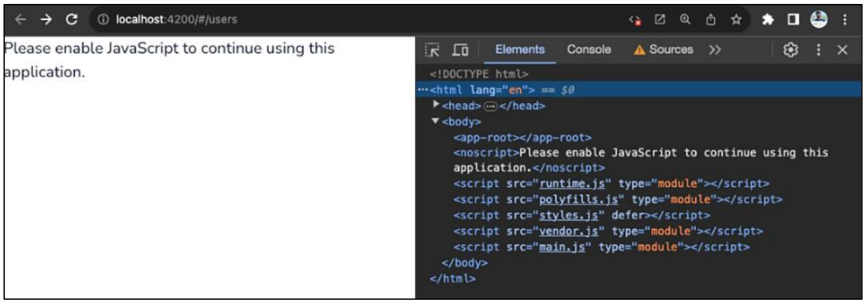

Providing a custom installable experience in your Angular PWA
Guess what the value will be when the die is rolled
1
2
3
4
5
6
You rock Ahsan! You got 50 points
Love the Dice Game? Install it!

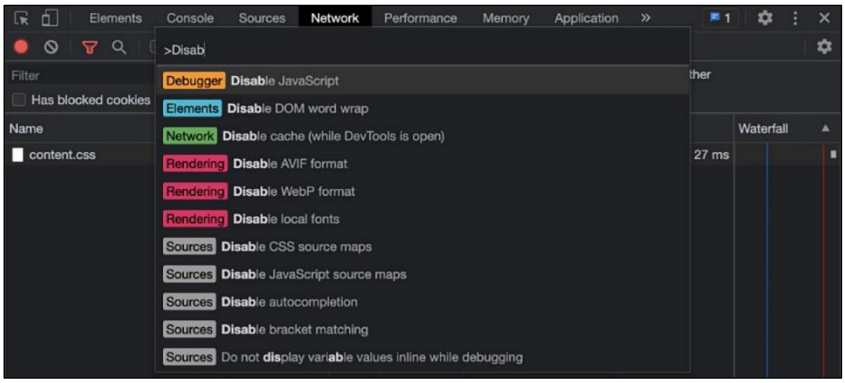

localhost:4200/#/game
Providing a custom installable experience in your Angu
Install app?
ng-pwa-cust-installation
localhost:4200
Cancel
Install
Guess what the value will be when the die is rolled
1
2
3
4
5
6
You rock Ahsan! You got 50 points

