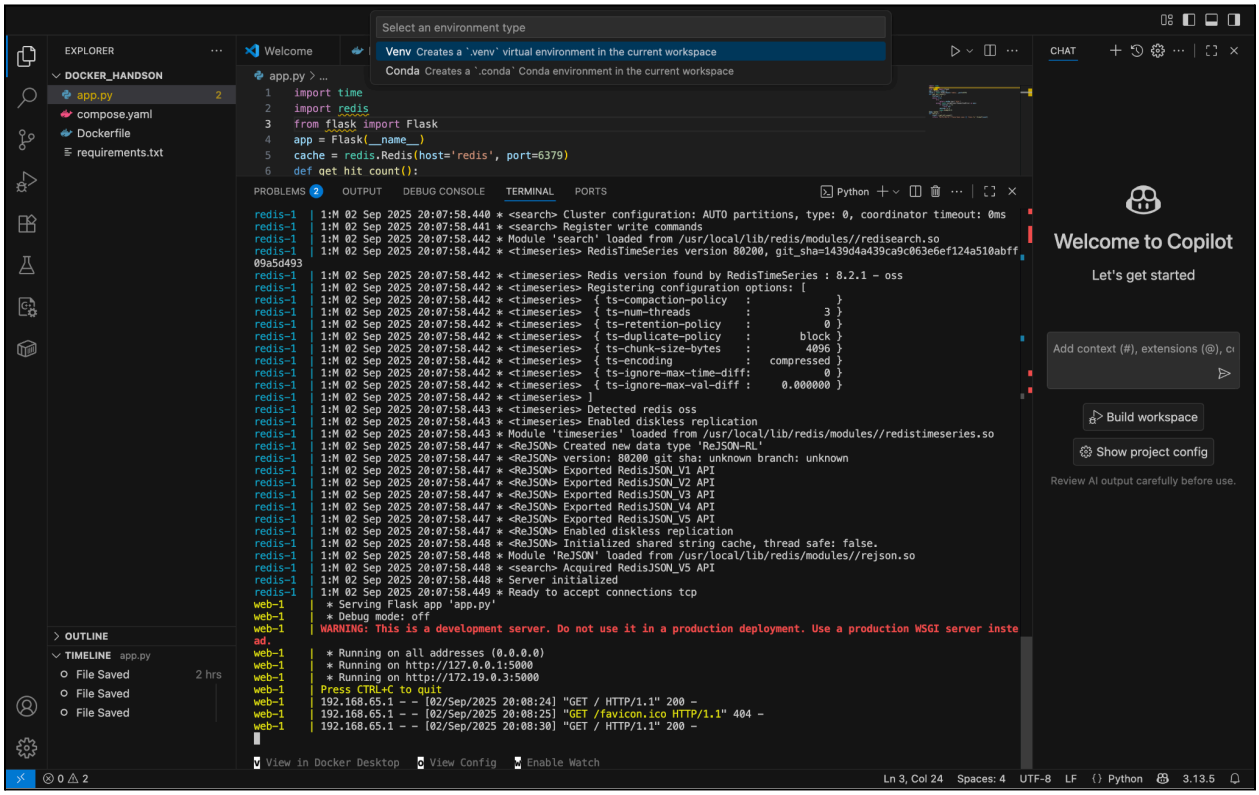
Hands - On L3: Installing Docker & Building a Multi - Container Microservice

