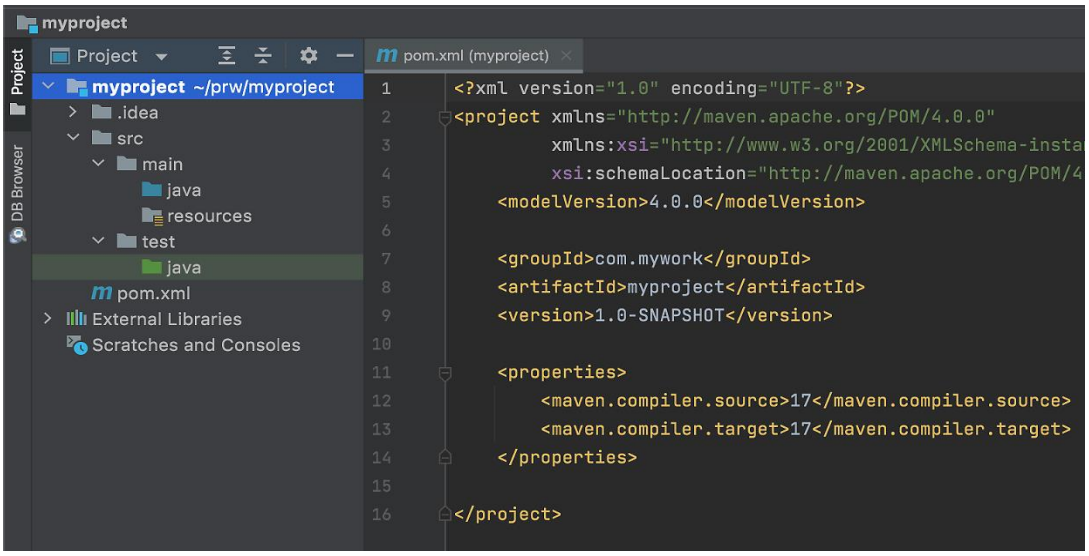
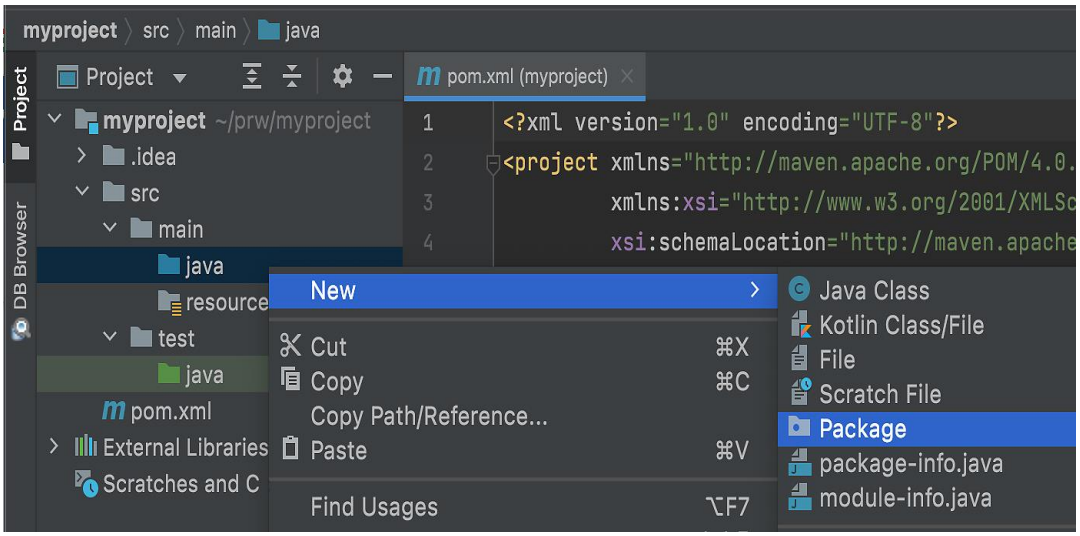
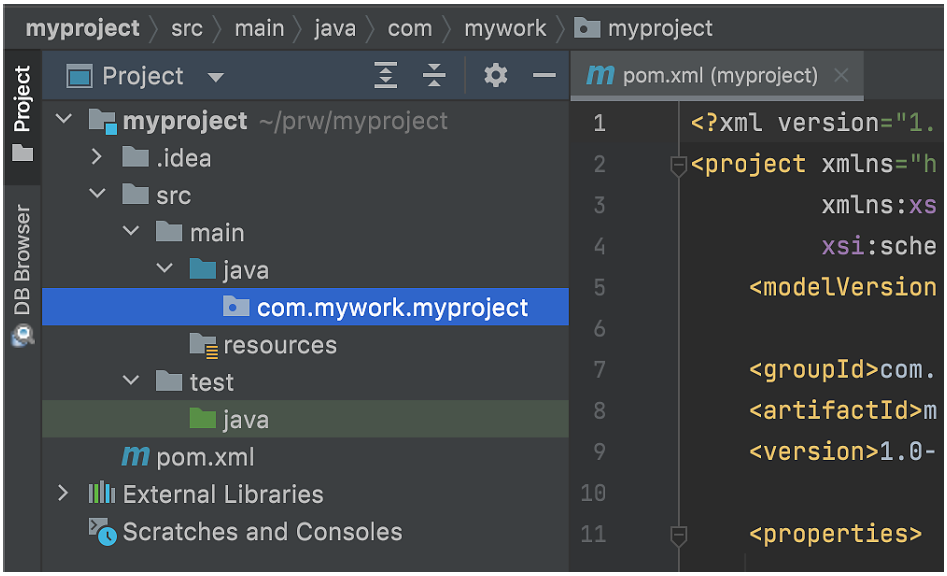
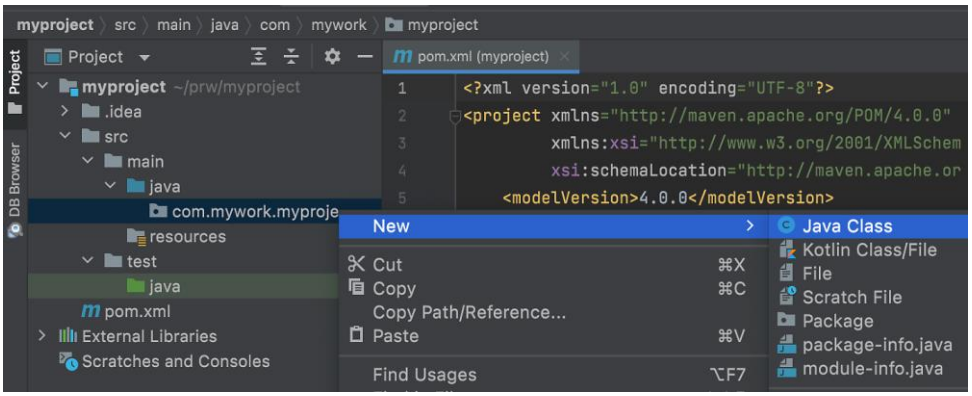
Chapter 1: Getting started with Java 17

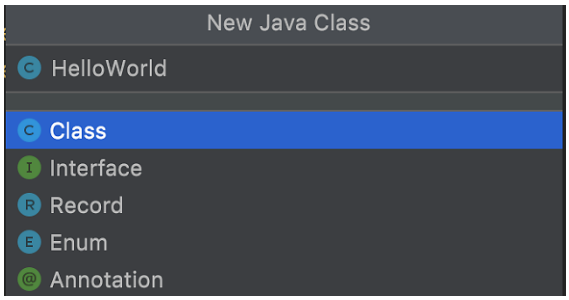
```
➜  ~
➜  ~ java -version
java version "17" 2021-09-14 LTS
Java(TM) SE Runtime Environment (build 17+35-LTS-2724)
Java HotSpot(TM) 64-Bit Server VM (build 17+35-LTS-2724, mixed mode, sharing)
➜  ~
➜  ~
```

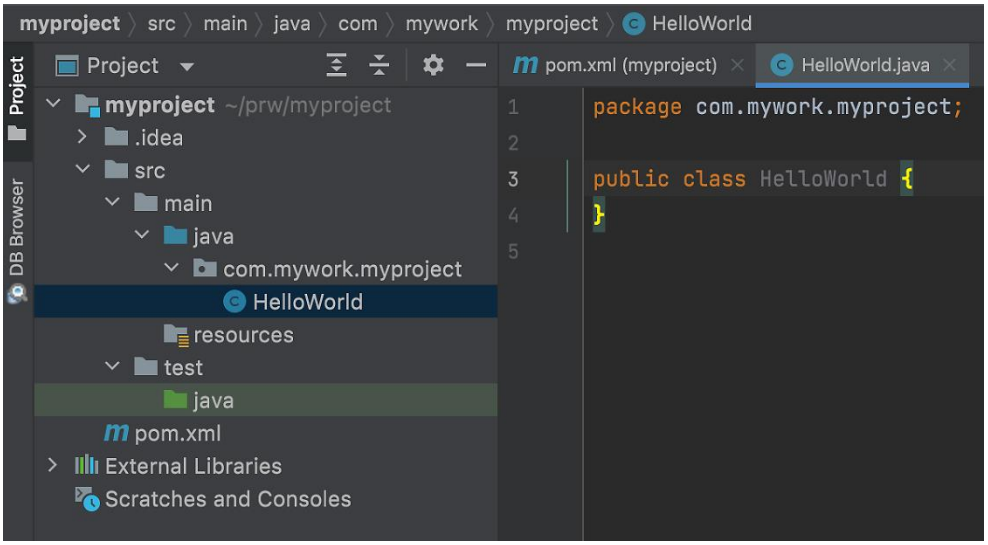




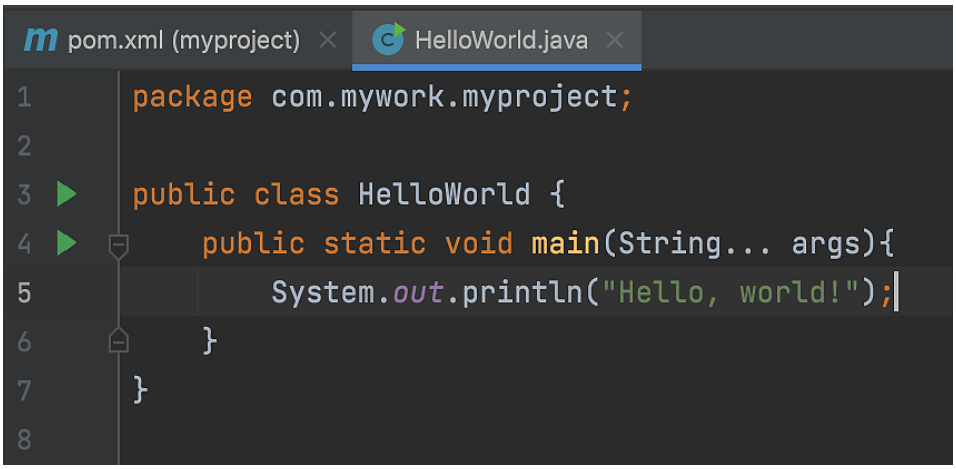

myproject › src › main › java › com › mywork › myproject
Project
DB Browser
myproject ~/prw/myproject
.idea
src
main
java
com.mywork.myproject
resources
test
java
pom.xml
External Libraries
Scratches and Consoles
pom.xml (myproject)
1 <?xml version="1.
2 <project xmlns="h
3 xmlns:xs
4 xsi:sche
5 <modelVersion
6
7 <groupId>com.
8 <artifactId>m
9 <version>1.0-
10
11 <properties>


myproject › src › main › java › com › mywork › myproject
Project
DB Browser
myproject ~/prw/myproject
.idea
src
main
java
com.mywork.myproje
resources
test
java
pom.xml
External Libraries
Scratches and Consoles
pom.xml (myproject)
1 <?xml version="1.0" encoding="UTF-8"?>
2 <project xmlns="http://maven.apache.org/POM/4.0.0"
3 xmlns:xsi="http://www.w3.org/2001/XMLSchem
4 xsi:schemaLocation="http://maven.apache.or
5 <modelVersion>4.0.0</modelVersion>
New
Cut ⌘X
Copy ⌘C
Copy Path/Reference...
Paste ⌘V
Find Usages ⌥F7
Java Class
Kotlin Class/File
File
Scratch File
Package
package-info.java
module-info.java

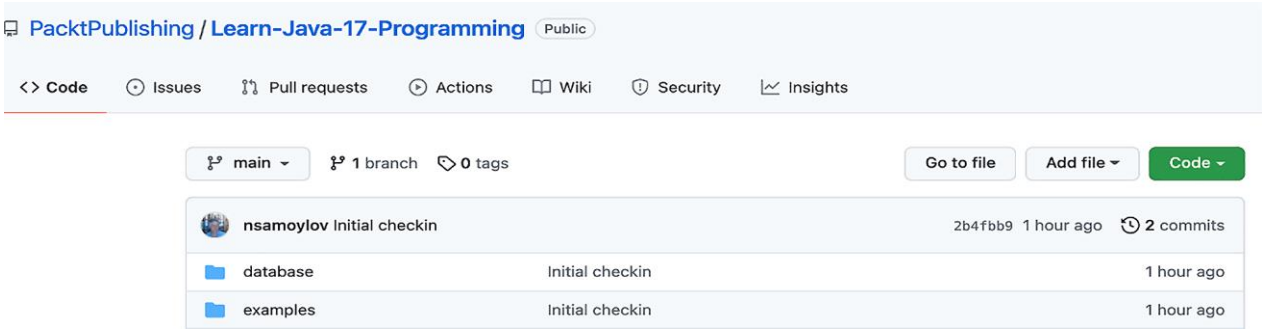

New Java Class
HelloWorld
Class
Interface
Record
Enum
Annotation

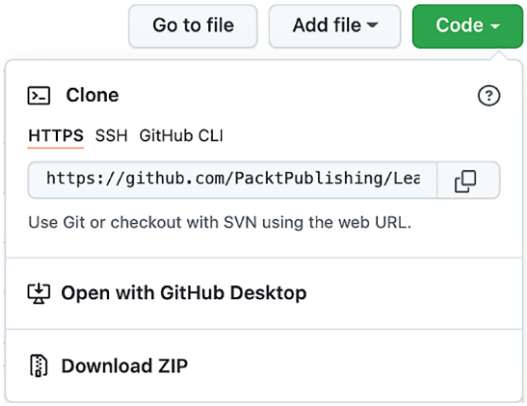

myproject › src › main › java › com › mywork › myproject › HelloWorld
Project
DB Browser
myproject ~/prw/myproject
.idea
src
main
java
com.mywork.myproject
HelloWorld
resources
test
java
pom.xml
External Libraries
Scratches and Consoles
pom.xml (myproject)
HelloWorld.java
1 package com.mywork.myproject;
2
3 public class HelloWorld {
4 }
5


pom.xml (myproject)
HelloWorld.java
1 package com.mywork.myproject;
2
3 public class HelloWorld {
4 public static void main(String... args){
5
6 }
7 }
8

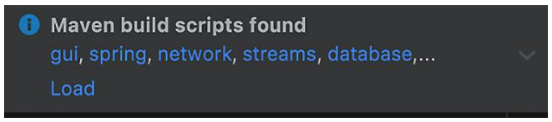

pom.xml (myproject)
HelloWorld.java
1 package com.mywork.myproject;
2
3 public class HelloWorld {
4 public static void main(String... args){
5 System.out.println("Hello, world!");
6 }
7 }
8

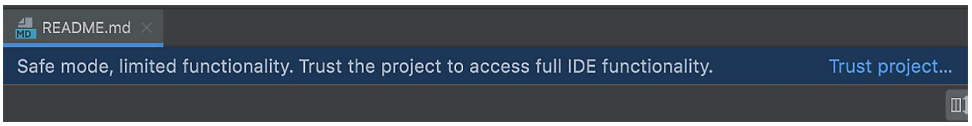
```
Hello, world!
```

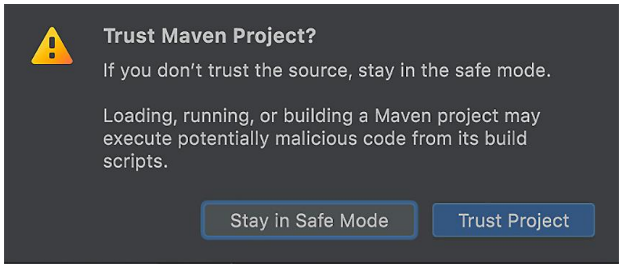


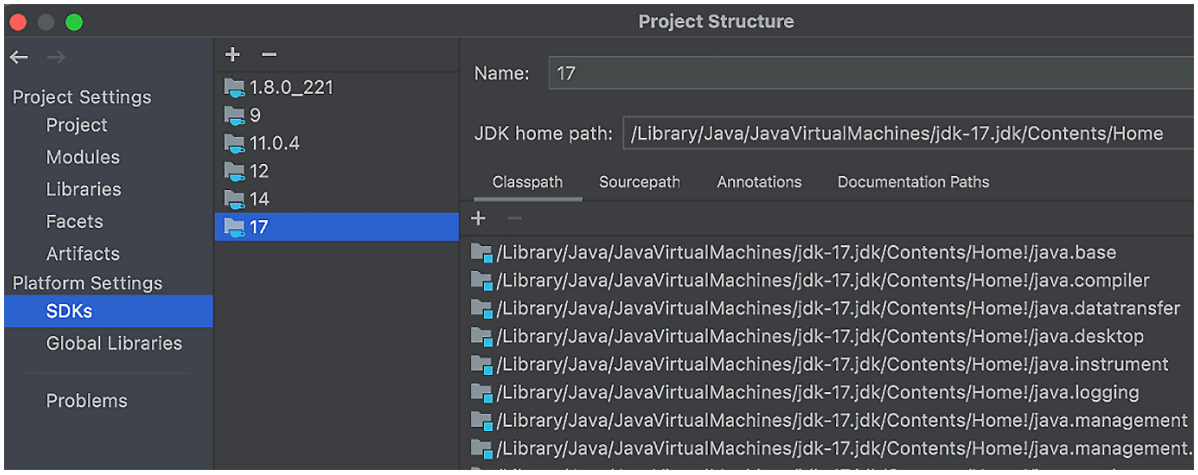


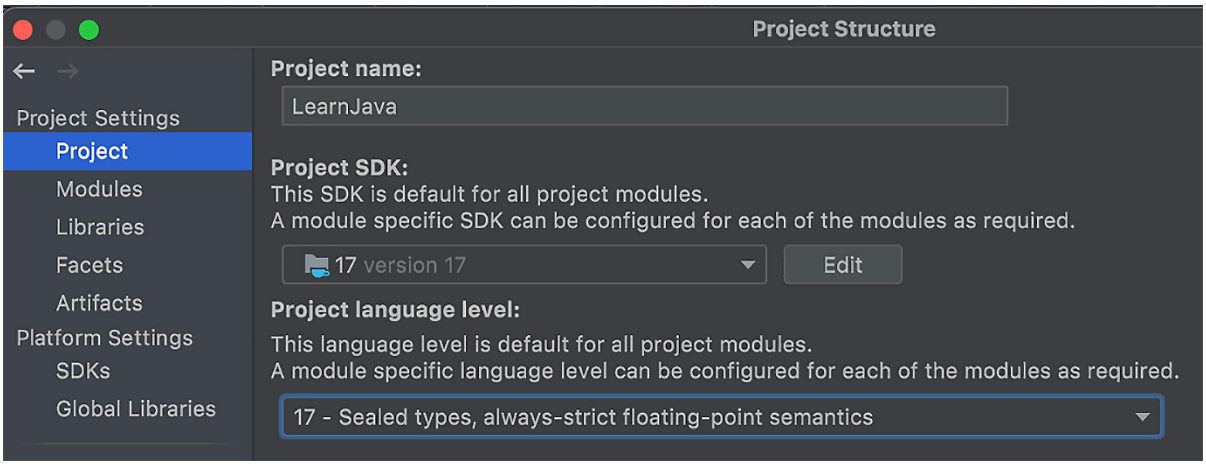

```
→  prw git clone https://github.com/PacktPublishing/Learn-Java-17-Programming.git
Cloning into 'Learn-Java-17-Programming'...
remote: Enumerating objects: 31, done.
remote: Counting objects: 100% (31/31), done.
remote: Compressing objects: 100% (16/16), done.
remote: Total 31 (delta 2), reused 28 (delta 2), pack-reused 0
Unpacking objects: 100% (31/31), done.
```