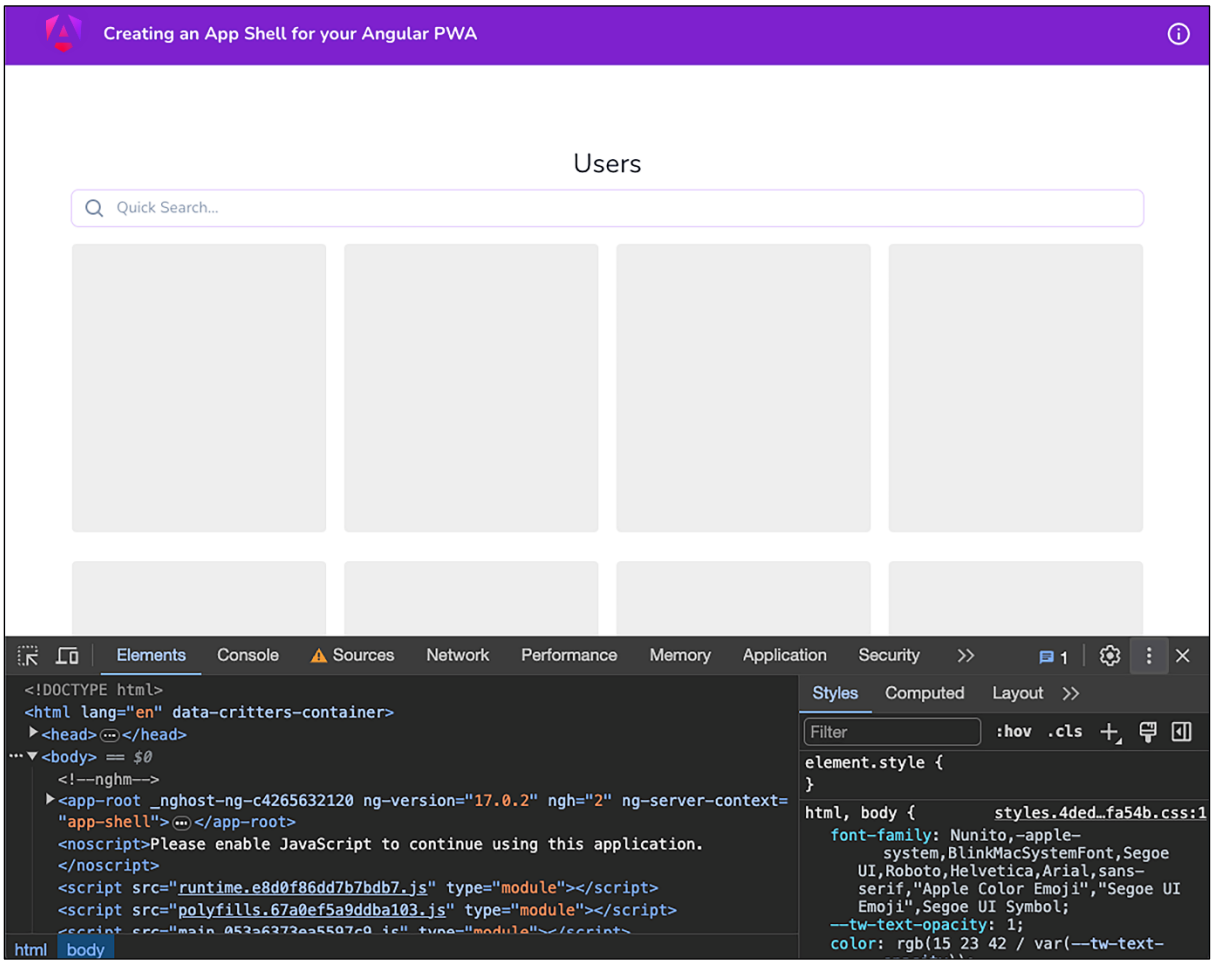

Precaching requests using an Angular service worker
Elements
Console
Sources
Network
Customize and control DevTools
Preserve log
Disable cache
Offline
Filter
Invert
Hide data URLs
Hide extension URLs
All
Doc
JS
Fetch/XHR
CSS
Font
Img
Media
Manifest
WS
Wasm
Other
Blocked response cookies
Blocked requests
3rd-party requests
Name
Status
Size
Time
Waterfall
localhost 200 (Service... 10 ms
runtime.4cd1cd8d77512c90.js 200 (memory ... 0 ms
polyfills.397900bdf438322e.js 200 (memory ... 0 ms
main.a93790bccc0bfe49.js 200 (memory ... 0 ms
styles.1c412e682d9b2717.css 200 (memory ... 0 ms
XRXV3I6Li01BKofiNeaBTMnFcQ.w... 200 (memory ... 0 ms
kJEhBvYX7BgnkSrUwT8OhrdQw4o... 200 (memory ... 0 ms
manifest.webmanifest 200 (Service... 1 ms
data:image/svg+xml;... 200 (memory ... 0 ms
1/ 504 (Service... 4 ms
1/ (failed) 0 B 4 ms
detect_angular_for_extension_icon_... 200 (Service... 2 ms
detect_angular_for_extension_ico... 200 644 B 1 ms
icon-144x144.png 200 (Service... 1 ms
favicon.ico 200 (Service... 1 ms
ngsw.json?ngsw-cache-bust=0.3... (failed) 0 B 1 ms
16 requests
644 B transferred
3.4 MB resources
Finish: 5.14 s
DOMContentLoaded: 92 ms
Console
What's New
Issues
Rendering

