## Chapter 01: Setting Up FastAPI for Starters

PS C:\Al	ibata\Training\Source\fastapi\ch01>
INFO:	Uvicorn running on http://127.0.0.1:8000 (Press CTRL+C to quit)
INFO:	Started reloader process [2552] using watchgod
INFO:	Started server process [17880]
INFO:	Waiting for application startup.
INFO:	Application startup complete.



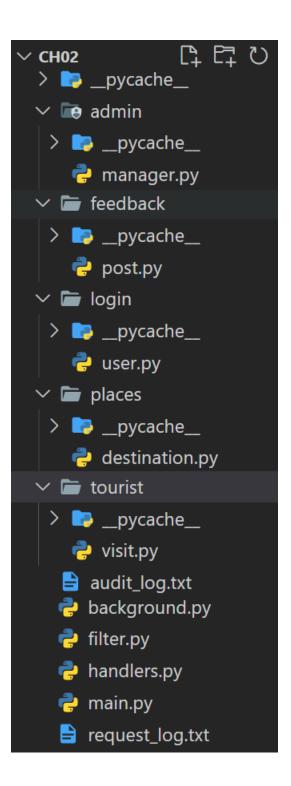
/openapi.json

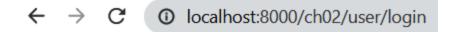
#### default

GET	/ch01/index Index	$\checkmark$
POST	/ch01/login/signup Signup	$\checkmark$
POST	/ch01/list/users/pending List Pending Users	$\checkmark$
POST	/ch01/login/validate Approve User	$\checkmark$
DELETE	/ch01/login/remove/{username} Delete User	$\checkmark$
DELETE	/ch01/login/remove/ Delete Users	$\checkmark$
GET	/ch01/list/users/valid List Valid Users	$\sim$

 $\overline{}$ 

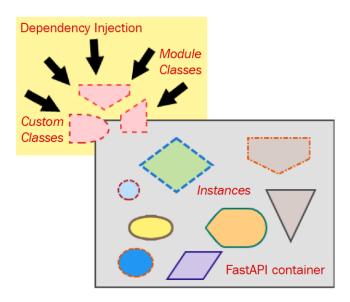
#### **Chapter 02: Exploring the Core Features**

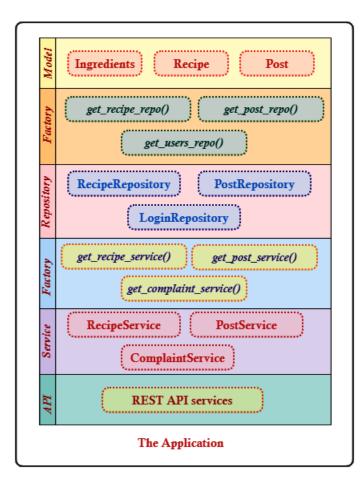


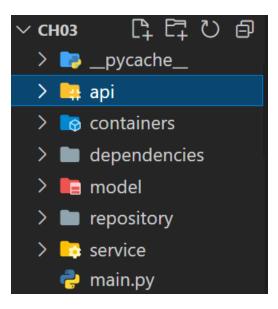


{"detail":"Not Found"}

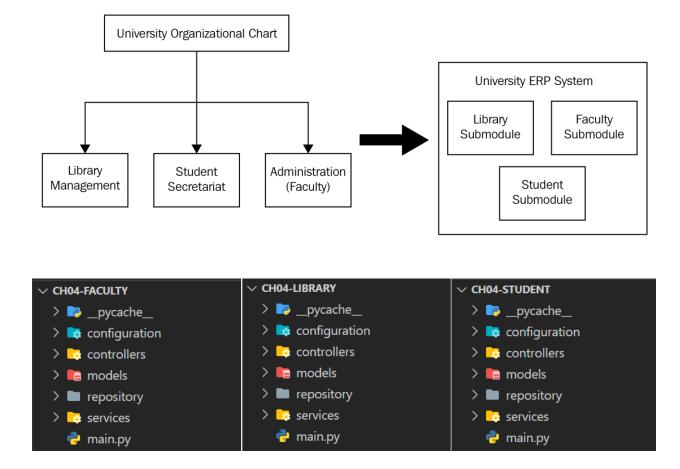
#### **Chapter 03: Investigating Dependency Injection**