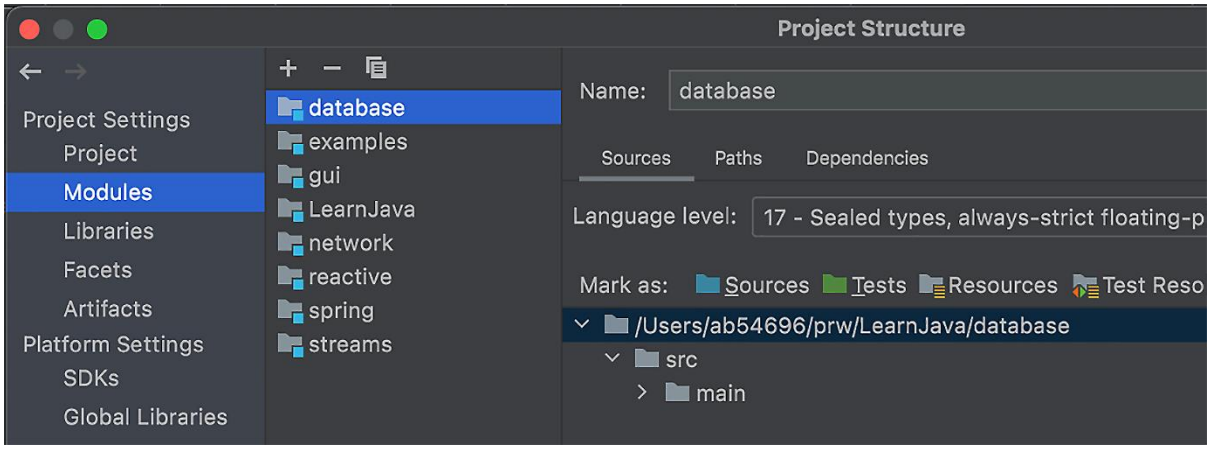


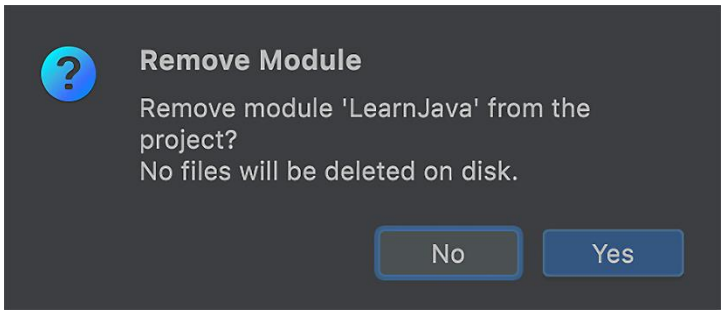


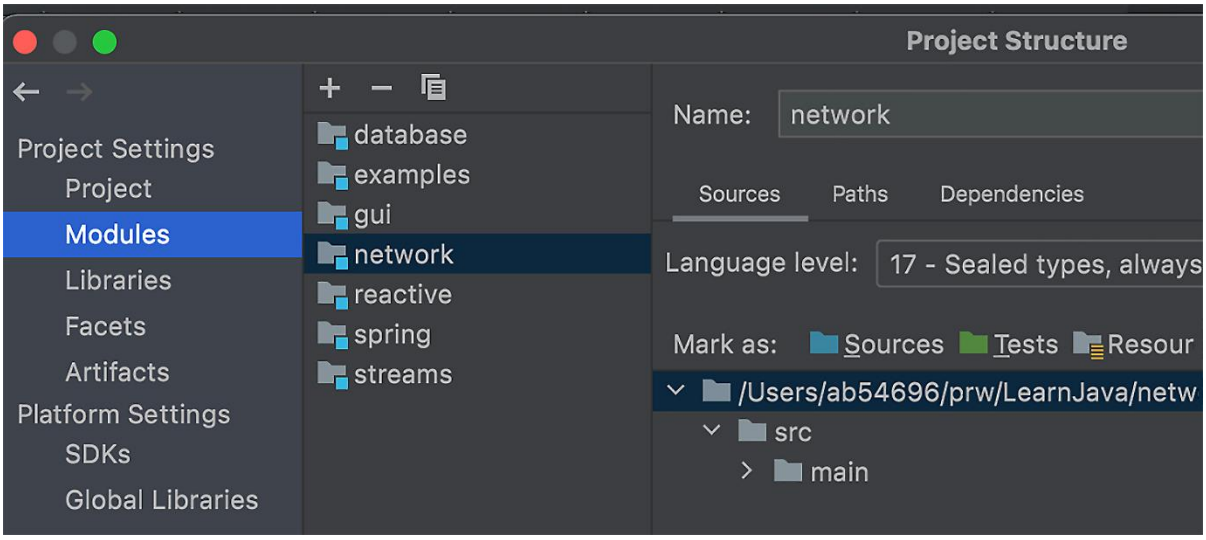


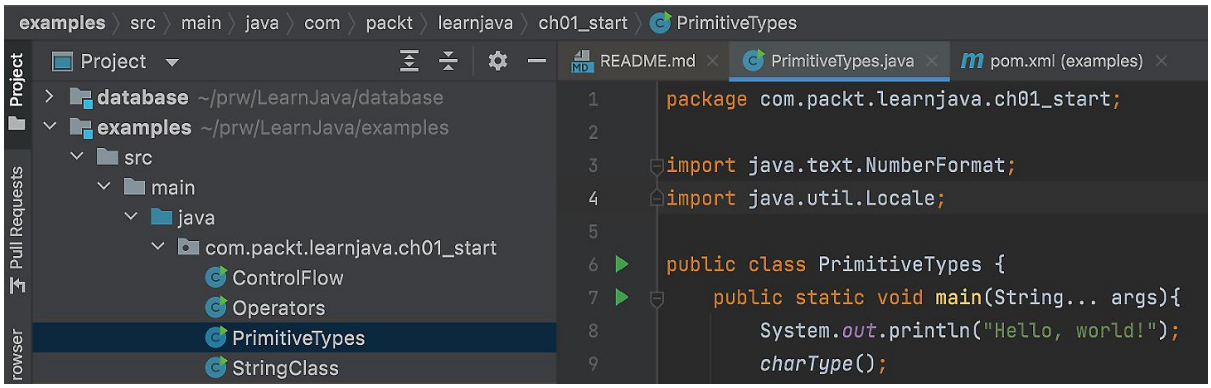

Project Structure
Project Settings
Project
Modules
Libraries
Facets
Artifacts
Platform Settings
SDKs
Global Libraries
Problems
1.8.0_221
9
11.0.4
12
14
17
Name: 17
JDK home path: /Library/Java/JavaVirtualMachines/jdk-17.jdk/Contents/Home
Classpath
Sourcepath
Annotations
Documentation Paths
/Library/Java/JavaVirtualMachines/jdk-17.jdk/Contents/Home!/java.base
/Library/Java/JavaVirtualMachines/jdk-17.jdk/Contents/Home!/java.compiler
/Library/Java/JavaVirtualMachines/jdk-17.jdk/Contents/Home!/java.datatransfer
/Library/Java/JavaVirtualMachines/jdk-17.jdk/Contents/Home!/java.desktop
/Library/Java/JavaVirtualMachines/jdk-17.jdk/Contents/Home!/java.instrument
/Library/Java/JavaVirtualMachines/jdk-17.jdk/Contents/Home!/java.logging
/Library/Java/JavaVirtualMachines/jdk-17.jdk/Contents/Home!/java.management
/Library/Java/JavaVirtualMachines/jdk-17.jdk/Contents/Home!/java.management.

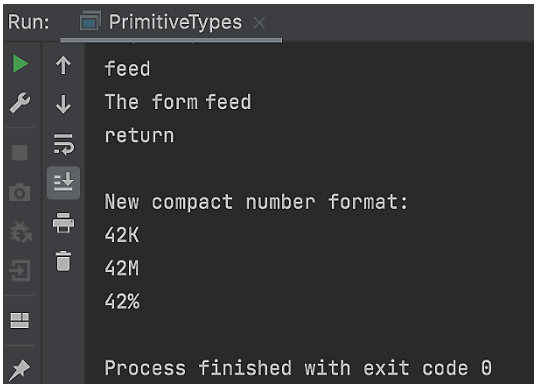

Project Structure
Project Settings
Project
Modules
Libraries
Facets
Artifacts
Platform Settings
SDKs
Global Libraries
Project name:
LearnJava
Project SDK:
This SDK is default for all project modules.
A module specific SDK can be configured for each of the modules as required.
17 version 17
Edit
Project language level:
This language level is default for all project modules.
A module specific language level can be configured for each of the modules as required.
17 - Sealed types, always-strict floating-point semantics


Project Structure
Project Settings
Project
Modules
Libraries
Facets
Artifacts
Platform Settings
SDKs
Global Libraries
database
examples
gui
LearnJava
network
reactive
spring
streams
Name: database
Sources
Paths
Dependencies
Language level: 17 - Sealed types, always-strict floating-p
Mark as: Sources Tests Resources Test Reso
/Users/ab54696/prw/LearnJava/database
src
main


Remove Module
Remove module 'LearnJava' from the project?
No files will be deleted on disk.
No
Yes

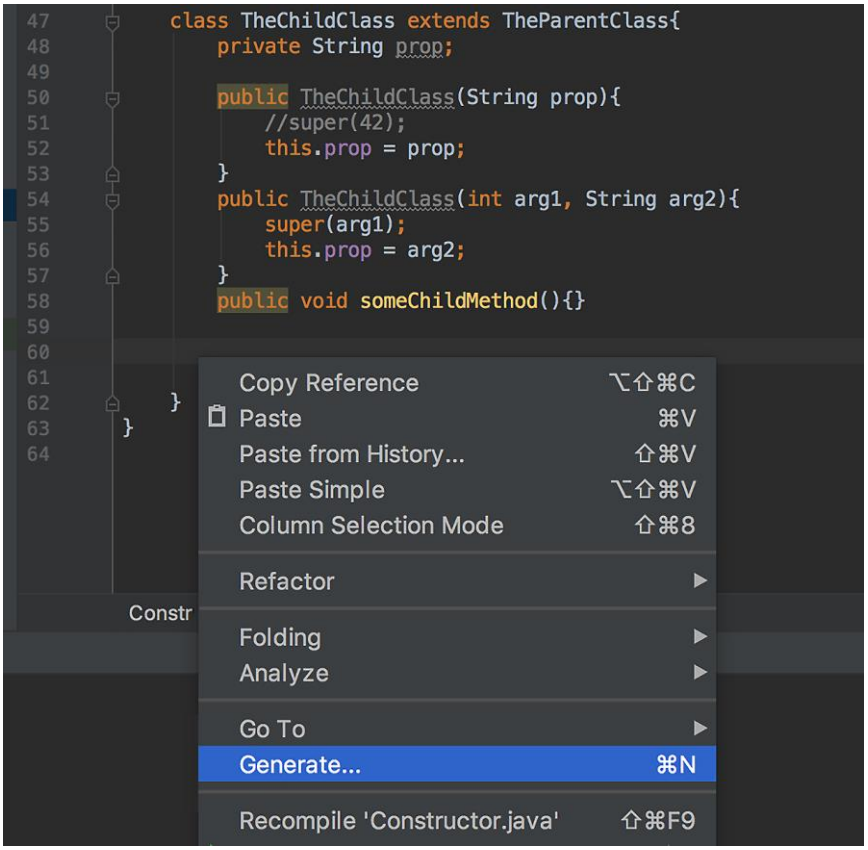


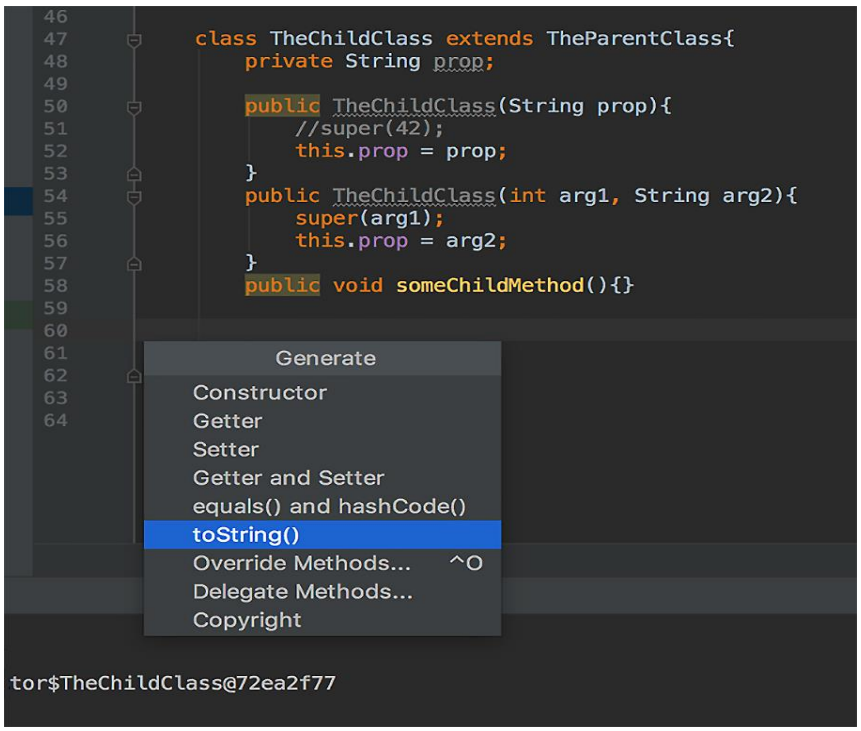


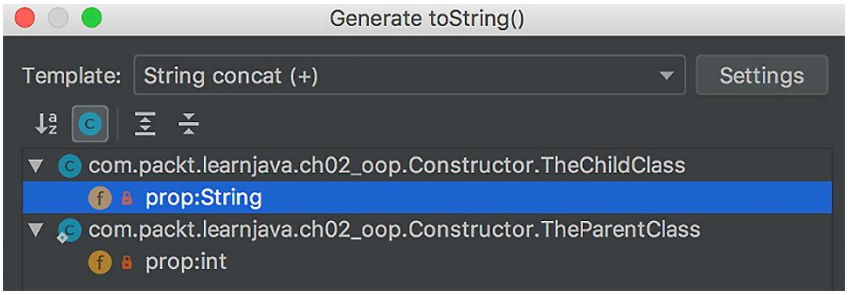



```
→  examples git:(main) ✗
→  examples git:(main) ✗ java -cp target/examples-1.0-SNAPSHOT.jar com.packt.learnjava.ch01_start.ControlFlow

Selection statements:
1 or 3

Iteration statements:
0 1 2 3 4
0 1 2 3 4
0 1 2
0 1 2
```

Chapter 2: Java Object-Oriented Programming (OOP)





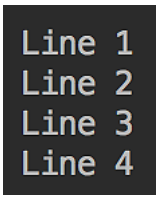

Generate toString()
Template:
String concat (+)
Settings
com.packt.learnjava.ch02_oop.Constructor.TheChildClass
prop:String
com.packt.learnjava.ch02_oop.Constructor.TheParentClass
prop:int

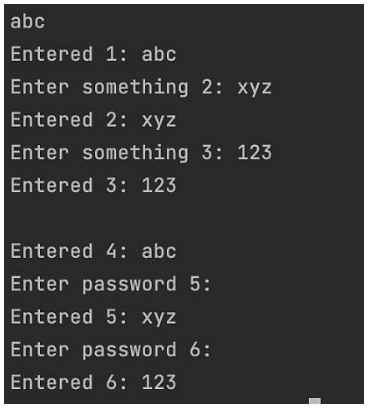
```
Inner private value
Top-level private value
Inner private static
Inner private value
Top-level private value
```

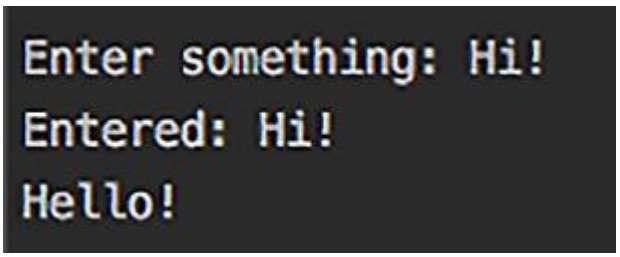
Chapter 4: Exception handling

No-images…

Chapter 5: Strings, input/output, and files





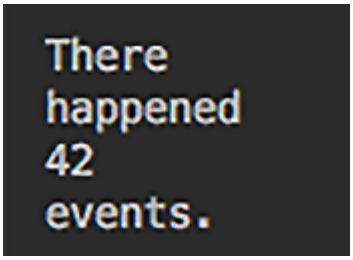


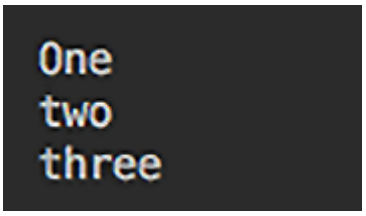
```
Line 1:
TT_WORD => Th

Line 2:
TT_WORD => happ

Line 3:
TT_NUMBER => 42.0

Line 4:
```

