

TALLER “CREAR PLANTILLA DE BACKEND CONTAINER CON FASTAPI”

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ELECTIVA DE PROFUNDIZACION III Y IV - GRUPO: MODELO Y  
ARQUITECTURA DE SOFTWARE

VALLEDUPAR – CESAR

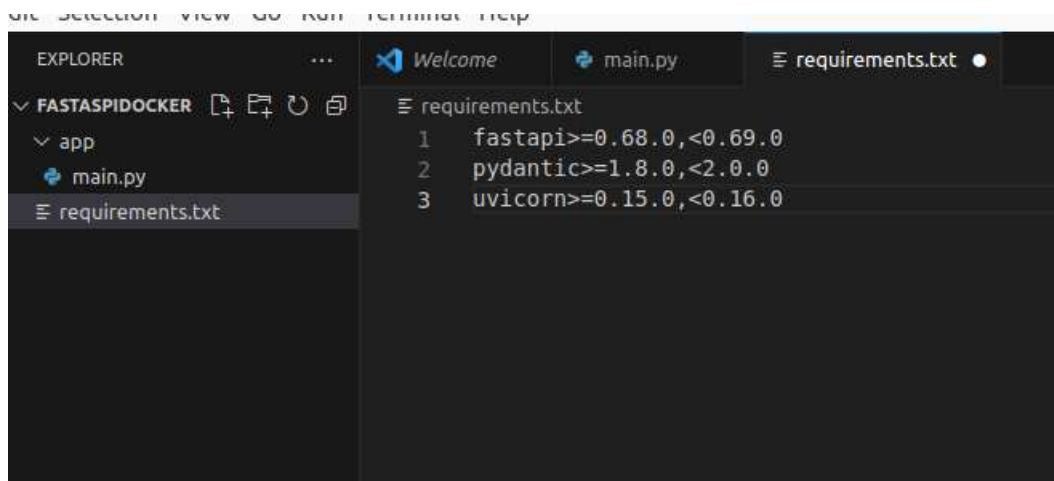
2023

## Paso a paso

### Instalando visual code en Linux

```
lauradayana master ? :32 ~ 100 sudo dpkg -i Downloads/code_1.82.2-1694671812_amd64.deb
Selecting previously unselected package code.
(Reading database ... 187727 files and directories currently installed.)
Preparing to unpack .../code_1.82.2-1694671812_amd64.deb ...
Unpacking code (1.82.2-1694671812) ...
```

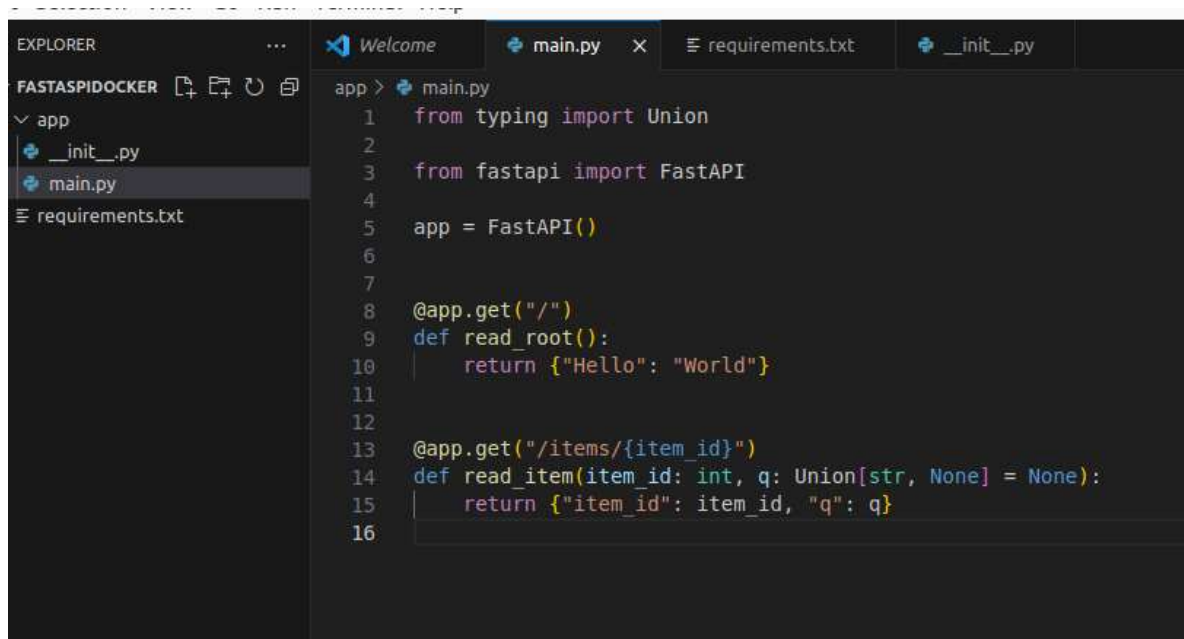
### Creo mi carpeta de proyecto y mis archivo main.py y requerimientos