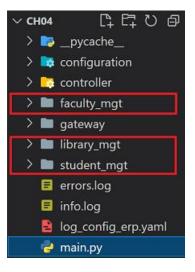


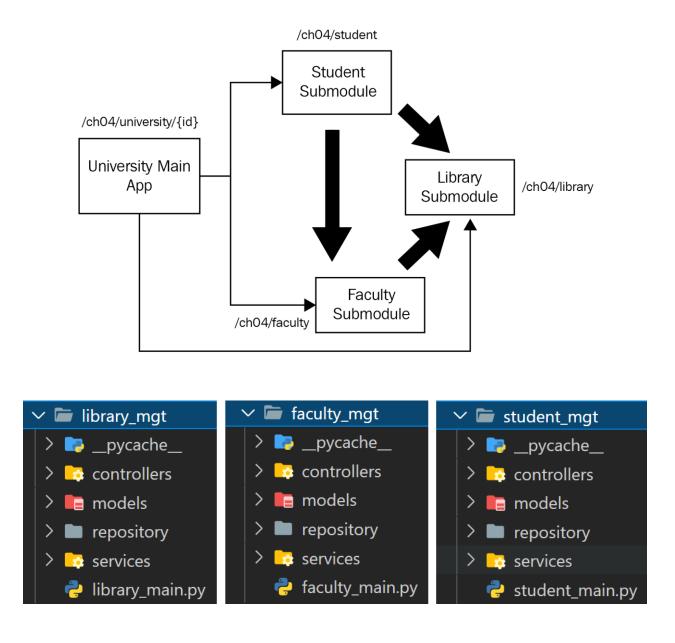




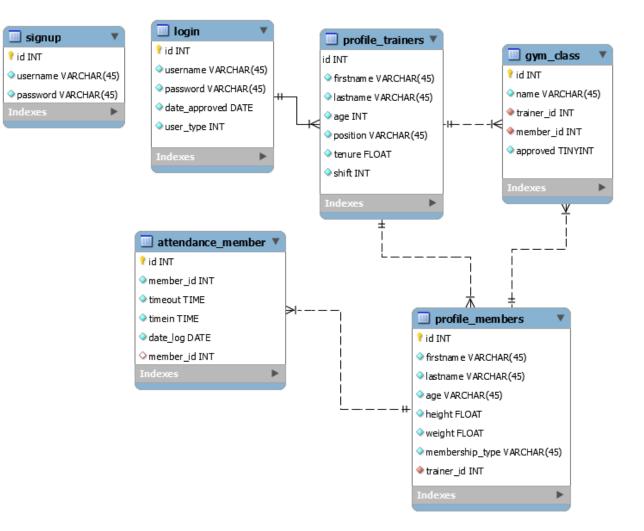
#### **Chapter 04: Building the Microservice Application**





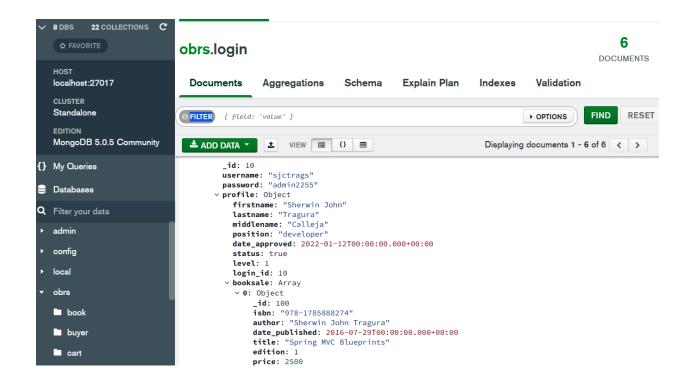


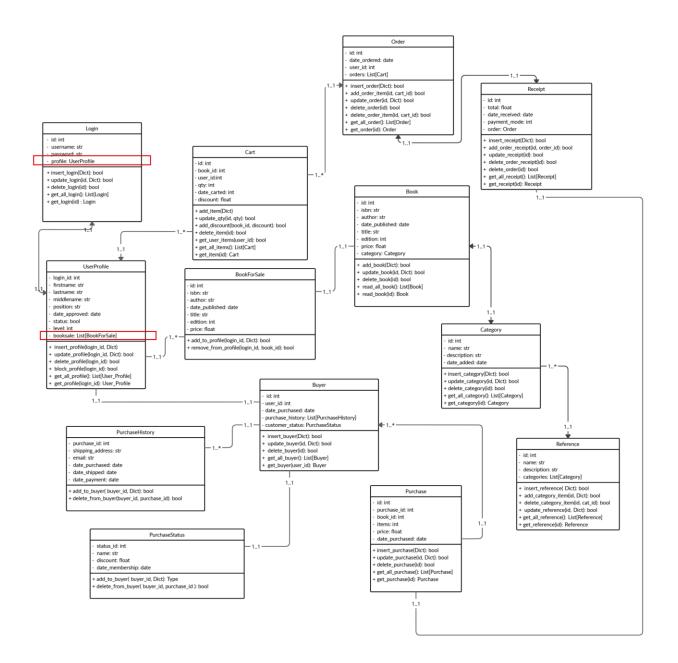
#### **Chapter 05: Connecting to a Relational Database**



Column lt	Туре	Table "public.profile_trainers"   Collation   Nullable   Def
 id	   integer	· · · · · · · · · · · · · · · · · · ·
login_id	::regclass) integer	not null
firstname lastname	character varying(255) character varying(255)	not null
age position tenure	character varying(255)   character varying(255)   real	not null       not null     not null
shift	integer	not null

#### **Chapter 06: Using a Non-Relational Database**





## Chapter 07: Securing the REST APIs

	Sign in http://localhost:8000
GET /ch07/approve/signup Signup Approve	Username
GET /ch07/login Login	Password
Parameters	Sign in Cancel Cancel
No parameters	
Execute	Clear

http:	//localhost:8000/ch07/login
Server r	esponse
Code	Details
200	Response body
	<pre>{     "approved_date": "2022-02-10",     "username": "sjctrags",     "password": "sjctrags",     "passphrase": "\$5\$rounds=535000\$rDtiI8SD1zxOnpny\$SfcE/fxQejdAAnngCY7XdkOW9QYzBGdU/54VM6JrES8",     "id": 1 } Download</pre>
	Response headers
	content-length: 174 content-type: application/json date: Wed,16 Feb 2022 23:57:07 GMT server: uvicorn

	Authorize
default	^
POST /ch07/signup/add Add Signup	~
GET /ch07/signup/list List Signup	~

#### Available authorizations

Scopes are used to grant an application different levels of access to data on behalf of the end user. Each API may declare one or more scopes.

