Chapter 01: Getting Started with Fast API

```
youngestdev@Abduls-MacBook-Air:~/Documents/FastAPI-Book          ⌥⌘1
→  FastAPI-Book git:(main) ✗ git add hello.txt
→  FastAPI-Book git:(main) ✗ git commit -m "Initial commit"
[main (root-commit) eda7e6c] Initial commit
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 hello.txt
→  FastAPI-Book git:(main) echo "This is a new addition  to the file" > hello.tx
t
→  FastAPI-Book git:(main) ✗ git status
On branch main
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   hello.txt

no changes added to commit (use "git add" and/or "git commit -a")
→  FastAPI-Book git:(main) ✗ git diff hello.txt
→  FastAPI-Book git:(main) ✗ 
```
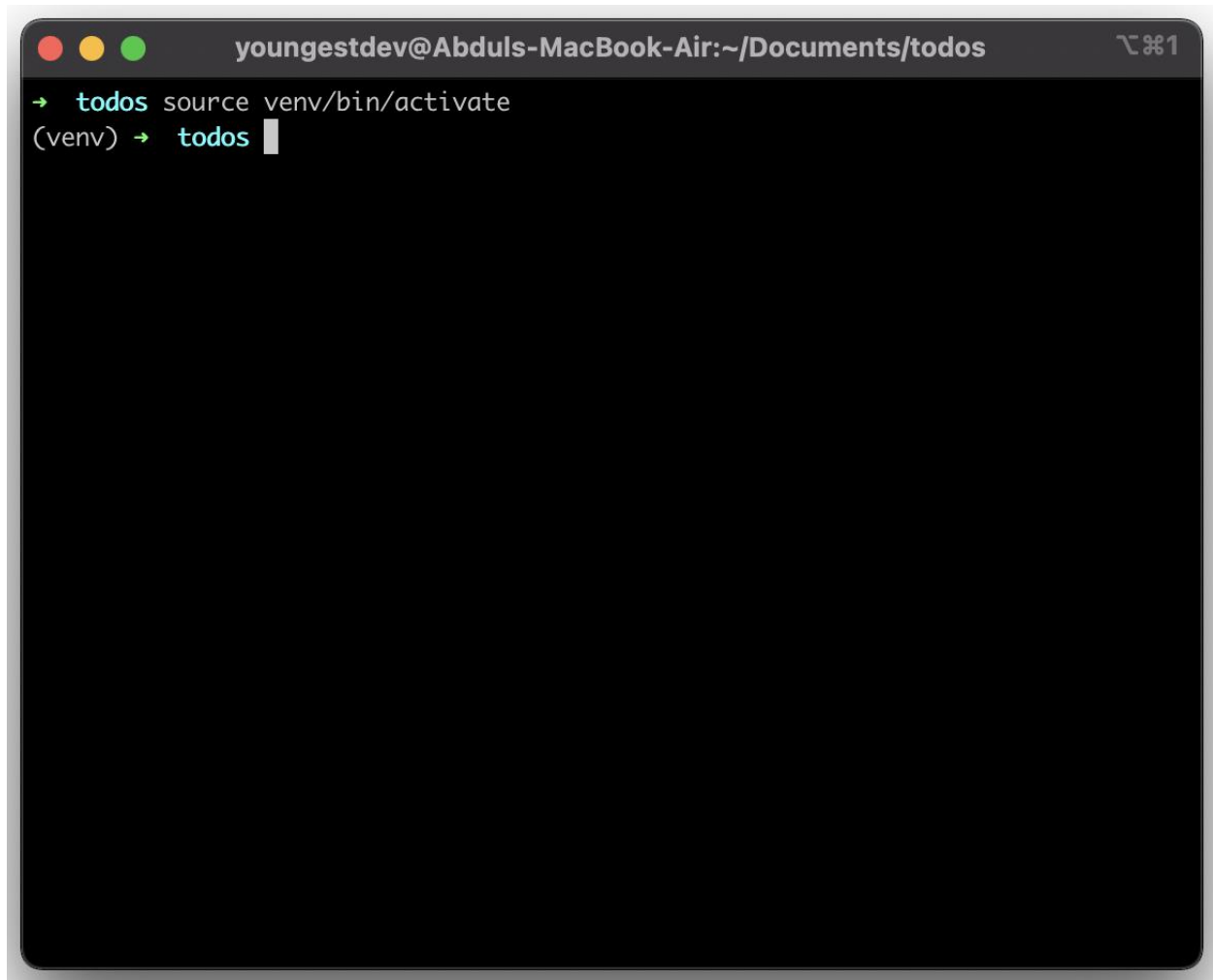
```
diff --git a/hello.txt b/hello.txt
index e69de29..910b351 100644
--- a/hello.txt
+++ b/hello.txt
@@ -0,0 +1 @@
+This is a new addition  to the file
(END)
```
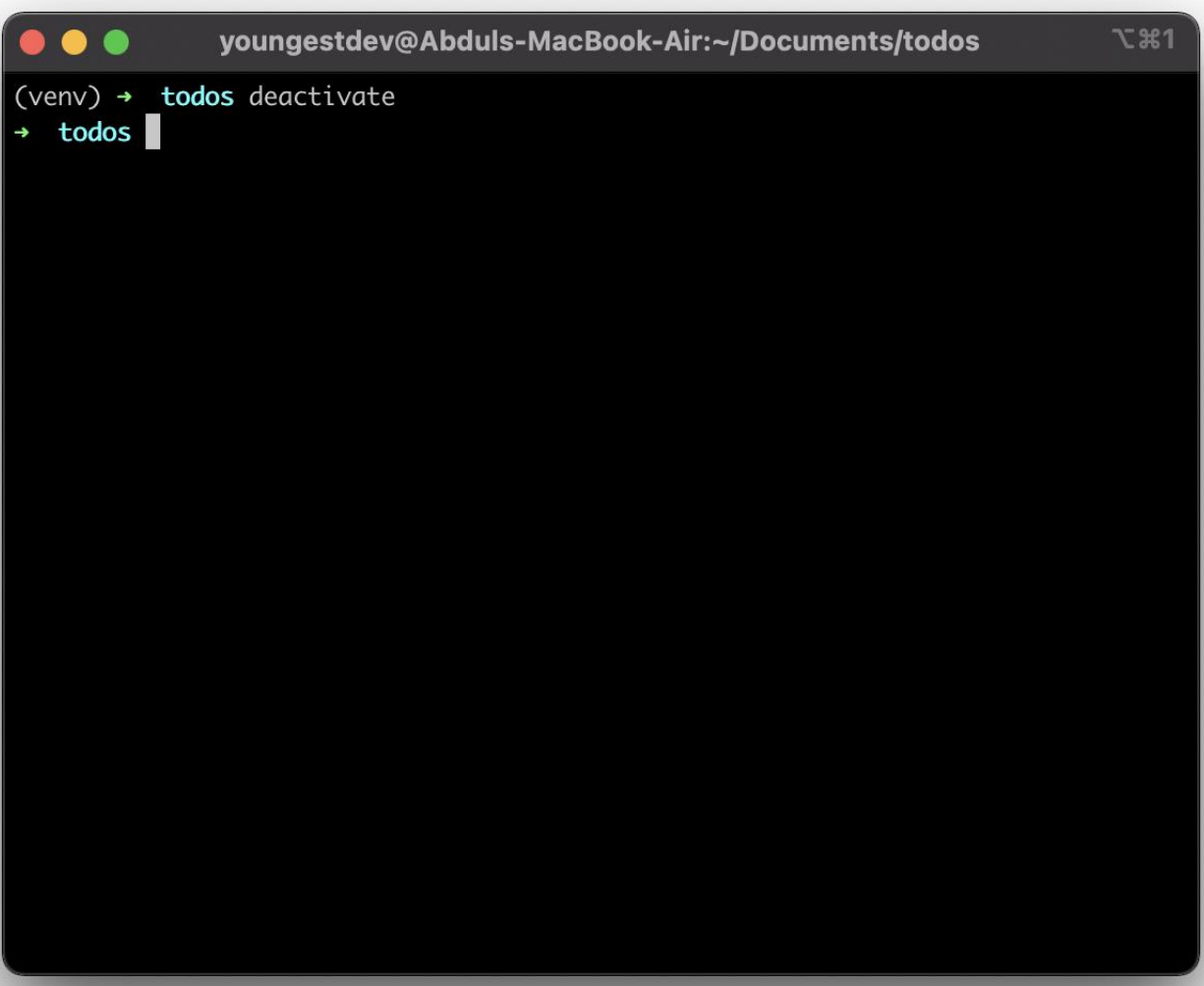
```
