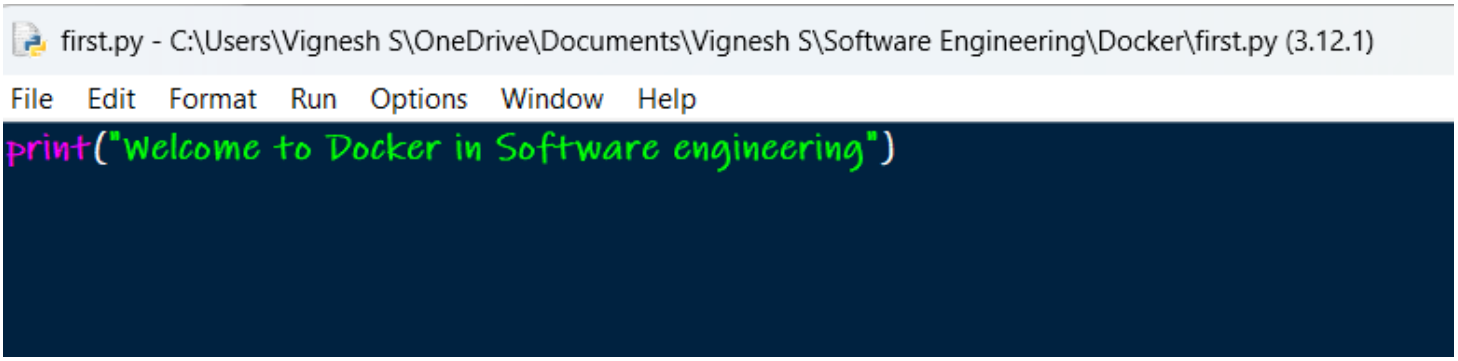
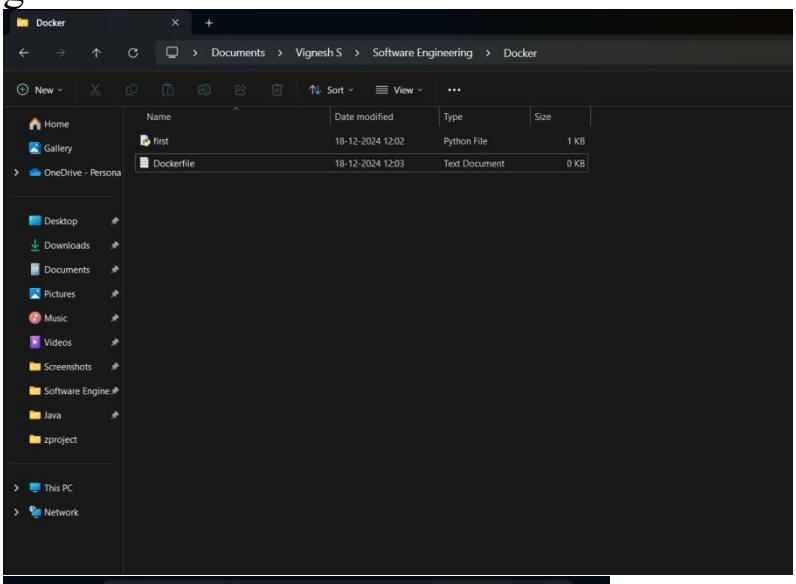
CSA1086 - Software Engineering

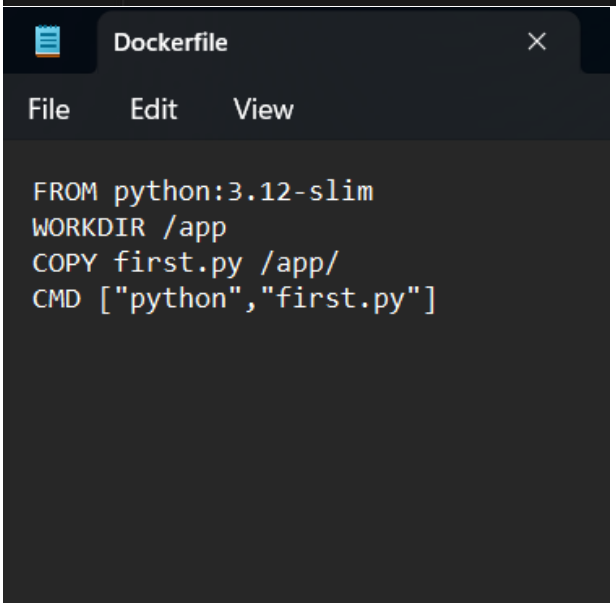
Creating Image and Container in docker

STEP 1: Open your docker in the background at all times
STEP 2: Create a folder named Docker and place a python file named “first.py” in the folder with some code