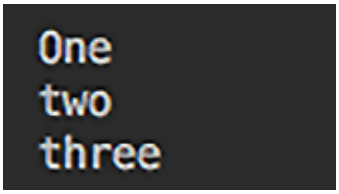
```
class com.packt.learnjava.ch05_stringsIoStreams.Person1
Class name: com.packt.learnjava.ch05_stringsIoStreams.Person1
SerialVersionUID: -2546904836625458265
Serialized fields:
age:
    int
    I
    null
name:
    class java.lang.String
    L
    Ljava/lang/String;
```

```
class com.packt.learnjava.ch05_stringsIoStreams.Person2
Class name: com.packt.learnjava.ch05_stringsIoStreams.Person2
SerialVersionUID: 0
Serialized fields:
```

```
Enter something: type
type
one line
one line
at a time
at a time
end

Process finished with exit code 0
```








```
dir1.list(): demo2
dir1.listFiles(): demo1/demo2
dir.list(): file1.txt file2.txt
dir.listFiles(): demo1/demo2/file1.txt demo1/demo2/file2.txt
File.listRoots(): /
```

Chapter 6: Data structures, generics and popular utilities

No-images…

Chapter 7: Java standard and external libraries

No-images…

Chapter 8: Multithreading and concurrent processing

```
daemon thread Thread-1(id=14) parameter: Two
  user thread Thread-0(id=13) parameter: One
daemon thread Thread-1(id=14) parameter: Two
  user thread Thread-0(id=13) parameter: exit
Main thread exists
```

```
thread Two, parameter: null
thread One, parameter: null
thread Two, parameter: null
thread One, parameter: exit
Main thread exists
```

```
One is working...
Three is working...
Two is working...
Before shutdown: isShutdown()=false, isTerminated()=false
After shutdown: isShutdown()=true, isTerminated()=false
Waiting all threads completion for 100 MILLISECONDS...
isTerminated()=false
Calling shutdownNow()...
0 threads running
One was interrupted
One Thread.currentThread().isInterrupted()=false
Two was interrupted
Two Thread.currentThread().isInterrupted()=false
Three was interrupted
Three Thread.currentThread().isInterrupted()=false
Exiting
```

```
Two is working...
Three is working...
One is working...
Before shutdown: isShutdown()=false, isTerminated()=false
After shutdown: isShutdown()=true, isTerminated()=false
Waiting all threads completion for 100 MILLISECONDS...
isTerminated()=false
Calling shutdownNow()...
0 threads running
Two was interrupted
Two Thread.currentThread().isInterrupted()=true
One was interrupted
One Thread.currentThread().isInterrupted()=true
Three was interrupted
Three Thread.currentThread().isInterrupted()=true
Exiting
```

```
false
false
One is working...
One is done
null
true
false
Waiting all threads completion for 100 MILLISECONDS...
isTerminated()=false
Calling shutdownNow()...
0 threads running
Exiting
```

```
false
false
Two is working...
Two is done
Result{name=Two, result=42.0}
true
false
Waiting all threads completion for 100 MILLISECONDS...
isTerminated()=false
Calling shutdownNow()...
0 threads running
Exiting
```

```
false
false
Three is working...
Three is done
Result{name=Three, result=42.42}
true
false
Waiting all threads completion for 100 MILLISECONDS...
isTerminated()=false
Calling shutdownNow()...
0 threads running
Exiting
```

```
Without synchronization:
Result{name=One, result=81.436610544383 27}
Result{name=Two, result=83.130510123742 16}
Waiting all threads completion for 100 MILLISECONDS...
isTerminated()=false
Calling shutdownNow()...
0 threads running
Exiting
```

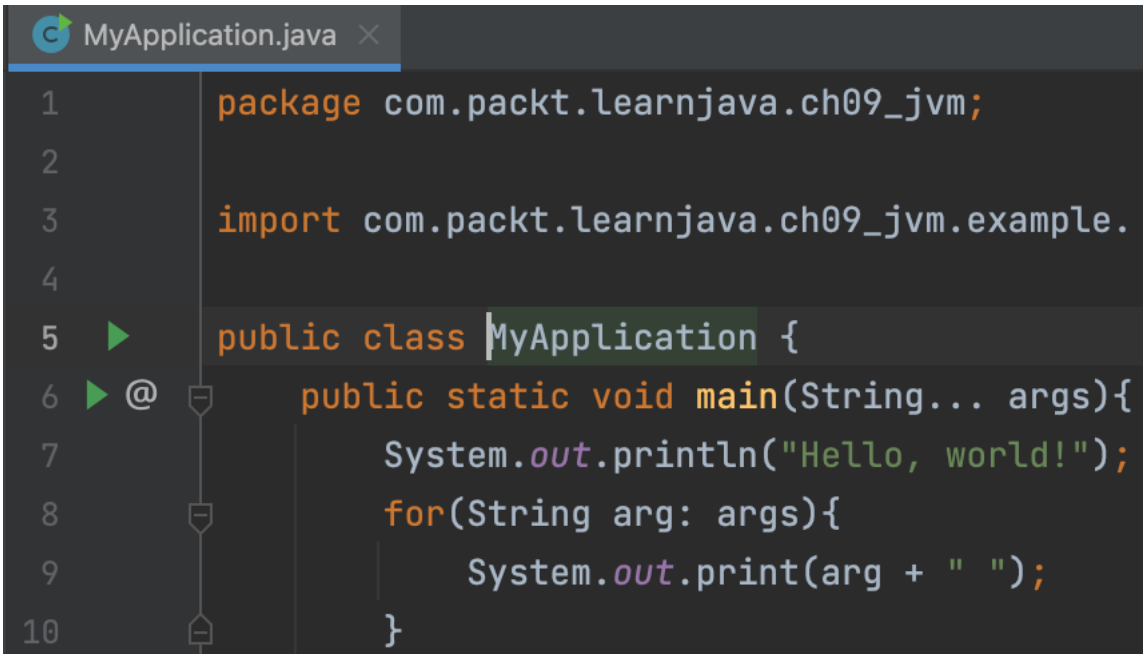
```
Using AtomicReference:
Result{name=One, result=80.884306837571 49}
Result{name=Two, result=80.884306837571 49}
Waiting all threads completion for 100 MILLISECONDS...
isTerminated()=false
Calling shutdownNow()...
0 threads running
Exiting
```

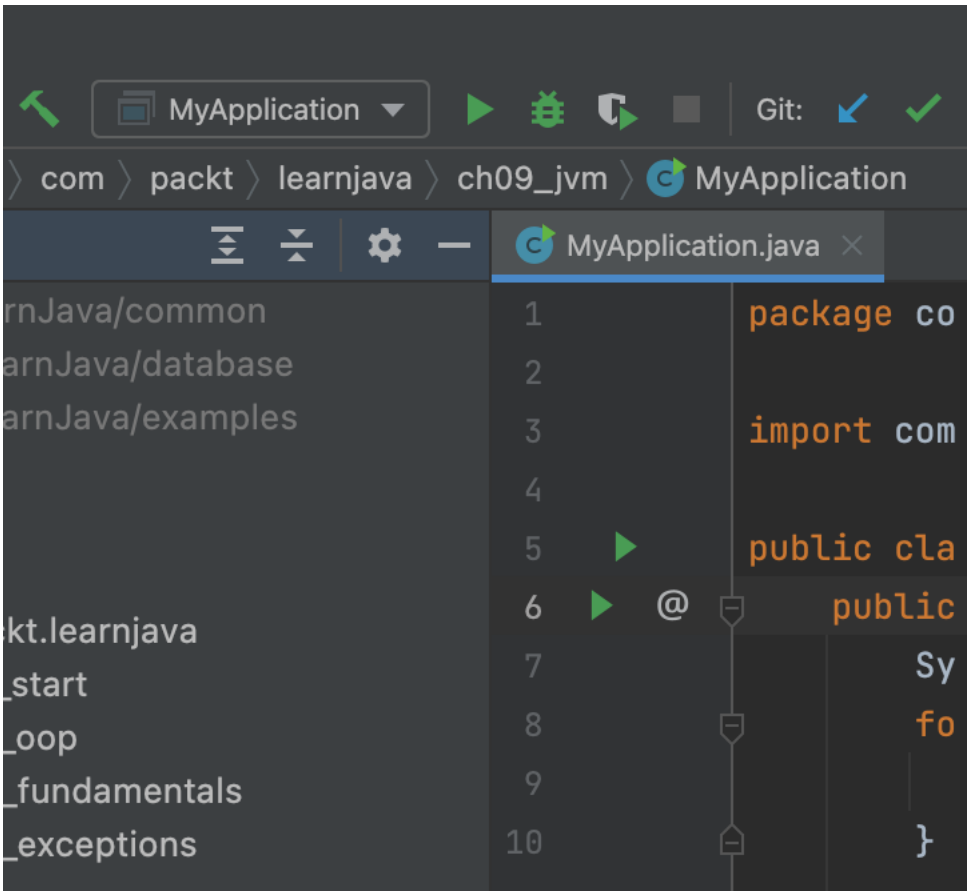
```
Using synchronized method:
Result{name=One, result=80.884306837571 49}
Result{name=Two, result=80.884306837571 49}
Waiting all threads completion for 100 MILLISECONDS...
isTerminated()=false
Calling shutdownNow()...
0 threads running
Exiting
```

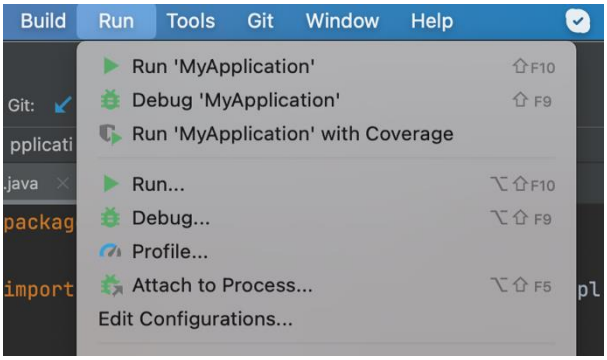
```
Using synchronized block:
Result{name=One, result=80.88430683757149}
Result{name=Two, result=80.88430683757149}
Waiting all threads completion for 100 MILLISECONDS...
isTerminated()=false
Calling shutdownNow()...
0 threads running
Exiting
```

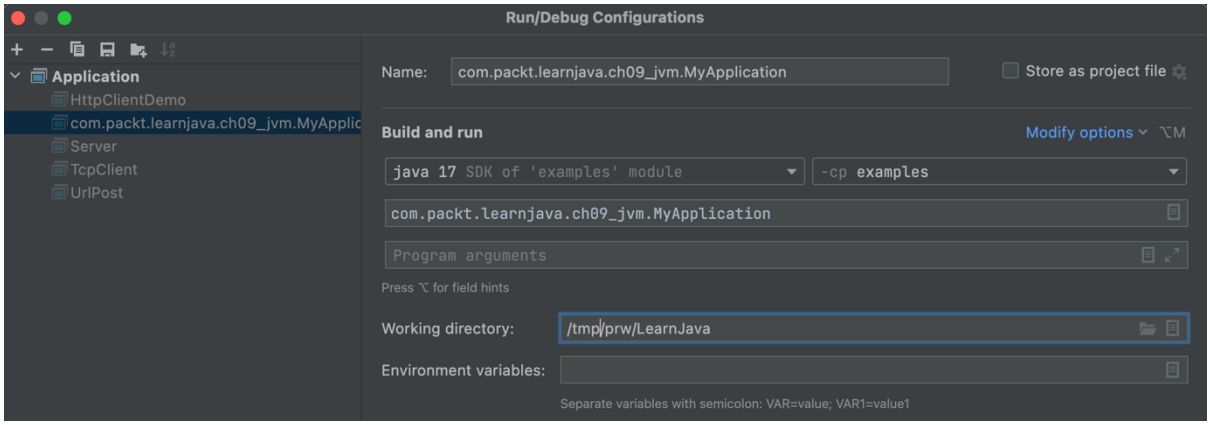
```
[One, Two]
One Two
[One, Two, Three, Three]
```

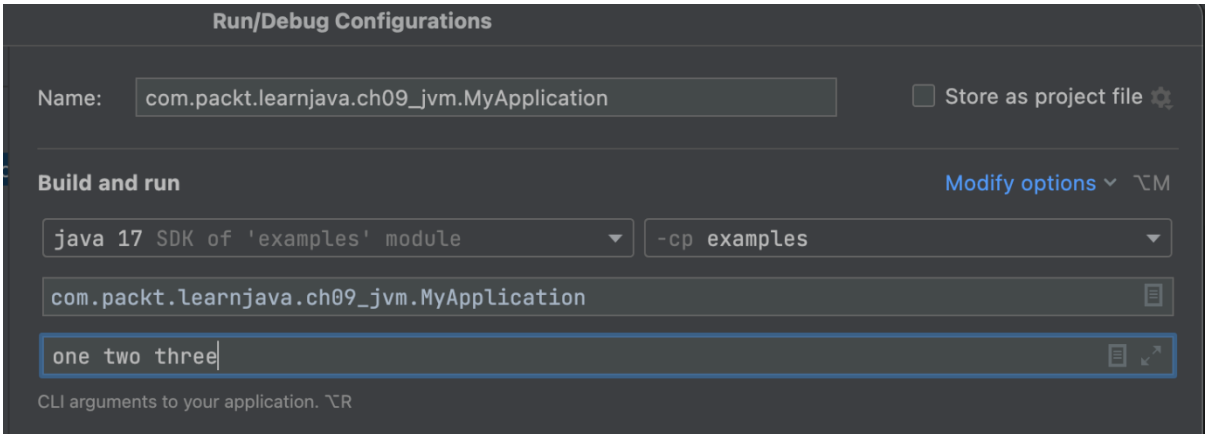
Chapter 9: Java Microbenchmark Harness

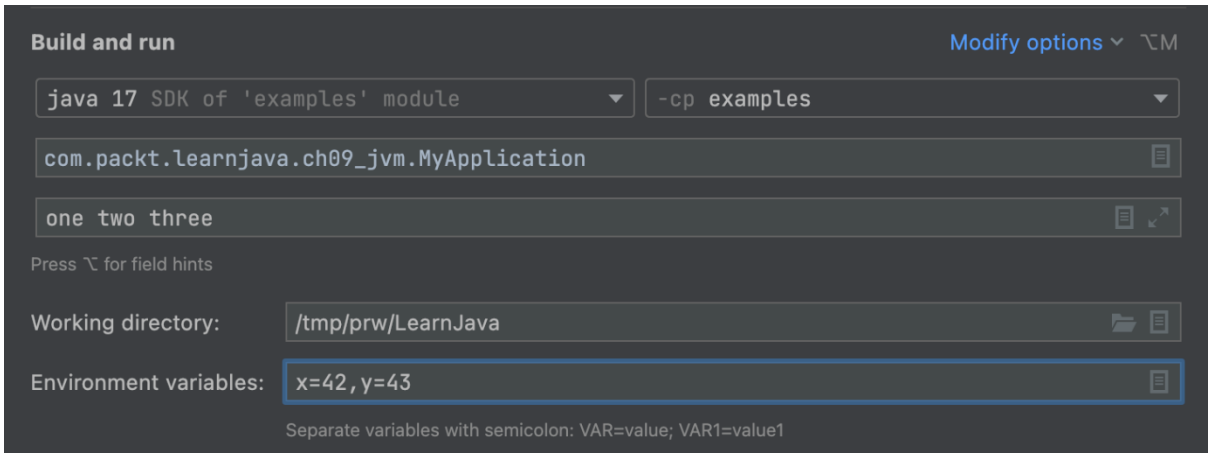


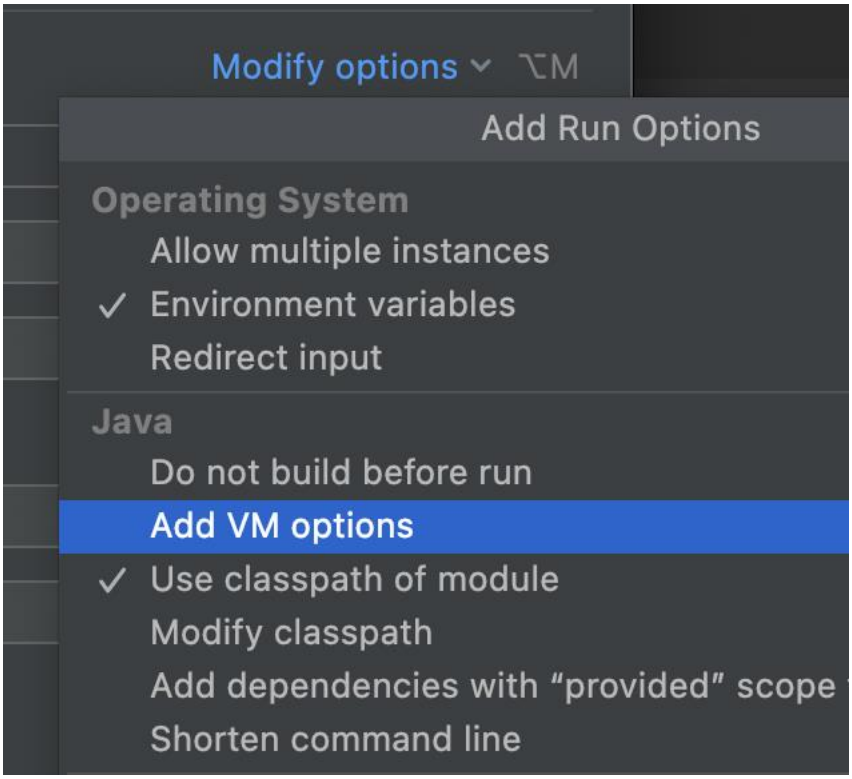


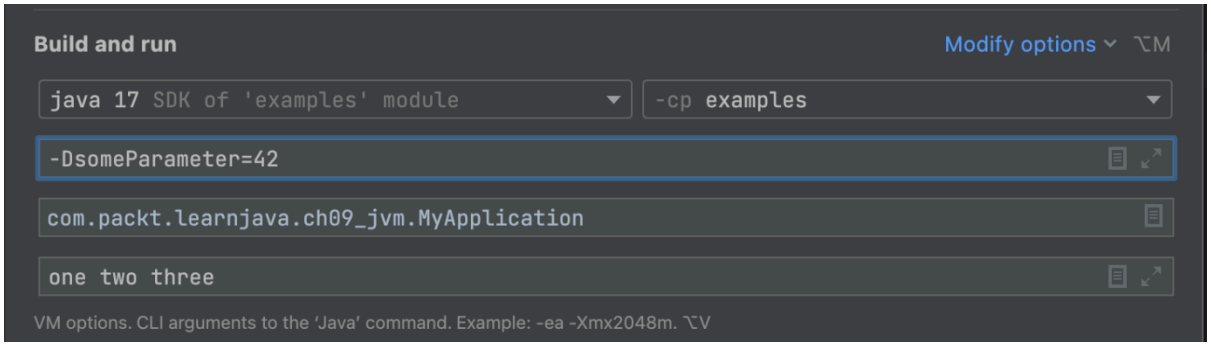

Build
Run
Tools
Git
Window
Help
Run 'MyApplication' ⇧F10
Debug 'MyApplication' ⇧F9
Run 'MyApplication' with Coverage
Run... ⌥⇧F10
Debug... ⌥⇧F9
Profile...
Attach to Process... ⌥⇧F5
Edit Configurations...
Git:
pplicati
.java
packag
import