→  FastAPI-Book git:(main) python3 -m pip list
Package                  Version
------------------------ ---------
cachetools               4.2.2
certifi                  2021.5.30
chardet                  4.0.0
google-auth              1.32.0
googleapis-common-protos 1.53.0
httplib2                 0.19.1
idna                     2.10
packaging                20.9
pip                      21.1.2
protobuf                 3.17.3
pyasn1                   0.4.8
pyasn1-modules           0.2.8
pyparsing                2.4.7
pytz                     2021.1
requests                 2.25.1
rsa                      4.7.2
setuptools               41.2.0
six                      1.15.0
urllib3                  1.26.5
wheel                    0.33.1
WARNING: You are using pip version 21.1.2; however, version 21.2.4 is availab
le.
```
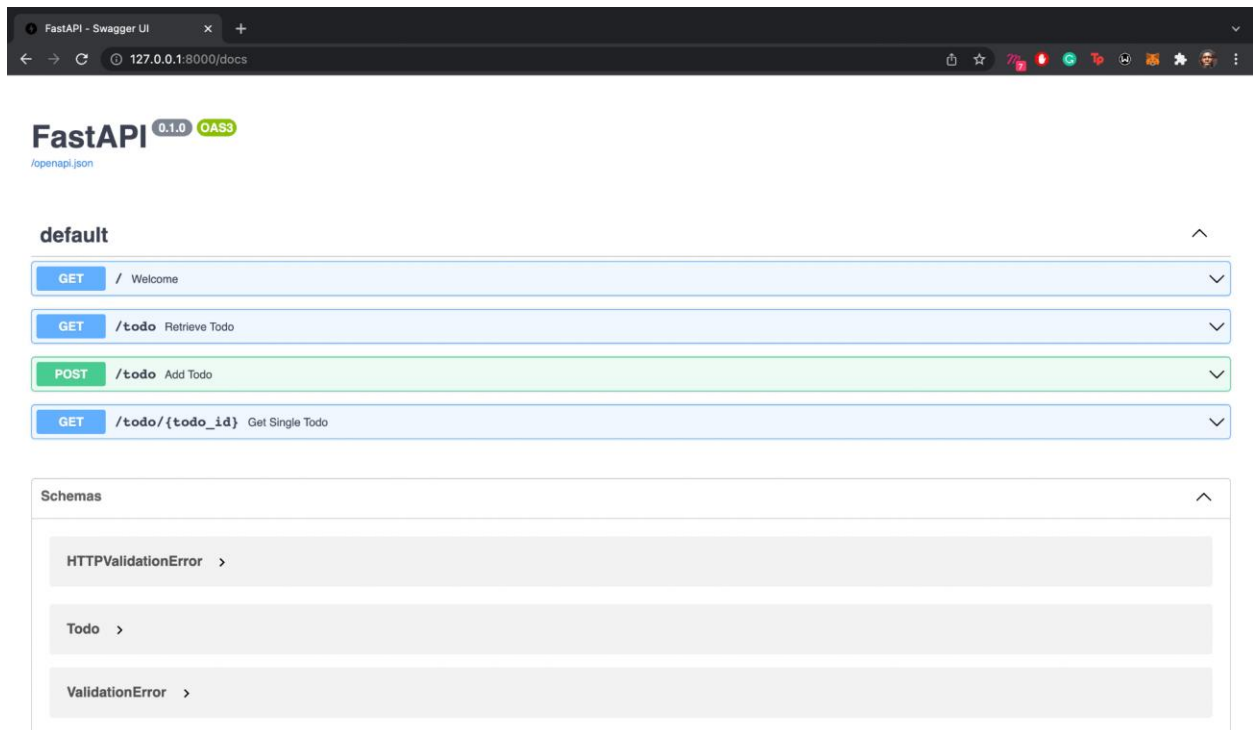
```
→  todos source venv/bin/activate
(venv) →  todos
```

```
(venv) → todos deactivate
→ todos
```