STEP 3: Create a txt file named “Dockerfile.txt” in the Docker folder and enter the given text





STEP 4: Open terminal in the folder and type the below code to convert txt into file

```
PS C:\Users\Vignesh S\OneDrive\Documents\Vignesh S\Software Engineering\Docker> ren "Dockerfile.txt" Dockerfile
```

STEP 5: Type “Docker build -t python312 .” to integrate docker to terminal (312 is python version 3.12. It may change according to your device)

```
PS C:\Users\Vignesh S\OneDrive\Documents\Vignesh S\Software Engineering\Docker> Docker build -t python312 .
[+] Building 57.5s (9/9) FINISHED
 => [internal] load build definition from Dockerfile
 => => transferring dockerfile: 120B
 => [internal] load metadata for docker.io/library/python:3.12-slim
 => [auth] library/python:pull token for registry-1.docker.io
 => [internal] load .dockerignore
 => => transferring context: 2B
 => [1/3] FROM docker.io/library/python:3.12-slim@sha256:2b0079146a74e23bf4ae8f6a28e1b484c6292f6fb904cbb51825b4a19812fcd8
 => => resolve docker.io/library/python:3.12-slim@sha256:2b0079146a74e23bf4ae8f6a28e1b484c6292f6fb904cbb51825b4a19812fcd8
 => => sha256:8bfa778b5b231c44fb4d35b4783fe69f55f2b3f59dad4c8205661c3f752494a6 13.65MB / 13.65MB
 => => sha256:2b0079146a74e23bf4ae8f6a28e1b484c6292f6fb904cbb51825b4a19812fcd8 9.12kB / 9.12kB
 => => sha256:027e90762c20461da8dc5f530b0ca8604b38c382dadacb4471ea47377c7cf951 1.75kB / 1.75kB
 => => sha256:3ebf71e888419589c6cda9e15384dc2bff81338fb591f54af96ca5529df597c2 5.17kB / 5.17kB
 => => sha256:bc0965b23a04fe7f2d9fb20f597008fcf89891de1c705ffc1c80483a1f098e4f 28.23MB / 28.23MB
 => => sha256:9b871d410cbf35a95adbe8c061f6d60e2e129bd2fd9b60485a8dd397ee3fcf61 3.32MB / 3.32MB
 => => sha256:258b25b9265525eaafd659e18f862525eea9e6379dce2ef29defd91ba0b8868c 249B / 249B
 => => extracting sha256:bc0965b23a04fe7f2d9fb20f597008fcf89891de1c705ffc1c80483a1f098e4f
 => => extracting sha256:9b871d410cbf35a95adbe8c061f6d60e2e129bd2fd9b60485a8dd397ee3fcf61
 => => extracting sha256:8bfa778b5b231c44fb4d35b4783fe69f55f2b3f59dad4c8205661c3f752494a6
 => => extracting sha256:258b25b9265525eaafd659e18f862525eea9e6379dce2ef29defd91ba0b8868c
 => [internal] load build context
 => => transferring context: 87B
 => [2/3] WORKDIR /app
 => [3/3] COPY first.py /app/
 => exporting to image
 => => exporting layers
 => => writing image sha256:02a88789c71a029ff053483c30a90862a77788c58cf0432a55228c9fc5117308
 => => naming to docker.io/library/python312
```

STEP 6: Type “Docker run python312” to print the output of your code

```
PS C:\Users\Vignesh S\OneDrive\Documents\Vignesh S\Software Engineering\Docker> Docker run python312
Welcome to Docker in Software engineering
```

STEP 7: Type “Docker login” to login into your account

```
PS C:\Users\Vignesh S\OneDrive\Documents\Vignesh S\Software Engineering\Docker> Docker login
Authenticating with existing credentials...
Login Succeeded
```

STEP 8: Type “Docker tag python312 <username>/python312” to create a container

```
PS C:\Users\Vignesh S\OneDrive\Documents\Vignesh S\Software Engineering\Docker> Docker tag python312 vigneshs26/python312
```

STEP 9: Type “Docker push <username>/python312” to push the python file as image into the container

```
PS C:\Users\Vignesh S\OneDrive\Documents\Vignesh S\Software Engineering\Docker> Docker push vigneshs26/python312
Using default tag: latest
The push refers to repository [docker.io/vigneshs26/python312]
3f1fe6e6766c: Pushed
a7ca6a808ed6: Pushed
f367aaee5ea4: Mounted from library/python
3c8070ec4683: Mounted from library/python
30f438d1cdd0: Mounted from library/python
c0f1022b22a9: Mounted from library/python
latest: digest: sha256:36c5c6cf90b670e3d8c7cf89ea5c4cefa889f7e9839e7074e4a81d8f489266b6 size: 1572
```

STEP 10: Check your docker for the new container