The screenshot shows the VS Code Explorer sidebar on the left with a project folder named 'app'. Inside 'app', there are two files: 'main.py' and 'requirements.txt'. The 'requirements.txt' file is selected, and its contents are displayed in the main editor area. The requirements are listed as follows:

```
1 fastapi>=0.68.0,<0.69.0
2 pydantic>=1.8.0,<2.0.0
3 uvicorn>=0.15.0,<0.16.0
```

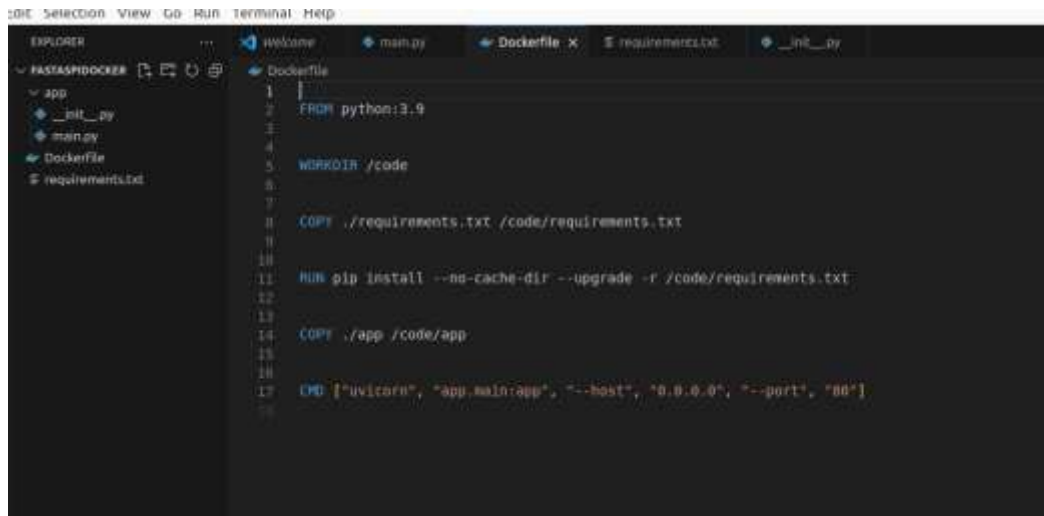
### main.py



The screenshot shows the VS Code main.py file content. The file is located in the 'app' folder. The code defines a FastAPI application with two endpoints: a root endpoint that returns a JSON response with 'Hello' and 'World', and an item endpoint that returns a JSON response with 'item\_id' and 'q'.

```
1 from typing import Union
2
3 from fastapi import FastAPI
4
5 app = FastAPI()
6
7
8 @app.get("/")
9 def read_root():
10     return {"Hello": "World"}
11
12
13 @app.get("/items/{item_id}")
14 def read_item(item_id: int, q: Union[str, None] = None):
15     return {"item_id": item_id, "q": q}
16
```