Chapter 02: Routing in FastAPI

Parameters

<div style="text-align:right">Cancel | Reset</div>

No parameters

Request body required

<div style="text-align:right">application/json ⌄</div>

```
{
  "id": "1",
  "item": "We're testing the interactive documentation!"
}
```

| Execute | Clear |

Responses

Curl

```
curl -X 'POST' \
  'http://127.0.0.1:8000/todo' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
  "id": "1",
  "item": "We'\''re testing the interactive documentation!"
}'
```

Request URL

```
http://127.0.0.1:8000/todo
```

Server response

Code	Details
201	**Response body**

```
{
  "message": "Todo added successfully."
}
```

Download

Browser tab: FastAPI - ReDoc
URL: 127.0.0.1:8000/redoc

Sidebar:
Search...
GET Welcome
GET Retrieve Todo
POST Add Todo
GET Get Single Todo
Documentation Powered by ReDoc

FastAPI (0.1.0)

Download OpenAPI specification: Download

Welcome

Responses

> 200 Successful Response

GET /
Response samples
200
Content type
application/json
Copy Expand all Collapse all
null

Retrieve Todo

Responses

> 200 Successful Response

GET /todo
Response samples
200
Content type
application/json
Copy Expand all Collapse all
null

Add Todo

REQUEST BODY SCHEMA: application/json

POST /todo
Request samples

Browser tab: FastAPI - ReDoc
URL: 127.0.0.1:8000/redoc#operation/add_todo_todo_post

Sidebar:
Search...
GET Welcome
GET Retrieve Todo
POST Add Todo
GET Get Single Todo
Documentation Powered by ReDoc

Add Todo

REQUEST BODY SCHEMA: application/json

┌ id
  required   integer (Id)
└ item
  required   string (Item)

Responses

> 200 Successful Response
> 422 Validation Error

POST /todo
Request samples
Payload
Content type
application/json
Copy Expand all Collapse all
{
    "id": 1,
    "item": "Example schmea!"
}

Response samples
200 422
Content type
application/json
Copy Expand all Collapse all
null

Get Single Todo

PATH PARAMETERS

→ todo_id
  required   integer (The ID of the todo to retrieve)

Responses

> 200 Successful Response
> 422 Validation Error

GET /todo/{todo_id}
Response samples
200 422
Content type
application/json
Copy Expand all Collapse all
null

default

| GET | /   Welcome | ∨ |

| GET | /todo   Retrieve Todo | ∨ |

| POST | /todo   Add Todo | ∧ |

Parameters   `Try it out`

No parameters

Request body required   `application/json` ∨

Example Value | Schema

```
{
  "id": 1,
  "item": "Example schmea!"
}
```

Responses

Code	Description	Links
200	Successful Response	No links

Media type

`application/json` ∨

Chapter 03: Response Models and Error Handling

Chapter 04: Templating in FastAPI

Variable	Description
`loop.index`	The current iteration of the loop (1 indexed)
`loop.index0`	The current iteration of the loop (0 indexed)
`loop.revindex`	The number of iterations from the end of the loop (1 indexed)
`loop.revindex0`	The number of iterations from the end of the loop (0 indexed)
`loop.first`	True if first iteration

Variable	Description
`loop.last`	True if last iteration
`loop.length`	The number of items in the sequence
`loop.cycle`	A helper function to cycle between a list of sequences
`loop.depth`	Indicates how deep in a recursive loop the rendering currently is; starts at level 1
`loop.depth0`	Indicates how deep in a recursive loop the rendering currently is; starts at level 0
`loop.previtem`	The item from the previous iteration of the loop; undefined during the first iteration
`loop.nextitem`	The item from the following iteration of the loop; undefined during the last iteration
`loop.changed(*val)`	True if previously called with a different value (or not called at all)