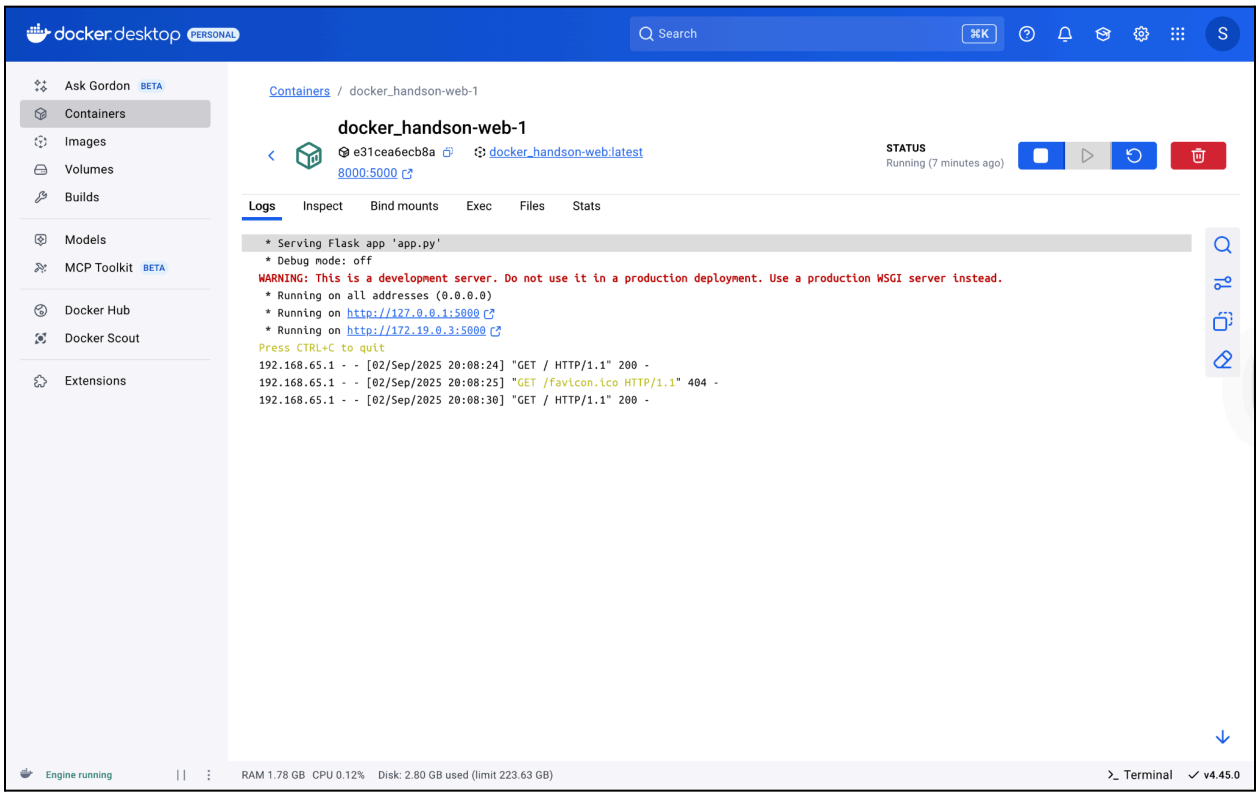
Successful PostgreSQL Setup with Docker

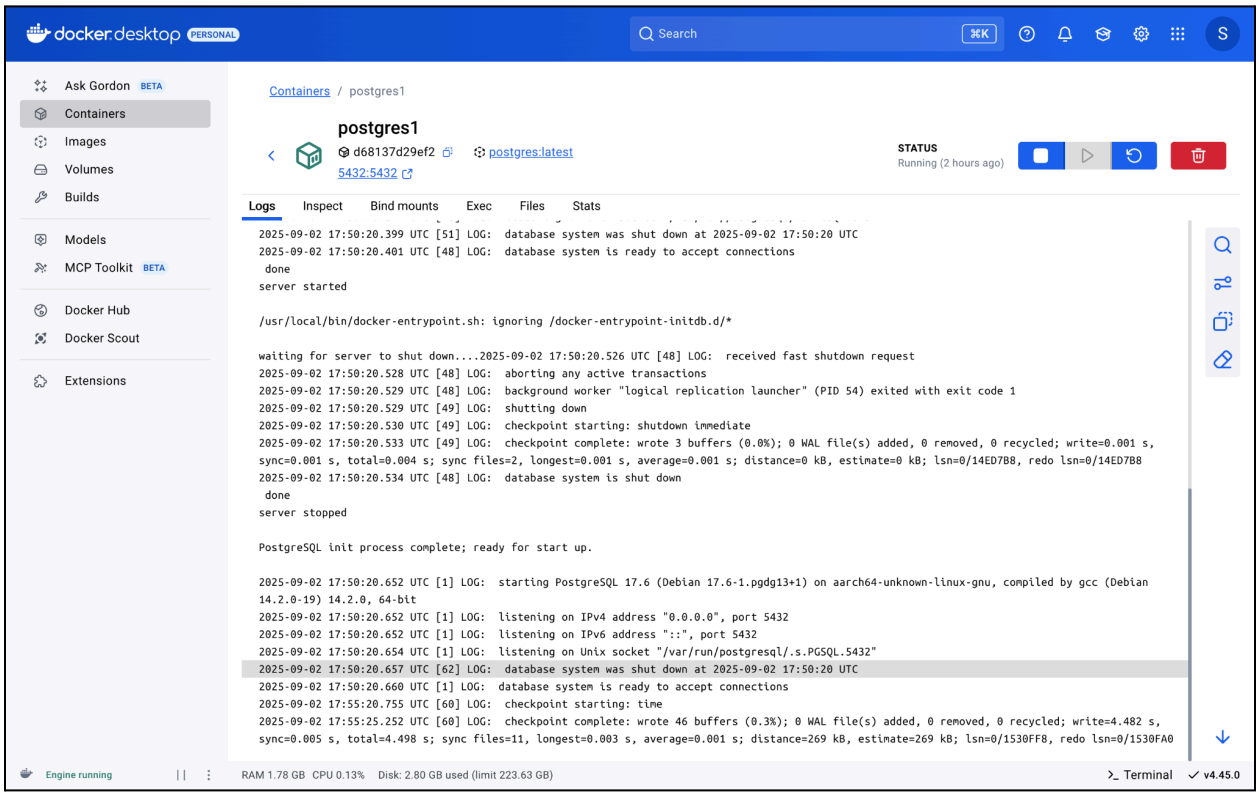
```
sudeeptabal@Sudeeptas-MacBook-Air / % docker pull postgres
Using default tag: latest
latest: Pulling from library/postgres
9b85f77888b0: Download complete
9428761563b8: Download complete
9b85f77888b0: Pull complete
9428761563b8: Pull complete
42acada82f9e: Pull complete
e7eac9296143: Pull complete
2c2dc2c5cbec: Pull complete
d902a23b5be4: Pull complete
Digest: sha256:29e0bb09c8e7e7fc265ea9f4367de9622e55bae6b0b97e7cce740c2d63c2ebc0
Status: Downloaded newer image for postgres:latest
docker.io/library/postgres:latest
sudeeptabal@Sudeeptas-MacBook-Air / % docker run -d -p 5432:5432 --name postgres1 -e POSTGRES_PASSWORD=pass12345 postgres
96cad82e563589a3c0fc117845d59955e0eea1eab5ff5aefe67d9d7727524805
sudeeptabal@Sudeeptas-MacBook-Air / % docker run -d -p 5432:5432 --name postgres1 -e POSTGRES_PASSWORD=pass12345 postgres
docker: Error response from daemon: Conflict. The container name "/postgres1" is already in use by container "96cad82e563589a3c0fc117845d59955e0eea1eab5ff5aefe67d9d7727524805". You have to remove (or rena
me) that container to be able to reuse that name.

Run 'docker run --help' for more information
sudeeptabal@Sudeeptas-MacBook-Air / % docker run -d -p 5432:5432 --name postgres2 -e POSTGRES_PASSWORD=pass12345 postgres
234d84f6edfcee1c4a6eeb32fe11a45853213f57ed0db62a5753d52817a37728
docker: Error response from daemon: failed to set up container networking: driver failed programming external connectivity on endpoint postgres2 (4b6535db37a7579e5e6890c738cc59414be8eb0c6af058aefb8a4b0ebc
c342ee): Bind for 0.0.0.0:5432 failed: port is already allocated