API requires the following scopes. Select which ones you want to grant to Swagger UI.

OAuth2PasswordBearer (OAuth2, password)	
Token URL: ch07/login/token Flow:password	
username:	
password:	
Client credentials location:	
Authorization header 🗸	
client_id:	
client_secret:	
Authorize Close	

X

.

#### Available authorizations

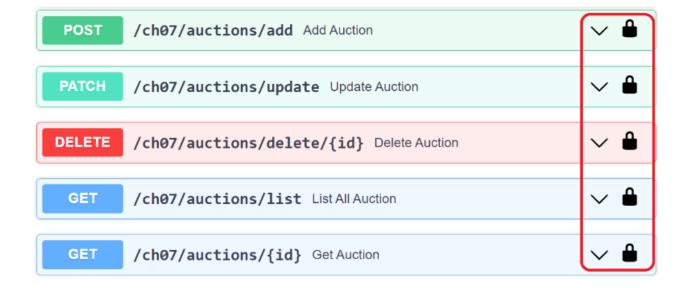
Scopes are used to grant an application different levels of access to data on behalf of the end user. Each API may declare one or more scopes.

API requires the following scopes. Select which ones you want to grant to Swagger UI.

#### OAuth2PasswordBearer (OAuth2, password)

Authorized

Token URL:	ch07/login/token
Flow: passw	ord
username: pa <u>ssword:</u>	sjctrags *****
	entials location: basic et: *****
	Logout Close

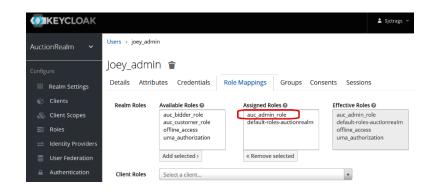


	K	
Select realm 🗸	Add realm	
	Import	Select file 🗵
	Name *	AuctionRealm
	Enabled	ON
		Create Cancel

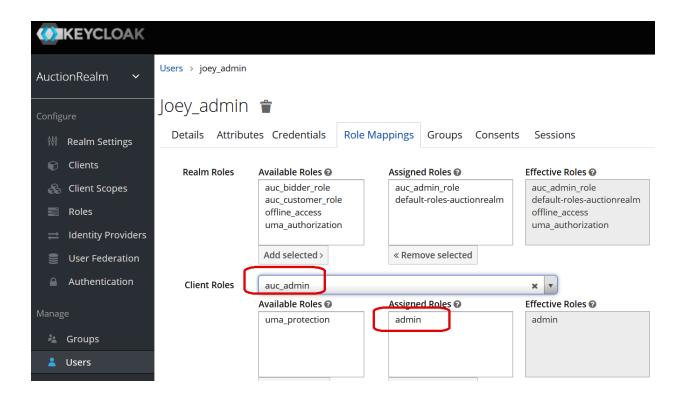
	KEYCLOAK					-	Sjctrags 👻
Aucti	ionRealm 🗸	Clients					
	jure	Lookup 😧					
	Realm Settings	Search Q					Create
Ð	Clients	Client ID	Enabled	Base URL	Actions		
	Client Scopes	account	True	http://localhost:8080/auth/realms/AuctionRealm/account/	Edit	Export	Delete
	Roles	account-console	True	http://localhost:8080/auth/realms/AuctionRealm/account/	Edit	Export	Delete
	Identite : Dura ident	admin-cli	True	Not defined	Edit	Export	Delete
	Identity Providers	auc-bidder	True	http://localhost:8000http://localhost:8080	Edit	Export	Delete
	User Federation	auc-customer	True	http://localhost:8000http://localhost:8080	Edit	Export	Delete
	Authentication	auc_admin	True	http://localhost:8000http://localhost:8000	Edit	Export	Delete
		broker	True	Not defined	Edit	Export	Delete
	ge	realm-management	True	Not defined	Edit	Export	Delete
	Groups	security-admin-console	True	http://localhost:8080/auth/admin/AuctionRealm/console/	Edit	Export	Delete

					💄 Sjctrags
AuctionRealm 🗸	Roles				
Configure	Realm Roles Defau	lt Roles			
👫 Realm Settings	Search	Q View a	l roles		Add Role
😭 Clients	Role Name	Composite	Description	Actions	
🙈 Client Scopes	auc_admin_role	False		Edit	Delete
Roles	auc_bidder_role	False		Edit	Delete
	auc_customer_role	False		Edit	Delete
	default-roles-auctionrealm	True	\${role_default-roles}	Edit	Delete
User Federation	offline_access	False	\${role_offline-access}	Edit	Delete
Authentication	uma authorization	False	{role uma authorization}	Edit	Delete