Run/Debug Configurations
Application
HttpClientDemo
com.packt.learnjava.ch09_jvm.MyApplic
Server
TcpClient
UrlPost
Name: com.packt.learnjava.ch09_jvm.MyApplication
Store as project file
Build and run
Modify options ⌥M
java 17 SDK of 'examples' module
-cp examples
com.packt.learnjava.ch09_jvm.MyApplication
Program arguments
Press ⌥ for field hints
Working directory: /tmp/prw/LearnJava
Environment variables:
Separate variables with semicolon: VAR=value; VAR1=value1


Run/Debug Configurations
Name: com.packt.learnjava.ch09_jvm.MyApplication
Store as project file
Build and run
Modify options ⌥M
java 17 SDK of 'examples' module
-cp examples
com.packt.learnjava.ch09_jvm.MyApplication
one two three
CLI arguments to your application. ⌥R


Build and run
Modify options ⌥M
java 17 SDK of 'examples' module
-cp examples
com.packt.learnjava.ch09_jvm.MyApplication
one two three
Press ⌥ for field hints
Working directory: /tmp/prw/LearnJava
Environment variables: x=42,y=43
Separate variables with semicolon: VAR=value; VAR1=value1



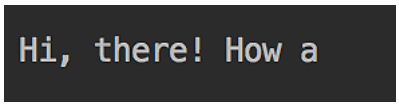


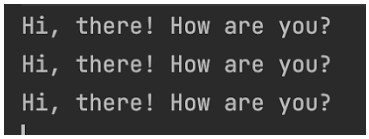

```
Hello, world!
one two three
42
4
```

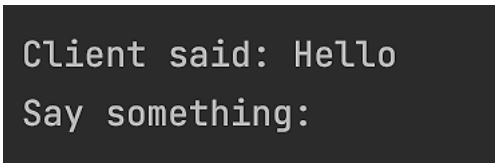
Chapter 10: JVM structure and garbage collection

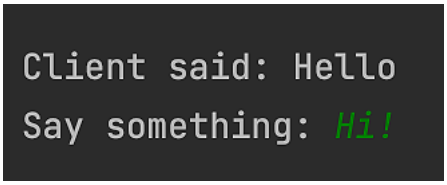
No-images…

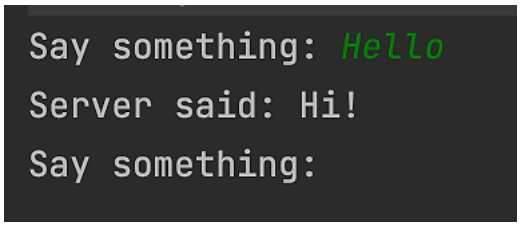
Chapter 11: Manage data in the database

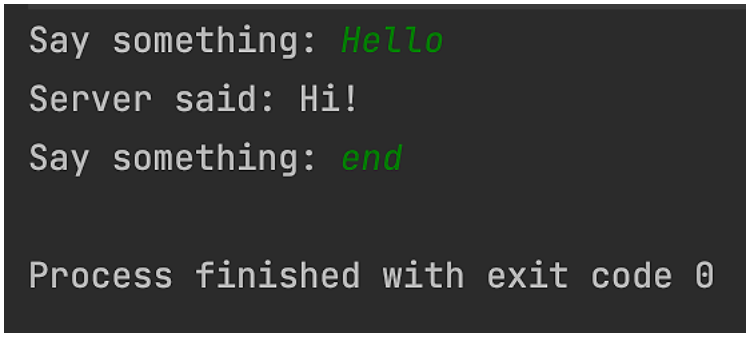












```
Client said: Hello
Say something: Hi!
Client said: end

Process finished with exit code 0
```

Java

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```
public class Server {
    Nick Samoylov
    public static void main(String[] args){
        ClassLoader classLoader = Thread.currentThread().getCo
        Properties properties = Prop.getProperties(classLoader
        int port = Prop.getInt(properties, name: "port");
```


```
/something
/something
Received as body:
  parameter1=value1&parameter2=value2
```

```
Got it! Thanks.

Process finished with exit code 0
```

```
Received as body:
```

```
Response: 200 : Got it! Thanks.
```

```
Received as body:
  Hi there!
```

```
Response: 200 : Got it! Thanks.
```

```
Received as body:
```

```
The request was sent asynchronously...
Response: 200 : Got it! Thanks.
CompletableFuture get: null
Exit the client...
```

```
The request was sent asynchronously...
CompletableFuture get: Server responded: Got it! Thanks.
Exit the client...
```

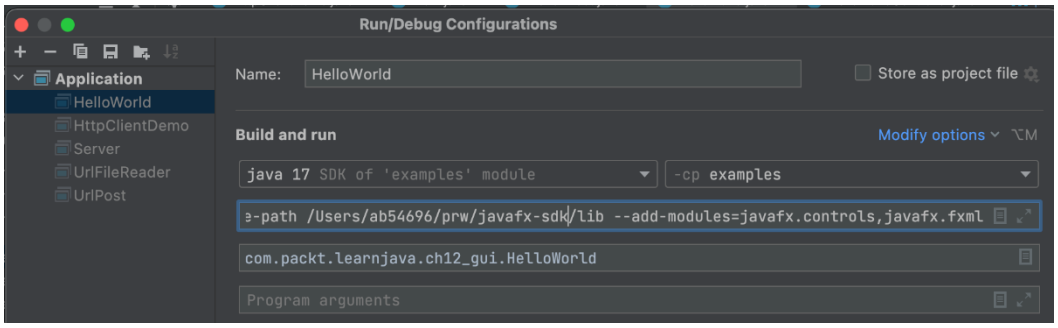
```
Received as body:
  Hi there!
```

```
The request was sent asynchronously...
CompletableFuture get: Server responded: Got it! Thanks.
Exit the client...
```

```
Received as body:
  Hi! My name is 2.

Received as body:
  Hi! My name is 3.

Received as body:
  Hi! My name is 1.
```

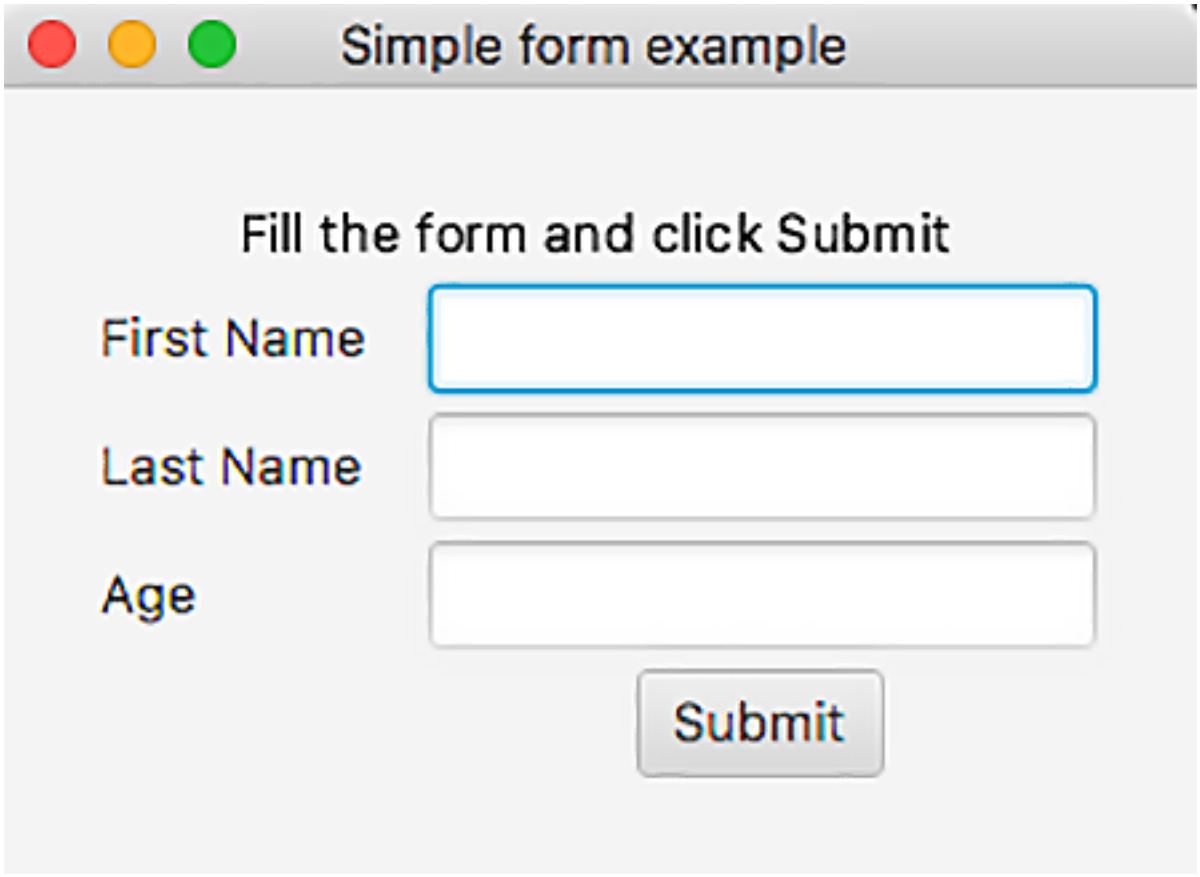
```
Connection established.
The WebSocket was created and ran asynchronously.
Method onText() got data: echo.websocket.events sponsored by Lob.com
Method onText() got data: Some message
Method onText() got data: Another message
Method onText() got data: Another message
Method onText() got data: Another message
Close is sent.
```

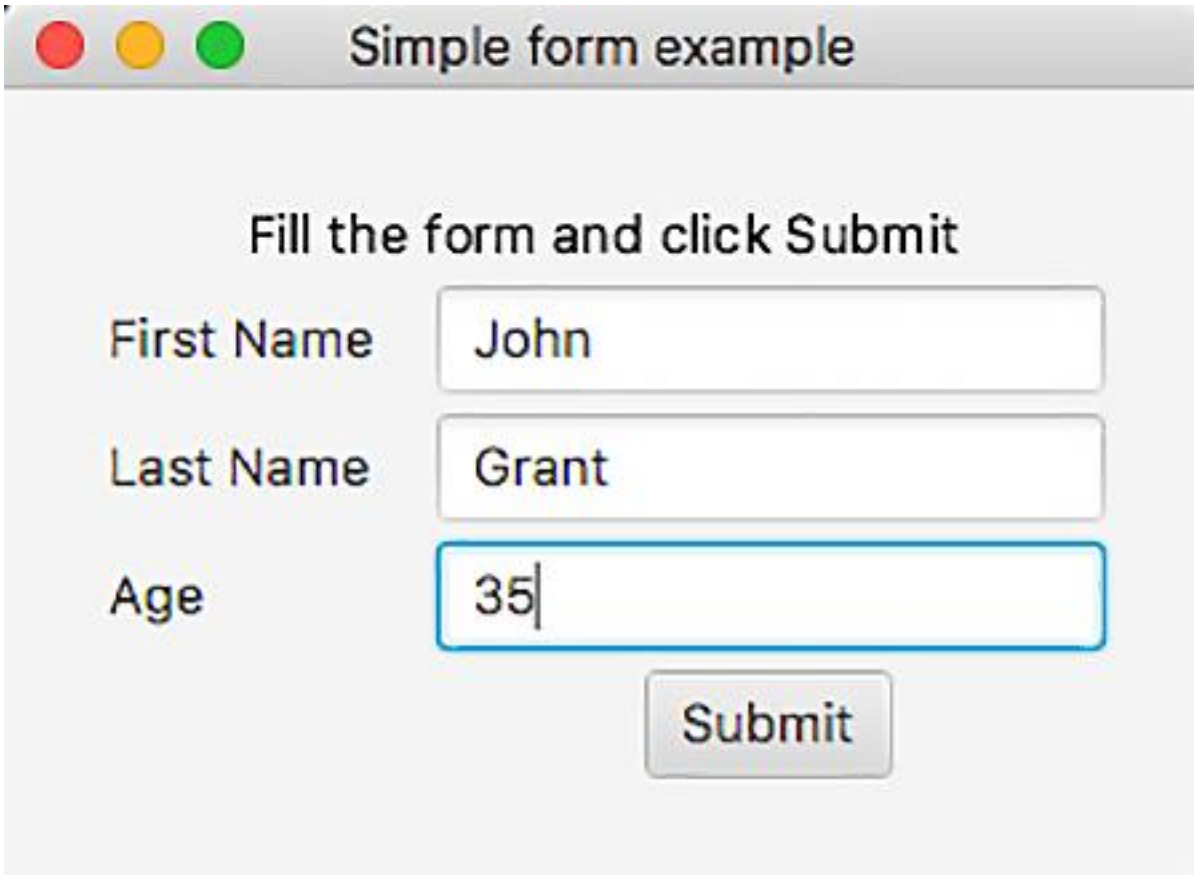
Chapter 12: Network programming



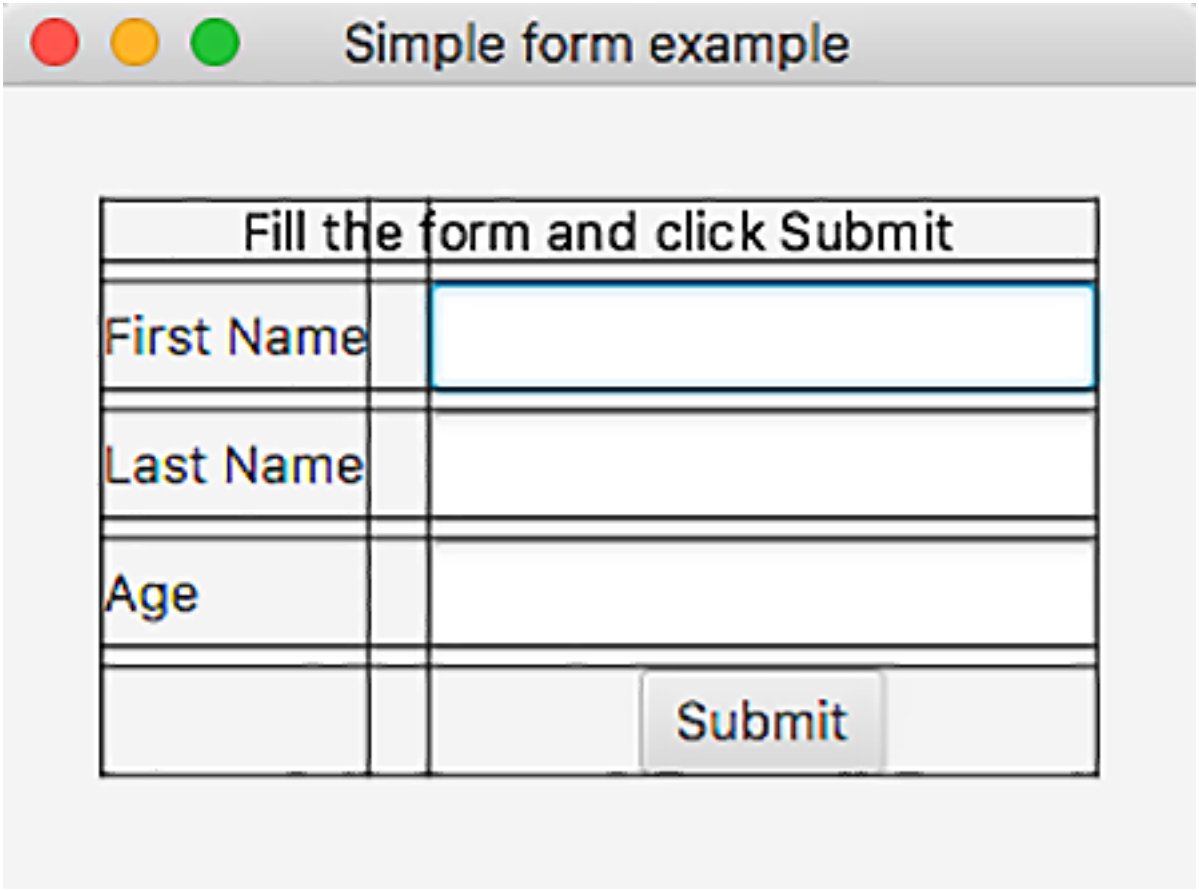