Packt Todo Application

[   ] **Add Todo**

Todos

1. Checkout Packt's course portal.
2. Practice my learnings from this book

127.0.0.1:8000/todo

Packt Todo Application
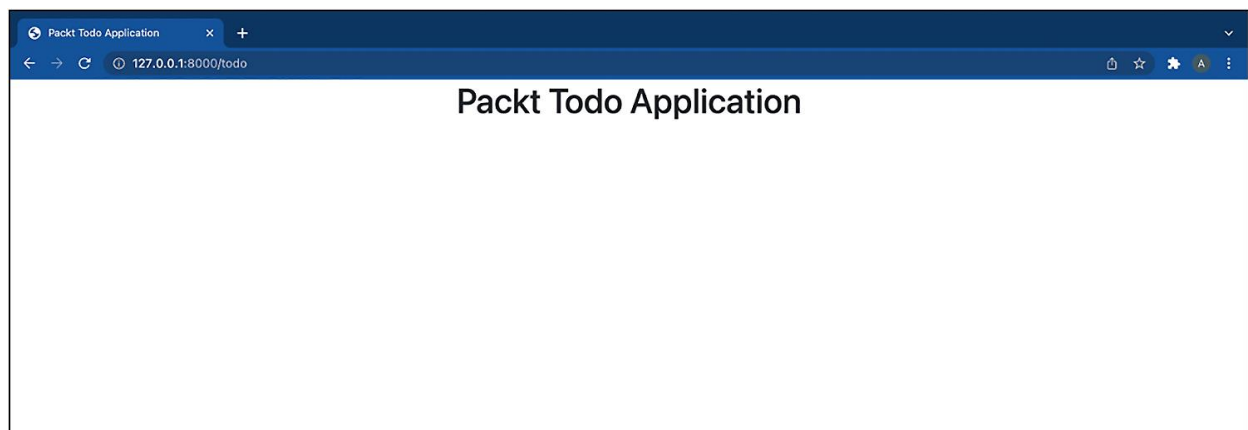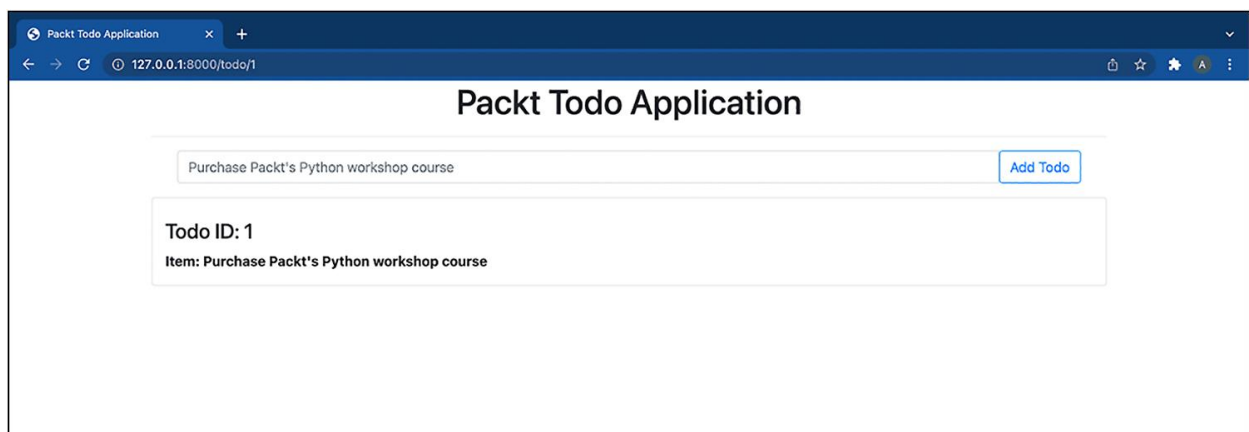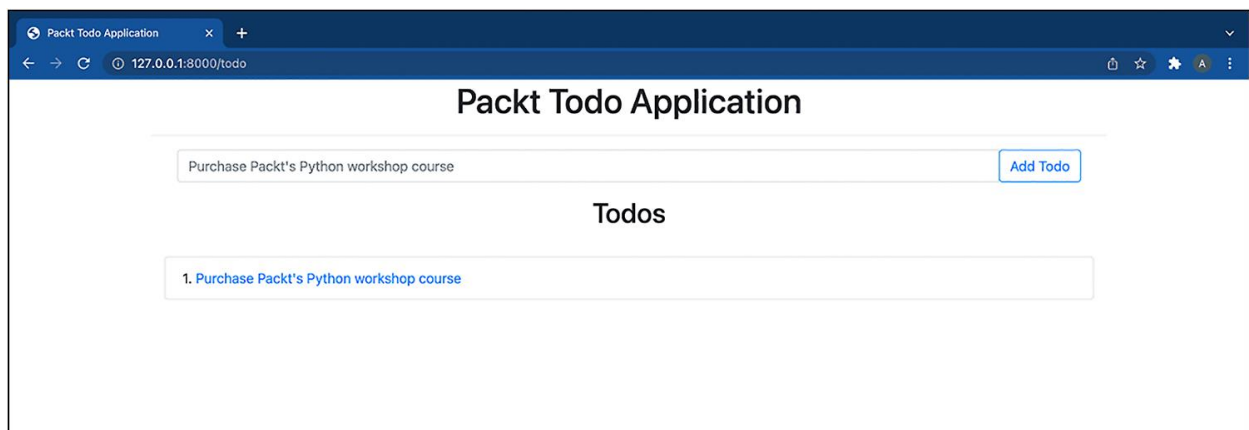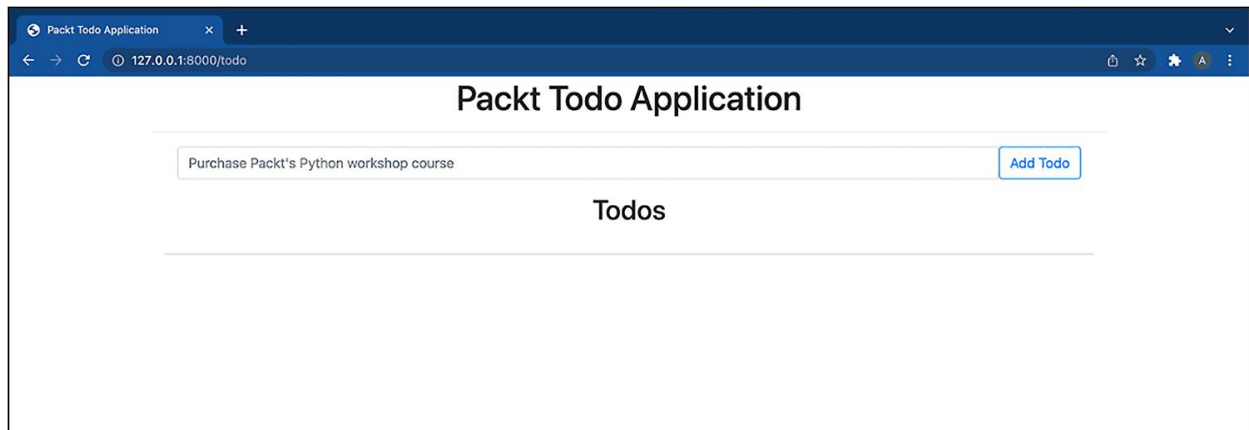
Chapter 05: Structuring FastAPI Applications
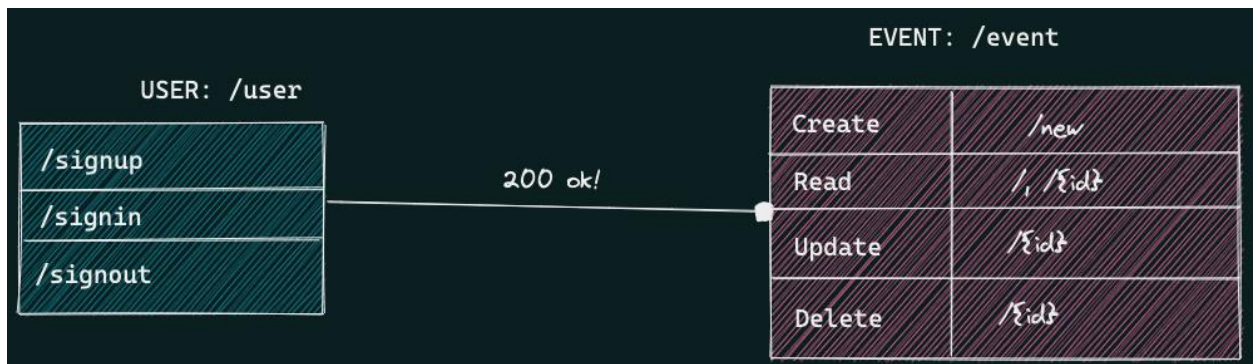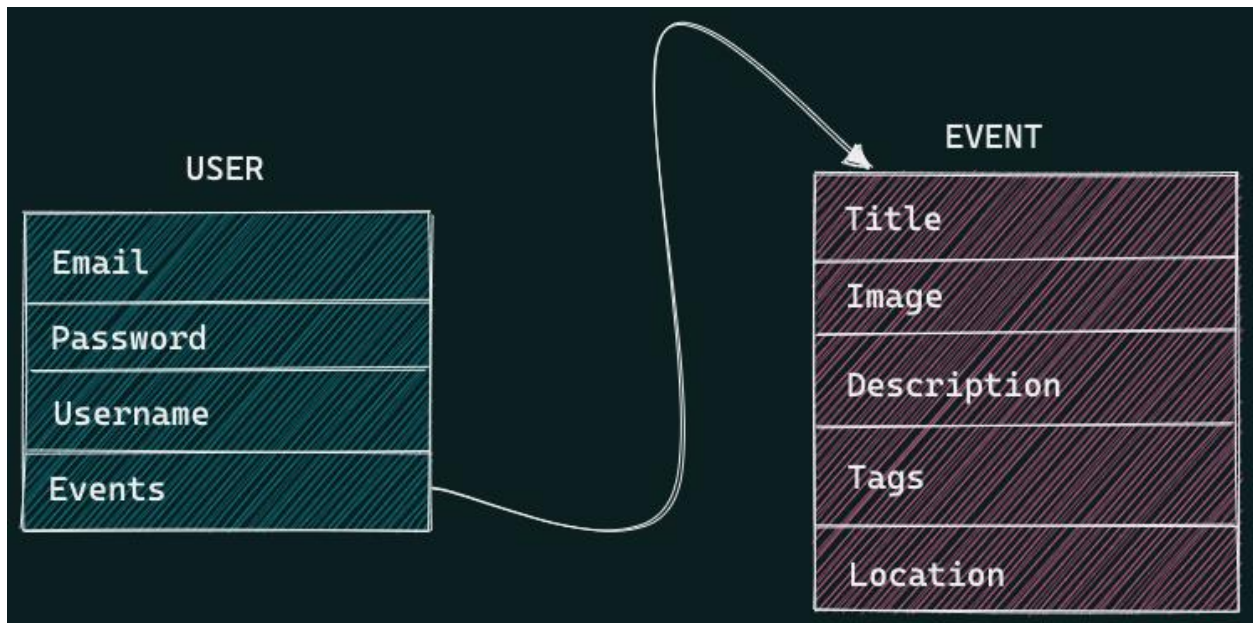
FastAPI 0.1.0 OAS3