									🛓 Sjctrags 🗸
AuctionRealm	Users Lookup								
👫 Realm Settings	Search	Q	View all users				-	Unlock users	Add user
🕞 Clients	ID		Username	Email	Last Name	First Name	Actio	ns	
🚲 Client Scopes	094f6a44-6e72-498	7	anna_bidder	annaloki@gmail.com	Loki	Anna	Edit	Impersona	te Delete
Roles	7f3a932b-b34e-4e6	i9	joey_admin	sjctrags@gmail.com	Cruz	Joey	Edit	Impersona	te Delete
	a81fd636-84ae-439		liza customer	sherwin.tragura@ali	Maze	Liza	Edit	Impersona	te Delete



								💄 Sjctrags 🗸
AuctionRealm 🗸	Clients > auc_admin							
Configure	Auc_admin	ī						
👯 Realm Settings	Settings Credentials	s Ke	eys Roles	Client Scopes	Mappers Ø Scope Ø	Authorization	Revocation	Sessions 🔞
🕤 Clients	Offline Access 🚱 Cl	uste	ring Instal	ation <b>@</b> Service A	ccount Roles 😡			
🚓 Client Scopes	Count	Q	Manu all aslas					Add Role
📰 Roles			view all roles	Composite	Description	Actions		Add Role
Identity Providers	Role Name			False	Description			elete
	admin			Salar		Edit	-	
User Federation	uma_protection			False		Edit	D	elete

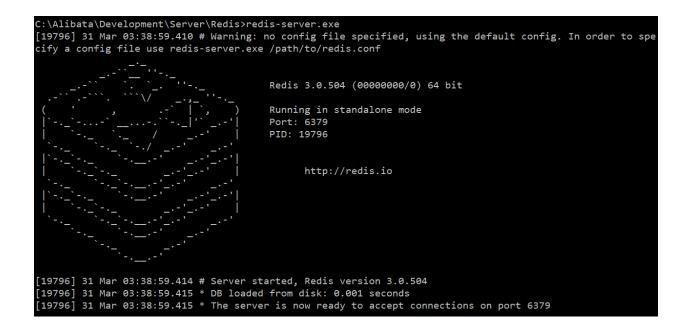


KEYCLOAK					🛔 Sjctrags 🔻				
AuctionRealm									
Configure Client Scopes    Default Client Scopes									
👫 Realm Settings	Search (	٩			Create				
🗊 Clients	Name	Protocol	GUI order	Actions					
🚳 Client Scopes	address	openid-connect		Edit	Delete				
📰 Roles	admin:read	openid-connect		Edit	Delete				
	admin:write	openid-connect		Edit	Delete				
	auction:read	openid-connect		Edit	Delete				
User Federation	auction:write	openid-connect		Edit	Delete				
Authentication	bidder:read	openid-connect		Edit	Delete				
	bidder:write	openid-connect		Edit	Delete				

$\checkmark$	dev-fastapi1 Development	~				Q [	Discuss you	ır needs
4	Getting Started		← Back to	Applications				
$\sim^{\mu}$	Activity FIRST			Austia	nAnn			
-	Applications	~	-	Auctio	••	ł		
	Applications							
	APIs		Quick Start	Settings	APIs			
	SSO Integrations							
£	Authentication	>	Basic	Information	Name *			
ΞB	Organizations		Dusic	internation				
<b>.</b>	User Management	>			AuctionApp			G
	Branding	>			Domain			
V	Security	>			dev-fastapi1.us.auth0.com			С
2	Actions	>			Client ID			
ւլ	Auth Pipeline	>			KjdwFzHrOLXC3IKekw8t6YhX4xUV1ZNd			G
ıll	Monitoring	>						
=+	Marketplace				Client Secret			
*	Extensions				•••••	• • • • • • • • •	••••• (0)	G
#	Settings							

### Chapter 08: Creating Coroutines, Events, and Message-Driven Transactions

🙀 Task Ma	nager							- 🗆	$\times$
File Optior	ns View								
Processes	Performance	App histo	ory Startup	Users	Details	Services			
Name	^	PID	Description	)			Status	Group	^
🖏 ProfSvc		2168	User Profile	Service	е		Running	netsvcs	
🖏 PushToln	stall		Windows PushToInstall Service			Stopped	netsvcs		
🖏 QWAVE		20236	Quality Windows Audio Video Experi F		Running	LocalServiceA	n		
🖏 RabbitM	Q	27652	RabbitMQ				Running		
🖏 RasAuto			Remote Ac	cess Au	to Conne	ction Man	Stopped	netsvcs	
🕰 RasMan -		728 —	Remote Ac	cess Co	nnection	Manager	-Running -	netsvcs	
💫 Redis			Redis				Stopped		
🔍 RemoteA	Access		Routing an	d Remo	te Acces	s	Stopped	netsvcs	