```
Bye! See you later!
```

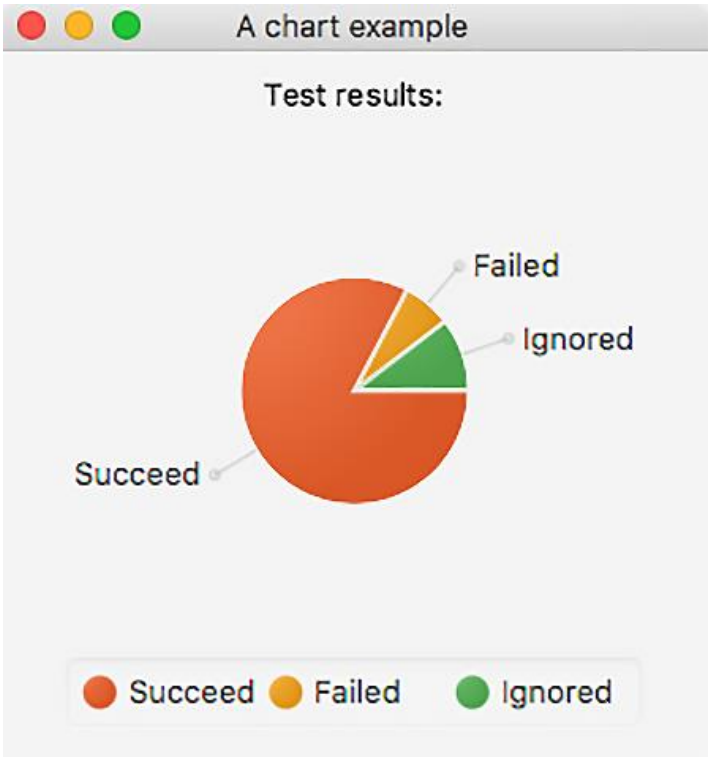
```
Bye! See you later!
Doing what has to be done before closing
```

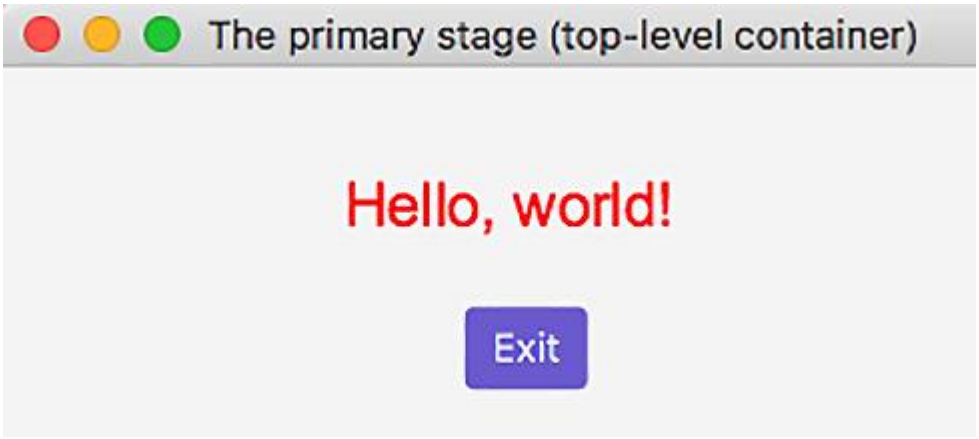

Simple form example
Fill the form and click Submit
First Name
Last Name
Age
Submit

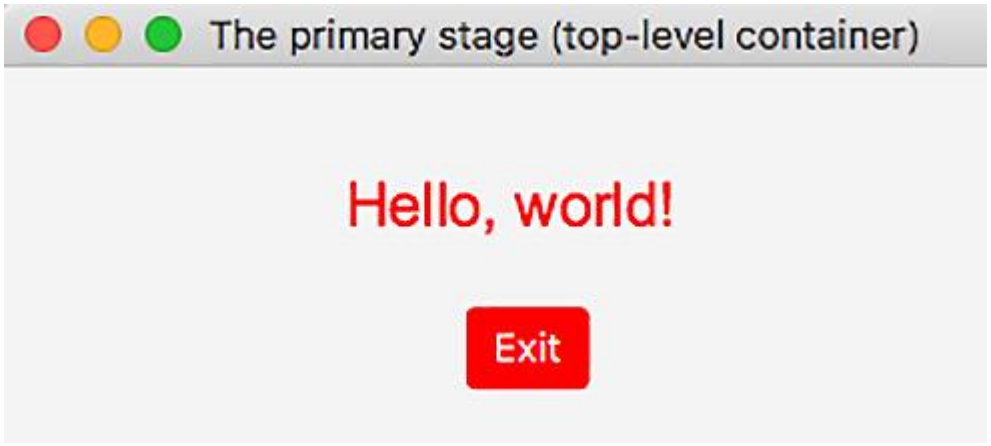

Simple form example
Fill the form and click Submit
First Name
John
Last Name
Grant
Age
35
Submit

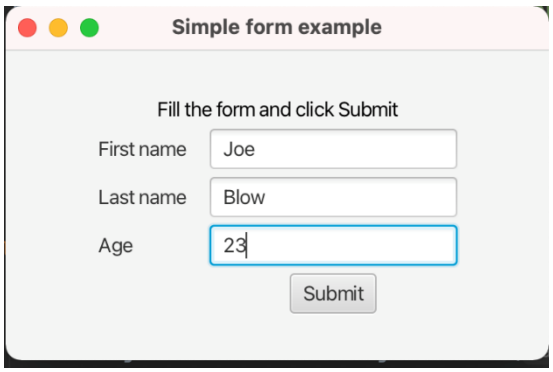
```
Hello, John Grant, age 35!
```





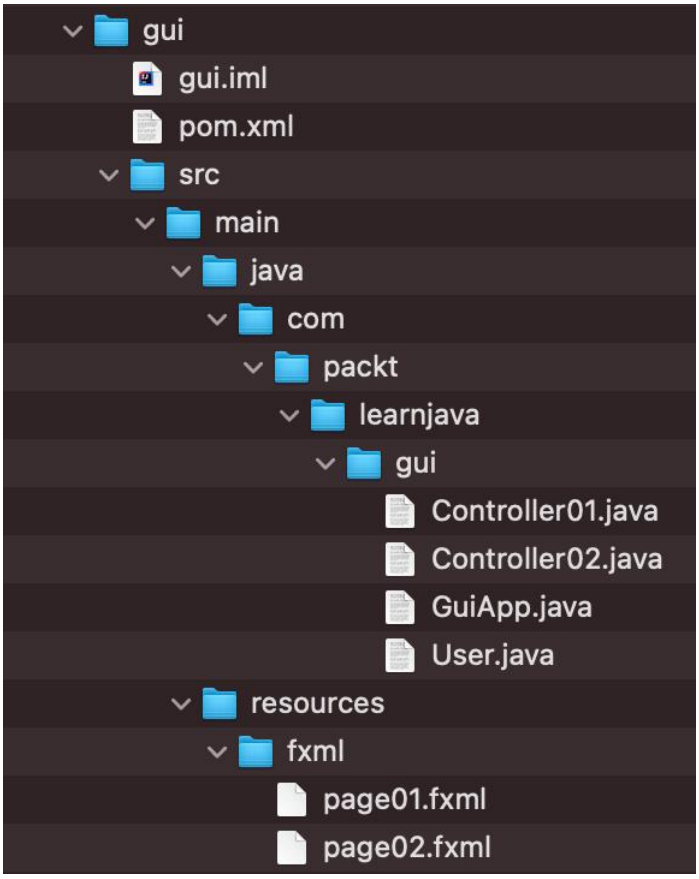


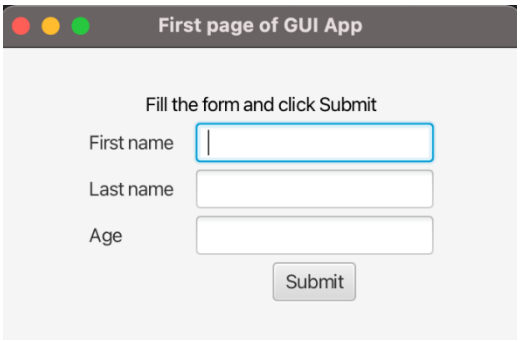


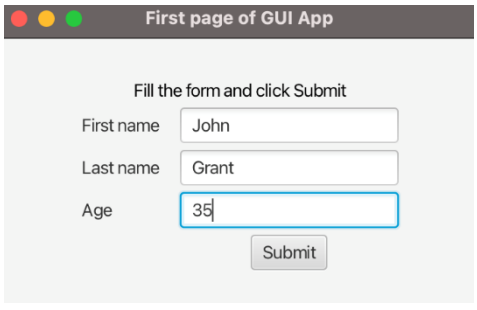



```
Bye! See you later!
Doing what has to be done before closing

Process finished with exit code 0
```

```
Hello, Joe Blow, age 23!
Doing what has to be done before closing

Process finished with exit code 0
```


gui
gui.iml
pom.xml
src
main
java
com
packt
learnjava
gui
Controller01.java
Controller02.java
GuiApp.java
User.java
resources
fxml
page01.fxml
page02.fxml

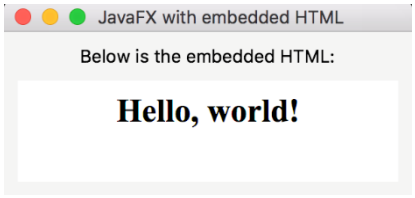

First page of GUI App
Fill the form and click Submit
First name
Last name
Age
Submit

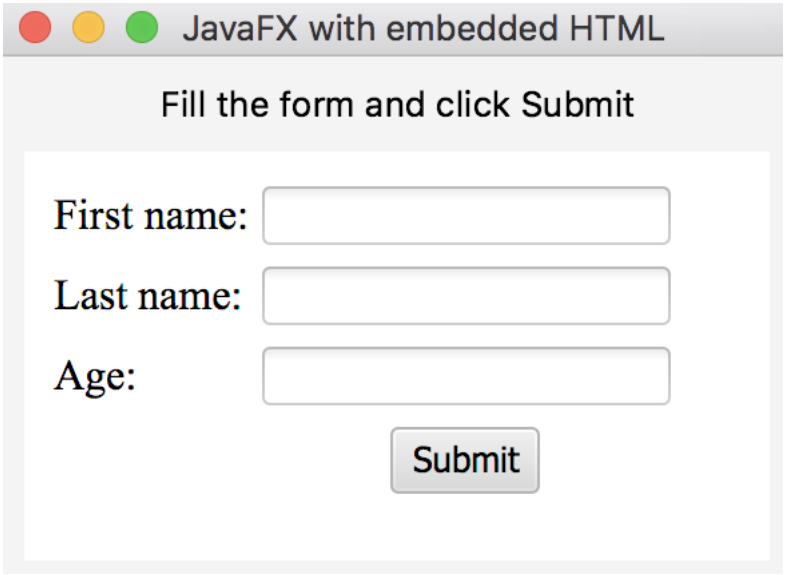

First page of GUI App
Fill the form and click Submit
First name
John
Last name
Grant
Age
35
Submit

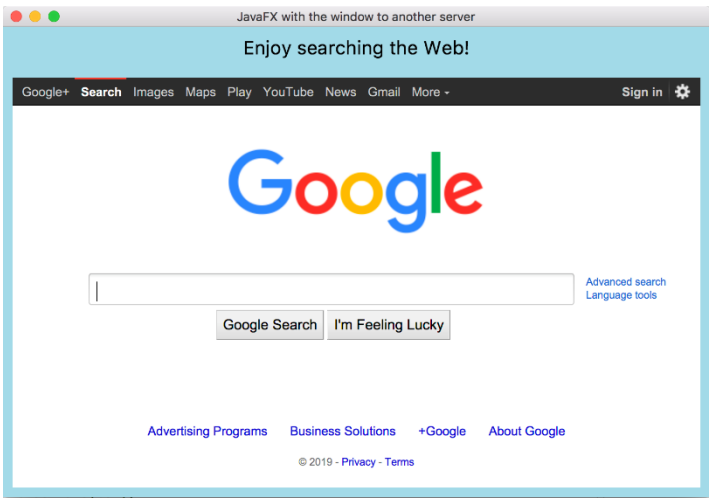

Second page of GUI App
Hello, John Grant, age 35!
Do what has to be done here

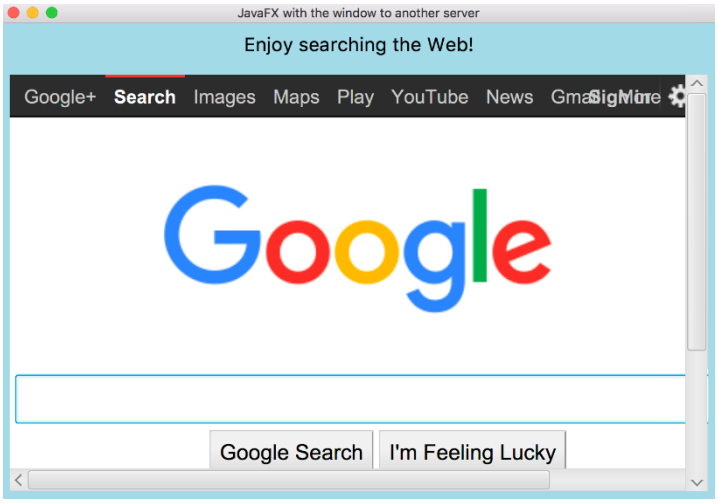
```
Bye! See you later!
Doing what has to be done...