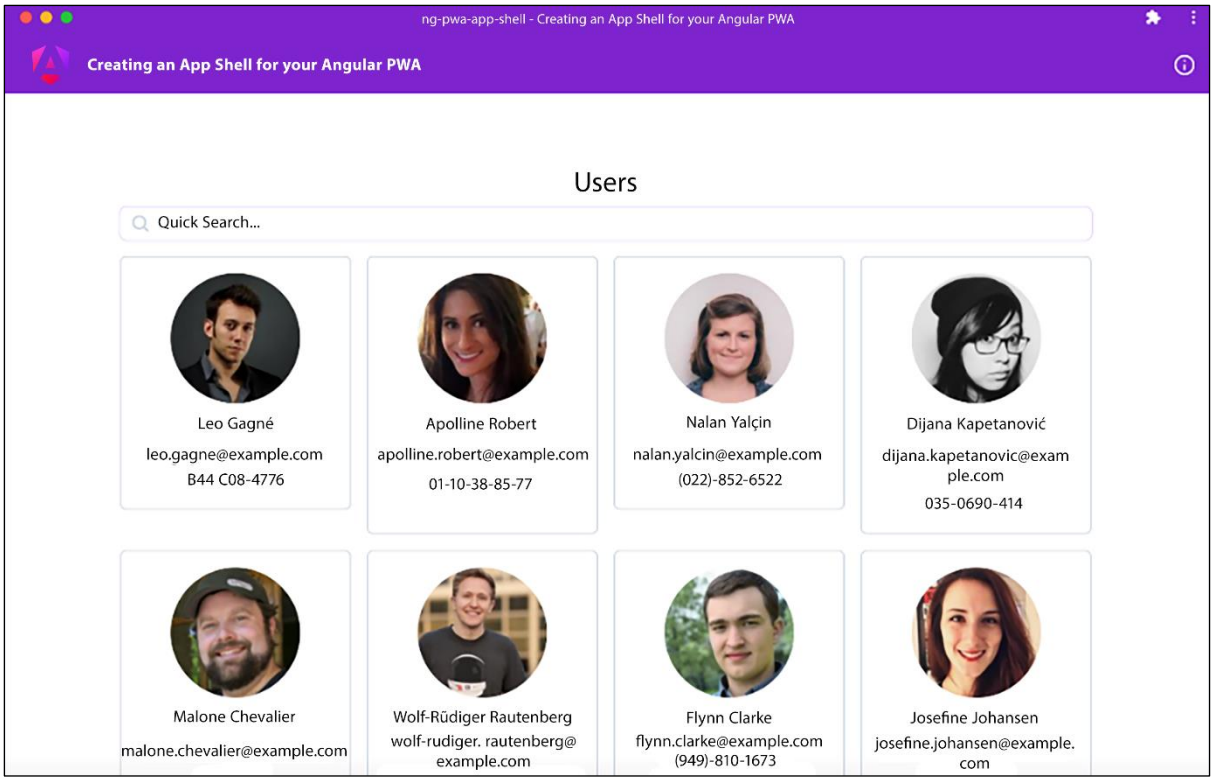

Precaching requests using an Angular service worker
Person: Luke Skywalker
Film: A New Hope
Film: The Empire Strikes Back
Film: Return of the Jedi
Film: Revenge of the Sith
Elements
Console
Sources
Network
Preserve log
Disable cache
Offline
1000 ms
2000 ms
3000 ms
4000 ms
5000 ms
6000 ms
Name
Status
Type
Initiator
Size
Ti...
Waterfall


Creating an App Shell for your Angular PWA
Users
Quick Search...
Leo Gagné
leo.gagne@example.com
B44 C08-4776
Apolline Robert
apolline.robert@example.com
01-10-38-85-77
Nalan Yalçın
nalan.yalcin@example.com
(022)-852-6522
Dijana Kapetanović
dijana.kapetanovic@example.com
035-0690-414
Malone Chevalier
malone.chevalier@example.com
01-28-32-93-67
Wolf-Rüdiger Rautenberg
wolf-rudiger.rautenberg@example.com
0873-4214196
Flynn Clarke
flynn.clarke@example.com
(949)-810-1673
Josefine Johansen
josefine.johansen@example.com
30238724


localhost:4200/#/users
Please enable JavaScript to continue using this application.
Elements
Console
Sources
<!DOCTYPE html>
<html lang="en"> == $0
<head>...</head>
<body>
<app-root></app-root>
<noscript>Please enable JavaScript to continue using this application.</noscript>
<script src="runtime.js" type="module"></script>
<script src="polyfills.js" type="module"></script>
<script src="styles.js" defer></script>
<script src="vendor.js" type="module"></script>
<script src="main.js" type="module"></script>
</body>
</html>


Elements
Console
Sources
Network
Performance
Memory
Application
>Disab
Filter
Has blocked cookies
Name
content.css
Waterfall
27 ms
Debugger Disable JavaScript
Elements Disable DOM word wrap
Network Disable cache (while DevTools is open)
Rendering Disable AVIF format
Rendering Disable WebP format
Rendering Disable local fonts
Sources Disable CSS source maps
Sources Disable JavaScript source maps
Sources Disable autocompletion
Sources Disable bracket matching
Sources Do not display variable values inline while debugging


Creating an App Shell for your Angular PWA
Users
Quick Search...
Elements
Console
Sources
Network
Performance
Memory
Application
Security
<!DOCTYPE html>
<html lang="en" data-critters-container>
<head></head>
<body> == $0
<!--nghm-->
<app-root _nghost-ng-c4265632120 ng-version="17.0.2" ngh="2" ng-server-context="app-shell"></app-root>
<noscript>Please enable JavaScript to continue using this application.</noscript>
<script src="runtime.e8d0f86dd7b7bdb7.js" type="module"></script>
<script src="polyfills.67a0ef5a9ddba103.js" type="module"></script>
html
body
Styles
Computed
Layout
Filter
:hov .cls
element.style {
}
html, body {
styles.4ded…fa54b.css:1
font-family: Nunito,-apple-system,BlinkMacSystemFont,Segoe UI,Roboto,Helvetica,Arial,sans-serif,"Apple Color Emoji","Segoe UI Emoji",Segoe UI Symbol;
--tw-text-opacity: 1;
color: rgb(15 23 42 / var(--tw-text-


ng-pwa-app-shell - Creating an App Shell for your Angular PWA
Creating an App Shell for your Angular PWA
Users
Quick Search...
Leo Gagné
leo.gagne@example.com
B44 C08-4776
Apolline Robert
apolline.robert@example.com
01-10-38-85-77
Nalan Yalçin
nalan.yalcin@example.com
(022)-852-6522
Dijana Kapetanović
dijana.kapetanovic@example.com
035-0690-414
Malone Chevalier
malone.chevalier@example.com
Wolf-Rüdiger Rautenberg
wolf-rudiger. rautenberg@example.com
Flynn Clarke
flynn.clarke@example.com
(949)-810-1673
Josefine Johansen
josefine.johansen@example.com