/openapi.json

User ⌃

| POST | **/user/signup** Sign User Up | ⌄ |

| POST | **/user/signin** Sign User In | ⌄ |

default ⌄

Schemas ⌃

Body_sign_user_in_user_signin_post >

Body_sign_user_up_user_signup_post >

Chapter 06: Connecting to a Database

```
INFO:      Will watch for changes in these directories: ['/Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-a
nd-Python/ch06/planner']
INFO:      Uvicorn running on http://0.0.0.0:8080 (Press CTRL+C to quit)
INFO:      Started reloader process [5668] using statreload
INFO:      Started server process [5671]
INFO:      Waiting for application startup.
2022-04-06 16:25:36,230 INFO sqlalchemy.engine.Engine BEGIN (implicit)
2022-04-06 16:25:36,230 INFO sqlalchemy.engine.Engine PRAGMA main.table_info("event")
2022-04-06 16:25:36,230 INFO sqlalchemy.engine.Engine [raw sql] ()
2022-04-06 16:25:36,230 INFO sqlalchemy.engine.Engine PRAGMA temp.table_info("event")
2022-04-06 16:25:36,231 INFO sqlalchemy.engine.Engine [raw sql] ()
2022-04-06 16:25:36,231 INFO sqlalchemy.engine.Engine
CREATE TABLE event (
        tags JSON,
        id INTEGER,
        title VARCHAR NOT NULL,
        image VARCHAR NOT NULL,
        description VARCHAR NOT NULL,
        location VARCHAR NOT NULL,
        PRIMARY KEY (id)
)


2022-04-06 16:25:36,231 INFO sqlalchemy.engine.Engine [no key 0.00003s] ()
2022-04-06 16:25:36,232 INFO sqlalchemy.engine.Engine COMMIT
```

Chapter 07: Securing FastAPI Applications

```
{
  "access_token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpc3MiOi ... "
}
```

User	62655d4b52b6386b8b11b5fb
Expires	datetime.datetime(2022, 4, 24, 15, 39, 16, 630218)

← → C ⚠ Not Secure | 0.0.0.0:8080/docs#/

POST `/user/signin` Sign User In ⌄

Parameters   Try it out

No parameters

Request body ^{required}   application/x-www-form-urlencoded ⌄

grant_type
string
pattern: password

username * required
string

password * required
string

scope
string

client_id
string

client_secret
string

Responses

FastAPI `0.1.0` `OAS3`
/openapi.json

Authorize 🔓

User ⌄

Events ⌃

| GET | /event/ Retrieve All Events | ⌄ |

| GET | /event/{id} Retrieve Event | ⌄ |

| PUT | /event/{id} Update Event | ⌄ 🔒 |

| DELETE | /event/{id} Delete Event | ⌄ 🔒 |

| POST | /event/new Create Event | ⌄ 🔒 |

default ⌄

Schemas ⌃

FastAPI `0.1.0` `OAS3`
/openapi.json

Authorize 🔓

User ⌃

| POST | /user/signup Sign User Up | ⌄ |
| POST | /user/signin Sign User In | ⌄ |

Events ⌃

GET	/event/ Retrieve All Events	⌄
GET	/event/{id} Retrieve Event	⌄
PUT	/event/{id} Update Event	⌄ 🔒
DELETE	/event/{id} Delete Event	⌄ 🔒
POST	/event/new Create Event	⌄ 🔒

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: /user/signin
Flow: password
username: reader@packt.com
password: ******
Client credentials location: basic
client_secret: ******

[Logout]   [Close]