Process finished with exit code 0
```

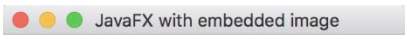
Hello, world!



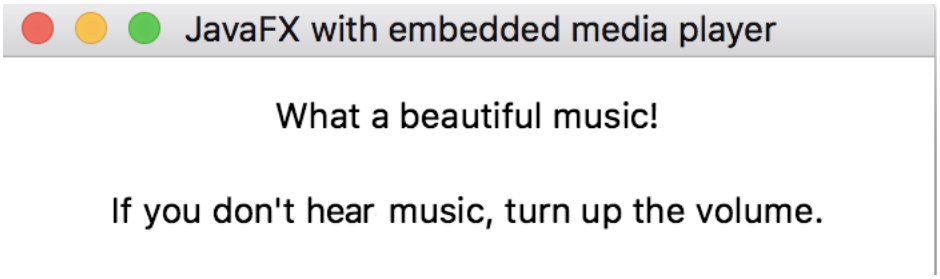


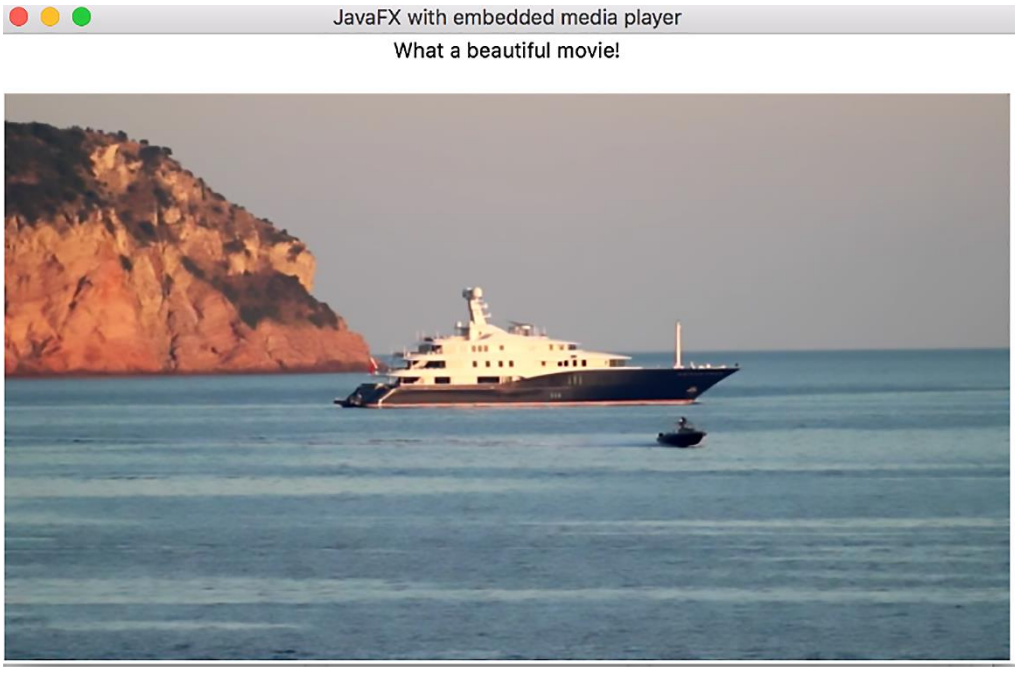


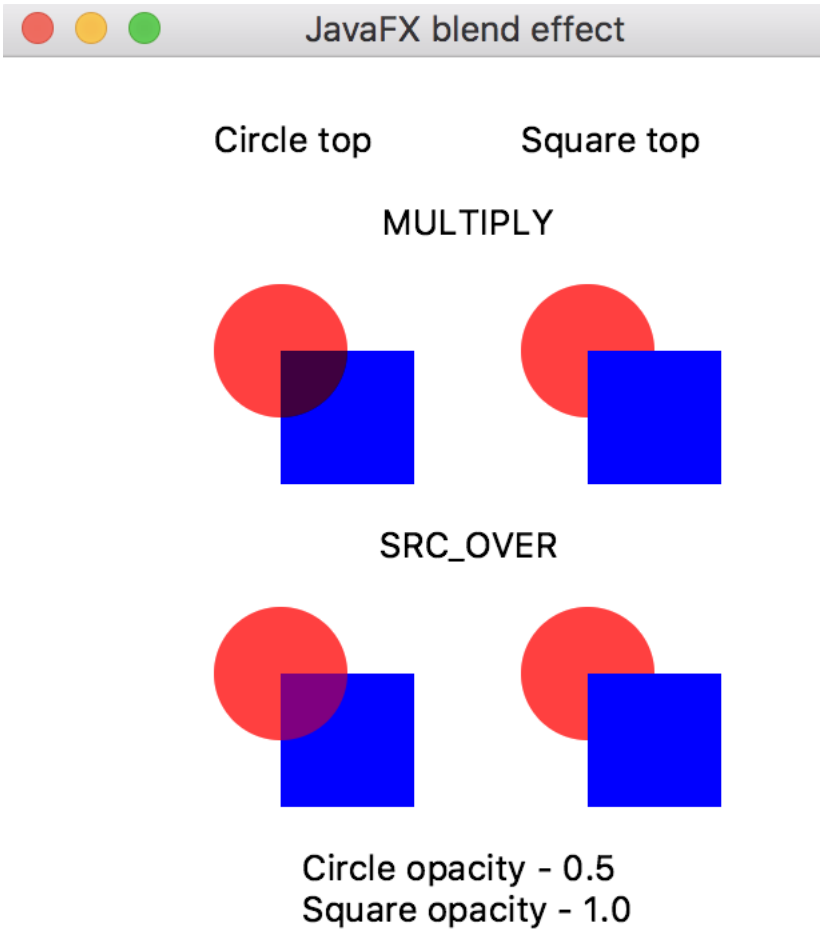


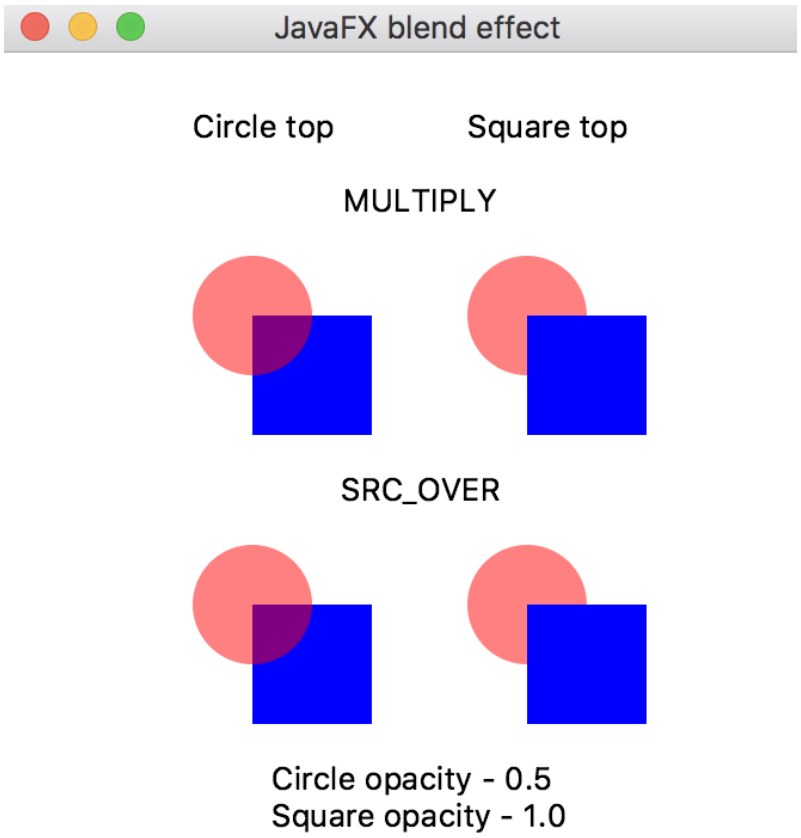


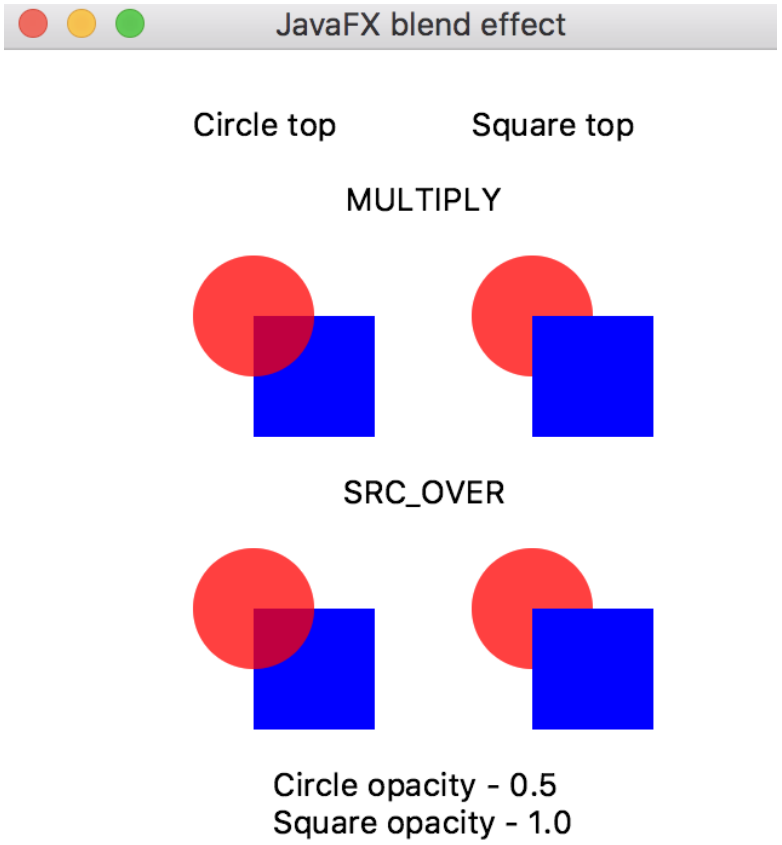
What a beautiful image!

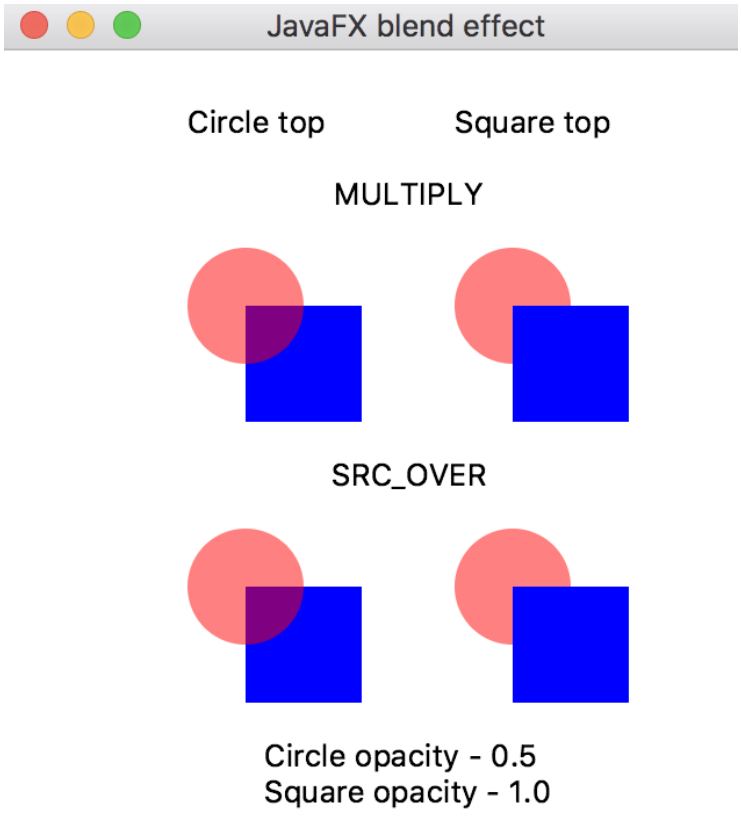


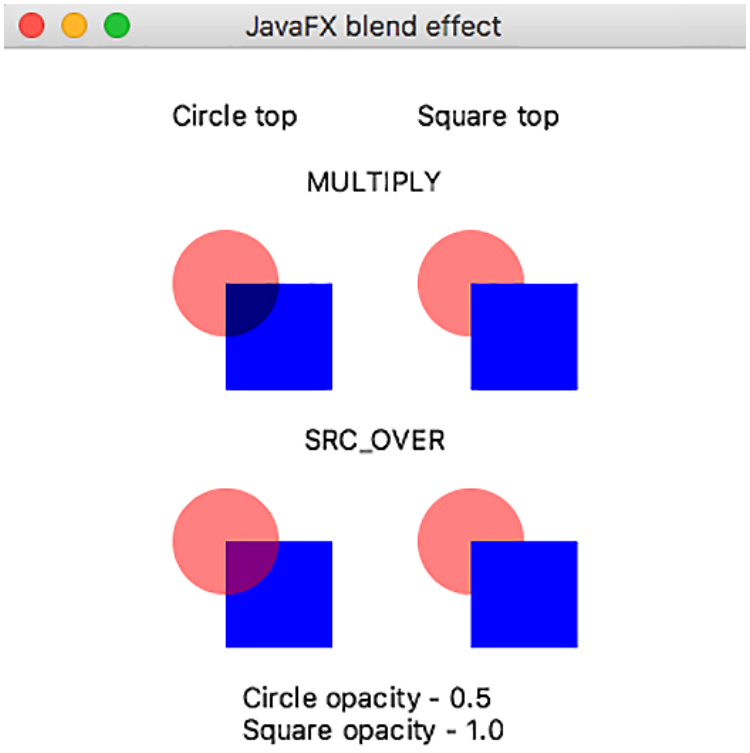


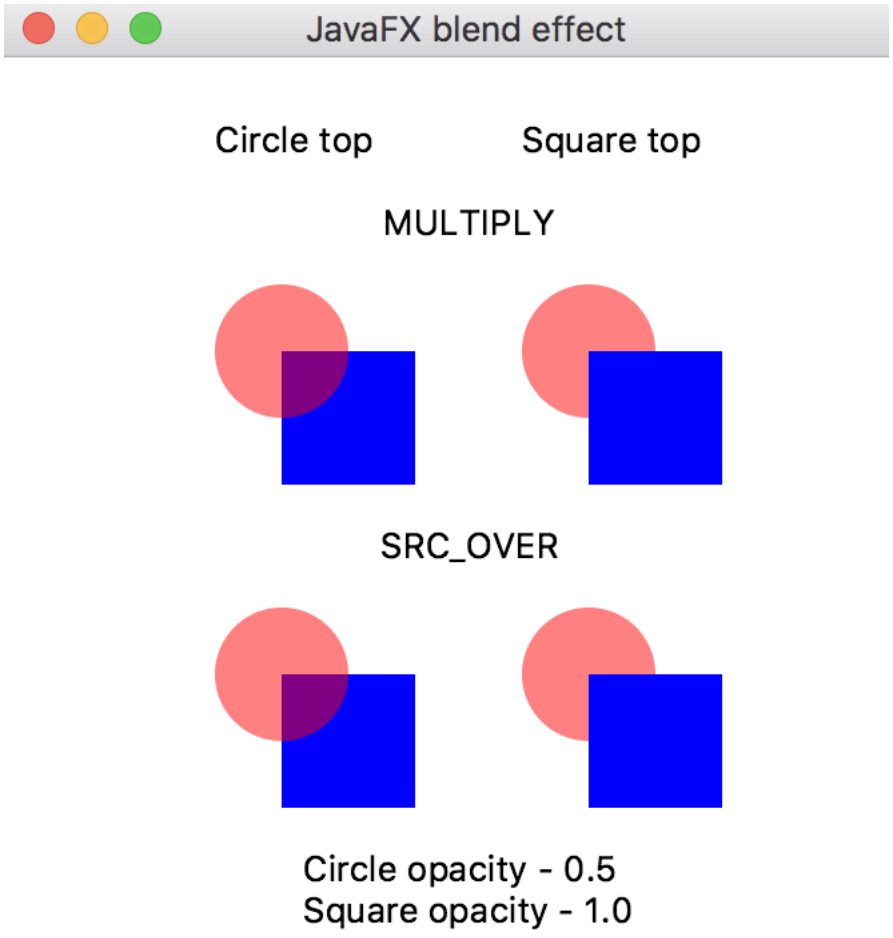

JavaFX blend effect
Circle top
Square top
MULTIPLY
SRC_OVER
Circle opacity - 0.5
Square opacity - 1.0

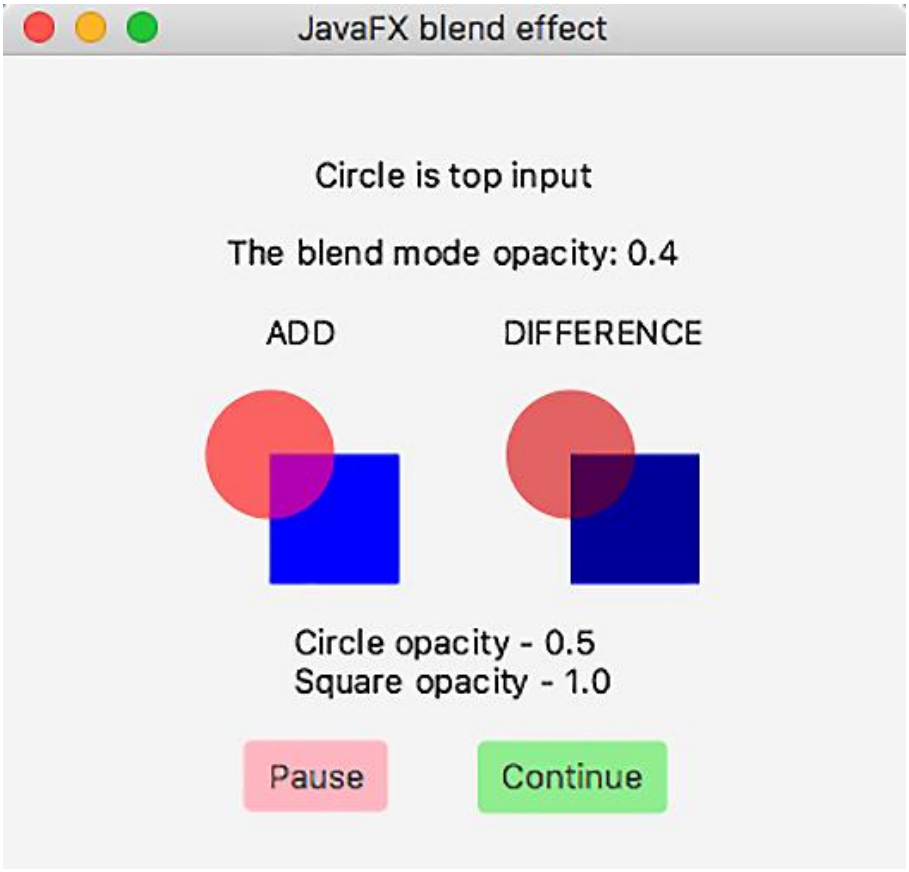

JavaFX blend effect
Circle top
Square top
MULTIPLY
SRC_OVER
Circle opacity - 0.5
Square opacity - 1.0

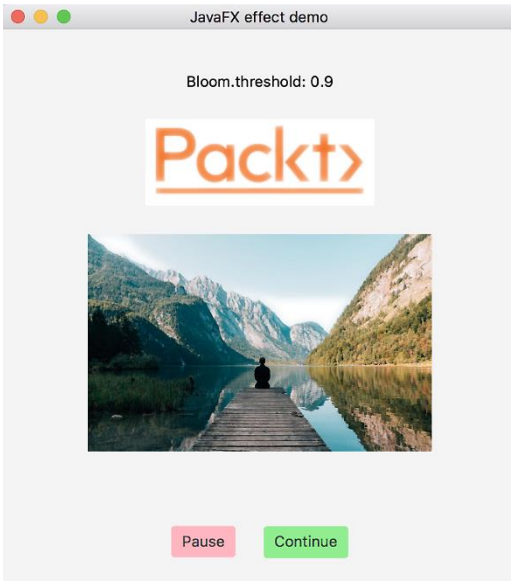

JavaFX blend effect
Circle top
Square top
MULTIPLY
SRC_OVER
Circle opacity - 0.5
Square opacity - 1.0

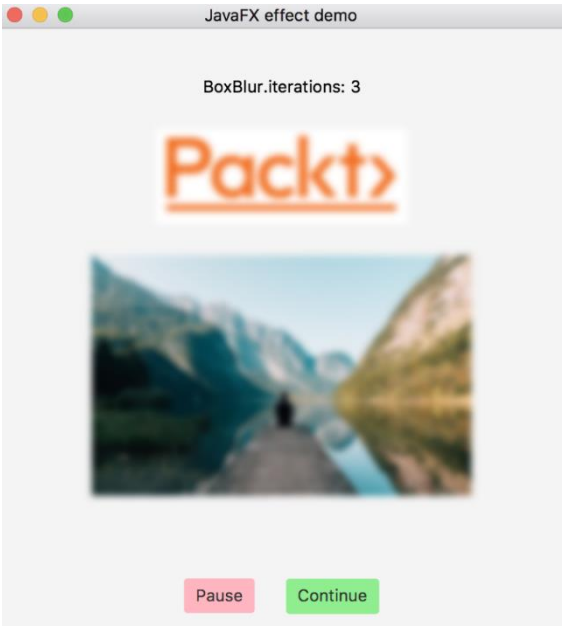

JavaFX blend effect
Circle top
Square top
MULTIPLY
SRC_OVER
Circle opacity - 0.5
Square opacity - 1.0

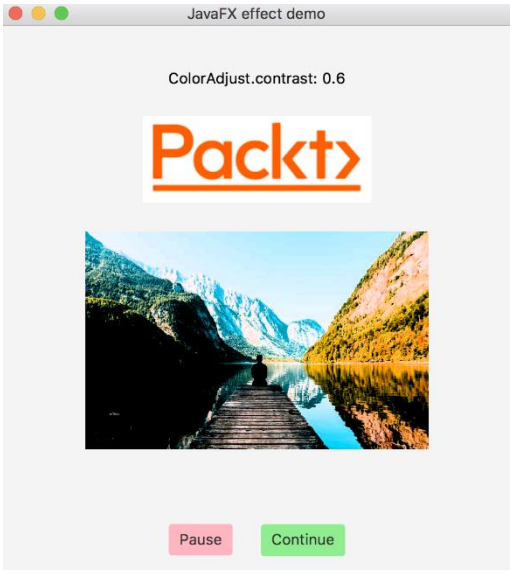

JavaFX blend effect
Circle top
Square top
MULTIPLY
SRC_OVER
Circle opacity - 0.5
Square opacity - 1.0

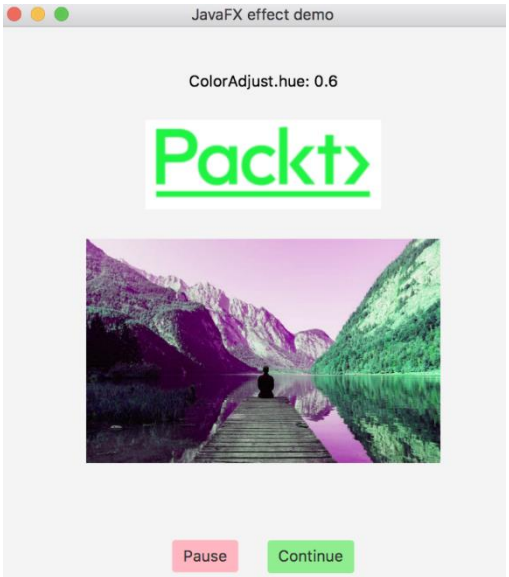

JavaFX blend effect
Circle top
Square top
MULTIPLY
SRC_OVER
Circle opacity - 0.5
Square opacity - 1.0

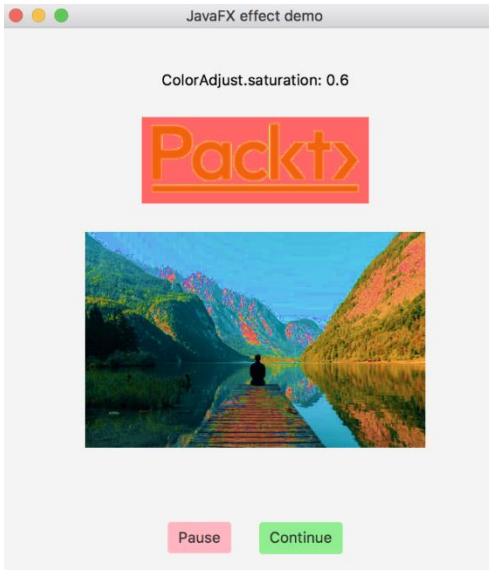

JavaFX blend effect
Circle is top input
The blend mode opacity: 0.4
ADD
DIFFERENCE
Circle opacity - 0.5
Square opacity - 1.0
Pause
Continue

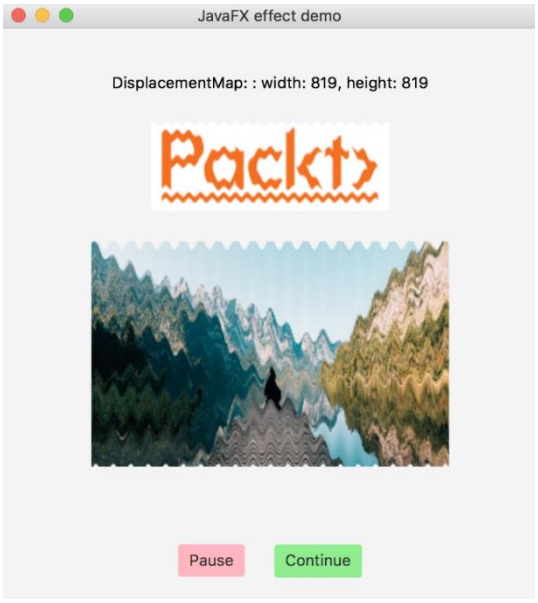

JavaFX effect demo
Bloom.threshold: 0.9
Pause
Continue


JavaFX effect demo
BoxBlur.iterations: 3
Pause
Continue

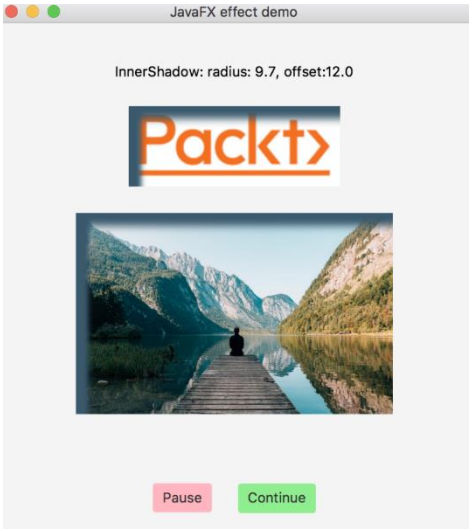

JavaFX effect demo
ColorAdjust.contrast: 0.6
Pause
Continue

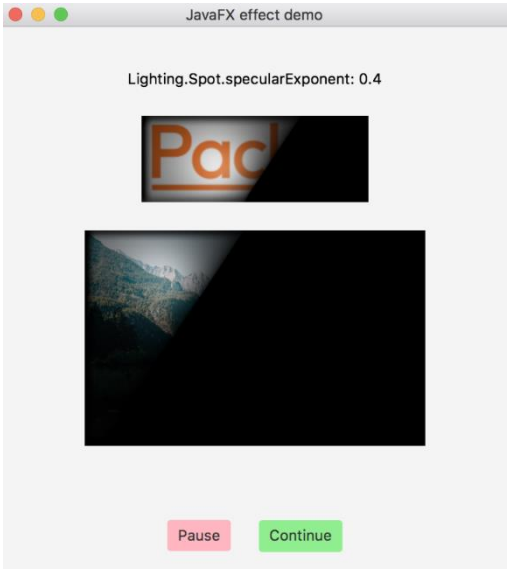

JavaFX effect demo
ColorAdjust.hue: 0.6
Pause
Continue

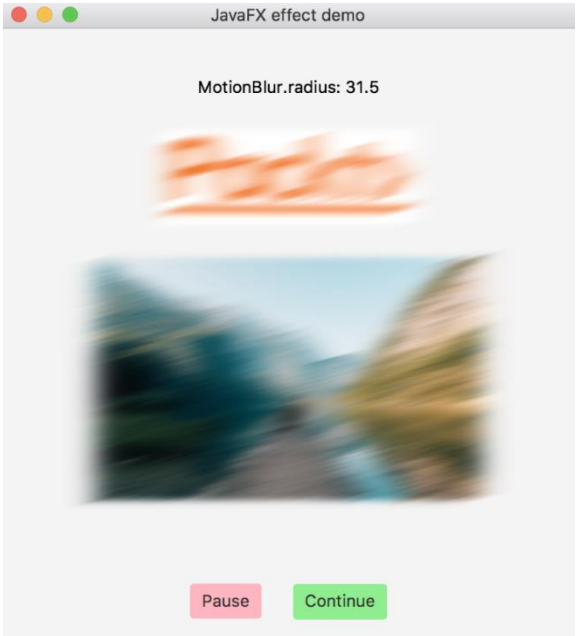

JavaFX effect demo
ColorAdjust.saturation: 0.6
Pause
Continue

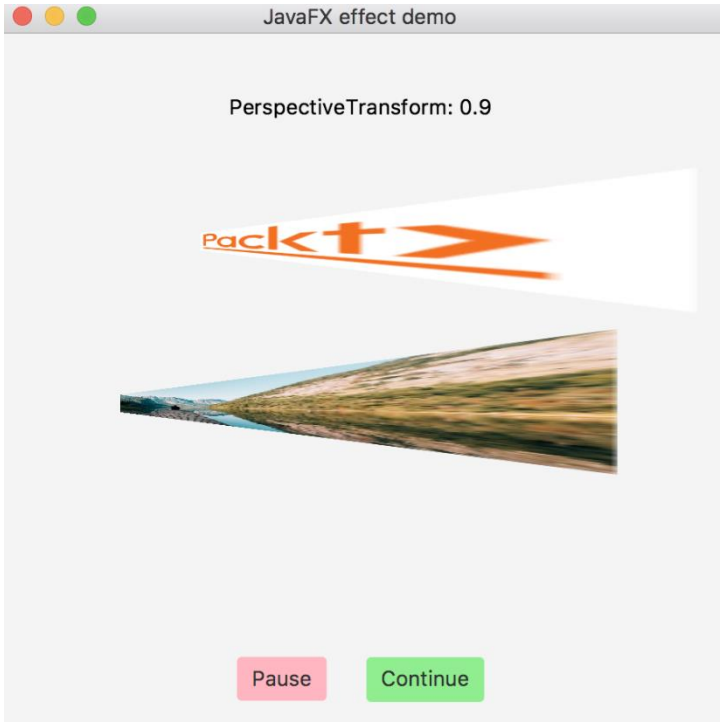

JavaFX effect demo
DisplacementMap: : width: 819, height: 819
Pause
Continue

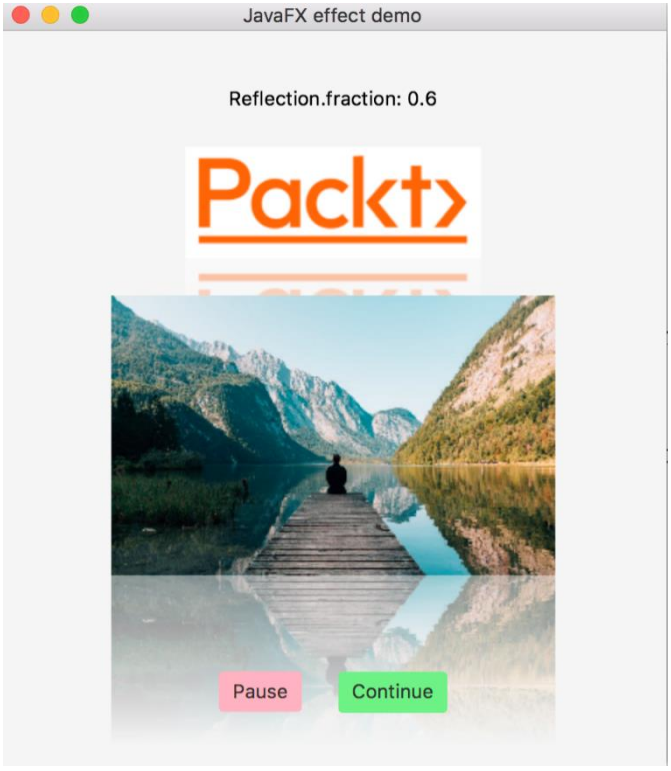

JavaFX effect demo
DropShadow.radius: 127.0
Pause
Continue

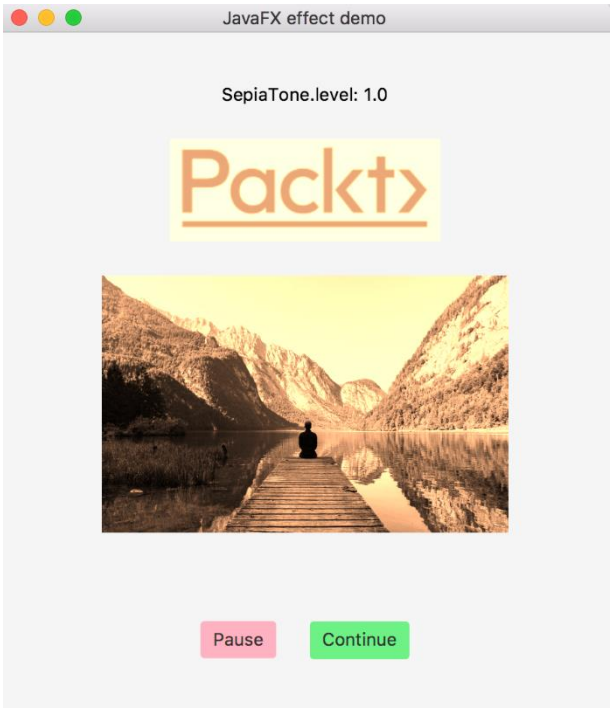

JavaFX effect demo
InnerShadow: radius: 9.7, offset:12.0
Pause
Continue


JavaFX effect demo
Lighting.Spot.specularExponent: 0.4
Pause
Continue


JavaFX effect demo
MotionBlur.radius: 31.5
Pause
Continue


JavaFX effect demo
PerspectiveTransform: 0.9
Pause
Continue

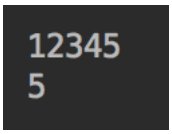

JavaFX effect demo
Reflection.fraction: 0.6
Pause
Continue


JavaFX effect demo
SepiaTone.level: 1.0
Packt
Pause
Continue

Chapter 13: Java GUI programming

No-images…

Chapter 14: Java standard streams