Flower	Dashboard	Tasks	Broker

how 10 · entries Search:									
Name 🗍	UUID	State 👙	args 🔺	kwargs 🌲	Result 🌲	Received 🌲	Started 🔺		
tasks.create_total_payables_year_celery	c5cec754-dfdc-418c- b8cd-98394df4148a	SUCCESS	(datetime.date(2022, 3, 16), [ <models.data.nsms.vendor at<br="" object="">0x0000026F8587CF70&gt;])</models.data.nsms.vendor>	{}	800000.0	2022-04-01 04:01:38.615	2022-04-01 04:01:38.617		
tasks.create_total_payables_year_celery	f44ed144-64b6- 44b3-9611- 183a8c8381f3	SUCCESS	(datetime.date(2022, 3, 16), [ <models.data.nsms.vendor at<br="" object="">0x0000026F85AAE130&gt;])</models.data.nsms.vendor>	0	800000.0	2022-04-01 04:01:39.926	2022-04-01 04:01:39.928		
tasks.create_total_payables_year_celery	9bc20165-3cad- 4761-832b- 8f36ec4085e7	SUCCESS	(datetime.date(2022, 3, 16), [ <models.data.nsms.vendor at<br="" object="">0x0000026F85AAE640&gt;])</models.data.nsms.vendor>	0	800000.0	2022-04-01 04:01:45.474	2022-04-01 04:01:45.477		
tasks.create_total_payables_year_celery	0535960a-85a2- 4986-bc68- ef06a28eb2b0	SUCCESS	(datetime.date(2022, 3, 16), [ <models.data.nsms.vendor at<br="" object="">0x0000026F85AAE310&gt;])</models.data.nsms.vendor>	0	800000.0	2022-04-01 04:01:46.487	2022-04-01 04:01:46.490		
tasks.create_total_payables_year_celery	9692ae35-429b- 4468-8f08- 38bd0168f40e	FAILURE	(datetime.date(2022, 3, 16), [ <models.data.nsms.vendor at<br="" object="">0x000002764706AFA0&gt;])</models.data.nsms.vendor>	0		2022-04-01 04:19:13.741	2022-04-01 04:19:13.742		
tasks.create_total_payables_year_celery	1d2549dd-891f- 41b7-a107- 8b436895e449	SUCCESS	(datetime.date(2022, 3, 16), [ <models.data.nsms.vendor at<br="" object="">0x000002BB52C85F40&gt;])</models.data.nsms.vendor>	{}	800000.0	2022-04-01 05:40:14.141	2022-04-01 05:40:14.142		
services.billing.tasks.create_total _payables_year_celery	644c2d2b-f689- 4582-9790- 9e81d06c7499	SUCCESS	(datetime.date(2022, 3, 16), [ <models.data.nsms.vendor at<br="" object="">0x000002A8CBFFB790&gt;])</models.data.nsms.vendor>	0	800000.0	2022-04-01 05:57:30.714	2022-04-01 05:57:30.716		

Refreshel 2022-04 BabbitMO TM RabbitMQ 3.9.13 Erlang 24.2.2 Overview Connections Channels Exchanges Adnin Queues Overview ▼ Totals Queued messages last minute ? 1.0 Ready 0 Unacked 0 Total 0 0.0 06:21:00 06:21:10 06:21:20 06:21:30 06:21:40 06:21:50 Message rates last minute ? 2.0/s Publish Deliver (auto ack) Get (manual ack) Unrouta (retu 0.60/s **0.60/s** 1.5/s **0.00/s** Publisher confirm 1.0/s 0.00/s Consumer ack Unrouta (dr 0.00/s 0.5/s Get (auto ack) **0.00/**s 0.0 /s Deliver (manual ack) 06:21:00 06:21:10 06:21:20 06:21:30 06:21:40 06:21:50 **0.00/s** 0.00/s Redelivered Disk re Get (empty) **0.00/**s Disk w Global counts ?



📾 Administrator: Command Prompt - kafka-console-consumer.batbootstrap-server 127.0.0.1:9092topic newstopic	-		×
C:\Alibata\Development\Server\kafka\bin\windows>kafka-console-consumer.batbootstrap-server 1	27.0.0	0.1:909	92 ^
topic newstopic			
{"id": 205, "firstname": "Liza", "lastname": "Zen", "salary": 8000.0, "date_employed": "2022-04	-04",	"statı	IS
": 1, "vendor_id": 2}			
{"id": 206, "firstname": "Peter", "lastname": "Cruz", "salary": 6000.0, "date_employed": "2022-	04-07'	", "sta	at
us": 1, "vendor_id": 2}			
{"id": 207, "firstname": "Johnny", "lastname": "Vitug", "salary": 3000.0, "date_employed": "202	2-04-1	11", "s	st
atus": 1, "vendor_id": 2}			

 $\leftrightarrow$   $\rightarrow$  X ( ) localhost:8000/ch08/messenger/sse/add

event: ping data: 2022-04-04 23:46:59.036807

event: ping data: 2022-04-04 23:47:14.042350

event: ping data: 2022-04-04 23:47:29.058708

id: f7237fb1-95ef-4bfa-99b7-a6b7510fe88d
event: Added messenger status: True, Received: April 04, 2022 [11:47:29 PM]
data: {"id": 205, "firstname": "Onan", "lastname": "Bean", "salary": 4000.0, "date\_employed": "2022-04-04", "status": 1, "vendor\_id": 2}
retry: 15000

event: ping data: 2022-04-04 23:47:44.060751

id: bc317c64-862c-42d7-8951-a5907d6e3343
event: Added messenger status: True, Received: April 04, 2022 [11:47:44 PM]
data: {"id": 206, "firstname": "Renan", "lastname": "Cruz", "salary": 4000.0, "date\_employed": "2022-04-04", "status": 1, "vendor\_id": 2}
retry: 15000

event: ping data: 2022-04-04 23:47:59.071265

id: ef03f177-1ee1-47e3-a116-08fd0723fa33
event: Added messenger status: True, Received: April 04, 2022 [11:48:02 PM]
data: {"id": 207, "firstname": "Jimmy", "lastname": "Tan", "salary": 2000.0, "date\_employed": "2022-04-04", "status": 1, "vendor\_id": 2}
retry: 15000

#### **Chapter 09: Utilizing Other Advanced Features**

## The Online Restaurant Rating System API 400 ASS

/openapi.json

This application is a prototype.