Run 'docker run --help' for more information
sudeeptabal@Sudeeptas-MacBook-Air / % docker ps -a
CONTAINER ID   IMAGE                                                COMMAND                  CREATED              STATUS                      PORTS                                       NAMES
234d84f6edfc   postgres                                             "docker-entrypoint.s…"   About a minute ago   Created                                                                 postgres2
96cad82e5635   postgres                                             "docker-entrypoint.s…"   2 minutes ago        Up 2 minutes                0.0.0.0:5432->5432/tcp, [::]:5432->5432/tcp   postgres1
276ae012e528   cloudcomputing_assignment1_dockercontainers-app      "python main.py"         18 hours ago         Exited (0) 18 hours ago                                                 cloudcomputing_assi
gnment1_dockercontainers-app-1
b92daccfe6d7   cloudcomputing_assignment1_dockercontainers-db       "docker-entrypoint.s…"   18 hours ago         Exited (0) 10 minutes ago                                               cloudcomputing_assi
gnment1_dockercontainers-db-1
sudeeptabal@Sudeeptas-MacBook-Air / % docker stop postgres1

postgres1
sudeeptabal@Sudeeptas-MacBook-Air / % docker rm postgres1
postgres1
sudeeptabal@Sudeeptas-MacBook-Air / % docker run -d -p 5432:5432 --name postgres1 -e POSTGRES_PASSWORD=pass12345 postgres
d68137d29ef2102cc131397a7afae9b747d8264e8ff839e9f1f60aac9f2fffdc
sudeeptabal@Sudeeptas-MacBook-Air / % docker exec -it postgres1 bash
root@d68137d29ef2:/# psql -d postgres -U postgres
psql (17.6 (Debian 17.6-1.pgdg13+1))
Type "help" for help.

postgres=#
```