```
cities: Coal, Denver, Prost, Young
states: AZ, CO
zips: 12345, 12346, 22345, 32345
Oldest in each zip: 12345=>35: Bob Blow; 12346=>25: Ben Hill; 22345=>38: Rick Meadows; 32345=>28: Fred Grant
```

Chapter 15: Functional programming

```
reuseObservable():
2
4
3.4142135623730951
2
4
1.7071067811865475
```

```
cacheObservableData():
2
4
3.4142135623730951
1.7071067811865475
```

```
observableBlocking1():
2
4
2.0
```

```
completableBlocking():
Run
null
Run
null
Run
Run
```

```
First: 0
First: 1
First: 2
First: 3
Second: 0
Second: 1
First: 4
Second: 2
First: 5
First: 6
Second: 3
Second: 4
First: 7
```

```
hot1():
First: 0
First: 1
First: 2
First: 3
Second: 3
First: 4
Second: 4
First: 5
Second: 5
First: 6
Second: 6
First: 7
Second: 7
First: 8
Second: 8
```

```
126
127
io.reactivex.exceptions.MissingBackpressureException Create breakpoint : Could not emit value due to lack of requests
    at io.reactivex.processors.PublishProcessor$PublishSubscription.onNext(PublishProcessor.java:364)
    at io.reactivex.processors.PublishProcessor.onNext(PublishProcessor.java:243)
    at com.packt.learnjava.ch15_reactive.HotObservable.hot2(HotObservable.java:38)
    at com.packt.learnjava.ch15_reactive.HotObservable.main(HotObservable.java:13)
```

```
391673
391674
391675
391676
391677
391678
Dropped: 391850
Dropped: 391851
Dropped: 391852
```

```
Two
Completed
```

```
events():
Subscribe onNext: o
Subscribe onNext: n
Subscribe onNext: e
Completed!
```

```
utilities():
one
Disposed: DISPOSED
12345
```

```
parallel1():
3: o
2: RxComputationThreadPool-1 => o
1: main => one
3: n
2: RxComputationThreadPool-1 => n
3: e
2: RxComputationThreadPool-1 => e
1: main => two
3: t
2: RxComputationThreadPool-2 => t
3: w
2: RxComputationThreadPool-2 => w
3: o
2: RxComputationThreadPool-2 => o
1: main => three
3: t
2: RxComputationThreadPool-3 => t
3: h
2: RxComputationThreadPool-3 => h
3: r
2: RxComputationThreadPool-3 => r
3: e
2: RxComputationThreadPool-3 => e
3: e
2: RxComputationThreadPool-3 => e
```