Sherwin John Tragura - Website a Authorize Send email to Sherwin John Tradura auth  $\overline{}$ POST /ch09/login/authenticate This is an API that stores credentials in session.  $\sim$ operation  $\overline{}$ ∼ 🔒 POST /ch09/login/add This is an API adds new user. ∽ 🔒 POST /ch09/login/profile/add This is an API updating existing user record.

POST	/ch09/login/authenticate Authenticate					
Parameter	S					
Name	Description					
username string (query)	* required The username of the credentials.					
maxLength:	username					
password string (query)	* required The password of the of the credentials.					
maxLength:	20 password					

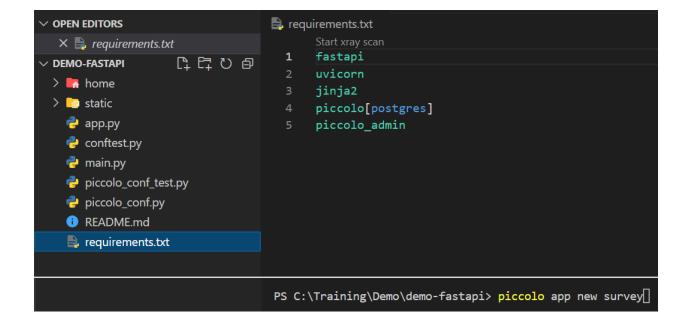
GET	/ch09/login/account/{id} Get Login
Parameters	3
Name	Description
<pre>id * required integer (path)</pre>	The user ID of the user.

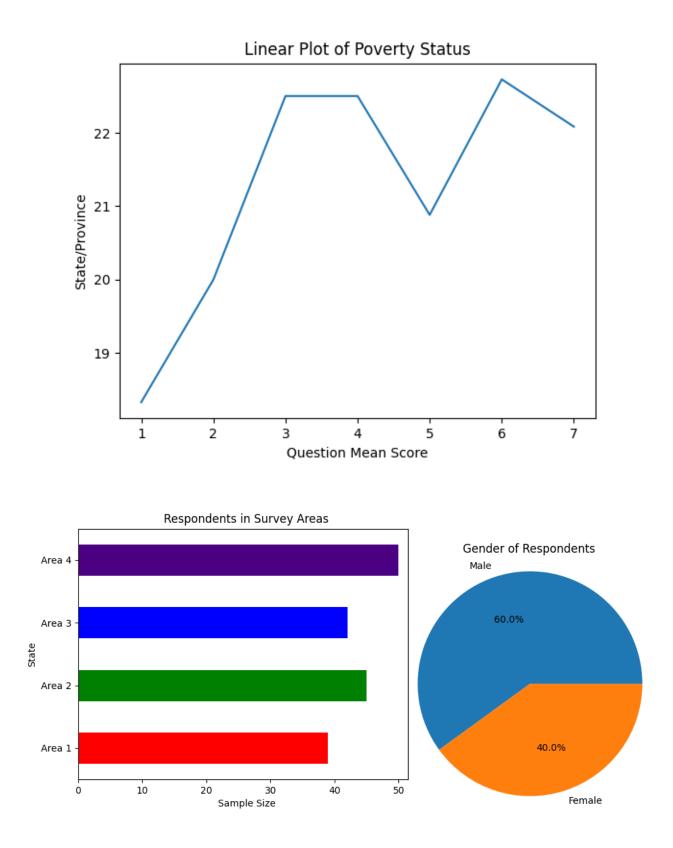
Code	Description
200	Return an MP4 encoded video.
	Media type
	video/mp4 v
500	video/mp4
000	The item was not found
	Media type
	application/json 🗸
	Example Value Schema
	<pre>"message": "Video file is invalid." }</pre>

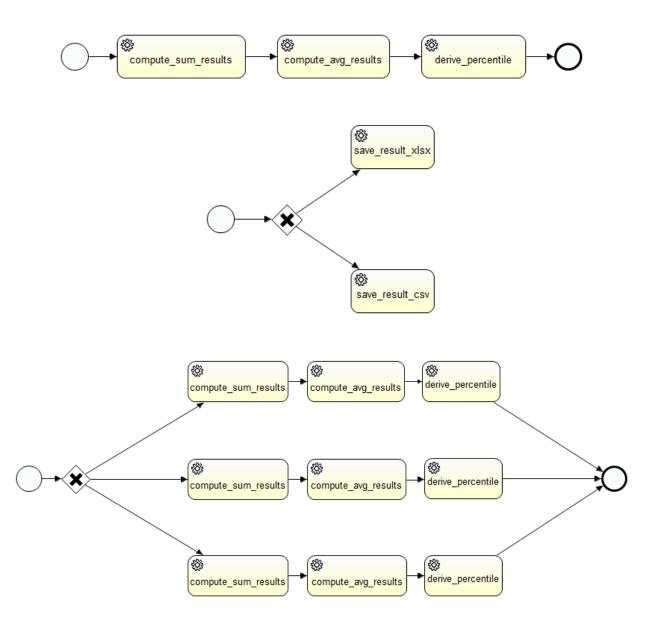
PS C:\Alibata\Training\Source\fastapi\ch09>
test session starts
platform win32 Python 3.8.5, pytest-7.1.2, pluggy-1.0.0 rootdir: C:\Alibata\Training\Source\fastapi\ch09 plugins: anyio-3.3.4, Faker-11.3.0 collected 2 items
test\test_restaurants.py . [ 50%]
test\test_route_extract.py . [100%]
<pre>warnings summary ====================================</pre>