## Archivo Dockerfile

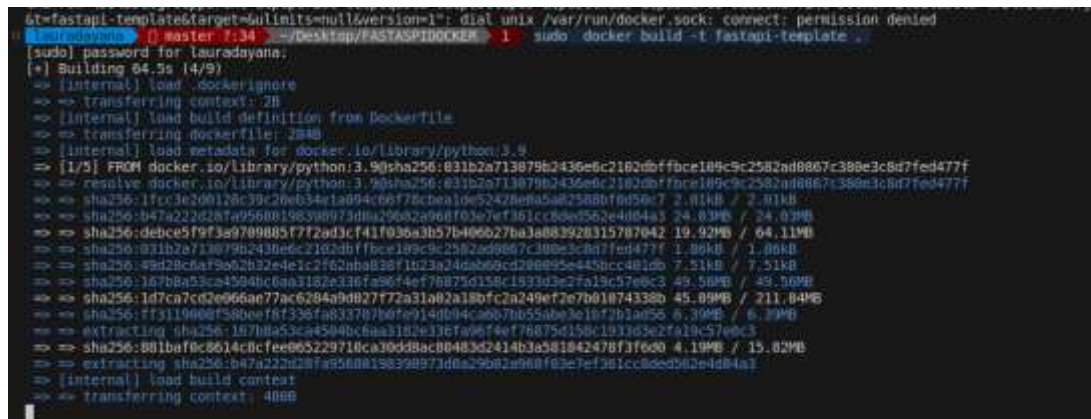


```
FILE SELECTION VIEW GO RUN TERMINAL HELP
EXPLORER
FASTASPIDOCKER
  app
    __init__.py
    main.py
    Dockerfile
    requirements.txt
  Dockerfile
  requirements.txt

Dockerfile
1 |
2 | FROM python:3.9
3 |
4 |
5 | WORKDIR /code
6 |
7 |
8 | COPY ./requirements.txt /code/requirements.txt
9 |
10 |
11 | RUN pip install --no-cache-dir --upgrade -r /code/requirements.txt
12 |
13 |
14 | COPY ./app /code/app
15 |
16 |
17 | CMD ["uvicorn", "app.main:app", "--host", "0.0.0.0", "--port", "80"]
18 |
```

Construya la imagen de Docker

`sudo docker build -t fastapi-template .`



```
lauradayana@master ~$ sudo docker build -t fastapi-template .
[sudo] password for lauradayana:
[+] Building 64.5s (4/9)
=> [internal] load .dockerignore
=> transferring context: 2B
=> [internal] load build definition from Dockerfile
=> transferring dockerfile: 284B
=> [internal] load metadata for docker.io/library/python:3.9
=> [1/5] FROM docker.io/library/python:3.9@sha256:831b2a713879b2436e6c2182dbffbc189c9c2582ad8867c388e3c8d7fed477f
=> resolve docker.io/library/python:3.9@sha256:831b2a713879b2436e6c2182dbffbc189c9c2582ad8867c388e3c8d7fed477f
=> sha256:1f3e2d0128c39c28e34e1a894c6f76cbe1de52428e8a5a82588b18d5e7 2.81kB / 2.81kB
=> sha256:b47a222d287a95688198398973d8a29682a968f03e7ef361cc8de4562e4d84a3 24.83MB / 24.83MB
=> sha256:debc5f9f3a9789885f7f2ad3cf41f036a3b57b406b27bala883928315787042 19.92MB / 64.11MB
=> sha256:831b2a713879b2436e6c2182dbffbc189c9c2582ad8867c388e3c8d7fed477f 1.86kB / 1.86kB
=> sha256:49d28c8af9a62b32e4c1c2f62nha838f1b23a24dab89cd288895e445bcc481d0 7.51kB / 7.51kB
=> sha256:167b8a53ca4594bc6aa3182e138fa96f4ef76875d158c1933d3c2fa19c57eac3 49.56MB / 49.56MB
=> sha256:1d7ca7cd2e966ae77ac6284a9d827f72a31a02a18bfc2a249ef7e7b01074338b 45.89MB / 211.84MB
=> sha256:7f311988f380ee78f336fa833797b07e914db94ca6b7b55aba3e18f2b1ac56 6.39MB / 6.39MB
=> extracting sha256:1d7b8a53ca4594bc6aa3182e138fa96f4ef76875d158c1933d3c2fa19c57eac3
=> sha256:881bf0c8614c8cfce865229718ca30dd8ac80483d2414b1a581842478f3f6d0 4.19MB / 15.82MB
=> extracting sha256:b47a222d287a95688198398973d8a29682a968f03e7ef361cc8de4562e4d84a3
=> [internal] load build context
=> transferring context: 486B
```



```
lauradayana@master ~$ sudo docker images
[sudo] password for lauradayana:
REPOSITORY          TAG         IMAGE ID      CREATED       SIZE
fastapi-template    latest     8f6faf142f07  3 minutes ago 1.02GB
lauradayana@master ~$
```

## Inicie el contenedor Docker

```
laurabayana@master:~/Desktop/FASTAPI/DOCKER$ sudo docker run -d --name my-fastapi-template -p 80:80 fastapi-template
8d39594457e61f7673e7a1c28ea4eh22db6b8b181dbd7356725cfd47a5266457
```

```
laurabayana@master:~/Desktop/FASTAPI/DOCKER$ sudo docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                    NAMES
8d39594457e6   fastapi-template   uvicorn app:main:app     17 minutes ago   Up 17 minutes   0.0.0.0:80->80/tcp, :::80->80/tcp   my-fastapi-template
```