Responses

Curl

```
curl -X 'POST' \
  'http://0.0.0.0:8080/event/new' \
  -H 'accept: application/json' \
  -H 'Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1cZVyIjoicmVhZGVyQHBhY2t0LmNvbSIsImV4cGlyZXMiOjE2NTA4Mjg4NTguNTNjyMzd9.emu1T5p0tz9q-oHeqCcUehAN4bc8HBAMn4-AQOU4esc' \
  -H 'Content-Type: application/json' \
  -d '{
  "title": "FastAPI BookLaunch",
  "image": "https://linktomyimage.com/image.png",
  "description": "We will be discussing the contents of the FastAPI book in this event.Ensure to come with your own copy to win gifts!",
  "tags": [
    "python",
    "fastapi",
    "book",
    "launch"
  ],
  "location": "Google Meet"
}'
```

Request URL

```
http://0.0.0.0:8080/event/new
```

Server response

Code	Details
200	**Response body**

```
{
  "message": "Event created successfully"
}
```

Download

Response headers

```
content-length: 40
content-type: application/json
date: Sun,24 Apr 2022 18:36:09 GMT
server: uvicorn
```

Responses

Chapter 08: Testing FastAPI Applications

```
Unit testing with Pytest                                    ⌥⌘2
(venv) → planner git:(main) x pytest tests/test_arthmetic_operations.py
================================ test session starts ================================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner, configfi
le: pytest.ini
plugins: asyncio-0.18.3, anyio-3.5.0
asyncio: mode=auto
collected 4 items

tests/test_arthmetic_operations.py ....                                      [100%]

================================ 4 passed in 0.01s ================================
(venv) → planner git:(main) x ▊
```

```
Unit testing with pytest                                    ⌥⌘1
(venv) → tests git:(main) x
(venv) → tests git:(main) x pytest test_arthmetic_operations.py
================================ test session starts ================================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner/tests, configfile: pytest.i
ni
plugins: asyncio-0.18.3, anyio-3.5.0, cov-3.0.0
asyncio: mode=auto
collected 4 items

test_arthmetic_operations.py F...                                            [100%]

================================ FAILURES ================================
_____ test_add _____

    def test_add():
>       assert add(1, 1) == 11
E       assert 2 == 11
E        +  where 2 = add(1, 1)

test_arthmetic_operations.py:18: AssertionError
================================ short test summary info ================================
FAILED test_arthmetic_operations.py::test_add - assert 2 == 11
================================ 1 failed, 3 passed in 0.06s ================================
(venv) → tests git:(main) x ▊
```

```
●●●                              pytest                              ⌥⌘1
(venv) → planner git:(main) ✗ pytest tests/test_login.py
============================== test session starts ==============================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner, configfile: pytest.ini
plugins: asyncio-0.18.3, anyio-3.5.0
asyncio: mode=auto
collected 1 item

tests/test_login.py .                                                     [100%]

=============================== 1 passed in 0.28s ===============================
(venv) → planner git:(main) ✗
```

```
●●●                              pytest                              ⌥⌘1
(venv) → planner git:(main) ✗ pytest tests/test_login.py
============================== test session starts ==============================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner, configfile: pytest.ini
plugins: asyncio-0.18.3, anyio-3.5.0
asyncio: mode=auto
collected 2 items

tests/test_login.py ..                                                    [100%]

=============================== 2 passed in 0.52s ===============================
(venv) → planner git:(main) ✗
```

```
default_client = <httpx.AsyncClient object at 0x1044a84f0>

    @pytest.mark.asyncio
    async def test_sign_user_in(default_client: httpx.AsyncClient) -> None:
        payload = {
            "username": "wronguser@packt.com",
            "password": "testpassword"
        }

        headers = {
            "accept": "application/json",
            "Content-Type": "application/x-www-form-urlencoded"
        }

        response = await default_client.post("/user/signin", data=payload, headers=headers)

>       assert response.status_code == 200
E       assert 404 == 200
E        +  where 404 = <Response [404 Not Found]>.status_code

tests/test_login.py:41: AssertionError
========================= short test summary info =========================
FAILED tests/test_login.py::test_sign_user_in - assert 404 == 200
========================= 1 failed, 1 passed in 0.34s =========================
(venv) → planner git:(main) x ▮
```

```
(venv) → planner git:(main) x pytest tests/test_routes.py
========================= test session starts =========================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner, configfile: pytest.ini
plugins: asyncio-0.18.3, anyio-3.5.0
asyncio: mode=auto
collected 1 item

tests/test_routes.py .                                                  [100%]

========================= 1 passed in 0.03s =========================
```

```
(venv) → planner git:(main) x pytest tests/test_routes.py
========================= test session starts =========================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner, configfile: pytest.ini
plugins: asyncio-0.18.3, anyio-3.5.0
asyncio: mode=auto
collected 2 items

tests/test_routes.py ..                                                 [100%]

========================= 2 passed in 0.03s =========================
(venv) → planner git:(main) x ▮
```

```
●●●                              pytest                              ⌥⌘2
(venv) → planner git:(main) ✗ pytest tests/test_routes.py
========================= test session starts =========================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner, configfile: pytest.ini
plugins: asyncio-0.18.3, anyio-3.5.0
asyncio: mode=auto
collected 3 items

tests/test_routes.py ...                                       [100%]

========================= 3 passed in 0.04s =========================
(venv) → planner git:(main) ✗ 
```

```
●●●                              pytest                              ⌥⌘2
(venv) → planner git:(main) ✗ pytest tests/test_routes.py
========================= test session starts =========================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner, configfile: pytest.ini
plugins: asyncio-0.18.3, anyio-3.5.0
asyncio: mode=auto
collected 4 items

tests/test_routes.py ....                                      [100%]

========================= 4 passed in 0.04s =========================
(venv) → planner git:(main) ✗ 
```

```
(venv) ➜ planner git:(main) ✗ pytest tests/test_routes.py
========================= test session starts =========================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner, configfile: pytest.ini
plugins: asyncio-0.18.3, anyio-3.5.0
asyncio: mode=auto
collected 5 items

tests/test_routes.py .....                                        [100%]

========================== 5 passed in 0.05s ==========================
(venv) ➜ planner git:(main) ✗
```

```
      test_payload = {
          "title": "Updated FastAPI event"
      }

      headers = {
          "Content-Type": "application/json",
          "Authorization": f"Bearer {access_token}"
      }

      url = f"/event/{str(mock_event.id)}"

      response = await default_client.put(url, json=test_payload, headers=headers)

      assert response.status_code == 200
>     assert response.json()["title"] == "This test should fail"
E     AssertionError: assert 'Updated FastAPI event' == 'This test should fail'
E       - This test should fail
E       + Updated FastAPI event

tests/test_routes.py:103: AssertionError
========================= short test summary info =========================
FAILED tests/test_routes.py::test_update_event - AssertionError: assert 'Updated FastAPI event' == 'This test should fail'
========================= 1 failed, 4 passed in 0.09s =========================
(venv) ➜ planner git:(main) ✗
```

```
(venv) → planner git:(main) x pytest tests/test_routes.py
================================ test session starts ================================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner, configfile: pytest.ini
plugins: asyncio-0.18.3, anyio-3.5.0
asyncio: mode=auto
collected 6 items

tests/test_routes.py ......                                                  [100%]

================================ 6 passed in 0.04s ================================
(venv) → planner git:(main) x
```

```
tests/test_routes.py ......F                                                 [100%]

================================== FAILURES ==================================
_____ test_get_event_again _____

default_client = <httpx.AsyncClient object at 0x107fb4310>
mock_event = Event(id=ObjectId('627efe676d3e951f9d01578e'), revision_id=None, creator='testuser@packt.com', title='FastAPI
 Book Lau...Ensure to come with your own copy to win gifts!', tags=['python', 'fastapi', 'book', 'launch'], location='Goog
le Meet')

    @pytest.mark.asyncio
    async def test_get_event_again(default_client: httpx.AsyncClient, mock_event: Event) -> None:
        url = f"/event/{str(mock_event.id)}"
        response = await default_client.get(url)

>       assert response.status_code == 200
E       assert 404 == 200
E        +  where 404 = <Response [404 Not Found]>.status_code

tests/test_routes.py:130: AssertionError
=========================== short test summary info ===========================
FAILED tests/test_routes.py::test_get_event_again - assert 404 == 200
========================= 1 failed, 6 passed in 0.09s =========================
(venv) → planner git:(main) x
```

```
                                                                    pytest                                          ⌥⌘2

(venv) → planner git:(main) x pytest
================================ test session starts ================================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner, configfile: pytest.ini
plugins: asyncio-0.18.3, anyio-3.5.0
asyncio: mode=auto
collected 14 items

tests/test_arthmetic_operations.py ....                                                      [ 28%]
tests/test_fixture.py .                                                                       [ 35%]
tests/test_login.py ..                                                                        [ 50%]
tests/test_routes.py .......                                                                  [100%]

================================ 14 passed in 0.57s ================================
(venv) → planner git:(main) x ▮
```

```
                                                                    pytest                                          ⌥⌘2

(venv) → planner git:(main) x coverage run -m pytest
================================ test session starts ================================
platform darwin -- Python 3.8.2, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/youngestdev/Work/Building-Web-APIs-with-FastAPI-and-Python/ch08/planner, configfile: pytest.ini
plugins: asyncio-0.18.3, anyio-3.5.0
asyncio: mode=auto
collected 14 items

tests/test_arthmetic_operations.py ....                                                      [ 28%]
tests/test_fixture.py .                                                                       [ 35%]
tests/test_login.py ..                                                                        [ 50%]
tests/test_routes.py .......                                                                  [100%]

================================ 14 passed in 0.57s ================================
(venv) → planner git:(main) x ▮
```

```
                                                            pytest

(venv) → planner git:(main) ✗ coverage report
Name                                  Stmts   Miss  Cover
----------------------------------------------------------
auth/__init__.py                          0      0   100%
auth/authenticate.py                      9      1    89%
auth/hash_password.py                     7      0   100%
auth/jwt_handler.py                      25      5    80%
database/__init__.py                      0      0   100%
database/database.py                     44      2    95%
main.py                                  18      3    83%
models/__init__.py                        0      0   100%
models/events.py                         22      0   100%
models/users.py                          12      0   100%
routes/__init__.py                        0      0   100%
routes/events.py                         41      4    90%
routes/users.py                          27      3    89%
tests/conftest.py                        23      0   100%
tests/test_arthmetic_operations.py       16      0   100%
tests/test_fixture.py                     7      0   100%
tests/test_login.py                      17      0   100%
tests/test_routes.py                     59      0   100%
----------------------------------------------------------
TOTAL                                   327     18    94%
(venv) → planner git:(main) ✗
```

```
                                                            pytest

(venv) → planner git:(main) ✗ coverage html
Wrote HTML report to htmlcov/index.html
(venv) → planner git:(main) ✗
```