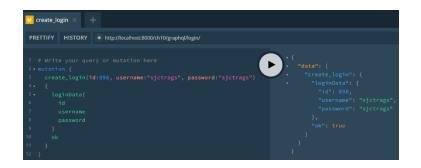
# Chapter 10: Solving Numerical, Symbolic, and Graphical Problems

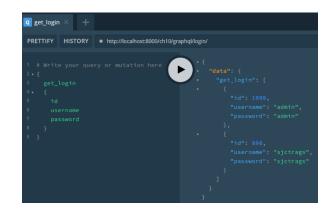
Command Prompt	-		×
C:\Alibata\Training\Source\fastapi\ch10>piccolo asgi new Can't import the APP_REGISTRY from piccolo_conf - some commands may be missing. If this is a ct don't worry. To see a full traceback use `piccolodiagnose` Which routing framework? starlette [0], fastapi [1], blacksheep [2], xpresso [3]	new	proj	e
1 Which server? uvicorn [0], Hypercorn [1] 0 Run `pip install -r requirements.txt` and `python main.py` to get started.			











#### **Chapter 11: Adding Other Microservice Features**

C:\Alibata\Training\Source\fastapi>python -m virtualenv ch01-env

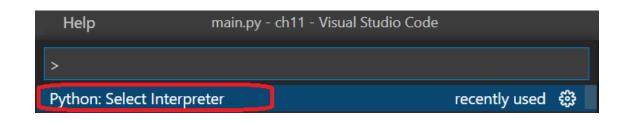
created virtual environment CPython3.8.5. + inal.0-64 in 1540ms

creator CPython3Windows(dest=C:\Alibata\Training\Source\fastapi\ch01-env, clear=False, no\_vcs\_ignore
=False, global=False)

seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, via=copy, app\_data\_d
ir=C:\Users\alibatasys\AppData\Local\pypa\virtualenv)

added seed packages: pip==22.1.2, setuptools==62.3.4, wheel==0.37.1

activators BashActivator, BatchActivator, FishActivator, NushellActivator, PowerShellActivator, PythonActivator



	main.py - ch11 - Visu	al Studio Code	
Enter path to a Python interpret	ter.		
Find Browse your file system to find	a Python interpreter.		
Select Python interpreter	r		×
← → • ↑ 📜 « Sc	ource > fastapi > ch011-env	> Scripts > マ ひ / Search Scrip	ts
Desktop	🏠 pip-3.8.exe	16/06/2022 11:25 AM Application	
Downloads Music	python.exe	16/06/2022 11:25 AM Application	5
🐛 AlibataSys (C:) 🗸	wheel3.8.exe	16/06/2022 11:25 AM Application	1
File nar	me: python.exe	<ul> <li>Executables (*.exe)</li> </ul>	~
		Select Interpreter	Cancel

C:\Alibata\Training\Source\fastapi\ch11>c:/Alibata/Training/Source/fastapi/ch011-env/Scripts/activate.bat

(ch011-env) C:\Alibata\Training\Source\fastapi\ch11>pip install fastapi Collecting fastapi

Using cached fastapi-0.78.0-py3-none-any.whl (54 kB)

(ch011-env) C:\Alibata\Training\Source\fastapi\ch11>pip install uvicorn

Collecting uvicorn

Using cached uvicorn-0.17.6-py3-none-any.whl (53 kB)

Collecting h11>=0.8

📕 ch011-env	16/06/2022 11:25 AM	File folder
📕 ch010-env	16/06/2022 11:25 AM	File folder
📙 ch09-env	16/06/2022 11:25 AM	File folder
📕 ch08-env	16/06/2022 11:24 AM	File folder

#### ← → C () localhost:8000/metrics

# TYPE starlette requests created gauge

starlette\_requests\_created{app\_name="osms",method="GET",path="/metrics",status\_code="200"} 1.6558878590579767e+09 starlette\_requests\_created{app\_name="osms",method="GET",path="/ch11/login/get/1",status\_code="200"} 1.6558878734448125e+09
starlette\_requests\_created{app\_name="osms",method="GET",path="/ch11/login/list/all",status\_code="200"} 1.6558878761680148e+09
starlette\_requests\_created{app\_name="osms",method="GET",path="/ch11/login/list/all",status\_code="200"} 1.655887888104112e+09 # HELP starlette\_request\_duration\_seconds HTTP request duration, in seconds