```
3: o
2: RxComputationThreadPool-2 => o
1: RxComputationThreadPool-1 => one
3: n
2: RxComputationThreadPool-2 => n
3: e
2: RxComputationThreadPool-2 => e
1: RxComputationThreadPool-1 => two
3: t
2: RxComputationThreadPool-3 => t
3: w
2: RxComputationThreadPool-3 => w
1: RxComputationThreadPool-1 => three
3: o
2: RxComputationThreadPool-3 => o
3: t
2: RxComputationThreadPool-4 => t
3: h
2: RxComputationThreadPool-4 => h
3: r
2: RxComputationThreadPool-4 => r
3: e
2: RxComputationThreadPool-4 => e
3: e
2: RxComputationThreadPool-4 => e
```

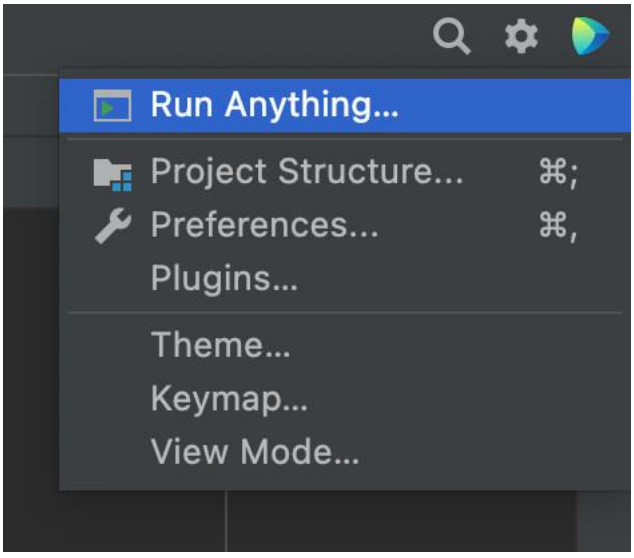
```
1: RxComputationThreadPool-2 => two
1: RxComputationThreadPool-3 => three
1: RxComputationThreadPool-1 => one
2: RxComputationThreadPool-3 => t
2: RxComputationThreadPool-1 => o
2: RxComputationThreadPool-3 => h
2: RxComputationThreadPool-1 => n
2: RxComputationThreadPool-3 => r
2: RxComputationThreadPool-1 => e
2: RxComputationThreadPool-3 => e
2: RxComputationThreadPool-3 => e
3: t
3: o
3: t
3: n
3: h
3: e
3: r
3: e
3: e
2: RxComputationThreadPool-2 => t
3: w
2: RxComputationThreadPool-2 => w
3: o
2: RxComputationThreadPool-2 => o
```

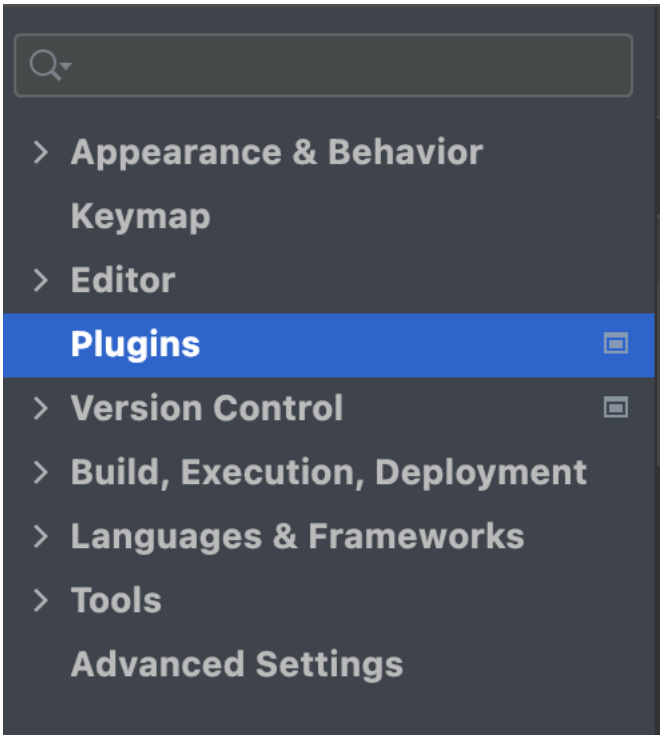
```
2: RxComputationThreadPool-1 => a
1: RxComputationThreadPool-1 => a
2: RxComputationThreadPool-1 => b
1: RxComputationThreadPool-1 => b
2: RxComputationThreadPool-1 => c
1: RxComputationThreadPool-1 => c
```

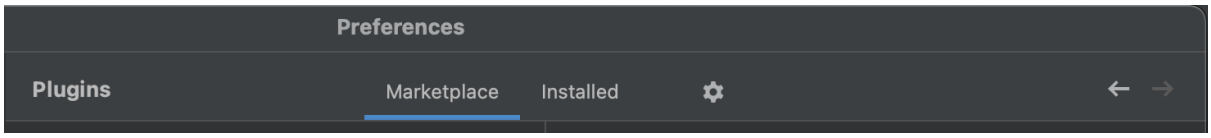
```
1: RxComputationThreadPool-1 => a
2: RxComputationThreadPool-2 => a
1: RxComputationThreadPool-1 => b
2: RxComputationThreadPool-2 => b
1: RxComputationThreadPool-1 => c
2: RxComputationThreadPool-2 => c
```

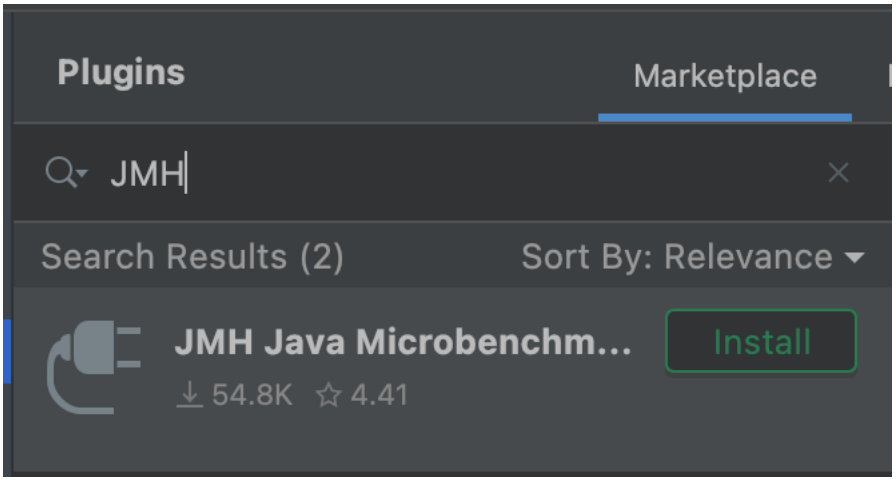
Chapter 16: Reactive programming

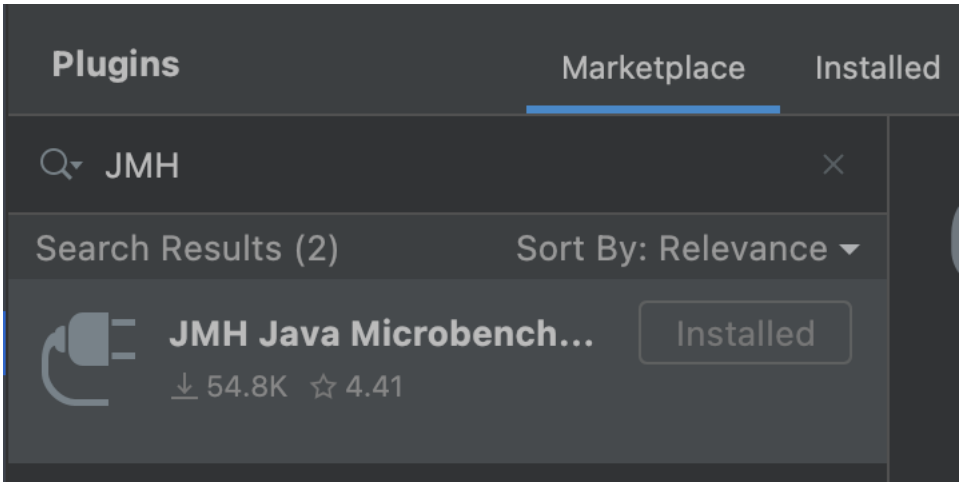
```
# Run progress: 0.00% complete, ETA 06:31:40
# Fork: 1 of 5
# Warmup Iteration   1: 0.001 ops/ns
# Warmup Iteration   2: 0.001 ops/ns
# Warmup Iteration   3: 0.001 ops/ns
# Warmup Iteration   4: 0.001 ops/ns
# Warmup Iteration   5: 0.001 ops/ns
Iteration   1: 0.001 ops/ns
Iteration   2: 0.001 ops/ns
Iteration   3: 0.001 ops/ns
Iteration   4: 0.001 ops/ns
Iteration   5: 0.001 ops/ns
```

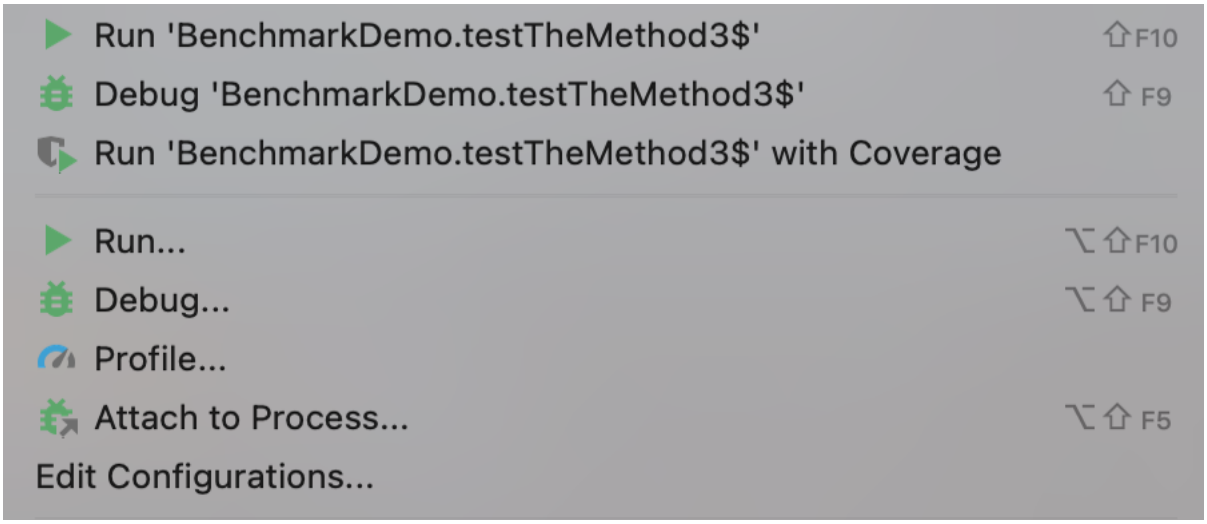


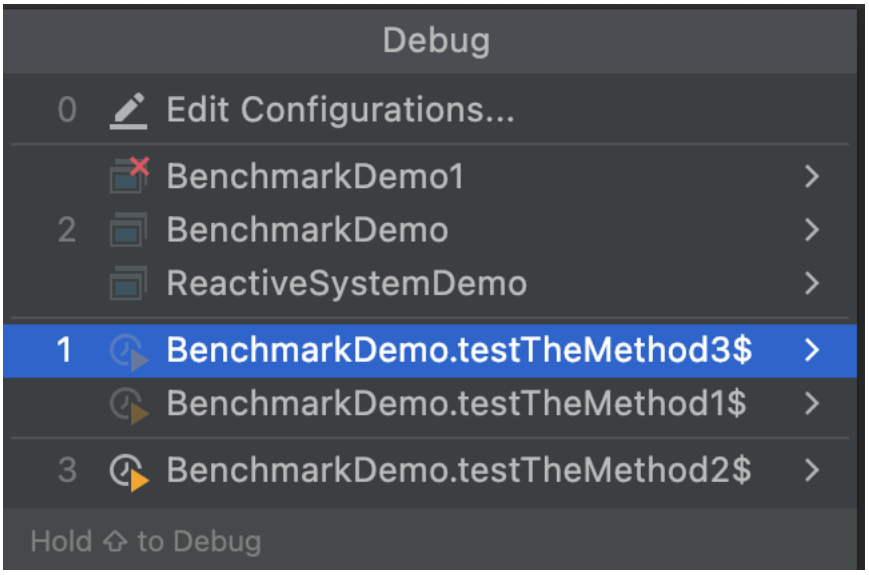

Appearance & Behavior
Keymap
Editor
Plugins
Version Control
Build, Execution, Deployment
Languages & Frameworks
Tools
Advanced Settings

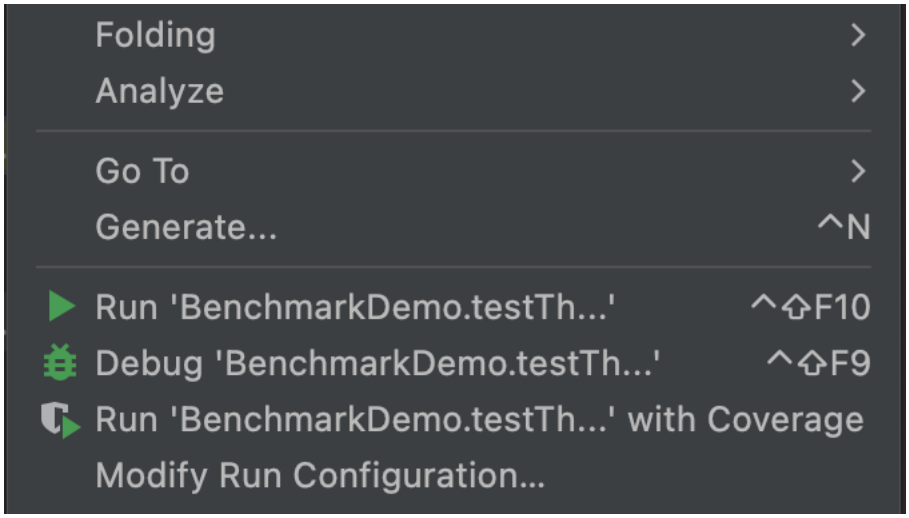

Preferences
Plugins
Marketplace
Installed


Plugins
Marketplace
JMH
Search Results (2)
Sort By: Relevance
JMH Java Microbenchm...
Install
54.8K
4.41


Plugins
Marketplace
Installed
JMH
Search Results (2)
Sort By: Relevance
JMH Java Microbench...
Installed
54.8K
4.41


Run 'BenchmarkDemo.testTheMethod3$' ⇧F10
Debug 'BenchmarkDemo.testTheMethod3$' ⇧F9
Run 'BenchmarkDemo.testTheMethod3$' with Coverage
Run... ⌥⇧F10
Debug... ⌥⇧F9
Profile...
Attach to Process... ⌥⇧F5
Edit Configurations...


Debug
0 Edit Configurations...
BenchmarkDemo1
2 BenchmarkDemo
ReactiveSystemDemo
1 BenchmarkDemo.testTheMethod3$
BenchmarkDemo.testTheMethod1$
3 BenchmarkDemo.testTheMethod2$
Hold ⇧ to Debug




```
Benchmark                                                Mode      Cnt         Score      Error   Units
BenchmarkDemo.testTheMethod0                            thrpt       25         0.001 ±    0.001  ops/ns
BenchmarkDemo.testTheMethod0                             avgt       25       879.400 ±   23.350   ns/op
BenchmarkDemo.testTheMethod0                           sample  8614070       964.566 ±   13.584   ns/op
BenchmarkDemo.testTheMethod0:testTheMethod0·p0.00      sample                549.000              ns/op
BenchmarkDemo.testTheMethod0:testTheMethod0·p0.50      sample                881.000              ns/op
BenchmarkDemo.testTheMethod0:testTheMethod0·p0.90      sample                960.000              ns/op
BenchmarkDemo.testTheMethod0:testTheMethod0·p0.95      sample                962.000              ns/op
BenchmarkDemo.testTheMethod0:testTheMethod0·p0.99      sample               1352.000              ns/op
BenchmarkDemo.testTheMethod0:testTheMethod0·p0.999     sample              13136.000              ns/op
BenchmarkDemo.testTheMethod0:testTheMethod0·p0.9999    sample              33408.000              ns/op
BenchmarkDemo.testTheMethod0:testTheMethod0·p1.00      sample           24641536.000              ns/op
BenchmarkDemo.testTheMethod0                               ss        5     23350.800 ± 4108.800   ns/op

Benchmark                                                Mode      Cnt         Score         Error   Units
BenchmarkDemo.testTheMethod1                            thrpt       25         0.001 ±       0.001  ops/ns
BenchmarkDemo.testTheMethod1                             avgt       25       925.099 ±      26.689   ns/op
BenchmarkDemo.testTheMethod1                           sample  8105111      1215.290 ±      57.860   ns/op
BenchmarkDemo.testTheMethod1:testTheMethod1·p0.00      sample               846.000                ns/op
BenchmarkDemo.testTheMethod1:testTheMethod1·p0.50      sample               881.000                ns/op
BenchmarkDemo.testTheMethod1:testTheMethod1·p0.90      sample               961.000                ns/op
BenchmarkDemo.testTheMethod1:testTheMethod1·p0.95      sample              1028.000                ns/op
BenchmarkDemo.testTheMethod1:testTheMethod1·p0.99      sample              1576.000                ns/op
BenchmarkDemo.testTheMethod1:testTheMethod1·p0.999     sample             19712.000                ns/op
BenchmarkDemo.testTheMethod1:testTheMethod1·p0.9999    sample            347636.531                ns/op
BenchmarkDemo.testTheMethod1:testTheMethod1·p1.00      sample          72482816.000                ns/op
BenchmarkDemo.testTheMethod1                               ss        5   1351110.400 ± 9370596.601   ns/op
```

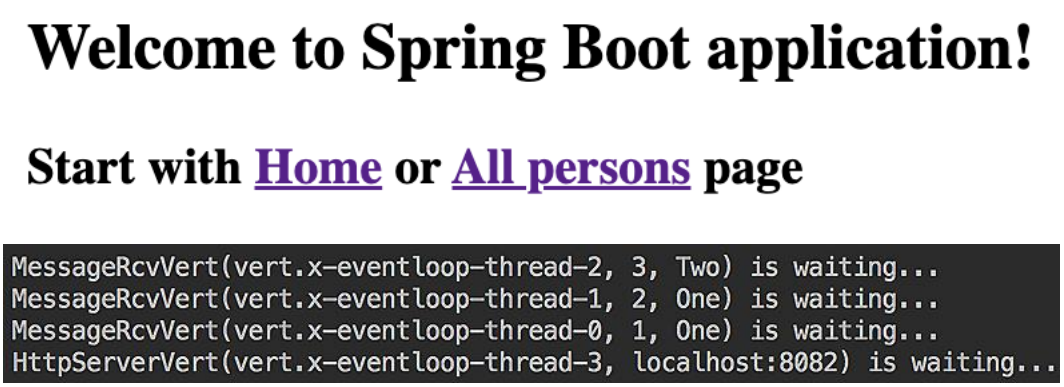
```
Benchmark                     Mode  Cnt     Score    Error  Units
BenchmarkDemo.testTheMethod3  avgt   25  2657.405 ± 93.749  ns/op
```

Benchmark	Mode	Cnt	Score	Error	Units
BenchmarkDemo.testTheMethod4	thrpt	25	≈ 10^{-3}		ops/ns
BenchmarkDemo.testTheMethod4	avgt	25	2849.015	± 674.026	ns/op
BenchmarkDemo.testTheMethod4	sample	5630034	2828.607	± 23.264	ns/op
BenchmarkDemo.testTheMethod4:testTheMethod4·p0.00	sample		2528.000		ns/op
BenchmarkDemo.testTheMethod4:testTheMethod4·p0.50	sample		2656.000		ns/op
BenchmarkDemo.testTheMethod4:testTheMethod4·p0.90	sample		2964.000		ns/op
BenchmarkDemo.testTheMethod4:testTheMethod4·p0.95	sample		2976.000		ns/op
BenchmarkDemo.testTheMethod4:testTheMethod4·p0.99	sample		4144.000		ns/op
BenchmarkDemo.testTheMethod4:testTheMethod4·p0.999	sample		17536.000		ns/op
BenchmarkDemo.testTheMethod4:testTheMethod4·p0.9999	sample		44288.000		ns/op
BenchmarkDemo.testTheMethod4:testTheMethod4·p1.00	sample		35454976.000		ns/op
BenchmarkDemo.testTheMethod4	ss	5	311340.000	± 380514.997	ns/op

REMEMBER: The numbers below are just data. To gain reusable insights, you need to follow up on why the numbers are the way they are. Use profilers (see -prof, -lprof), design factorial experiments, perform baseline and negative tests that provide experimental control, make sure the benchmarking environment is safe on JVM/OS/HW level, ask for reviews from the domain experts. Do not assume the numbers tell you what you want them to tell.

Chapter 17: Spring Boot

```
Ada Valentino, 50
Bob Avalon, 50
Nick Brook, 25
Nick Samoylov, 42
Zoe Adams, 10
Zoe Adams, 15
```




```
MessageRcvVert(vert.x-eventloop-thread-2, 3, Two) is waiting...
MessageRcvVert(vert.x-eventloop-thread-1, 2, One) is waiting...
MessageRcvVert(vert.x-eventloop-thread-0, 1, One) is waiting...
HttpServerVert(vert.x-eventloop-thread-3, localhost:8082) is waiting...
```

```
demo>
demo> curl localhost:8082/some/path/Nick/One/someValue
MessageRcvVert(vert.x-eventloop-thread-0, 1, One) got message 'Nick called with value someValue'. Thank you.
demo>
demo> curl localhost:8082/some/path/Nick/One/someValue
MessageRcvVert(vert.x-eventloop-thread-1, 2, One) got message 'Nick called with value someValue'. Thank you.
demo>
demo> curl localhost:8082/some/path/Nick/One/someValue
MessageRcvVert(vert.x-eventloop-thread-0, 1, One) got message 'Nick called with value someValue'. Thank you.
demo>
```

```
demo>
demo> curl -X POST localhost:8082/some/path/send -d '{"name":"Nick","address":"One","anotherParam":"someValue"}'
MessageRcvVert(vert.x-eventloop-thread-1, 2, One) got message 'Nick called with value someValue'. Thank you.
demo>
demo> curl -X POST localhost:8082/some/path/send -d '{"name":"Nick","address":"One","anotherParam":"someValue"}'
MessageRcvVert(vert.x-eventloop-thread-0, 1, One) got message 'Nick called with value someValue'. Thank you.
demo>
demo> curl -X POST localhost:8082/some/path/send -d '{"name":"Nick","address":"One","anotherParam":"someValue"}'
MessageRcvVert(vert.x-eventloop-thread-1, 2, One) got message 'Nick called with value someValue'. Thank you.
demo>
```

```
HttpServerVert(vert.x-eventloop-thread-3, localhost:8082): got payload
    {"name":"Nick","address":"One","anotherParam":"someValue"}
MessageRcvVert(vert.x-eventloop-thread-0, 1, One) got message 'Nick called with value someValue'.
MessageRcvVert(vert.x-eventloop-thread-1, 2, One) got message 'Nick called with value someValue'.

HttpServerVert(vert.x-eventloop-thread-3, localhost:8082): got payload
    {"name":"Nick","address":"One","anotherParam":"someValue"}
MessageRcvVert(vert.x-eventloop-thread-1, 2, One) got message 'Nick called with value someValue'.
MessageRcvVert(vert.x-eventloop-thread-0, 1, One) got message 'Nick called with value someValue'.
```