Coverage report: 95%

Module	statements	missing	excluded	coverage
auth/__init__.py	0	0	0	100%
auth/authenticate.py	9	1	0	89%
auth/hash_password.py	7	0	0	100%
auth/jwt_handler.py	25	5	0	80%
database/__init__.py	0	0	0	100%
database/connection.py	44	2	0	95%
main.py	21	3	0	86%
models/__init__.py	0	0	0	100%
models/events.py	22	0	0	100%
models/users.py	12	0	0	100%
routes/__init__.py	0	0	0	100%
routes/events.py	41	4	0	90%
routes/users.py	27	3	0	89%
tests/__init__.py	0	0	0	100%
tests/conftest.py	23	0	0	100%
tests/test_arthmetic_operations.py	16	0	0	100%
tests/test_fixture.py	7	0	0	100%
tests/test_login.py	17	0	0	100%
tests/test_routes.py	59	0	0	100%
Total	**330**	**18**	**0**	**95%**

coverage.py v6.3.3, created at 2022-07-12 17:02 +0100

Coverage for **routes/events.py**: 90%

41 statements   37 run   4 missing   0 excluded

```
1   from typing import List
2
3   from auth.authenticate import authenticate
4   from beanie import PydanticObjectId
5   from database.connection import Database
6   from fastapi import APIRouter, Depends, HTTPException, status
7   from models.events import Event, EventUpdate
8
9   event_router = APIRouter(
10      tags=["Events"]
11  )
12
13  event_database = Database(Event)
14
15
16  @event_router.get("/", response_model=List[Event])
17  async def retrieve_all_events() -> List[Event]:
18      events = await event_database.get_all()
19      return events
20
21
22  @event_router.get("/{id}", response_model=Event)
23  async def retrieve_event(id: PydanticObjectId) -> Event:
24      event = await event_database.get(id)
25      if not event:
26          raise HTTPException(
27              status_code=status.HTTP_404_NOT_FOUND,
28              detail="Event with supplied ID does not exist"
29          )
30      return event
31
32
33  @event_router.post("/new")
```

Chapter 09: Deploying FastAPI Applications

```
youngestdev@Abduls-MacBook-Air:~/Work/Building-Web-APIs-with-FastAPI-a...    ⌥⌘2
→  planner git:(main) x docker build -t event-planner-api .
[+] Building 107.0s (10/10) FINISHED
 => [internal] load build definition from Dockerfile                          0.0s
 => => transferring dockerfile: 244B                                          0.0s
 => [internal] load .dockerignore                                             0.0s
 => => transferring context: 34B                                              0.0s
 => [internal] load metadata for docker.io/library/python:3.10                3.0s
 => [1/5] FROM docker.io/library/python:3.10@sha256:bef6fd726fb8825d5cf26933d8477505b   72.8s
 => => resolve docker.io/library/python:3.10@sha256:bef6fd726fb8825d5cf26933d8477505b1  0.0s
 => => sha256:bef6fd726fb8825d5cf26933d8477505b14505be1a98394405c8840c 2.35kB / 2.35kB  0.0s
 => => sha256:204633a9721c179b4ee2870a56bf3d50be77c83a6fd4cda99fd6b0cb 8.54kB / 8.54kB  0.0s
 => => sha256:29e37b4c58dd1db7ead6f3c2cdf757f490b4e29c958d2a70559c31 10.66MB / 10.66MB  5.8s
 => => sha256:de898bf7d6164091d354ef4d27a3e175a9aabd907317019c7e186fc5 2.22kB / 2.22kB  0.0s
 => => sha256:d794814721d57f8aaec06ab3652e90212cc3beccf5ff5c87f6ecf 53.70MB / 53.70MB   22.5s
 => => sha256:bf62ee63325dbbad699d6845f68c2391db3bf158f60373849c2d1cb6 4.94MB / 4.94MB  4.1s
 => => sha256:9cb366fec153b3461ef6bedb0d03ddfd52da9b314025abfccb50a 54.67MB / 54.67MB   38.4s
 => => sha256:59fa95e4c98bdbabeeea8d446eb3369c6717c3f04eb0a3bee45 189.65MB / 189.65MB   66.9s
 => => sha256:cd9a5a779b84da710e04b3ac413a7e6b4e243a9bc5510aaecc67811 6.16MB / 6.16MB   28.4s
 => => extracting sha256:d794814721d57f8aaec06ab3652e90212cc3beccf5ff5c87f6ecf8375784b  1.3s
 => => extracting sha256:bf62ee63325dbbad699d6845f68c2391db3bf158f60373849c2d1cb6bb479  0.1s
 => => extracting sha256:29e37b4c58dd1db7ead6f3c2cdf757f490b4e29c958d2a70559c313e9a03a  0.2s
 => => sha256:1270f467b9d2bf240cca84722b20333ba60872159d16b4cf26cde 19.30MB / 19.30MB   40.4s
 => => extracting sha256:9cb366fec153b3461ef6bedb0d03ddfd52da9b314025abfccb50a3e8e8669  1.5s
 => => sha256:3d670a2dea2b875a4315a86d3cd54803d766e63c9a51a2f18d42e13b7e7 233B / 233B   40.2s
 => => sha256:9f0a233bbdccca5f5faea823f944fcc148a4de3cb02c5e1280e8b7e 2.87MB / 2.87MB   42.0s
```

```
youngestdev@Abduls-MacBook-Air:~                                    ⌥⌘2
→  ~ docker pull mongo
Using default tag: latest
latest: Pulling from library/mongo
d4ba87bb7858: Pull complete
cd0512bdaae7: Pull complete
51571d358e42: Pull complete
aa226bdd9830: Pull complete
8c0e3e44d3ac: Pull complete
e106719865e3: Pull complete
600ad43e7428: Pull complete
0e1222e945b3: Pull complete
8eb8d81c70ea: Pull complete
Digest: sha256:50d8918de7b076feceb9ba1ee264afd5f67fb4baaff07949f3b9de92cdca79c2
Status: Downloaded newer image for mongo:latest
docker.io/library/mongo:latest
→  ~
→  ~ docker pull mongo
Using default tag: latest
latest: Pulling from library/mongo
Digest: sha256:50d8918de7b076feceb9ba1ee264afd5f67fb4baaff07949f3b9de92cdca79c2
Status: Image is up to date for mongo:latest
docker.io/library/mongo:latest
→  ~ █
```

```
youngestdev@Abduls-MacBook-Air:~/Work/Building-Web-APIs-with-FastAPI-and-Py...    ⌥⌘1
→  planner git:(main) ✗ docker-compose up -d
Creating network "planner_default" with the default driver
Creating planner_database_1 ... done
Creating planner_api_1      ... done
→  planner git:(main) ✗
→  planner git:(main) ✗ █
```

```
youngestdev@Abduls-MacBook-Air:~/Work/Building-Web-APIs-with-FastAPI-and-Py...        ⌥⌘1
→  planner git:(main) ✗ docker ps
CONTAINER ID    IMAGE                    COMMAND                CREATED          STATUS
PORTS                                    NAMES
84423100df3e    event-planner-api:latest "python main.py"       2 minutes ago    Up 2 minutes
0.0.0.0:8080->8080/tcp, :::8080->8080/tcp   planner_api_1
01646e18fbb2    mongo                    "docker-entrypoint.s…" 2 minutes ago    Up 2 minutes
0.0.0.0:50879->27017/tcp                    planner_database_1
→  planner git:(main) ✗ █
```

```
youngestdev@Abduls-MacBook-Air:~/Work/Building-Web-APIs-with-FastAPI-and-Py...        ⌥⌘1
→  planner git:(main) ✗ docker-compose down
Stopping planner_api_1      ... done
Stopping planner_database_1 ... done
Removing planner_api_1      ... done
Removing planner_database_1 ... done
Removing network planner_default
→  planner git:(main) ✗
→  planner git:(main) ✗ █
```