# TYPE starlette\_request\_duration\_seconds histogram

# TYPE starlette\_request\_duration\_seconds histogram starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.005", method="GET", path="/metrics", status\_code="200"} 0.0 starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.01", method="GET", path="/metrics", status\_code="200"} 0.0 starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.005", method="GET", path="/metrics", status\_code="200"} 0.0 starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.005", method="GET", path="/ch11/login/get/1", status\_code="200"} 0.0 starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.005", method="GET", path="/ch11/login/list/all", status\_code="200"} 0.0 starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.005", method="GET", path="/ch11/login/list/all", status\_code="200"} 1.0 starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.01", method="GET", path="/ch11/login/list/all", status\_code="200"} 1.0 starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.025", method="GET", path="/ch11/login/list/all", status\_code="200"} 1.0 starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.025", method="GET", path="/ch11/login/list/all", status\_code="200"} 1.0 starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.025", method="GET", path="/ch11/login/list/all", status\_code="200"} 1.0 starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.05", method="GET", path="/ch11/login/list/all", status\_code="200"} 1.0 starlette\_request\_duration\_seconds\_bucket{app\_name="osms", le="0.05", method="GET", path="/ch11/login/list/all", status\_co

$\leftarrow \rightarrow \mathbf{C}  (\texttt{O} \ localhost: 16686/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655950133 \dots \\ C  (\texttt{O} \ localhost: 16686/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 165595373383000 \& limit = 20 \& localhost: 16886/search?end = 165595373383000 \& limit = 20 \& localhost: 16886/search?end = 165595373383000 \& limit = 20 \& localhost: 16886/search?end = 1655953733838000 \& limit = 20 \& localhost: 16886/search?end = 165595373383000 \& limit = 20 \& localhost: 16886/search?end = 165595333000 \& limit = 20 \& localhost: 16886/search?end = 16559533000 \& limit = 1655953000 \& localhost: 16866/search = 1655953000 \& limit = 1655953000 \& limit = 16559530000 \& limit = 165595300000 \& limit = 16559530000000000000000000000000000000000$					
JAEGER UI	Search Compare	System Architecture	Monitor		
Search	JSON File	40ms	Durration		•
Service (3)		<ul> <li>20ms</li> </ul>			•
Operation (1 all	5)	~	10:31:40 am	10:40:00 am	10:48:20 am
Tags (?)		8 Tra	aces		
	_code=200 error=true	Com	npare traces by se	electing result items	
Lookback				-	

Search JSON File	40ms	•
Service (3) Online-sports-tracer	20ms	• Time
Operation (15) all ^ /ch11/login/add	10:31:40 am 10:40:00 am 8 Traces	10.48.20 am 10.56.40 am 11:05:00 am Sort: Most Recent V Deep Dependency Graph
/ch11/login/add http receive /ch11/login/add http send /ch11/login/get/(id)	Compare traces by selecting result ite	ems
/ch11/login/list/all	online-sports-tracer: /ch11/login/list/all 13a48e	of 7ms
Max Duration         Min Duration           e.g. 1.2s, 100ms, 500t         e.g. 1.2s, 100ms, 500t	3 Spans online-sports-tracer (3)	Today   11:05:44 am 3 hours ago

JAEGER UI Search Compare	System Architecture	Monitor		Q	Lookup by Trace	ID	About Jaeger ∨
<ul> <li>← v online-sports-trac</li> </ul>	er: /ch11/login/lis	st/all 13a48e	ef	Find	• ^ \	× × H	Trace Timeline ~
Trace Start June 23 2022, 11:05:44.293	Duration 7ms Services 1	Depth 2 Total	Spans 3				
0µs	1.75ms		3.5ms		5.25ms		7
Service & Operation V > V >	0µs	1.75ms	:	3.5ms	I	5.25ms	7
v online-sports-tracer /ch11/login/list/all							
	/ch11/login/list/all			Service: onl	ine-sports-trace	r   Duration: 7	ms ∣ Start Time: 0µ
	✓ Tags						
	http.flavor	1.1					
	http.host	127.0.0.1:8000					
	http.method	GET					
	http.route	/ch11/login/li	st/all				
	http.scheme	http					
	http.server_name	localhost:8000					

[nio-8761-exec-4] c.n.e.registry.AbstractInstanceRegistry : Registered instance UNKNOWN/DESKTOP-56HNGC9.local:8761 with status UP (replication=true)
 [nio-8761-exec-5] c.n.e.registry.AbstractInstanceRegistry : Registered instance SPORTS\_SERVICE/192.168.1.5:sports\_service:8000 with status UP (replication=false)
 [nio-8761-exec-9] c.n.e.registry.AbstractInstanceRegistry : Registered instance SPORTS\_SERVICE/192.168.1.5:sports\_service:8000 with status UP (replication=true)

$\leftrightarrow$ $\rightarrow$ C $\odot$ localhost:876	51			🖻 🖈 🎕 Ł 👰 🛆 🕏			
Spring Eureka							
System Status							
Environment		test	Current time	2022-06-23T16:52:38 +0800			
Data center		default	Uptime	00:14			
			Lease expiration enabled	true			
			Renews threshold	3			
			Renews (last min)	8			
Instances currently registered with Eureka							
Application	AMIs	Availability Zones	Status				
SPORTS_SERVICE	n/a (1)	(1)	UP (1) - <u>192.168.1.5:spor</u>	ts_service:8000			
UNKNOWN	n/a (1)	(1)	UP(1) - DESKTOP-56HNC	5C9.local:8761			