Successful application run in VSCode



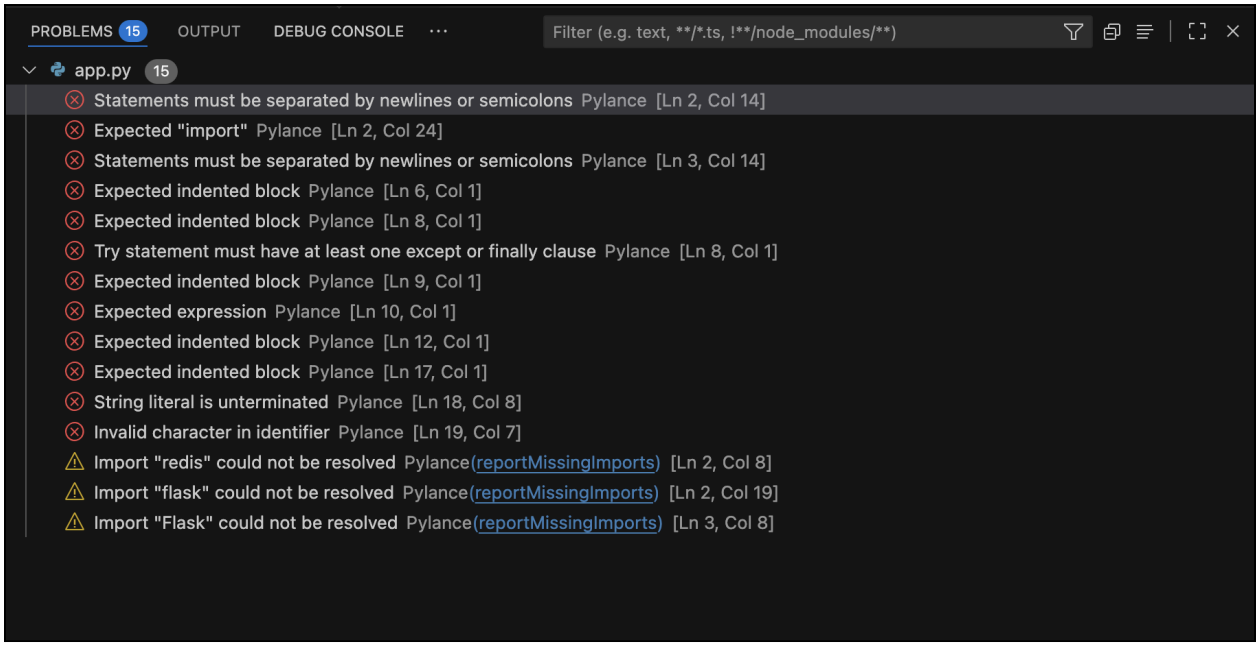
Docker desktop container logs





On opening application in a browser

Error Encountered



Errors fixed: