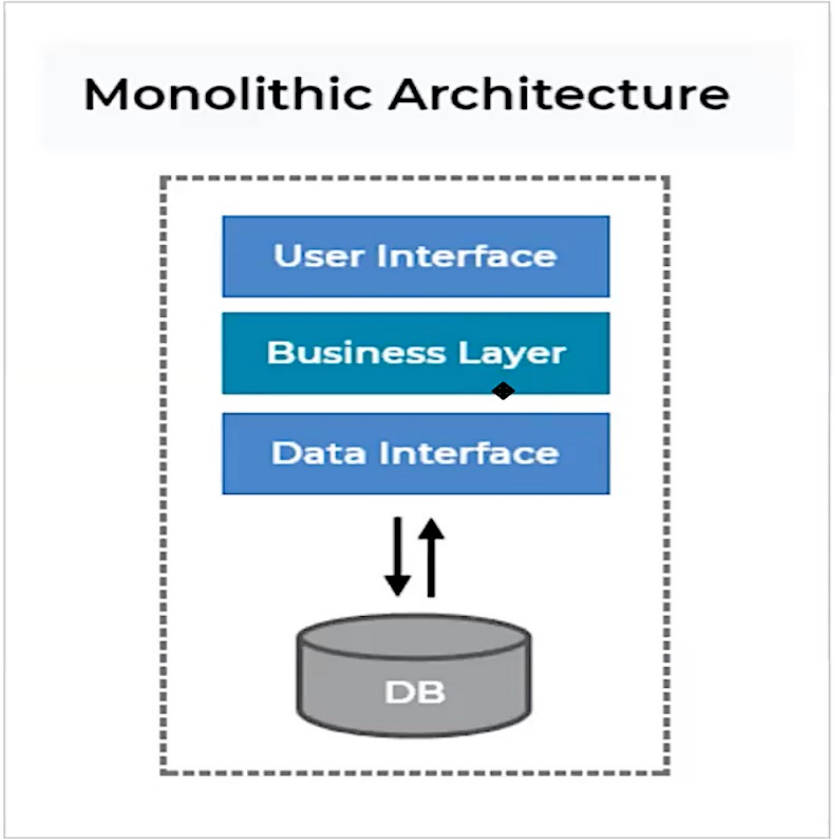
Docker Understanding

Dr. A. Suresh, INSOFE

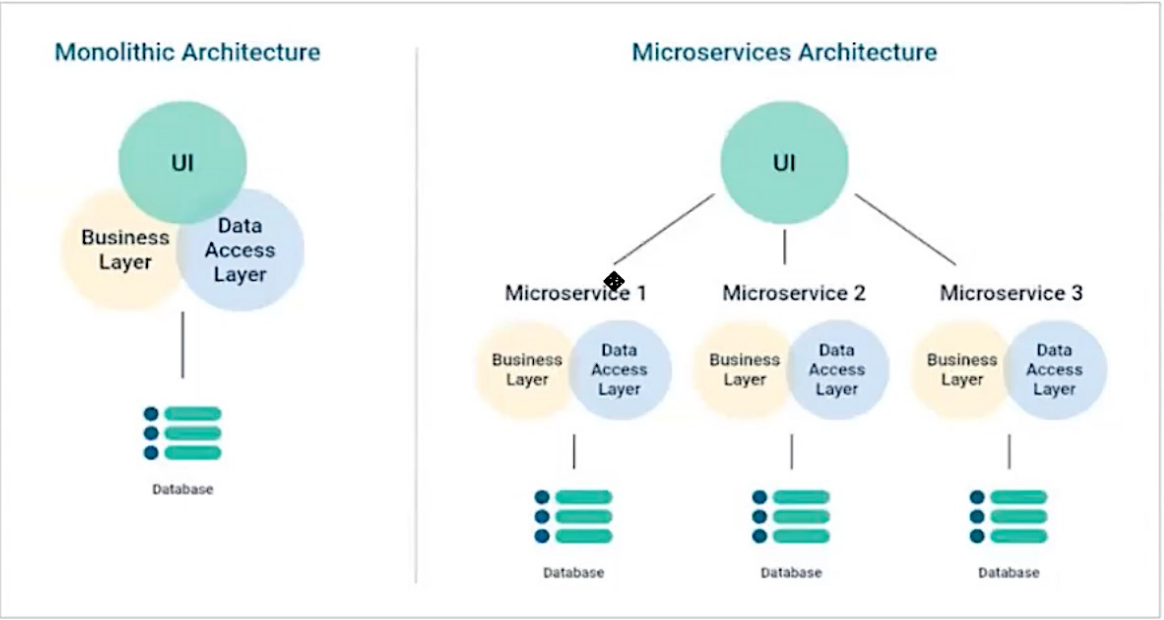
Monolithic

- Self-contained
- Components of the program are interconnected and interdependent.

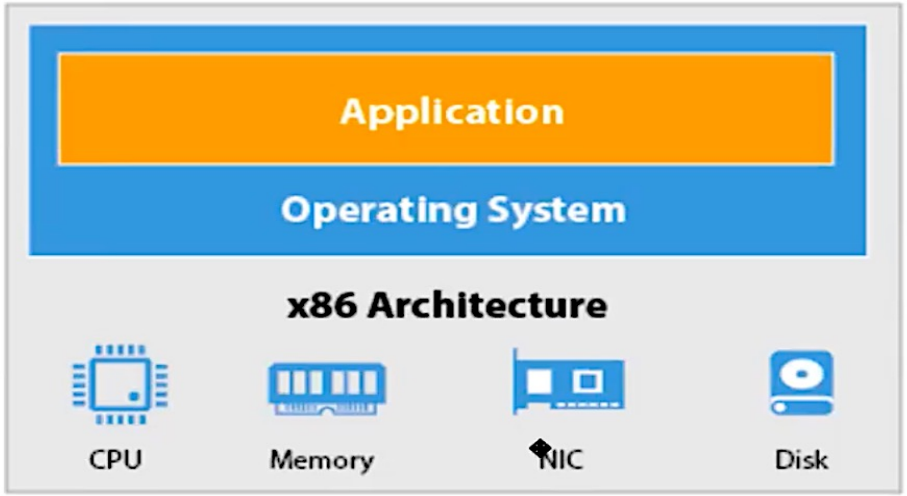


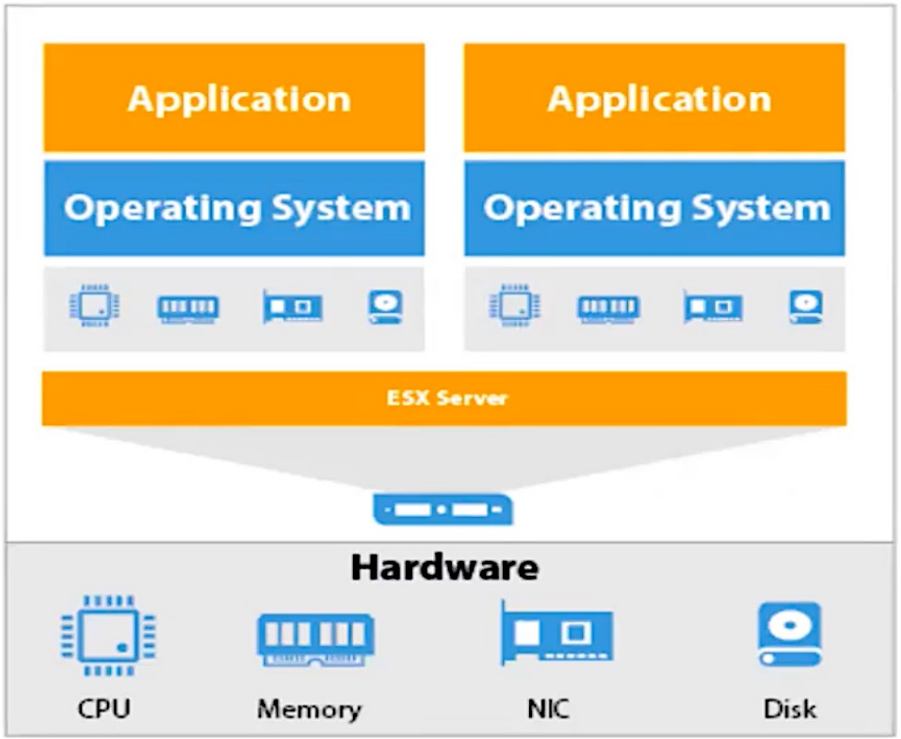
Microservices

- As a collection of small, loosely coupled services that operate together.

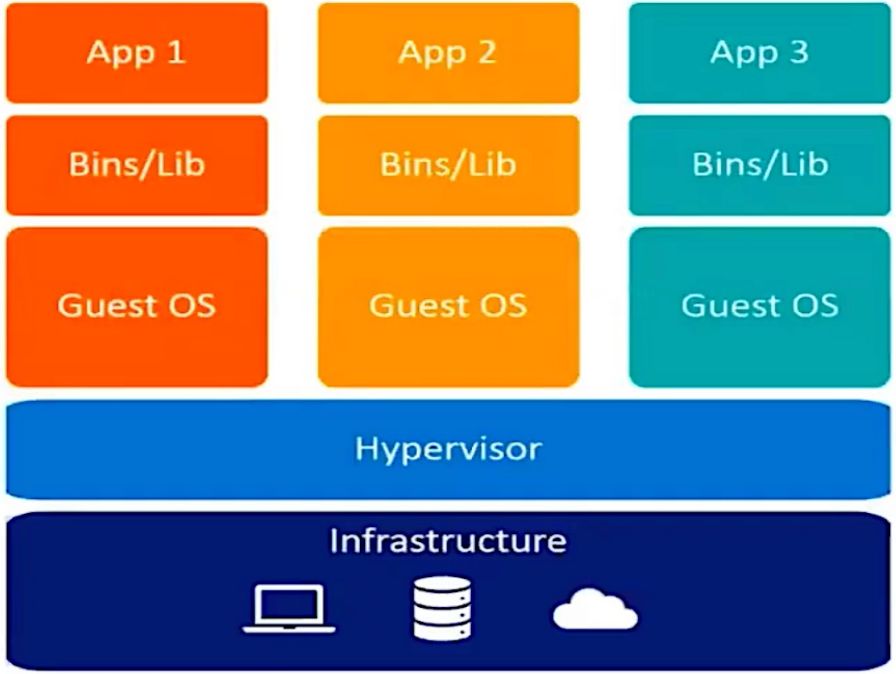


Physical Servers vs Virtual Machine

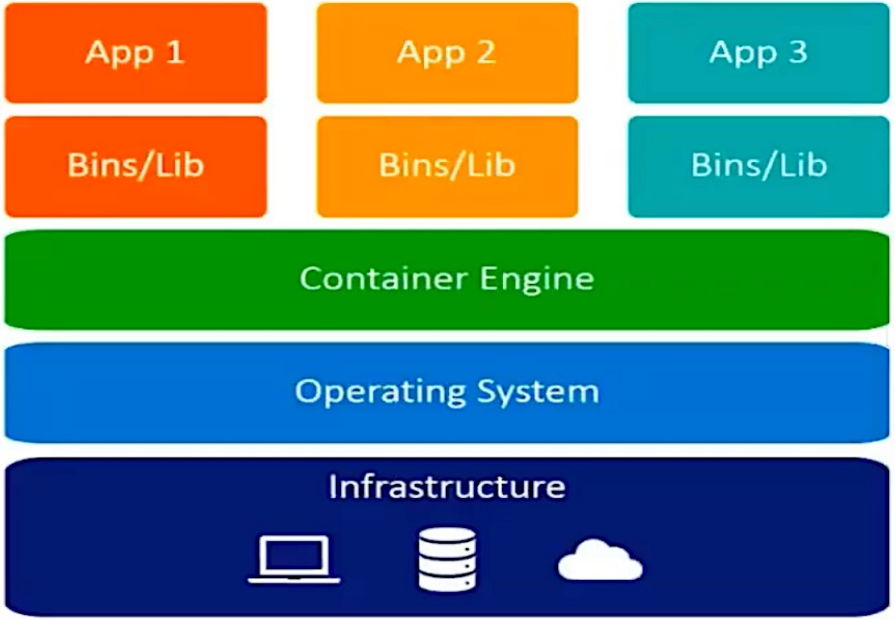




Virtual Machine vs Containers



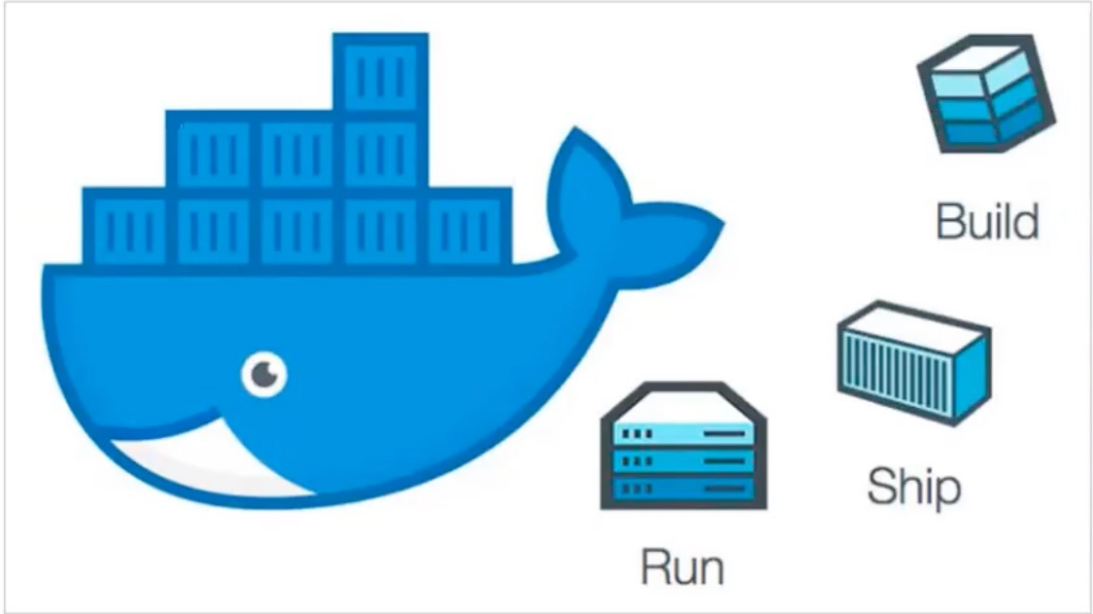
Virtual Machines



Containers

Docker

- Open platform
- Enables you to separate your applications from your infrastructure



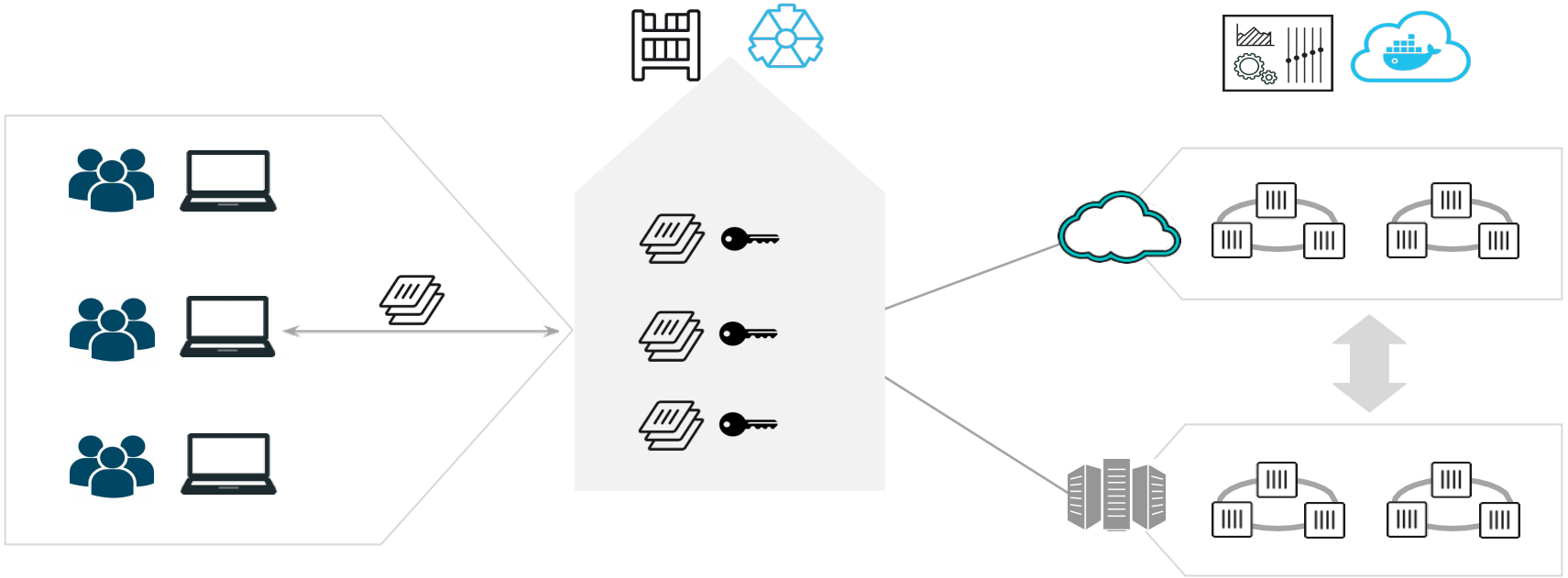
Developers

IT Operations

BUILD
Development Environments

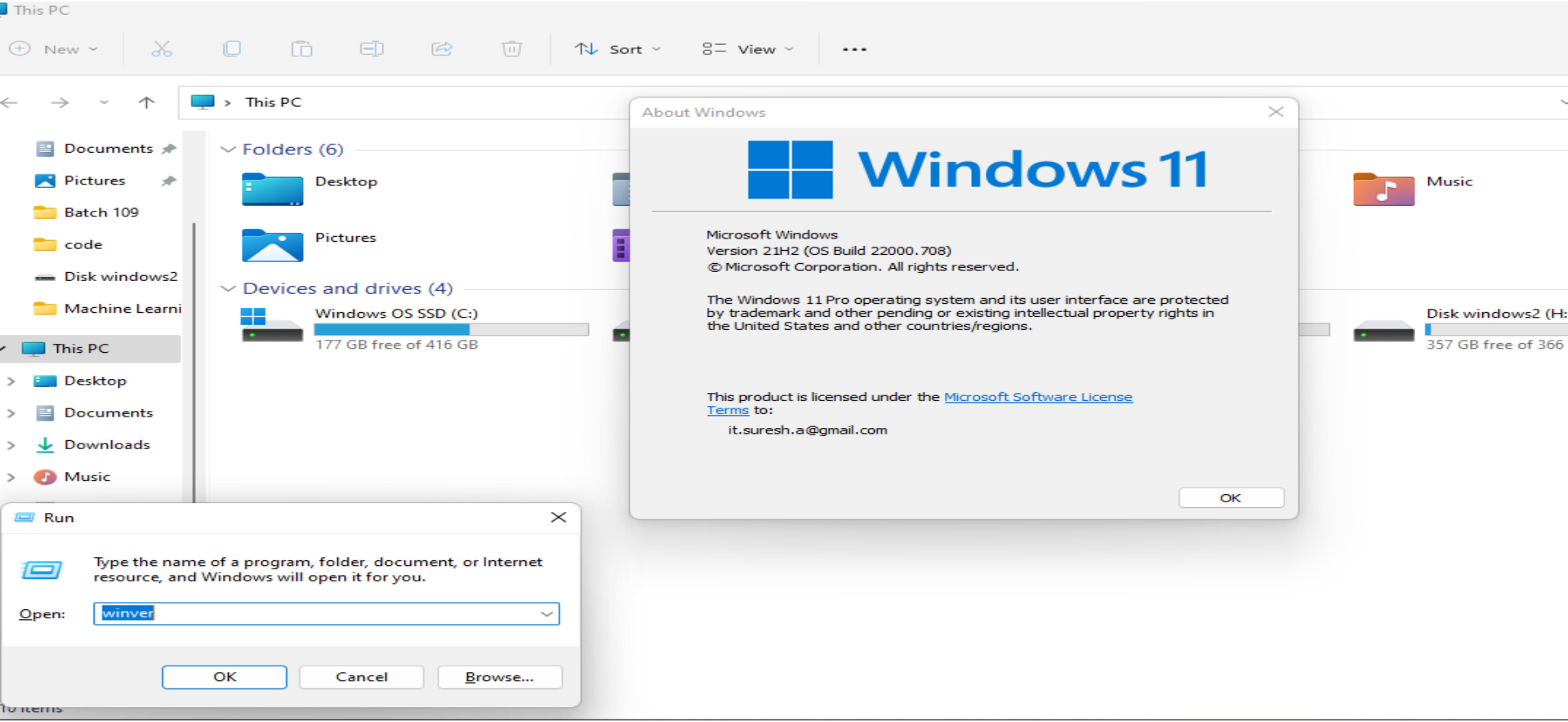
SHIP
Create & Store Images

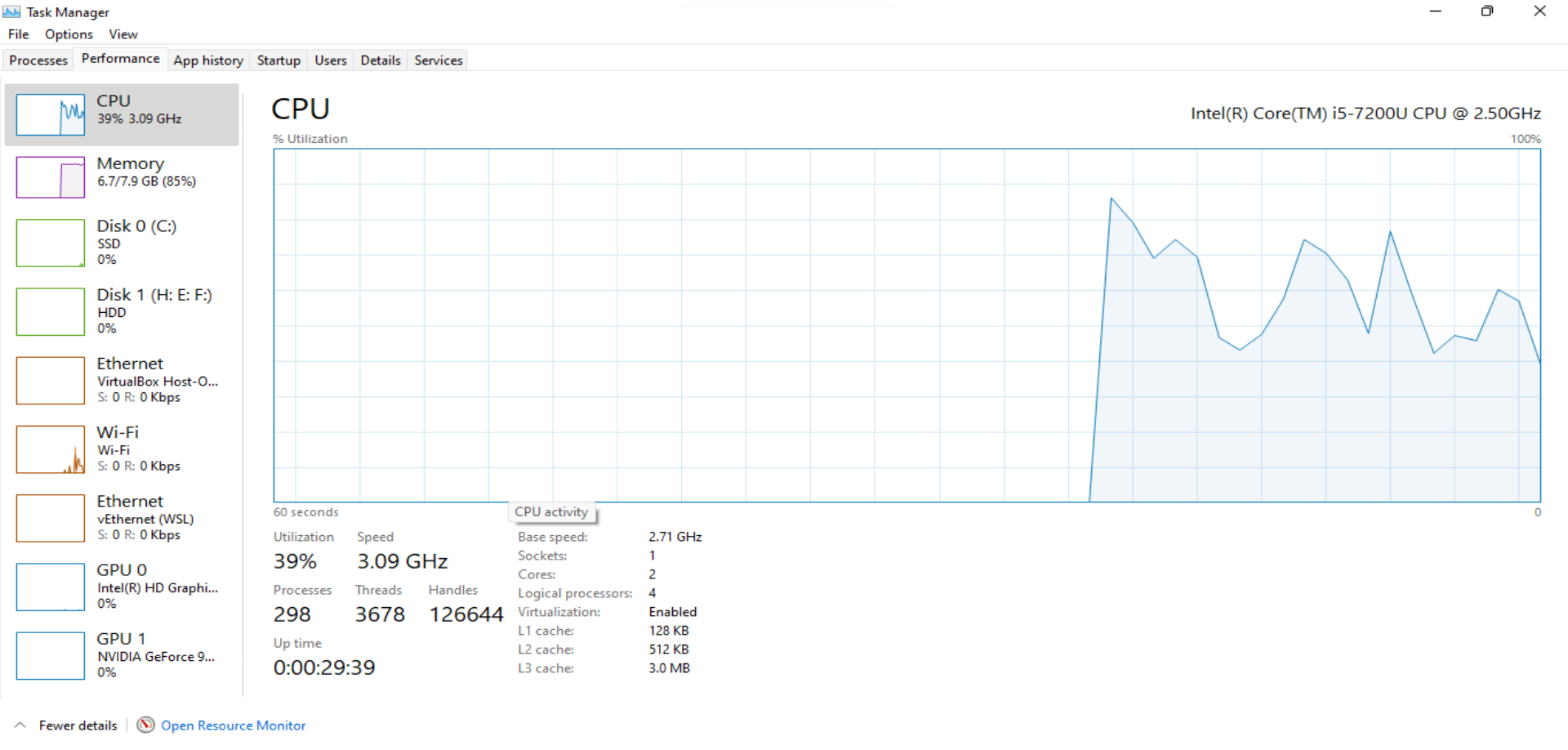
RUN
Deploy, Manage, Scale

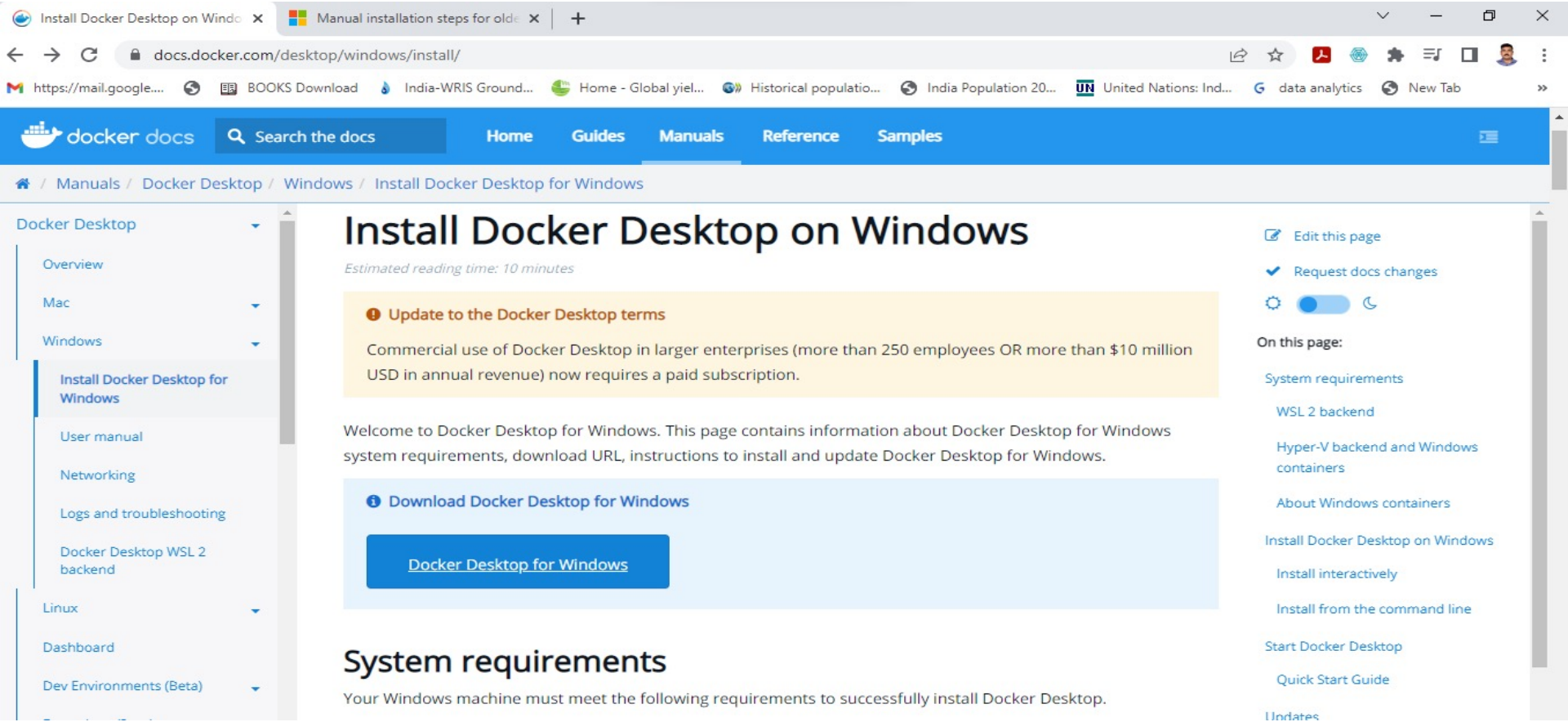


Software Requirements

- Docker
- Docker HUB
- VS code
- Extensions of VS code
  - ✓ Docker
  - ✓ Python
  - ✓ Pdf reader


This PC
New
Sort
View
This PC
Documents
Pictures
Batch 109
code
Disk windows2
Machine Learni
This PC
Desktop
Documents
Downloads
Music
Folders (6)
Desktop
Pictures
Devices and drives (4)
Windows OS SSD (C:)
177 GB free of 416 GB
Music
Disk windows2 (H:
357 GB free of 366
About Windows
Windows 11
Microsoft Windows
Version 21H2 (OS Build 22000.708)
© Microsoft Corporation. All rights reserved.
The Windows 11 Pro operating system and its user interface are protected by trademark and other pending or existing intellectual property rights in the United States and other countries/regions.
This product is licensed under the Microsoft Software License Terms to:
it.suresh.a@gmail.com
OK
Run
Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open:
winver
OK
Cancel
Browse...


Task Manager
File Options View
Processes Performance App history Startup Users Details Services
CPU
39% 3.09 GHz
Memory
6.7/7.9 GB (85%)
Disk 0 (C:)
SSD
0%
Disk 1 (H: E: F:)
HDD
0%
Ethernet
VirtualBox Host-O...
S: 0 R: 0 Kbps
Wi-Fi
Wi-Fi
S: 0 R: 0 Kbps
Ethernet
vEthernet (WSL)
S: 0 R: 0 Kbps
GPU 0
Intel(R) HD Graphi...
0%
GPU 1
NVIDIA GeForce 9...
0%
CPU
Intel(R) Core(TM) i5-7200U CPU @ 2.50GHz
% Utilization
100%
60 seconds
0
CPU activity
Utilization
39%
Speed
3.09 GHz
Processes
298
Threads
3678
Handles
126644
Up time
0:00:29:39
Base speed: 2.71 GHz
Sockets: 1
Cores: 2
Logical processors: 4
Virtualization: Enabled
L1 cache: 128 KB
L2 cache: 512 KB
L3 cache: 3.0 MB
Fewer details
Open Resource Monitor


Install Docker Desktop on Windo
Manual installation steps for olde
docs.docker.com/desktop/windows/install/
https://mail.google....
BOOKS Download
India-WRIS Ground...
Home - Global yiel...
Historical populatio...
India Population 20...
United Nations: Ind...
data analytics
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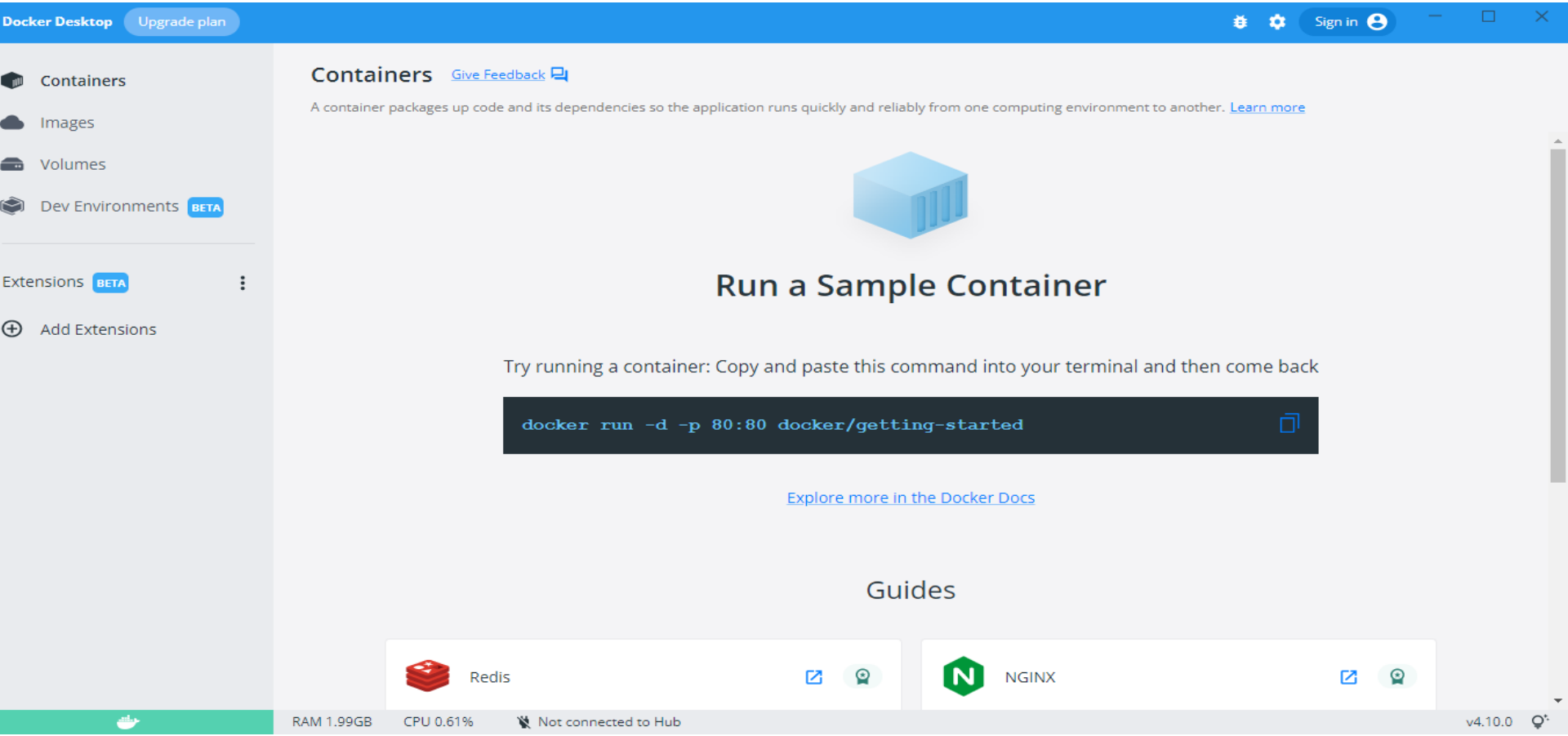
Samples
Manuals / Docker Desktop / Windows / Install Docker Desktop for Windows
Docker Desktop
Overview
Mac
Windows
Install Docker Desktop for Windows
User manual
Networking
Logs and troubleshooting
Docker Desktop WSL 2 backend
Linux
Dashboard
Dev Environments (Beta)
Install Docker Desktop on Windows
Estimated reading time: 10 minutes
Update to the Docker Desktop terms
Commercial use of Docker Desktop in larger enterprises (more than 250 employees OR more than $10 million USD in annual revenue) now requires a paid subscription.
Welcome to Docker Desktop for Windows. This page contains information about Docker Desktop for Windows system requirements, download URL, instructions to install and update Docker Desktop for Windows.
Download Docker Desktop for Windows
Docker Desktop for Windows
System requirements
Your Windows machine must meet the following requirements to successfully install Docker Desktop.
Edit this page
Request docs changes
On this page:
System requirements
WSL 2 backend
Hyper-V backend and Windows containers
About Windows containers
Install Docker Desktop on Windows
Install interactively
Install from the command line
Start Docker Desktop
Quick Start Guide
Updates


Docker Desktop
Upgrade plan
Sign in
Containers
Images
Volumes
Dev Environments
BETA
Extensions
BETA
Add Extensions
Containers
Give Feedback
A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. Learn more
Run a Sample Container
Try running a container: Copy and paste this command into your terminal and then come back
docker run -d -p 80:80 docker/getting-started
Explore more in the Docker Docs
Guides
Redis
NGINX
RAM 1.99GB
CPU 0.61%
Not connected to Hub
v4.10.0

Microsoft Store PREVIEW

Search apps, games, movies and more

DA

Home

Apps

Gaming

Movies & TV

Help

20.04 LTS

Ubuntu 20.04

Canonical Group Limited

Open

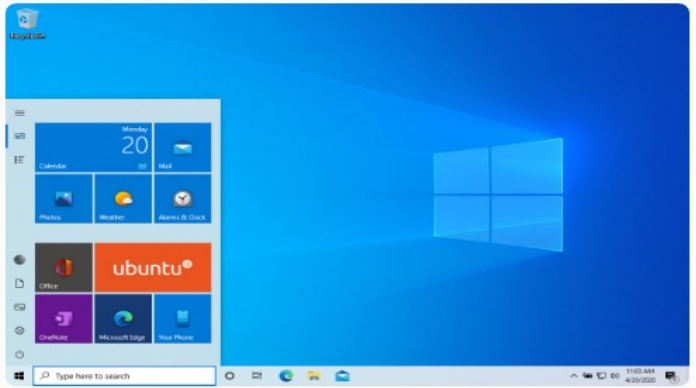
4.0 ★ Average

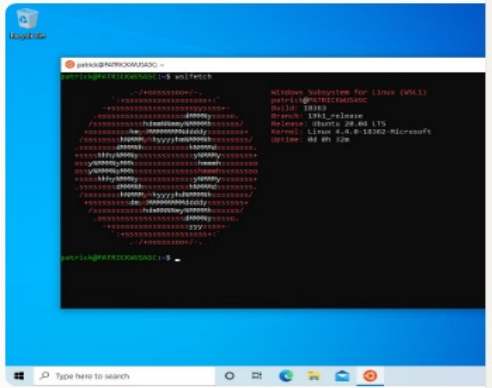
126 Ratings

EVERYONE

Age Rating: ESRB. EVERYONE

Screenshots





Description

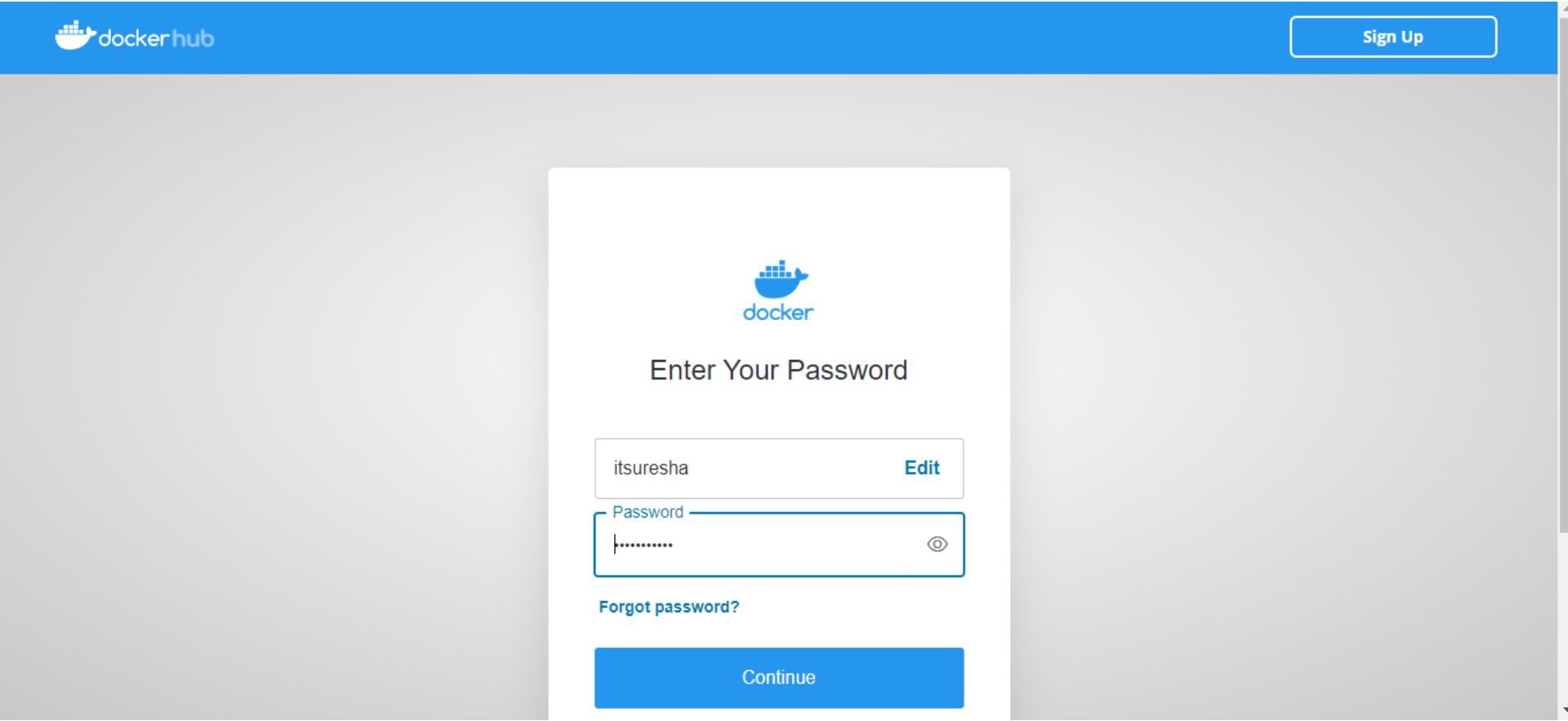
Ubuntu 20.04 LTS on Windows allows you to use Ubuntu Terminal and run Ubuntu command line utilities including bash, ssh, git, apt and many more.

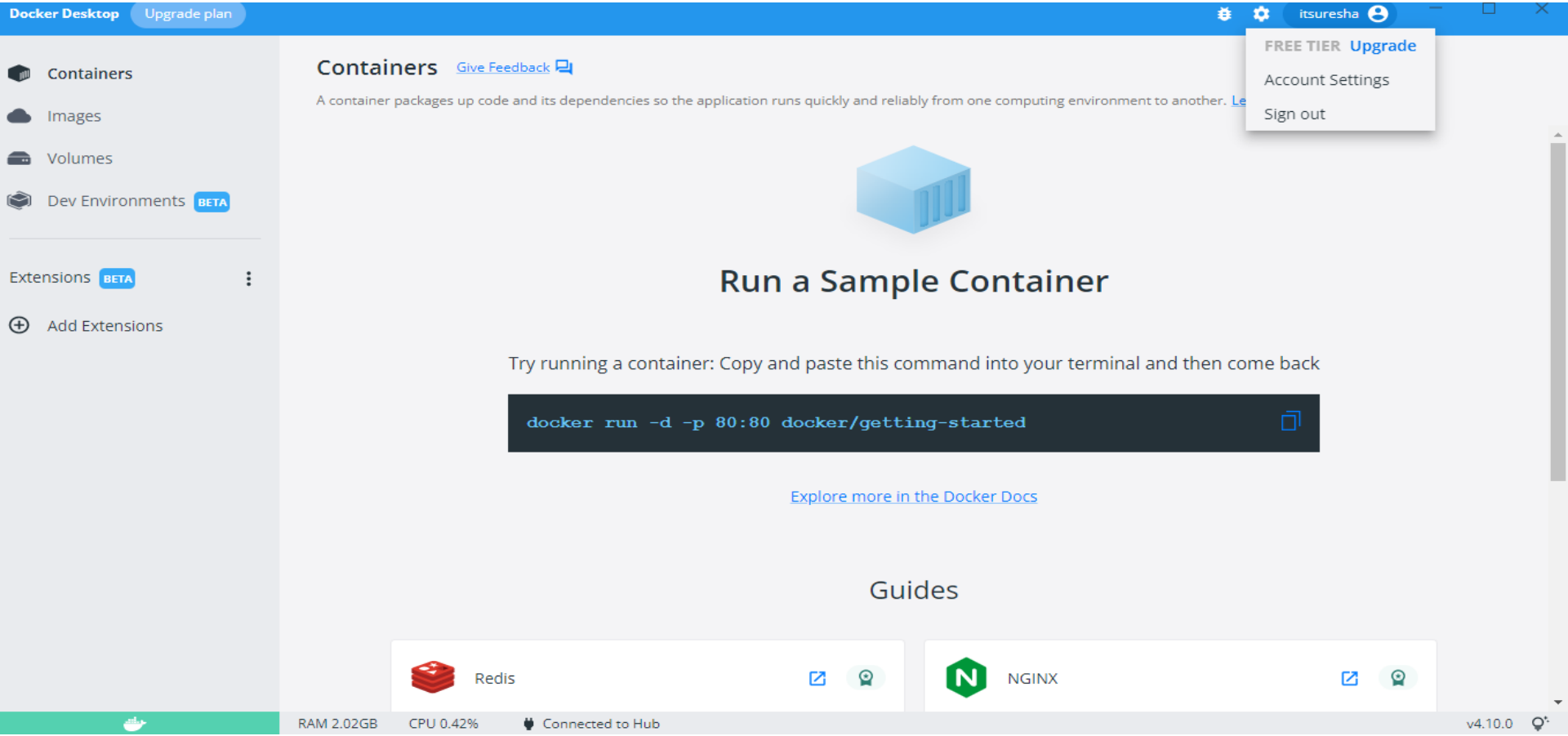
Please note that Windows 10 S does not support running this app.

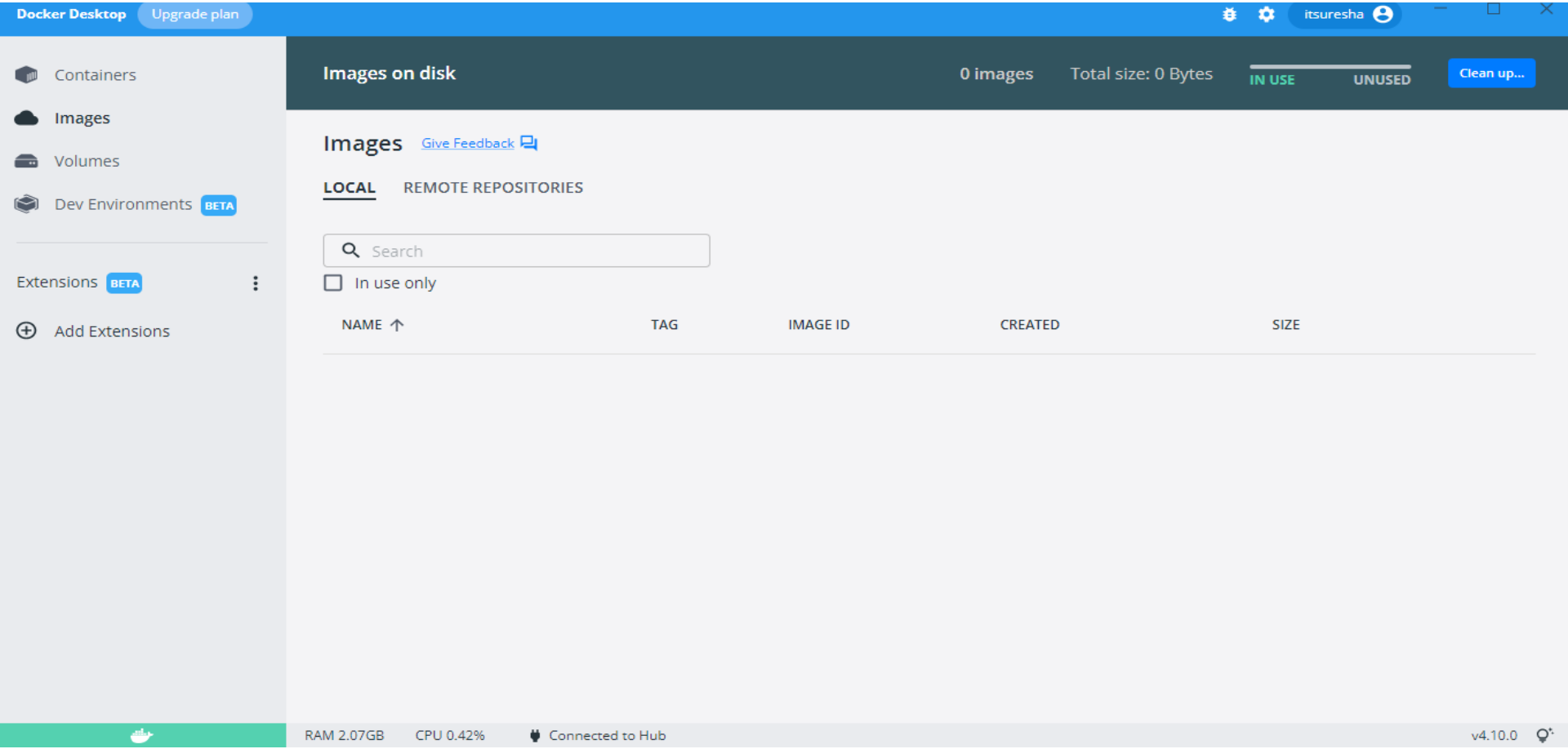
To launch, use "ubuntu2004" on the command-line prompt (cmd.exe), or click on the Ubuntu tile in the Start Menu.

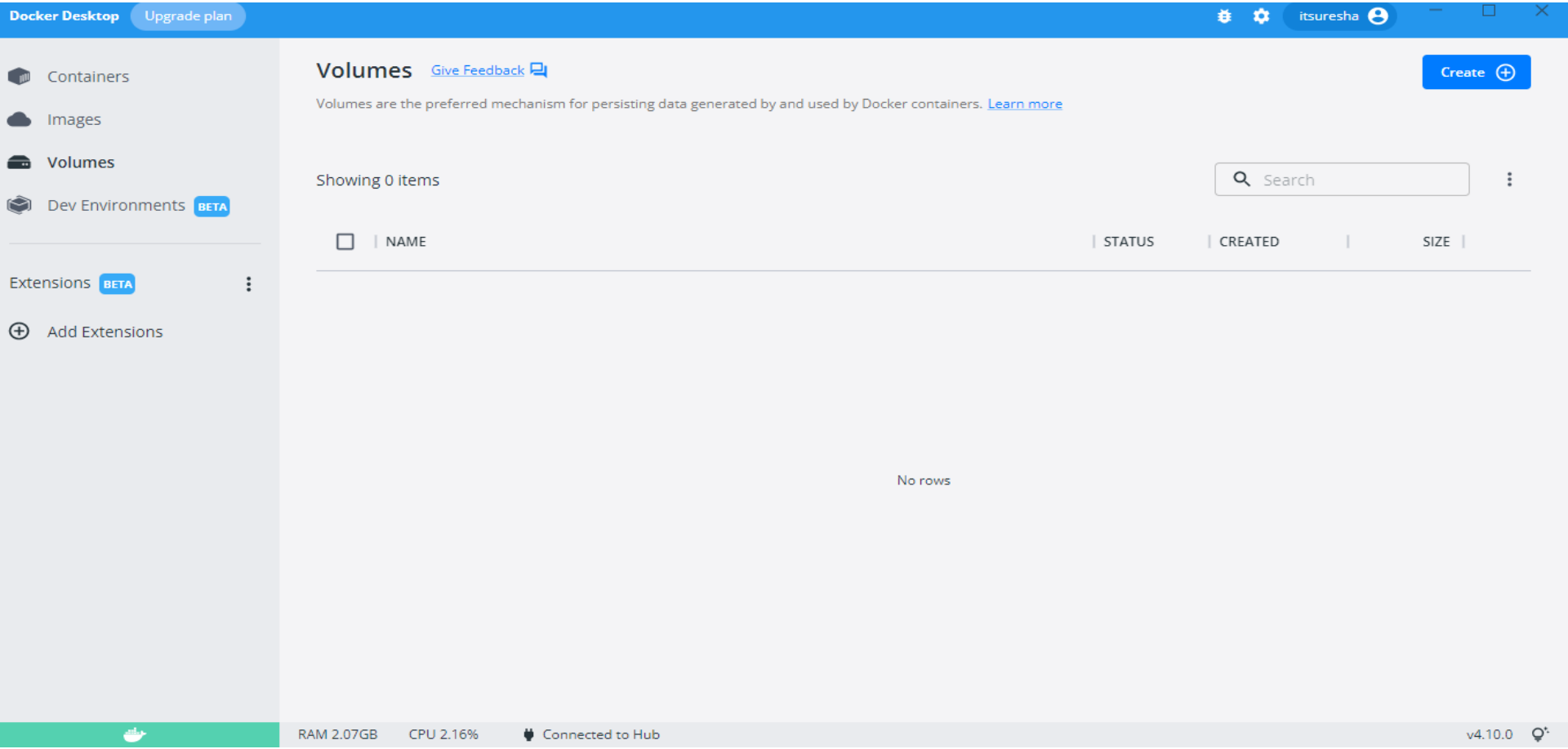
To use this feature, one first needs to use "Turn Windows features on or off" and select "Windows Subsystem for Linux", click OK, reboot, and use this app.


itsuresha@hostt: /mnt/c/Users/itsur
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\Users\itsur> wsl
itsuresha@hostt:/mnt/c/Users/itsur$


docker hub
Sign Up
docker
Enter Your Password
itsuresha
Edit
Password
Forgot password?
Continue


Docker Desktop
Upgrade plan
itsuresha
FREE TIER Upgrade
Account Settings
Sign out
Containers
Images
Volumes
Dev Environments BETA
Extensions BETA
Add Extensions
Containers
Give Feedback
A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another.
Run a Sample Container
Try running a container: Copy and paste this command into your terminal and then come back
docker run -d -p 80:80 docker/getting-started
Explore more in the Docker Docs
Guides
Redis
NGINX
RAM 2.02GB
CPU 0.42%
Connected to Hub
v4.10.0


Docker Desktop
Upgrade plan
itsuresha
Containers
Images
Volumes
Dev Environments BETA
Extensions BETA
Add Extensions
Images on disk
0 images
Total size: 0 Bytes
IN USE
UNUSED
Clean up...
Images
Give Feedback
LOCAL
REMOTE REPOSITORIES
Search
In use only
NAME
TAG
IMAGE ID
CREATED
SIZE
RAM 2.07GB
CPU 0.42%
Connected to Hub
v4.10.0


Docker Desktop
Upgrade plan
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Containers
Images
Volumes
Dev Environments BETA
Extensions BETA
Add Extensions
Volumes
Give Feedback
Create
Volumes are the preferred mechanism for persisting data generated by and used by Docker containers. Learn more
Showing 0 items
Search
NAME
STATUS
CREATED
SIZE
No rows
RAM 2.07GB
CPU 2.16%
Connected to Hub
v4.10.0

JupyterLab

ilab9798.insofe.com/user/suresha/lab?

File Edit View Run Kernel Tabs Settings Help

/

Name

- itsnew
- new10
- op.txt
- WordCountSpark
- WordCountSpark1
- a.txt
- aa.txt
- examples.desktop
- input1.txt
- j.txt
- myinput1.txt
- myinput3.csv

suresha@dn2:~ | suresha@ilab9798: ~

```
suresha@ilab9798:~$ docker --version
Docker version 20.10.14, build a224086
suresha@ilab9798:~$ docker ps
CONTAINER ID   IMAGE              COMMAND                  CREATED       STATUS       PORTS
                                  NAMES
3f22ab71da97   mysql_9798:9798    "docker-entrypoint.s…"   6 days ago    Up 6 days    33060/tcp, 0.0.
0.0:9798->3306/tcp, :::9798->3306/tcp   mysql_9798_container
suresha@ilab9798:~$ docker ps -a
CONTAINER ID   IMAGE                                COMMAND                  CREATED         STATUS
                    PORTS                                                 NAMES
3f22ab71da97   mysql_9798:9798                      "docker-entrypoint.s…"   6 days ago      Up 6 d
ays                 33060/tcp, 0.0.0.0:9798->3306/tcp, :::9798->3306/tcp  mysql_9798_container
ea4fcd97902c   app_mysql_deekshitha:deekshitha      "docker-entrypoint.s…"   2 months ago    Exited
 (255) 2 months ago   33060/tcp, 0.0.0.0:3290->3306/tcp, :::3290->3306/tcp   app_mysql_deekshitha_
container
4fc2a8f9aed7   app_python_4350:prem                 "bash"                   2 months ago    Exited
 (255) 2 months ago   0.0.0.0:4350->1234/tcp, :::4350->1234/tcp              app_python_prem
a4a71d6a4146   app_python_deekshitha:deekshitha     "python3"                2 months ago    Exited
 (255) 2 months ago   0.0.0.0:4290->1234/tcp, :::4290->1234/tcp              app_python_deekshitha
_container
```

4 $_ 0

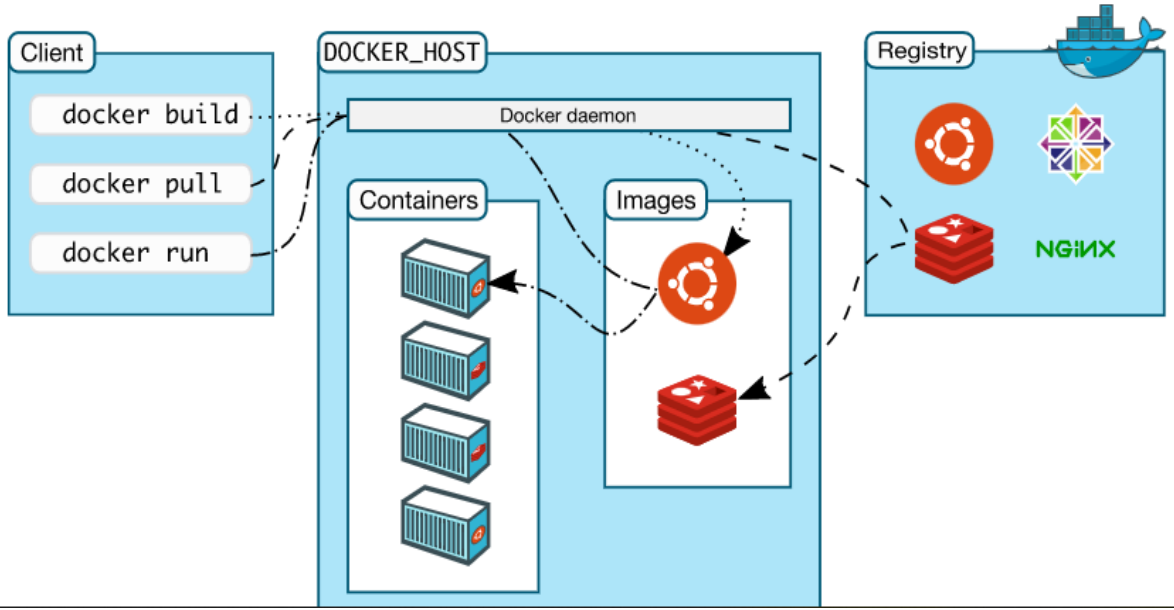
suresha@ilab9798: ~

docker docs | Search the docs | Home | Guides | Manuals | Reference | Samples

Guides / Docker overview

Docker architecture

Docker uses a client-server architecture. The Docker *client* talks to the Docker *daemon*, which does the heavy lifting of building, running, and distributing your Docker containers. The Docker client and daemon *can* run on the same system, or you can connect a Docker client to a remote Docker daemon. The Docker client and daemon communicate using a REST API, over UNIX sockets or a network interface. Another Docker client is Docker Compose, that lets you work with applications consisting of a set of containers.



The Docker daemon

The Docker daemon (`dockerd`) listens for Docker API requests and manages Docker objects such as images, containers, networks, and volumes. A daemon can also communicate with other daemons to manage Docker services.

The Docker client

The Docker client (`docker`) is the primary way that many Docker users interact with Docker. When you use commands such as `docker run` , the client sends these commands to `dockerd` , which carries them out. The `docker` command uses the Docker API. The Docker client can communicate with more than one daemon.

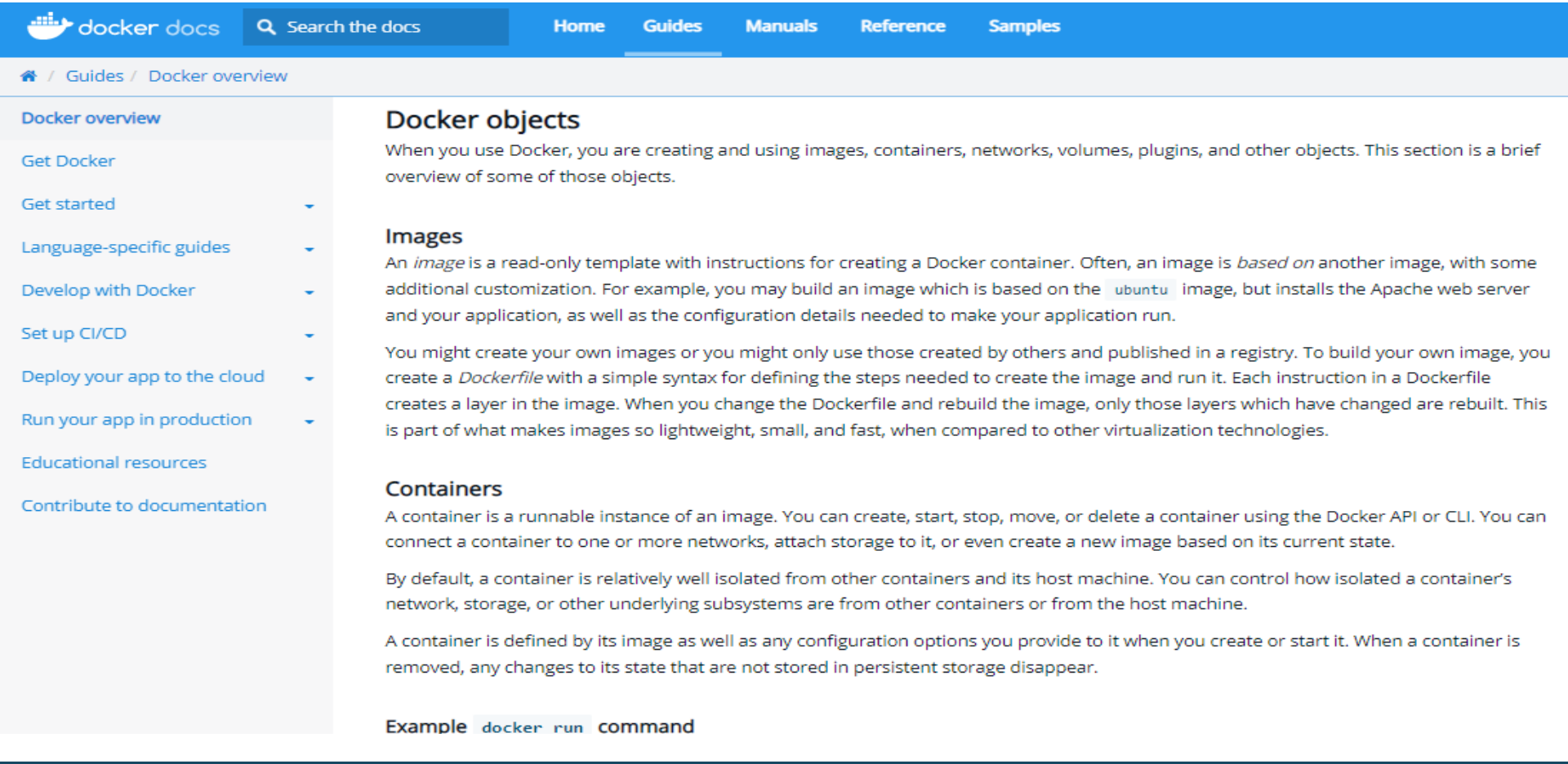
Docker Desktop

Docker Desktop is an easy-to-install application for your Mac or Windows environment that enables you to build and share containerized applications and microservices. Docker Desktop includes the Docker daemon (`dockerd`), the Docker client (`docker`), Docker Compose, Docker Content Trust, Kubernetes, and Credential Helper. For more information, see Docker Desktop.

Docker registries

A Docker *registry* stores Docker images. Docker Hub is a public registry that anyone can use, and Docker is configured to look for images on Docker Hub by default. You can even run your own private registry.

When you use the `docker pull` or `docker run` commands, the required images are pulled from your configured registry. When you use the `docker push` command, your image is pushed to your configured registry.


docker docs
Search the docs
Home
Guides
Manuals
Reference
Samples
Guides / Docker overview
Docker overview
Get Docker
Get started
Language-specific guides
Develop with Docker
Set up CI/CD
Deploy your app to the cloud
Run your app in production
Educational resources
Contribute to documentation
Docker objects
When you use Docker, you are creating and using images, containers, networks, volumes, plugins, and other objects. This section is a brief overview of some of those objects.
Images
An image is a read-only template with instructions for creating a Docker container. Often, an image is based on another image, with some additional customization. For example, you may build an image which is based on the ubuntu image, but installs the Apache web server and your application, as well as the configuration details needed to make your application run.
You might create your own images or you might only use those created by others and published in a registry. To build your own image, you create a Dockerfile with a simple syntax for defining the steps needed to create the image and run it. Each instruction in a Dockerfile creates a layer in the image. When you change the Dockerfile and rebuild the image, only those layers which have changed are rebuilt. This is part of what makes images so lightweight, small, and fast, when compared to other virtualization technologies.
Containers
A container is a runnable instance of an image. You can create, start, stop, move, or delete a container using the Docker API or CLI. You can connect a container to one or more networks, attach storage to it, or even create a new image based on its current state.
By default, a container is relatively well isolated from other containers and its host machine. You can control how isolated a container's network, storage, or other underlying subsystems are from other containers or from the host machine.
A container is defined by its image as well as any configuration options you provide to it when you create or start it. When a container is removed, any changes to its state that are not stored in persistent storage disappear.
Example docker run command

docker hub | mysql | Explore | Repositories | Organizations | Help | Upgrade | itsuresha

Filters

Products

- [ ] Images
- [ ] Plugins

Trusted Content

- [ ] Docker Official Image
- [ ] Verified Publisher
- [ ] Open Source Program

Operating Systems

- [ ] Linux
- [ ] Windows

Architectures

1 - 25 of 33,141 results for **mysql**.

Best Match

mysql DOCKER OFFICIAL IMAGE

Updated 3 days ago

1B+ Downloads 10K+ Stars

MySQL is a widely used, open-source relational database management system (RDBMS).

Linux | x86-64 | ARM 64

mariadb DOCKER OFFICIAL IMAGE

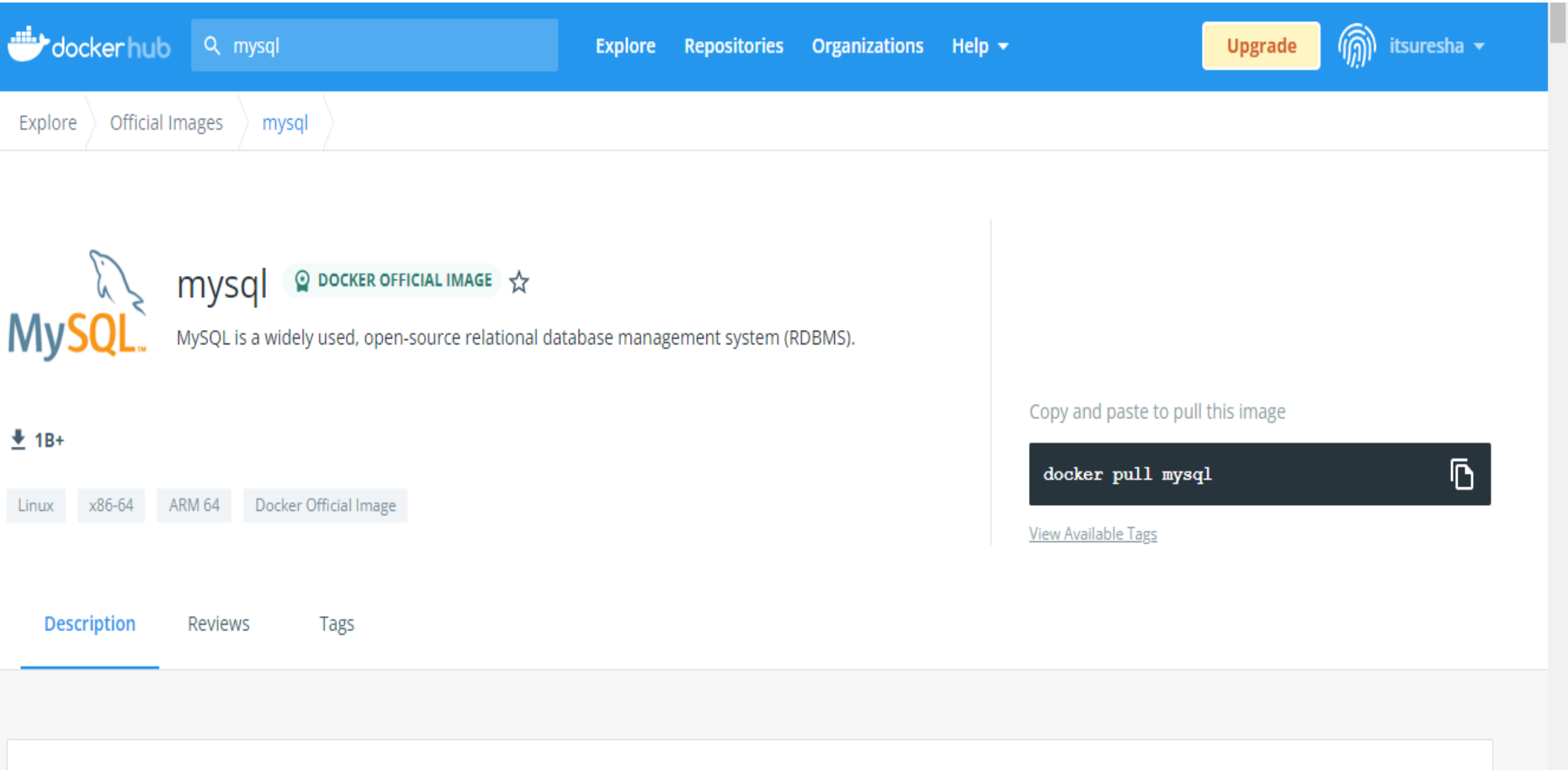
Updated a month ago

1B+ Downloads 4.9K Stars

MariaDB Server is a high performing open source relational database, forked from MySQL.

Linux | IBM Z | x86-64 | 386 | ARM 64 | PowerPC 64 LE

https://hub.docker.com/_/mariadb

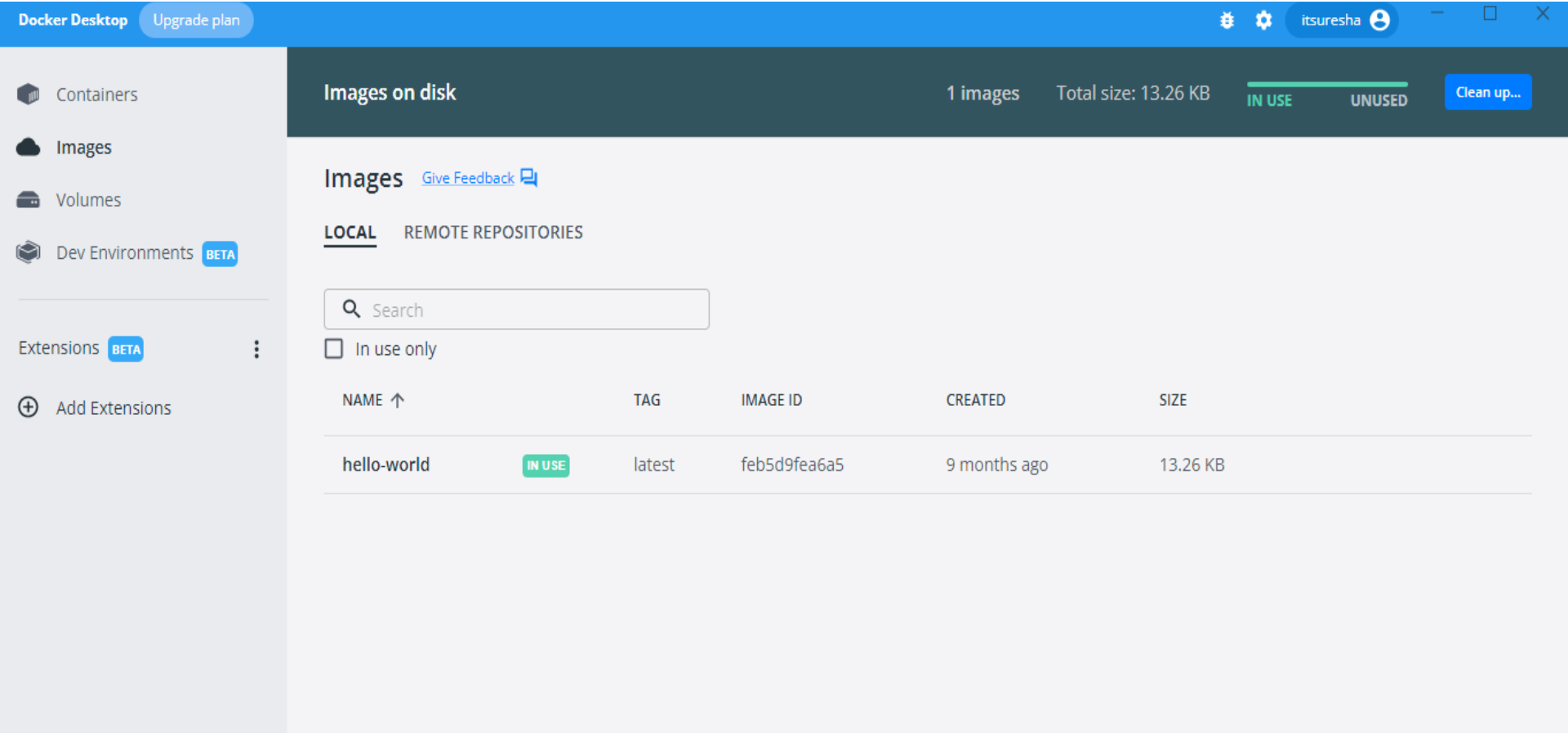

docker hub
mysql
Explore
Repositories
Organizations
Help
Upgrade
itsuresha
Explore
Official Images
mysql
MySQL
mysql
DOCKER OFFICIAL IMAGE
MySQL is a widely used, open-source relational database management system (RDBMS).
1B+
Linux
x86-64
ARM 64
Docker Official Image
Copy and paste to pull this image
docker pull mysql
View Available Tags
Description
Reviews
Tags

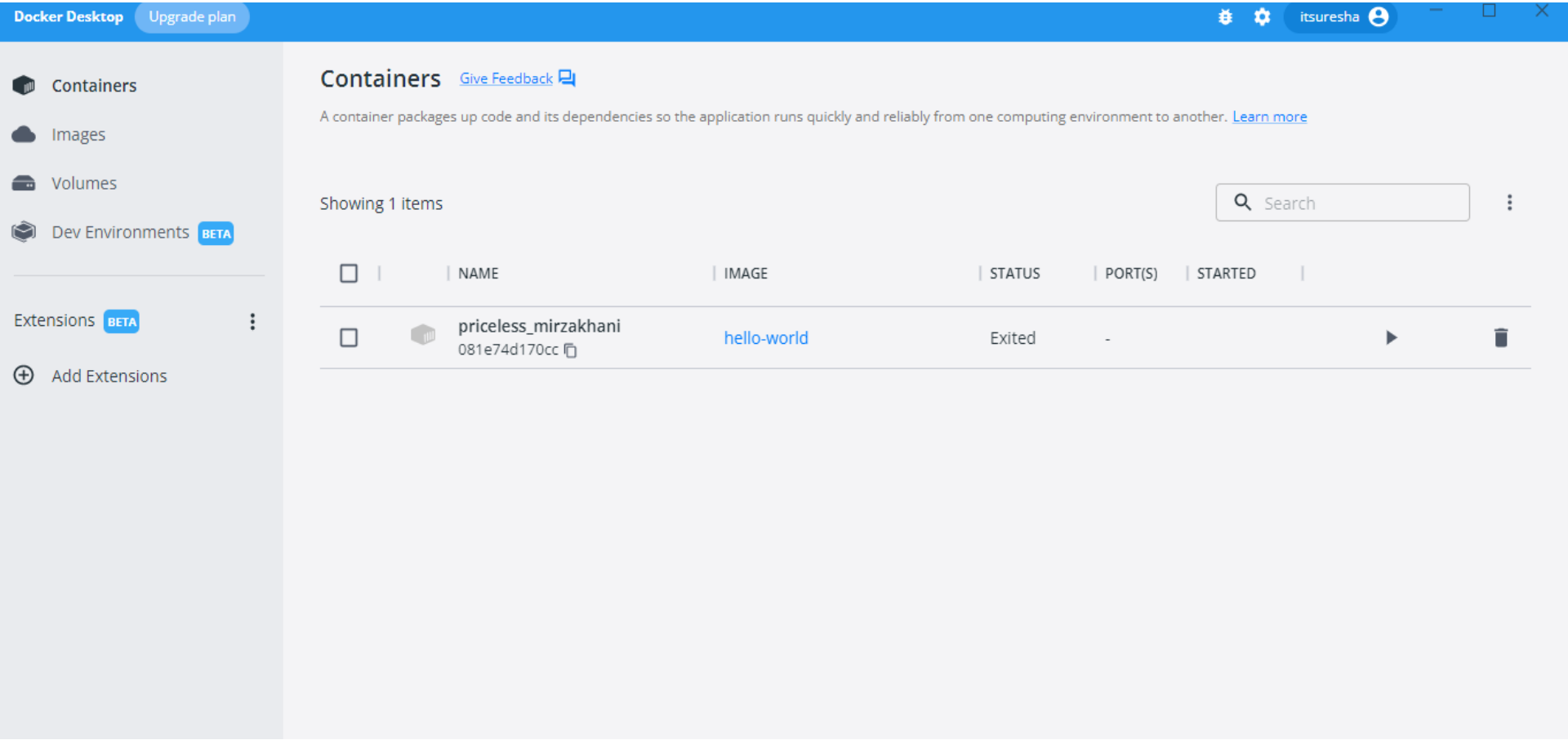
C:\WINDOWS\system32\cmd.exe

```
C:\Users\itsur>docker -v
Docker version 20.10.17, build 100c701

C:\Users\itsur>docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:13e367d31ae85359f42d637adf6da428f76d75dc9afeb3c21faea0d976f5c651

Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
```

C:\WINDOWS\system32\cmd.exe

```
Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/


C:\Users\itsur>docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
hello-world   latest    feb5d9fea6a5   9 months ago   13.3kB

C:\Users\itsur>docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES

C:\Users\itsur>docker container ls
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES

C:\Users\itsur>docker container ls -a
CONTAINER ID   IMAGE         COMMAND    CREATED         STATUS                     PORTS     NAMES
081e74d170cc   hello-world   "/hello"   5 minutes ago   Exited (0) 5 minutes ago             priceless_
mirzakhani

C:\Users\itsur>
```


Docker Desktop
Upgrade plan
itsuresha
Containers
Images
Volumes
Dev Environments BETA
Extensions BETA
Add Extensions
Images on disk
1 images
Total size: 13.26 KB
IN USE
UNUSED
Clean up...
Images
Give Feedback
LOCAL
REMOTE REPOSITORIES
Search
In use only
NAME
TAG
IMAGE ID
CREATED
SIZE
hello-world
IN USE
latest
feb5d9fea6a5
9 months ago
13.26 KB


Docker Desktop
Upgrade plan
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Containers
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Extensions BETA
Add Extensions
Containers
Give Feedback
A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. Learn more
Showing 1 items
Search
NAME
IMAGE
STATUS
PORT(S)
STARTED
priceless_mirzakhani
081e74d170cc
hello-world
Exited
-

C:\WINDOWS\system32\cmd.exe

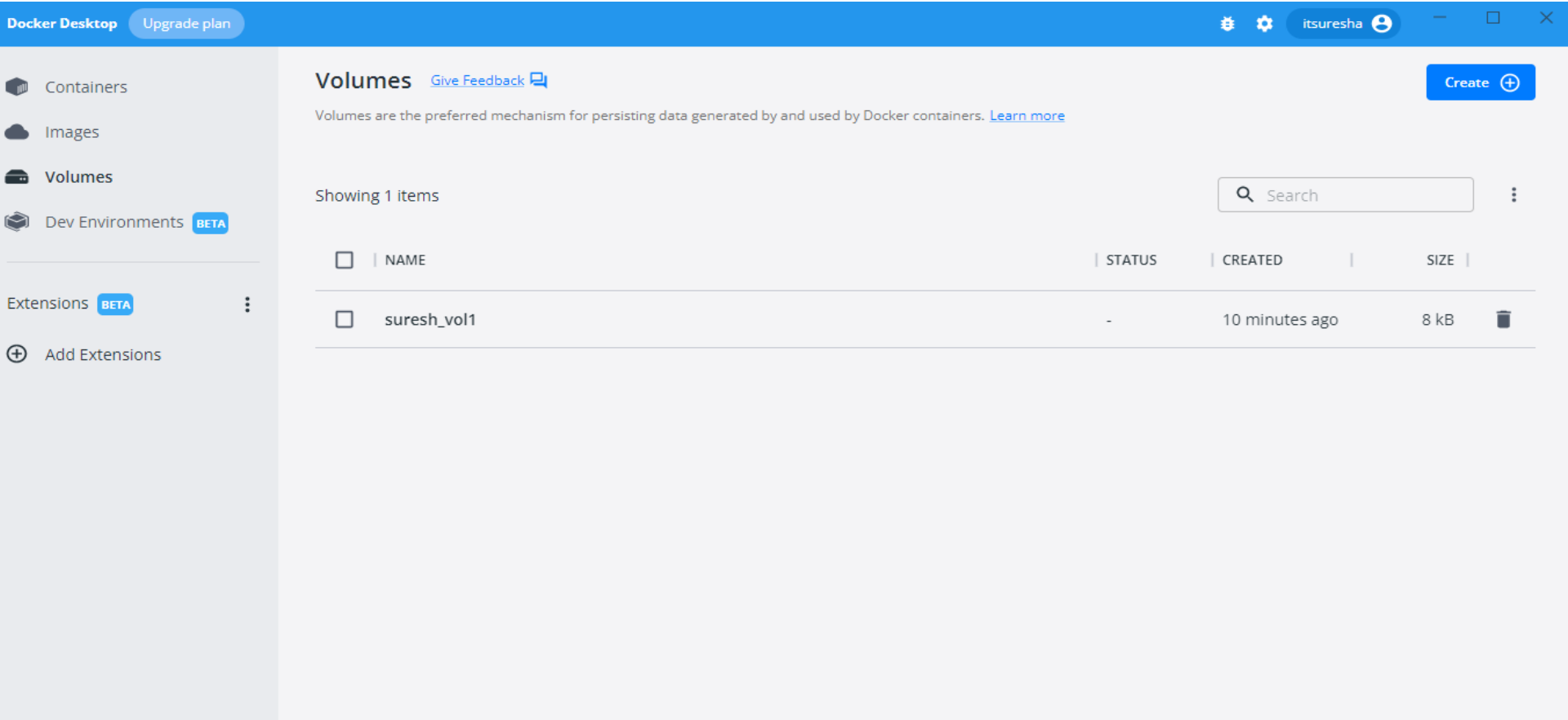
```
081e74d170cc   hello-world   "/hello"   5 minutes ago   Exited (0) 5 minutes ago          priceless_
mirzakhani

C:\Users\itsur>docker volume create suresh_vol1
suresh_vol1

C:\Users\itsur>docker volume ls
DRIVER    VOLUME NAME
local     suresh_vol1

C:\Users\itsur>docker inspect suresh_vol1
[
    {
        "CreatedAt": "2022-07-03T06:55:55Z",
        "Driver": "local",
        "Labels": {},
        "Mountpoint": "/var/lib/docker/volumes/suresh_vol1/_data",
        "Name": "suresh_vol1",
        "Options": {},
        "Scope": "local"
    }
]

C:\Users\itsur>
```


Docker Desktop
Upgrade plan
itsuresha
Containers
Images
Volumes
Dev Environments
BETA
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BETA
Add Extensions
Volumes
Give Feedback
Create
Volumes are the preferred mechanism for persisting data generated by and used by Docker containers. Learn more
Showing 1 items
Search
NAME
STATUS
CREATED
SIZE
suresh_vol1
-
10 minutes ago
8 kB

Select C:\WINDOWS\system32\cmd.exe

```
C:\Users\itsur>docker pull mysql
Using default tag: latest
latest: Pulling from library/mysql
824b15f81d65: Pull complete
c559dd1913db: Pull complete
e201c19614e6: Pull complete
f4247e8f6125: Pull complete
dc9fefd8cfb5: Pull complete
af3787edd16d: Pull complete
b6bb40f875d3: Pull complete
75f6b647ddb1: Pull complete
a09ca0f0cb24: Pull complete
9e223e3cd2fd: Pull complete
2b038d826c65: Pull complete
d33ac6052fc9: Pull complete
Digest: sha256:a840244706a5fdc3c704b15a3700bfda39fdc069262d7753fa09de2d9faf5f83
Status: Downloaded newer image for mysql:latest
docker.io/library/mysql:latest

C:\Users\itsur>docker pull mysql
Using default tag: latest
latest: Pulling from library/mysql
Digest: sha256:a840244706a5fdc3c704b15a3700bfda39fdc069262d7753fa09de2d9faf5f83
Status: Image is up to date for mysql:latest
```

C:\WINDOWS\system32\cmd.exe

```
C:\Users\itsur>docker run -d -p 8080:8080 mysql
4f631864d95272084c60e3b5423ccf29072ca58a81d357ee6bbc6dbae62cb34d

C:\Users\itsur>docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
mysql         latest    0ef9083d9892   6 days ago     524MB
hello-world   latest    feb5d9fea6a5   9 months ago   13.3kB

C:\Users\itsur>docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES

C:\Users\itsur>docker ps -a
CONTAINER ID   IMAGE         COMMAND                  CREATED          STATUS                      PORT
S     NAMES
4f631864d952   mysql         "docker-entrypoint.s…"   25 seconds ago   Exited (1) 23 seconds ago
      dazzling_johnson
081e74d170cc   hello-world   "/hello"                 18 hours ago     Exited (0) 18 hours ago
      priceless_mirzakhani

C:\Users\itsur>docker logs 4f631864d952
2022-07-03 23:57:27+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.29-1debian10 star
ted.
2022-07-03 23:57:27+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
2022-07-03 23:57:27+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.29-1debian10 star
ted.
2022-07-03 23:57:27+00:00 [ERROR] [Entrypoint]: Database is uninitialized and password option is not sp
ecified
    You need to specify one of the following:
```

Select C:\WINDOWS\system32\cmd.exe

```
C:\Users\itsur>docker run --name mysql_name -e MYSQL_ROOT_PASSWORD=root -d mysql
d4de278e8ea9dfe34018ebadce2a9fb4eec136ba96252b2709249c49fd16e36d

C:\Users\itsur>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED         STATUS         PORTS                 NAMES
d4de278e8ea9   mysql     "docker-entrypoint.s…"   6 seconds ago   Up 6 seconds   3306/tcp, 33060/tcp   mysql_name

C:\Users\itsur>docker ps -a
CONTAINER ID   IMAGE         COMMAND                  CREATED          STATUS                      PORTS                 N
AMES
d4de278e8ea9   mysql         "docker-entrypoint.s…"   45 seconds ago   Up 44 seconds               3306/tcp, 33060/tcp   m
ysql_name
4f631864d952   mysql         "docker-entrypoint.s…"   15 minutes ago   Exited (1) 12 minutes ago                         d
azzling_johnson
081e74d170cc   hello-world   "/hello"                 19 hours ago     Exited (0) 13 minutes ago                         p
riceless_mirzakhani

C:\Users\itsur>docker run --name mysql_new -e MYSQL_ROOT_PASSWORD=root -d -p 3307:3307 mysql
4c2c710272160f422df536801d10585e19d309938be172317604e77c8081d9be

C:\Users\itsur>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED         STATUS         PORTS
     NAMES
4c2c71027216   mysql     "docker-entrypoint.s…"   8 seconds ago   Up 6 seconds   3306/tcp, 33060/tcp, 0.0.0.0:3307->3307/t
cp   mysql_new
d4de278e8ea9   mysql     "docker-entrypoint.s…"   3 minutes ago   Up 3 minutes   3306/tcp, 33060/tcp
     mysql_name

C:\Users\itsur>
```

C:\WINDOWS\system32\cmd.exe

```
C:\Users\itsur>docker volume ls
DRIVER    VOLUME NAME
local     7d52b84abd0bc47ed4828729d0fb446b1cb4acc8264b6ad7b2fc9220da8a96b9
local     b89e8b8b86c18d12837a7493529a0630a8a28ae24310baa7730a626064115876
local     c515846d17a33789e2f8cd5b029aca385af9385c23b2d975c81f0728a5a12f7c
local     suresh_vol1

C:\Users\itsur>docker run --name mysql_new -e MYSQL_ROOT_PASSWORD=root  --mount source=suresh_vol1 target=/app -d mysql
invalid argument "source=suresh_vol1" for "--mount" flag: target is required
See 'docker run --help'.

C:\Users\itsur>docker run --name mysql_new1 -e MYSQL_ROOT_PASSWORD=root --mount source=suresh_vol1 target=/app -d mysql
invalid argument "source=suresh_vol1" for "--mount" flag: target is required
See 'docker run --help'.

C:\Users\itsur>docker run --name mysql_new1 -e MYSQL_ROOT_PASSWORD=root --mount source=suresh_vol1,target=/app -d mysql
fa810a29e4492fb79ec9259dc2b134178f93827af6fef982808ba7cb2436dc3d

C:\Users\itsur>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS          PORTS
      NAMES
fa810a29e449   mysql     "docker-entrypoint.s…"   15 seconds ago   Up 13 seconds   3306/tcp, 33060/tcp
      mysql_new1
4c2c71027216   mysql     "docker-entrypoint.s…"   14 minutes ago   Up 14 minutes   3306/tcp, 33060/tcp, 0.0.0.0:3307->3307
/tcp   mysql_new
d4de278e8ea9   mysql     "docker-entrypoint.s…"   17 minutes ago   Up 17 minutes   3306/tcp, 33060/tcp
      mysql_name

C:\Users\itsur>
```

Select C:\WINDOWS\system32\cmd.exe

```
C:\Users\itsur>docker inspect mysql_new1
[
    {
        "Id": "fa810a29e4492fb79ec9259dc2b134178f93827af6fef982808ba7cb2436dc3d",
        "Created": "2022-07-04T00:29:03.4844724Z",
        "Path": "docker-entrypoint.sh",
        "Args": [
            "mysqld"
        ],
        "State": {
            "Status": "running",
            "Running": true,
            "Paused": false,
            "Restarting": false,
            "OOMKilled": false,
            "Dead": false,
            "Pid": 3074,
            "ExitCode": 0,
            "Error": "",
            "StartedAt": "2022-07-04T00:29:04.5351048Z",
            "FinishedAt": "0001-01-01T00:00:00Z"
        },
        "Image": "sha256:0ef9083d9892db139e2b7c81fd133836e7aa32db2b5f1d5702e2593100fa1417",
        "ResolvConfPath": "/var/lib/docker/containers/fa810a29e4492fb79ec9259dc2b134178f93827af6fef982808ba7cb2436dc3d/resolv.conf",
        "HostnamePath": "/var/lib/docker/containers/fa810a29e4492fb79ec9259dc2b134178f93827af6fef982808ba7cb2436dc3d/hostname",
        "HostsPath": "/var/lib/docker/containers/fa810a29e4492fb79ec9259dc2b134178f93827af6fef982808ba7cb2436dc3d/hosts",
```

Select C:\WINDOWS\system32\cmd.exe


```
                "WorkDir": "/var/lib/docker/overlay2/731b00804b17adf2dd589424f4beea137db37971edf723a2e2172fde10de4bd7/work
"
            },
            "Name": "overlay2"
        },
        "Mounts": [
            {
                "Type": "volume",
                "Name": "suresh_vol1",
                "Source": "/var/lib/docker/volumes/suresh_vol1/_data",
                "Destination": "/app",
                "Driver": "local",
                "Mode": "z",
                "RW": true,
                "Propagation": ""
            },
            {
                "Type": "volume",
                "Name": "461d2e2300e8278c7432f4e7180b936160c5db13903479dde43d6708490828b0",
                "Source": "/var/lib/docker/volumes/461d2e2300e8278c7432f4e7180b936160c5db13903479dde43d6708490828b0/_data"
,
                "Destination": "/var/lib/mysql",
                "Driver": "local",
                "Mode": "",
                "RW": true,
                "Propagation": ""
            }
        ],
        "Config": {
```

C:\WINDOWS\system32\cmd.exe

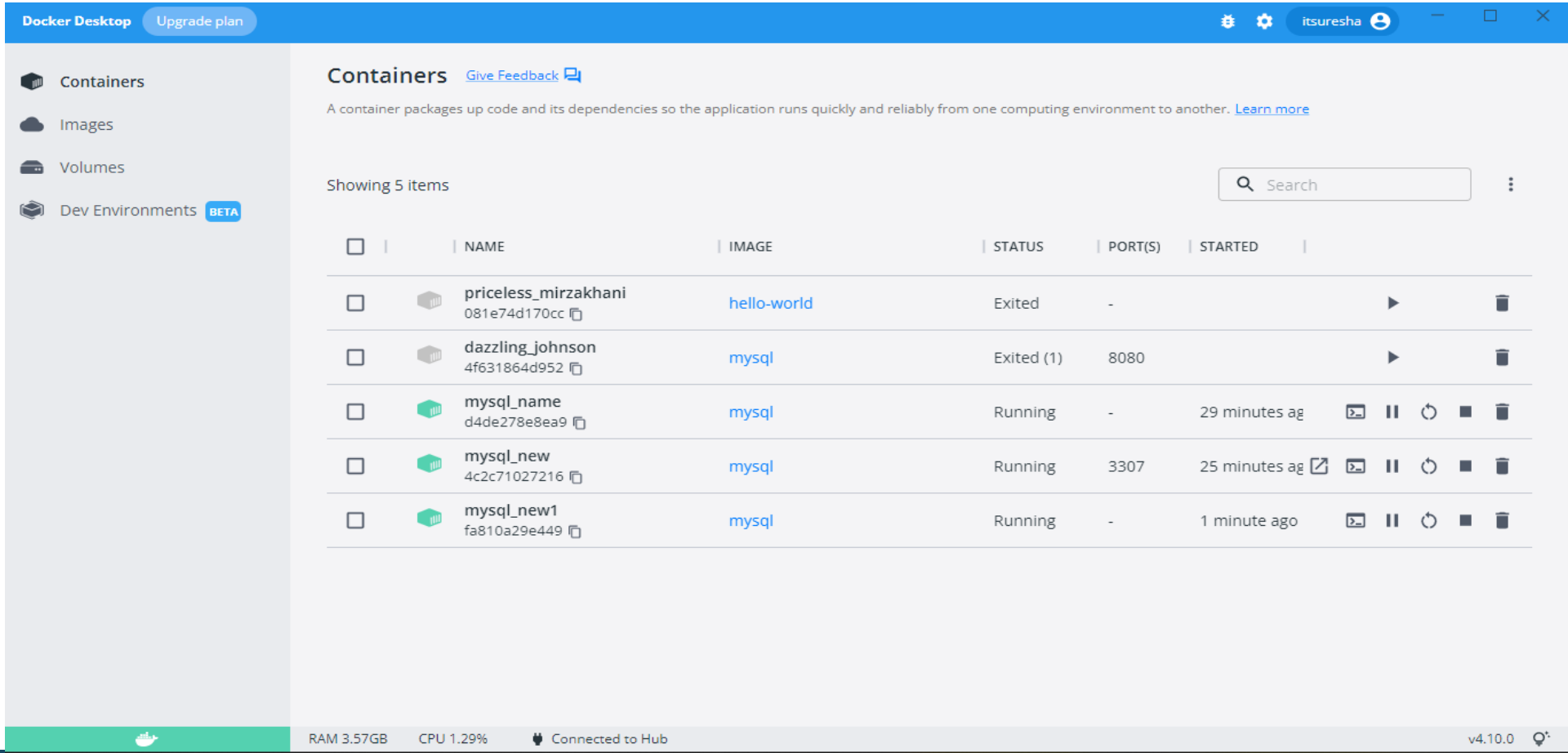
```
C:\Users\itsur>docker stop mysql_new1
mysql_new1

C:\Users\itsur>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS          PORTS
      NAMES
4c2c71027216   mysql     "docker-entrypoint.s…"   23 minutes ago   Up 23 minutes   3306/tcp, 33060/tcp, 0.0.0.0:3307->3307
/tcp   mysql_new
d4de278e8ea9   mysql     "docker-entrypoint.s…"   26 minutes ago   Up 26 minutes   3306/tcp, 33060/tcp
      mysql_name

C:\Users\itsur>docker ps -a
CONTAINER ID   IMAGE         COMMAND                  CREATED          STATUS                      PORTS
                  NAMES
fa810a29e449   mysql         "docker-entrypoint.s…"   9 minutes ago    Exited (0) 13 seconds ago
                  mysql_new1
4c2c71027216   mysql         "docker-entrypoint.s…"   23 minutes ago   Up 23 minutes               3306/tcp, 33060/tcp, 0.
0.0.0:3307->3307/tcp   mysql_new
d4de278e8ea9   mysql         "docker-entrypoint.s…"   26 minutes ago   Up 26 minutes               3306/tcp, 33060/tcp
                  mysql_name
4f631864d952   mysql         "docker-entrypoint.s…"   41 minutes ago   Exited (1) 39 minutes ago
                  dazzling_johnson
081e74d170cc   hello-world   "/hello"                 19 hours ago     Exited (0) 39 minutes ago
                  priceless_mirzakhani

C:\Users\itsur>docker start mysql_new1
mysql_new1

C:\Users\itsur>
```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A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. Learn more
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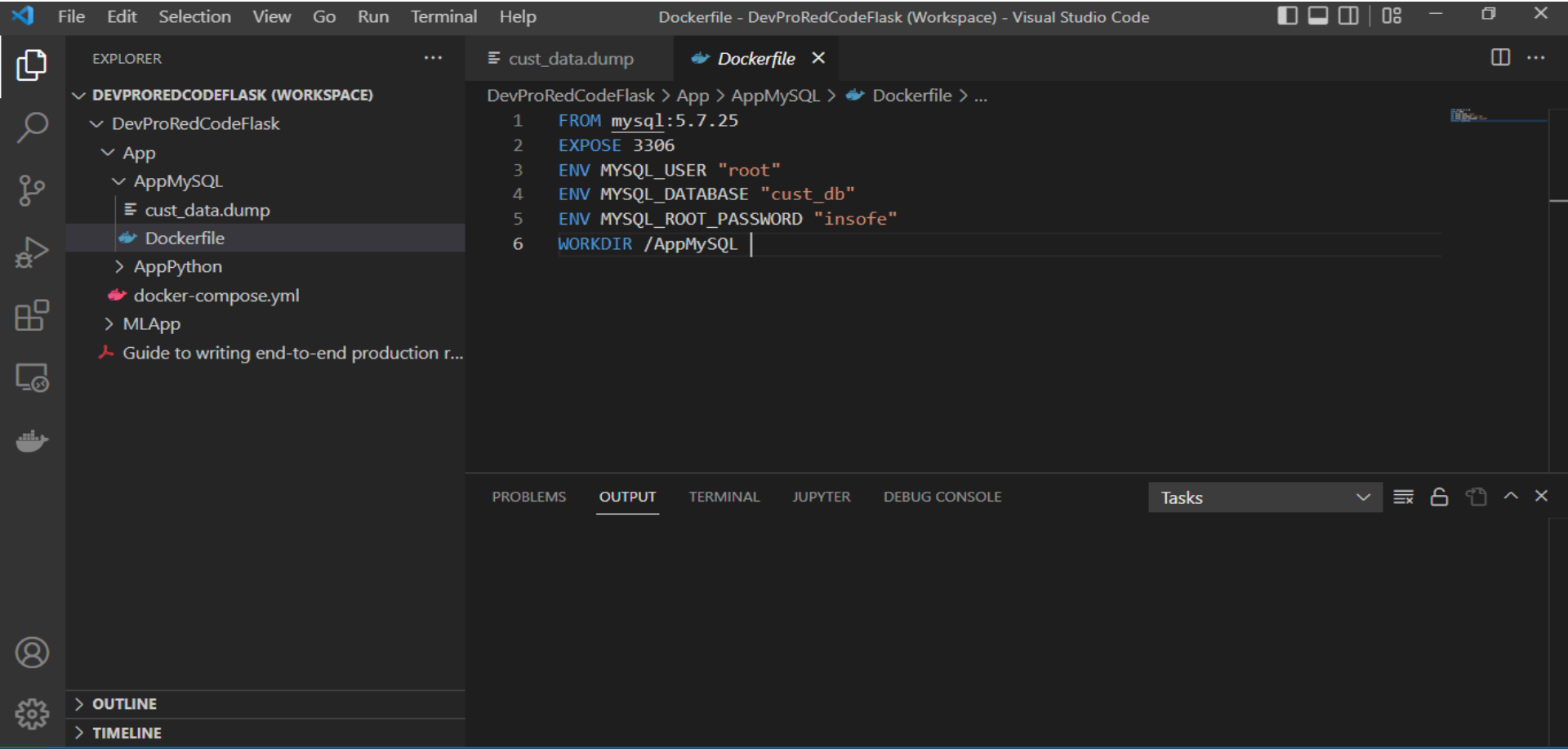
NAME
IMAGE
STATUS
PORT(S)
STARTED
priceless_mirzakhani
081e74d170cc
hello-world
Exited
-
dazzling_johnson
4f631864d952
mysql
Exited (1)
8080
mysql_name
d4de278e8ea9
mysql
Running
-
29 minutes ag
mysql_new
4c2c71027216
mysql
Running
3307
25 minutes ag
mysql_new1
fa810a29e449
mysql
Running
-
1 minute ago
RAM 3.57GB
CPU 1.29%
Connected to Hub
v4.10.0

C:\WINDOWS\system32\cmd.exe

```
C:\Users\itsur>docker rm mysql_new1
Error response from daemon: You cannot remove a running container fa810a29e4492fb79ec9259dc2b134178f93827af6fef982808ba7cb
2436dc3d. Stop the container before attempting removal or force remove

C:\Users\itsur>docker rm -f mysql_new1
mysql_new1

C:\Users\itsur>docker stop mysql_new
mysql_new

C:\Users\itsur>docker rm mysql_new
mysql_new

C:\Users\itsur>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS          PORTS                 NAMES
d4de278e8ea9   mysql     "docker-entrypoint.s…"   30 minutes ago   Up 30 minutes   3306/tcp, 33060/tcp   mysql_name

C:\Users\itsur>docker volume ls
DRIVER    VOLUME NAME
local     7d52b84abd0bc47ed4828729d0fb446b1cb4acc8264b6ad7b2fc9220da8a96b9
local     461d2e2300e8278c7432f4e7180b936160c5db13903479dde43d6708490828b0
local     b89e8b8b86c18d12837a7493529a0630a8a28ae24310baa7730a626064115876
local     c515846d17a33789e2f8cd5b029aca385af9385c23b2d975c81f0728a5a12f7c
local     suresh_vol1

C:\Users\itsur>docker rm suresh_vol1
Error: No such container: suresh_vol1

C:\Users\itsur>docker volume rm suresh_vol1
```

C:\WINDOWS\system32\cmd.exe

```
C:\Users\itsur>docker network ls
NETWORK ID     NAME      DRIVER    SCOPE
a1bb51240b0f   bridge    bridge    local
9e5aa78c8e63   host      host      local
e2dce93203eb   none      null      local

C:\Users\itsur>docker network create --driver bridge suresh_net
3d431398cde52b953b1c9edb4275862d87de3d30c3d47191bd95a2fa2a690ce0

C:\Users\itsur>docker network ls
NETWORK ID     NAME         DRIVER    SCOPE
a1bb51240b0f   bridge       bridge    local
9e5aa78c8e63   host         host      local
e2dce93203eb   none         null      local
3d431398cde5   suresh_net   bridge    local

C:\Users\itsur>docker run --name mysql_name -e MYSQL_ROOT_PASSWORD=root --network suresh_net -d mysql
docker: Error response from daemon: Conflict. The container name "/mysql_name" is already in use by container "d4de278e8ea
9dfe34018ebadce2a9fb4eec136ba96252b2709249c49fd16e36d". You have to remove (or rename) that container to be able to reuse
that name.
See 'docker run --help'.

C:\Users\itsur>docker run --name mysql_name1 -e MYSQL_ROOT_PASSWORD=root --network suresh_net -d mysql
4e0a015b9070776a026621fb6d159fa90960beae291e3405b7f61f023dda27ac

C:\Users\itsur>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS          PORTS                 NAMES
4e0a015b9070   mysql     "docker-entrypoint.s…"   13 seconds ago   Up 12 seconds   3306/tcp, 33060/tcp   mysql_name1
d4de278e8ea9   mysql     "docker-entrypoint.s…"   44 minutes ago   Up 44 minutes   3306/tcp, 33060/tcp   mysql_name
```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EXPLORER
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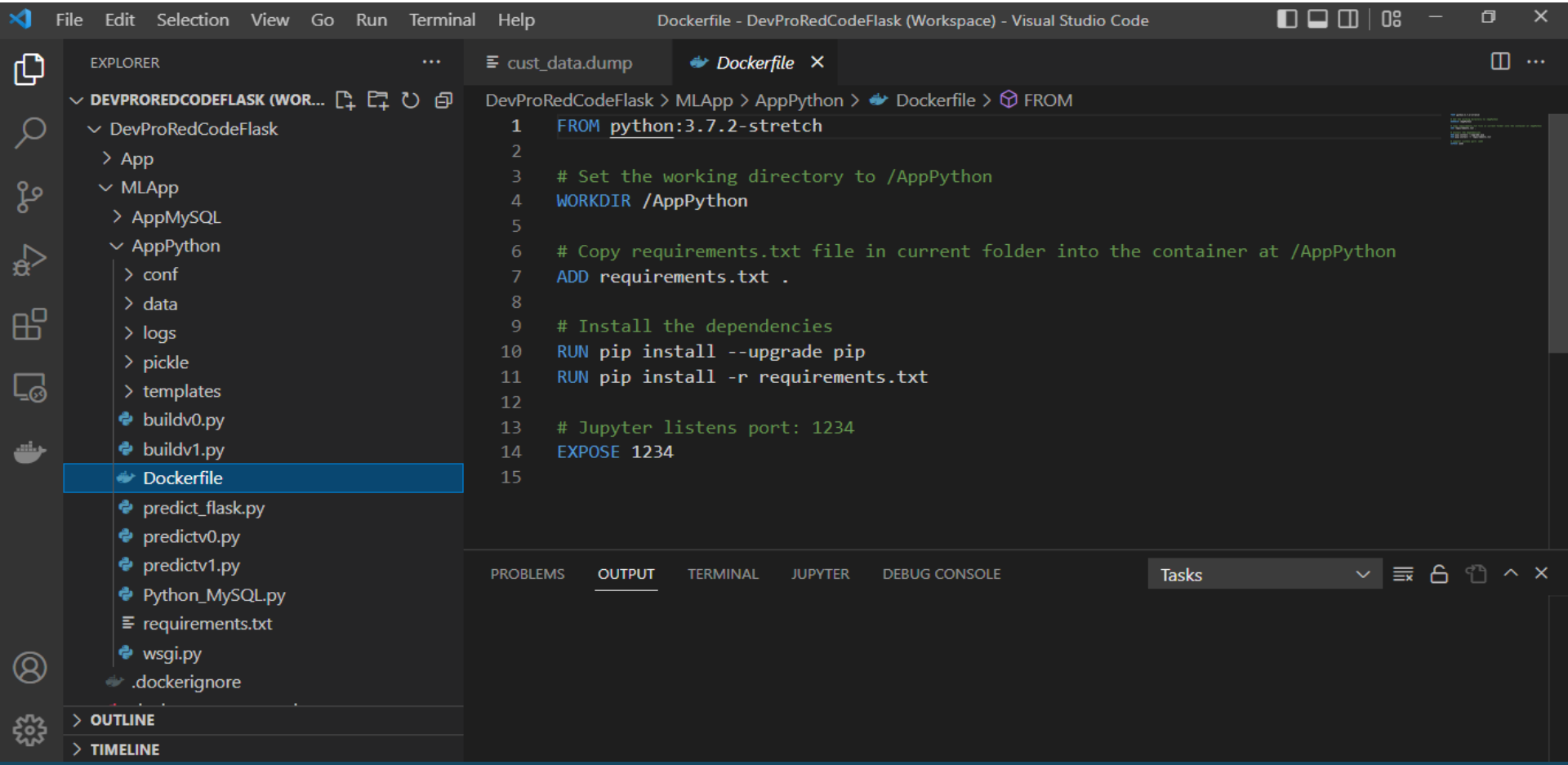
DevProRedCodeFlask
App
AppMySQL
cust_data.dump
Dockerfile
AppPython
docker-compose.yml
MLApp
Guide to writing end-to-end production r...
cust_data.dump
Dockerfile
DevProRedCodeFlask > App > AppMySQL > Dockerfile > ...
1 FROM mysql:5.7.25
2 EXPOSE 3306
3 ENV MYSQL_USER "root"
4 ENV MYSQL_DATABASE "cust_db"
5 ENV MYSQL_ROOT_PASSWORD "insofe"
6 WORKDIR /AppMySQL
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
Tasks
OUTLINE
TIMELINE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DEVPRORedCodeFlask (WOR...
DevProRedCodeFlask
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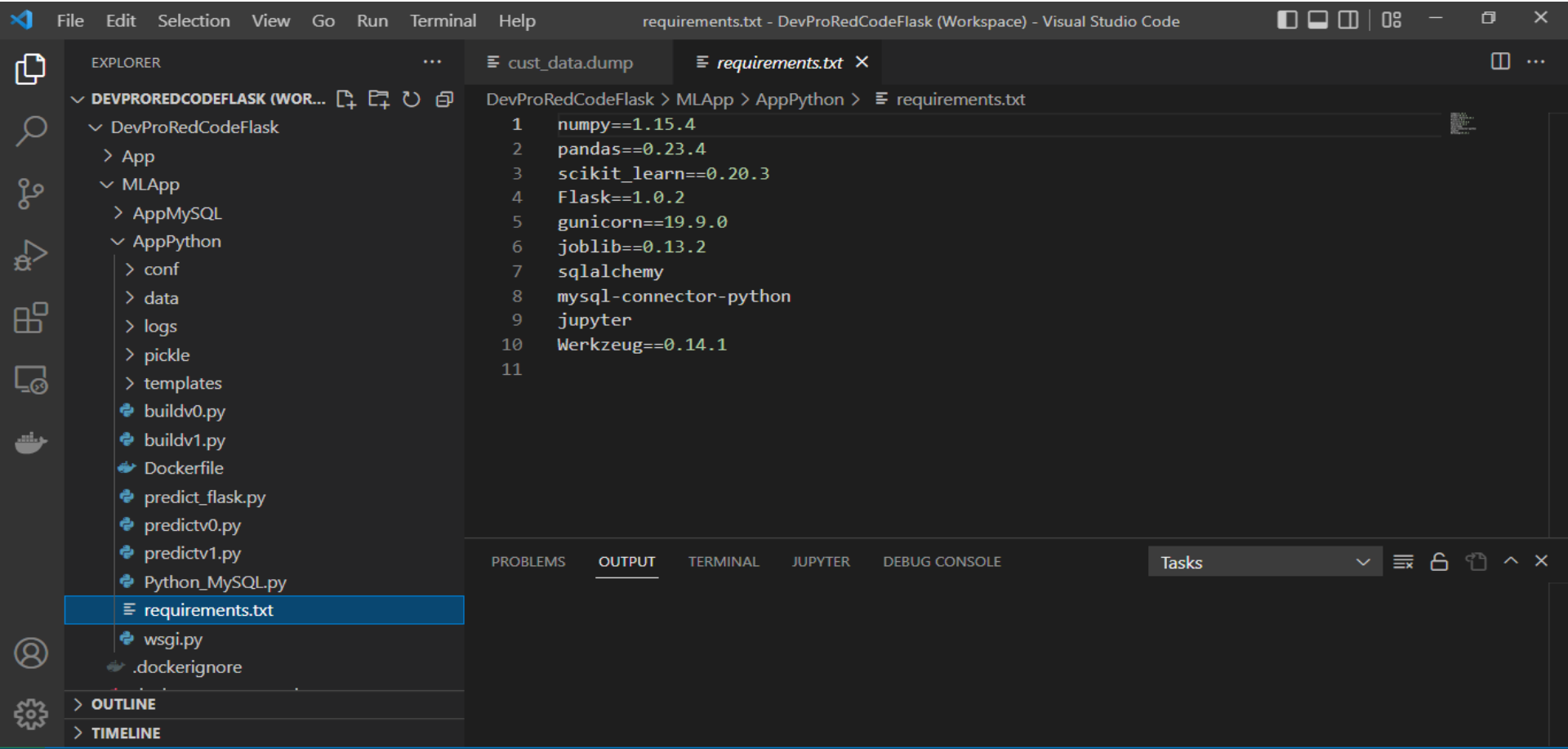
requirements.txt
wsgi.py
.dockerignore
OUTLINE
TIMELINE
cust_data.dump
Dockerfile
DevProRedCodeFlask > MLApp > AppPython > Dockerfile > FROM
1 FROM python:3.7.2-stretch
2
3 # Set the working directory to /AppPython
4 WORKDIR /AppPython
5
6 # Copy requirements.txt file in current folder into the container at /AppPython
7 ADD requirements.txt .
8
9 # Install the dependencies
10 RUN pip install --upgrade pip
11 RUN pip install -r requirements.txt
12
13 # Jupyter listens port: 1234
14 EXPOSE 1234
15
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
Tasks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DEVPRORedCODEFLASK (WOR...
DevProRedCodeFlask
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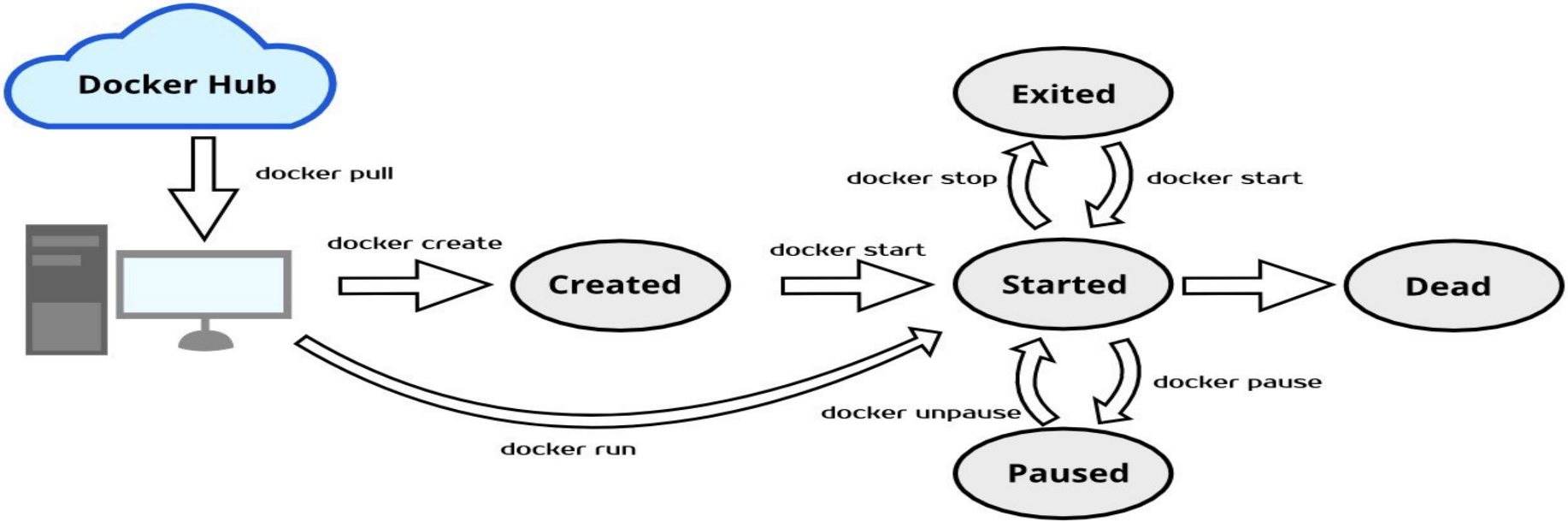
buildv1.py
Dockerfile
predict_flask.py
predictv0.py
predictv1.py
Python_MySQL.py
requirements.txt
wsgi.py
.dockerignore
OUTLINE
TIMELINE
cust_data.dump
requirements.txt
DevProRedCodeFlask > MLApp > AppPython > requirements.txt
1 numpy==1.15.4
2 pandas==0.23.4
3 scikit_learn==0.20.3
4 Flask==1.0.2
5 gunicorn==19.9.0
6 joblib==0.13.2
7 sqlalchemy
8 mysql-connector-python
9 jupyter
10 Werkzeug==0.14.1
11
PROBLEMS
OUTPUT
TERMINAL
JUPYTER
DEBUG CONSOLE
Tasks


Docker Hub
docker pull
docker create
Created
docker start
Exited
docker stop
docker start
Started
Dead
docker pause
docker unpause
Paused
docker run

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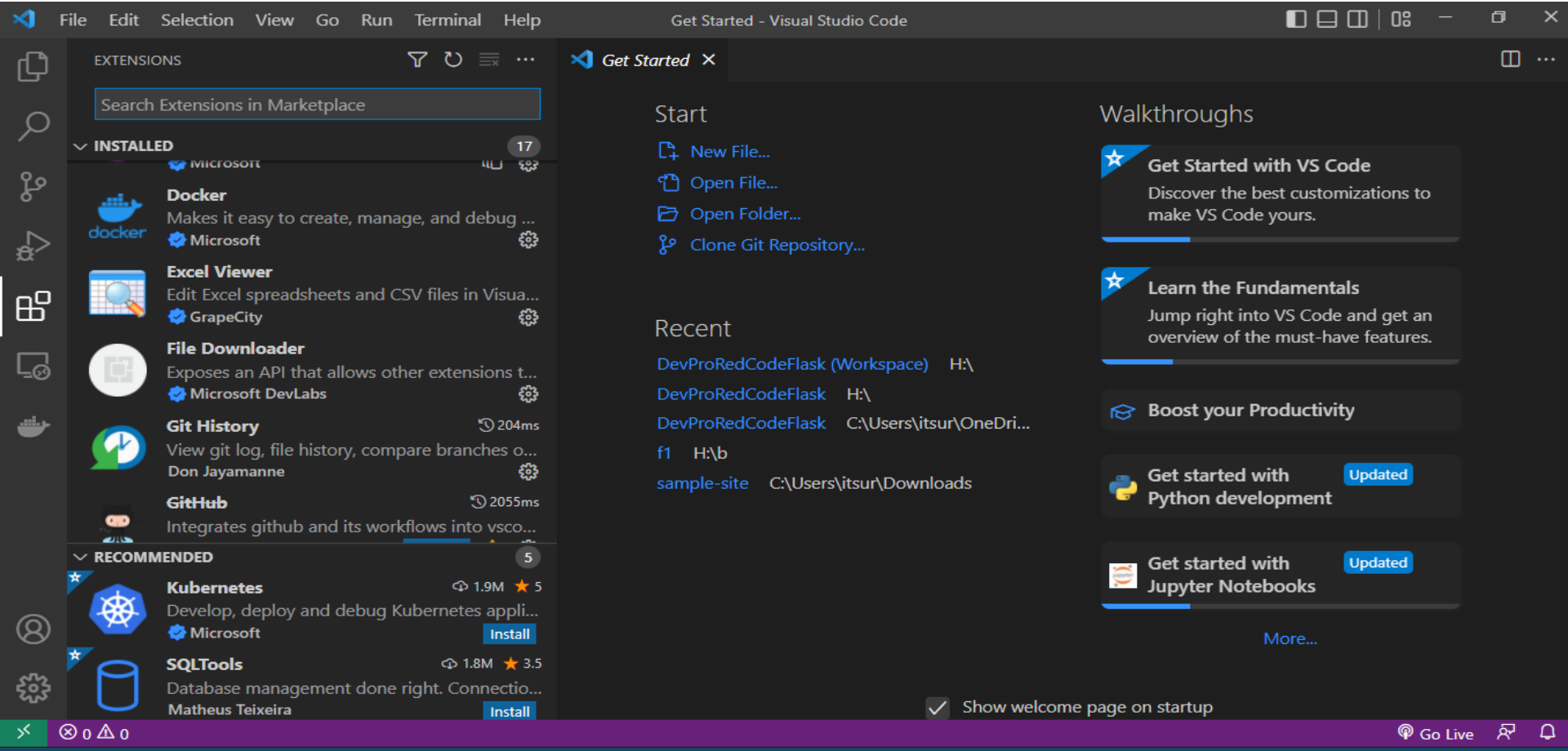
Red Hat, Fedora, SUSE

.deb 64 bit ARM ARM 64
.rpm 64 bit ARM ARM 64
.tar.gz 64 bit ARM ARM 64
Snap Store

Mac
macOS 10.11+

.zip Universal Intel Chip Apple Silicon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GitHub 2055ms
Integrates github and its workflows into vsco...
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Kubernetes 1.9M 5
Develop, deploy and debug Kubernetes appli...
Microsoft Install
SQLTools 1.8M 3.5
Database management done right. Connectio...
Matheus Teixeira Install
Get Started
Start
New File...
Open File...
Open Folder...
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DevProRedCodeFlask H:\
DevProRedCodeFlask C:\Users\itsur\OneDri...
f1 H:\b
sample-site C:\Users\itsur\Downloads
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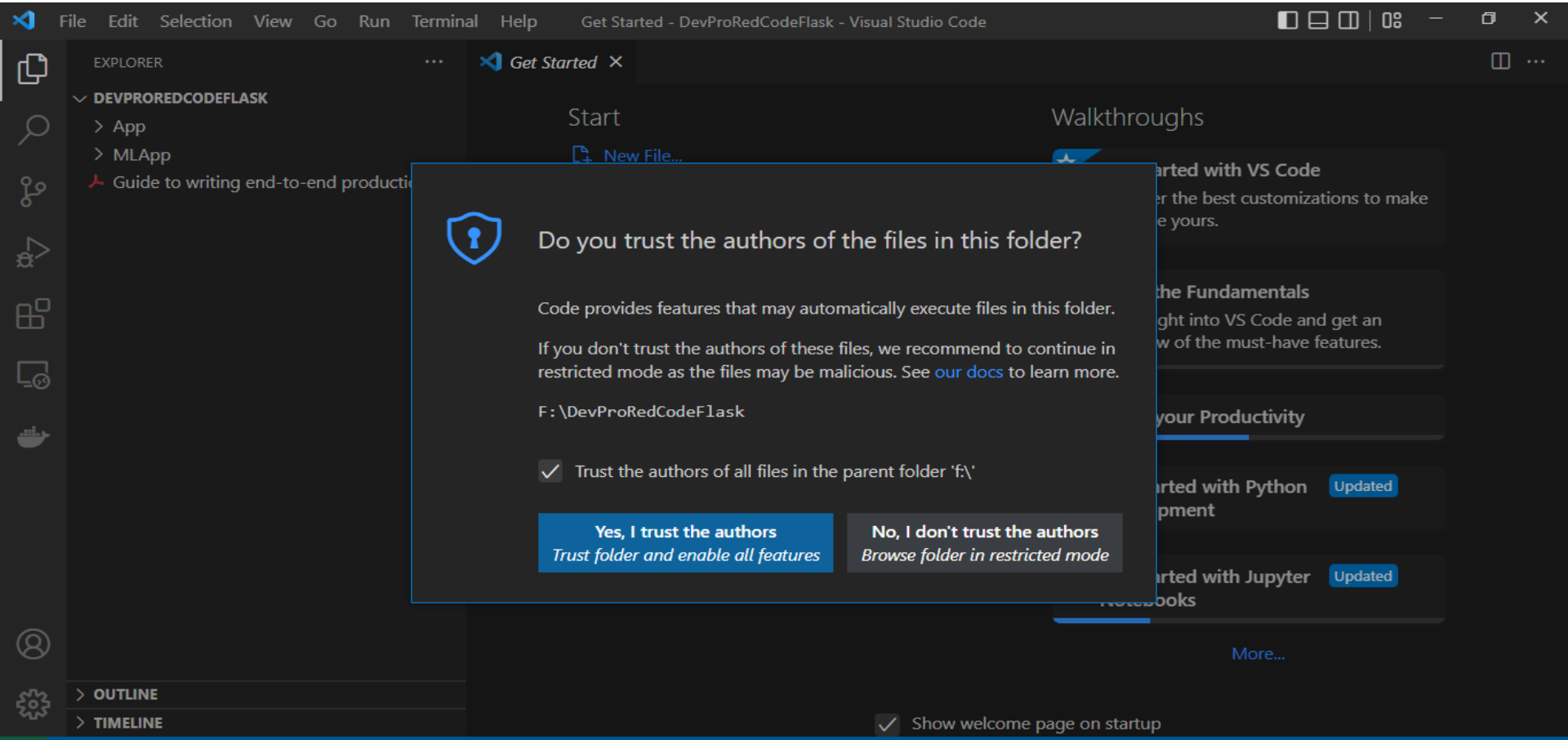
0 0
Go Live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New File...
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ght into VS Code and get an
w of the must-have features.
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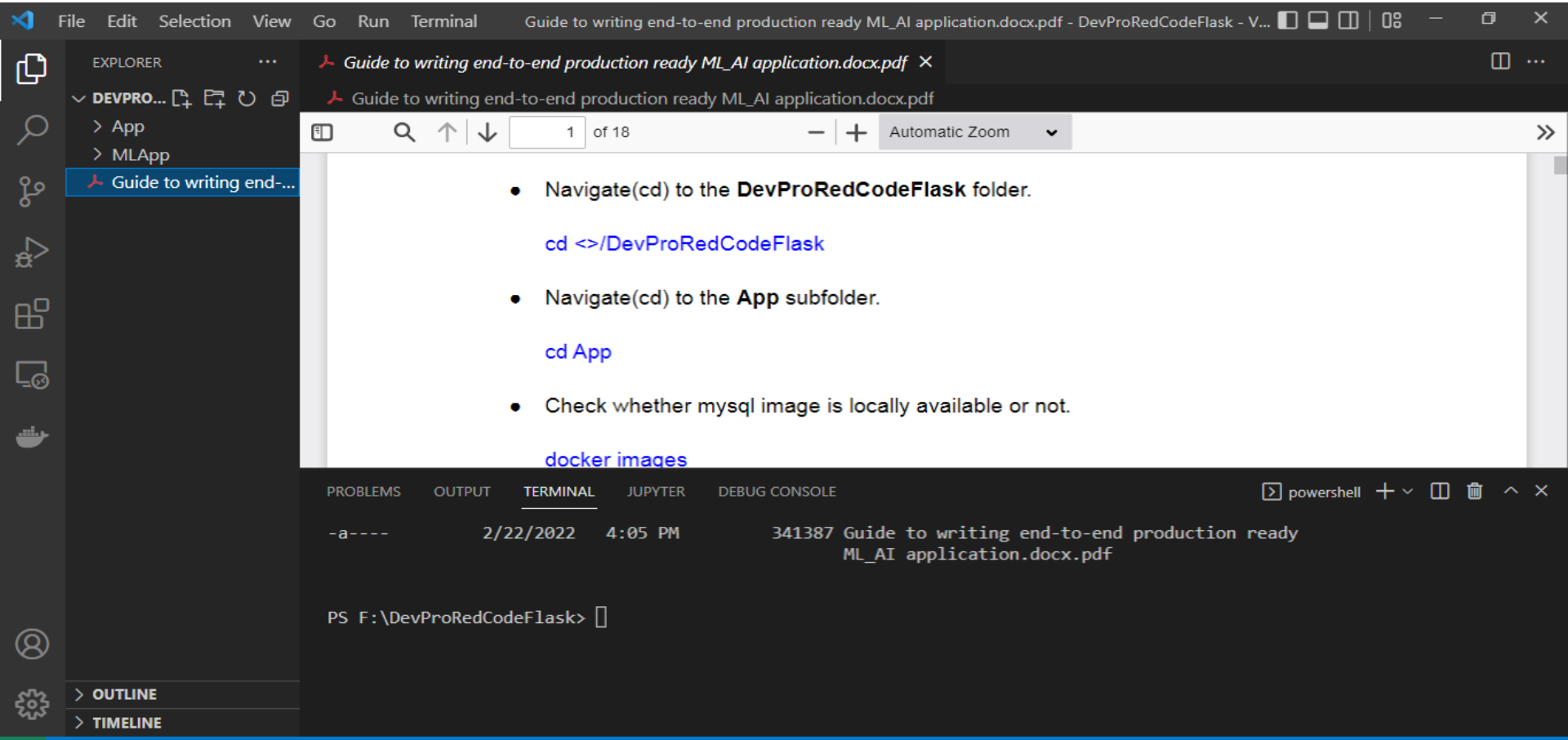
pment
Updated
rted with Jupyter
Notebooks
Updated
More...
Show welcome page on startup
Do you trust the authors of the files in this folder?
Code provides features that may automatically execute files in this folder.
If you don't trust the authors of these files, we recommend to continue in restricted mode as the files may be malicious. See our docs to learn more.
F:\DevProRedCodeFlask
Trust the authors of all files in the parent folder 'f:\'
Yes, I trust the authors
Trust folder and enable all features
No, I don't trust the authors
Browse folder in restricted mode
OUTLINE
TIMELINE
0 0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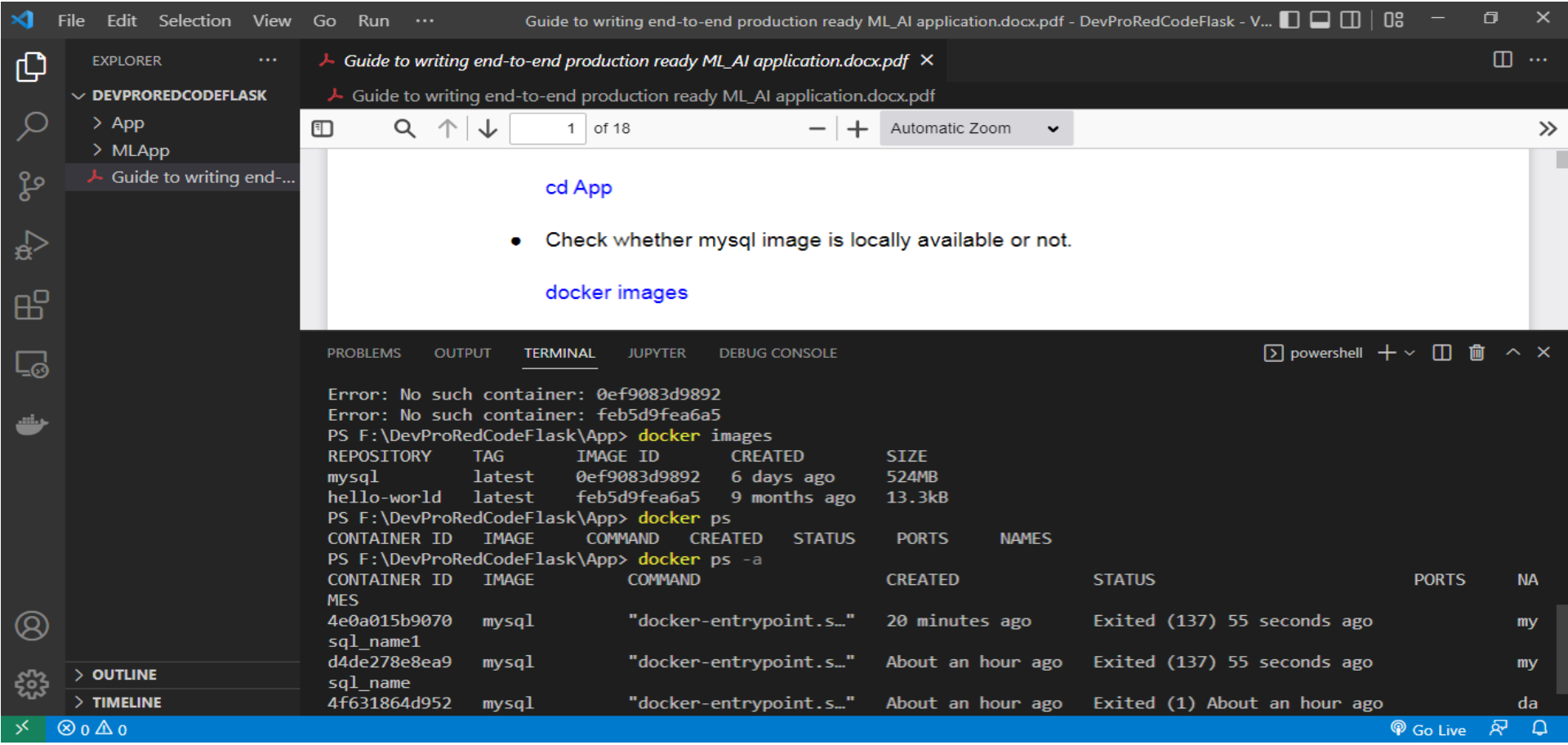
Automatic Zoom
Navigate(cd) to the DevProRedCodeFlask folder.
cd <>/DevProRedCodeFlask
Navigate(cd) to the App subfolder.
cd App
Check whether mysql image is locally available or not.
docker images
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
powershell
-a---- 2/22/2022 4:05 PM 341387 Guide to writing end-to-end production ready ML_AI application.docx.pdf
PS F:\DevProRedCodeFlask>
OUTLINE
TIMELINE
Go Live


File Edit Selection View Go Run ...
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cd App
Check whether mysql image is locally available or not.
docker images
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
powershell
Error: No such container: 0ef9083d9892
Error: No such container: feb5d9fea6a5
PS F:\DevProRedCodeFlask\App> docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
mysql latest 0ef9083d9892 6 days ago 524MB
hello-world latest feb5d9fea6a5 9 months ago 13.3kB
PS F:\DevProRedCodeFlask\App> docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
PS F:\DevProRedCodeFlask\App> docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NA
MES
4e0a015b9070 mysql "docker-entrypoint.s…" 20 minutes ago Exited (137) 55 seconds ago my
sql_name1
d4de278e8ea9 mysql "docker-entrypoint.s…" About an hour ago Exited (137) 55 seconds ago my
sql_name
4f631864d952 mysql "docker-entrypoint.s…" About an hour ago Exited (1) About an hour ago da
OUTLINE
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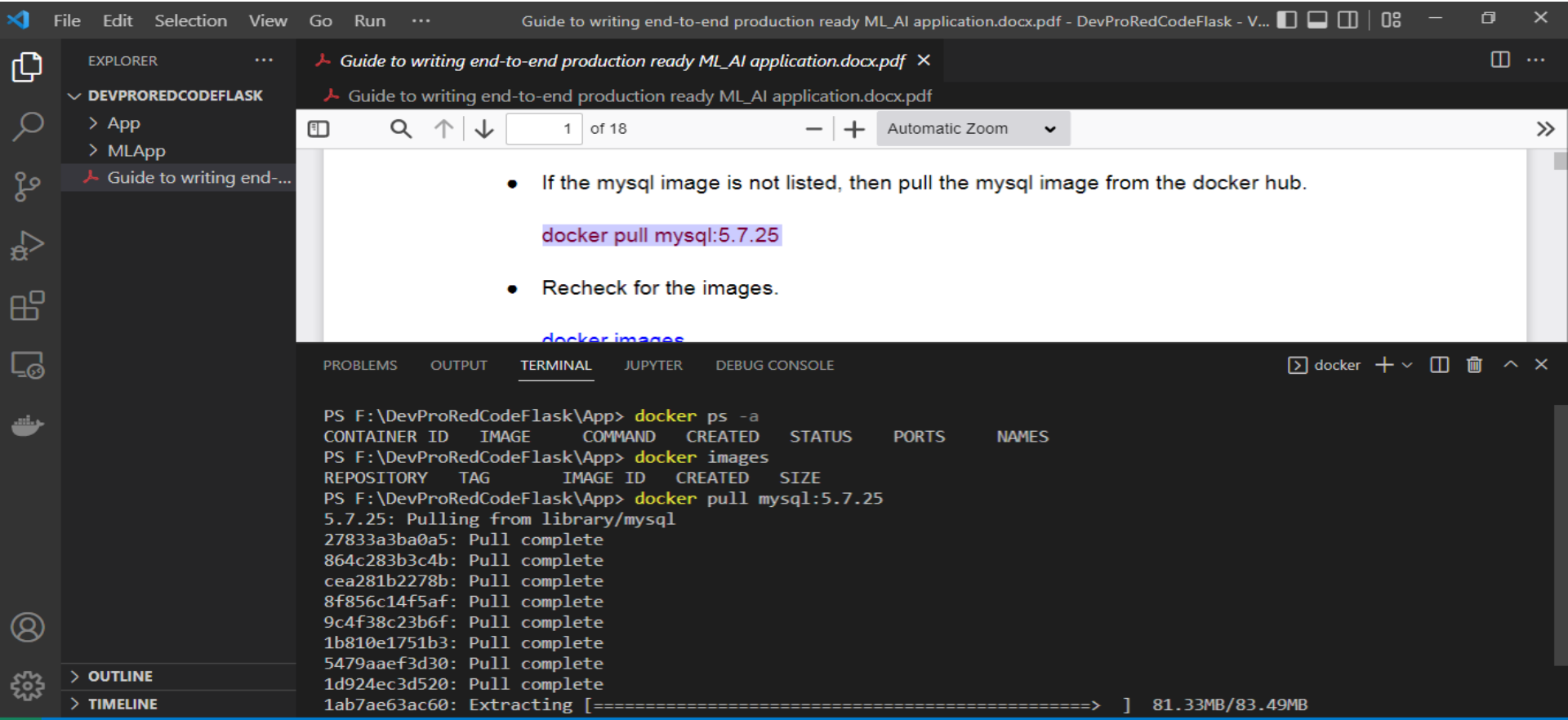
0 0
Go Live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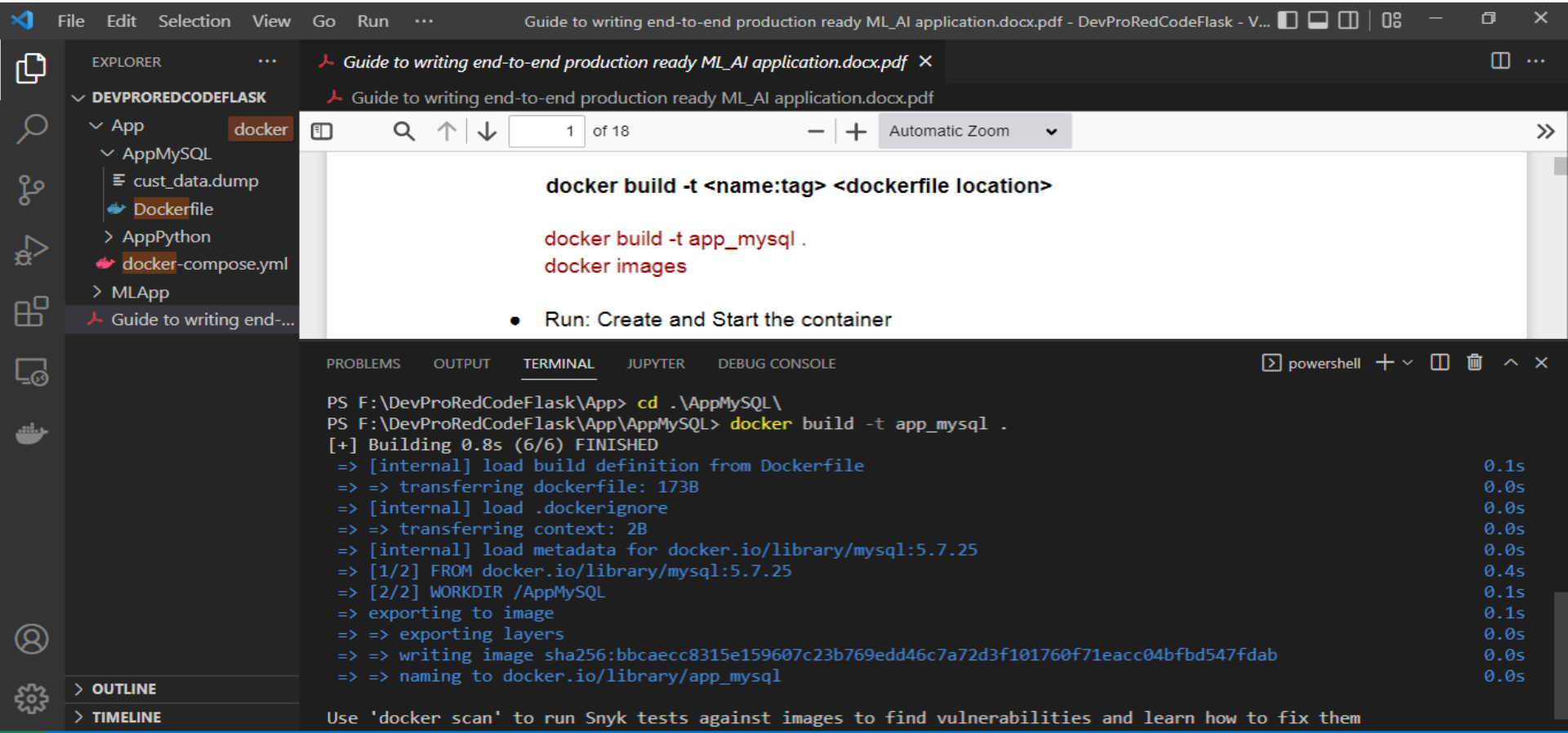
If the mysql image is not listed, then pull the mysql image from the docker hub.
docker pull mysql:5.7.25
Recheck for the images.
docker images
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
PS F:\DevProRedCodeFlask\App> docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
PS F:\DevProRedCodeFlask\App> docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
PS F:\DevProRedCodeFlask\App> docker pull mysql:5.7.25
5.7.25: Pulling from library/mysql
27833a3ba0a5: Pull complete
864c283b3c4b: Pull complete
cea281b2278b: Pull complete
8f856c14f5af: Pull complete
9c4f38c23b6f: Pull complete
1b810e1751b3: Pull complete
5479aaef3d30: Pull complete
1d924ec3d520: Pull complete
1ab7ae63ac60: Extracting [==========>] 81.33MB/83.49MB
OUTLINE
TIMELINE
0 0
Go Live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docker build -t <name:tag> <dockerfile location>
docker build -t app_mysql .
docker images
Run: Create and Start the container
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
powershell
PS F:\DevProRedCodeFlask\App> cd .\AppMySQL\
PS F:\DevProRedCodeFlask\App\AppMySQL> docker build -t app_mysql .
[+] Building 0.8s (6/6) FINISHED
=> [internal] load build definition from Dockerfile 0.1s
=> => transferring dockerfile: 173B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/mysql:5.7.25 0.0s
=> [1/2] FROM docker.io/library/mysql:5.7.25 0.4s
=> [2/2] WORKDIR /AppMySQL 0.1s
=> exporting to image 0.1s
=> => exporting layers 0.0s
=> => writing image sha256:bbcaecc8315e159607c23b769edd46c7a72d3f101760f71eacc04bfbd547fdab 0.0s
=> => naming to docker.io/library/app_mysql 0.0s
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
OUTLINE
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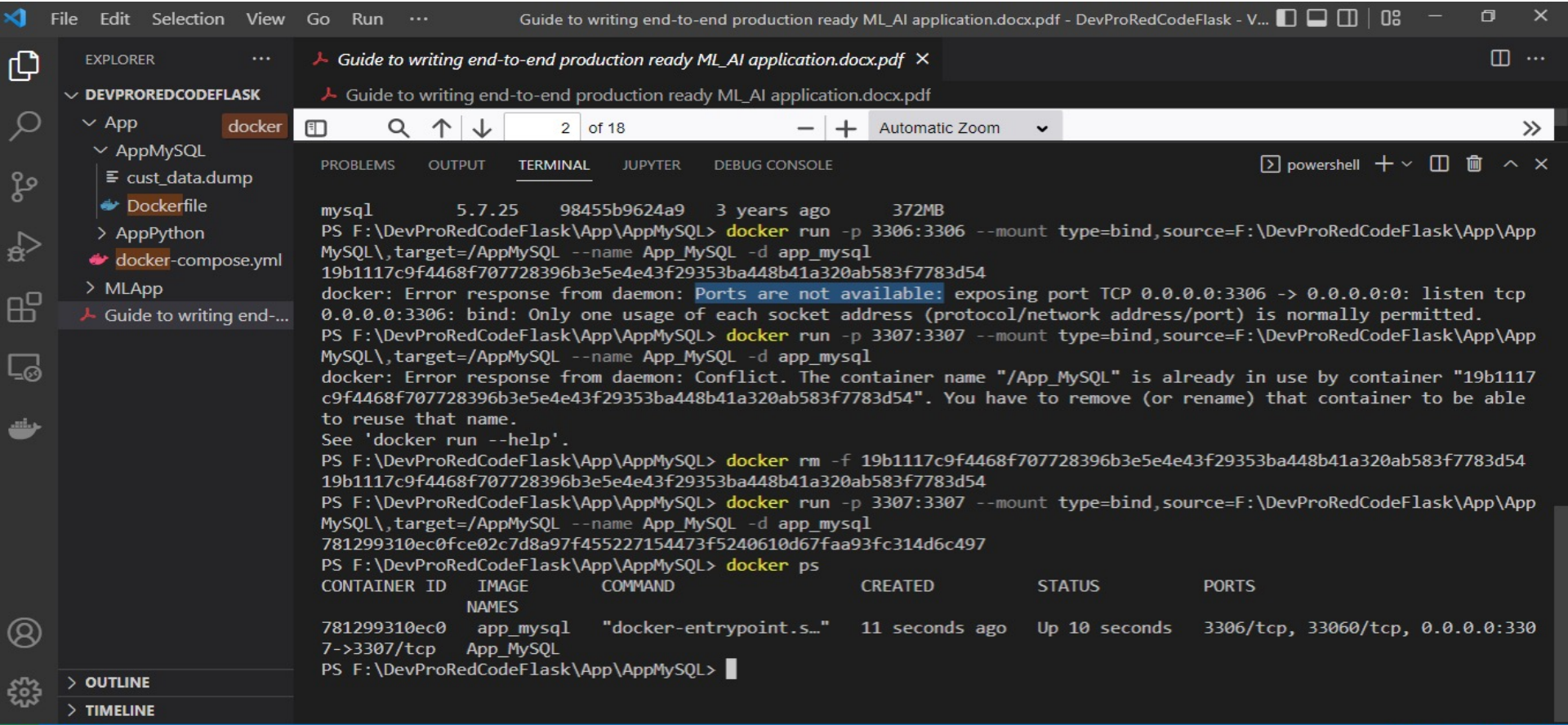
0 0
Go Live


File Edit Selection View Go Run ...
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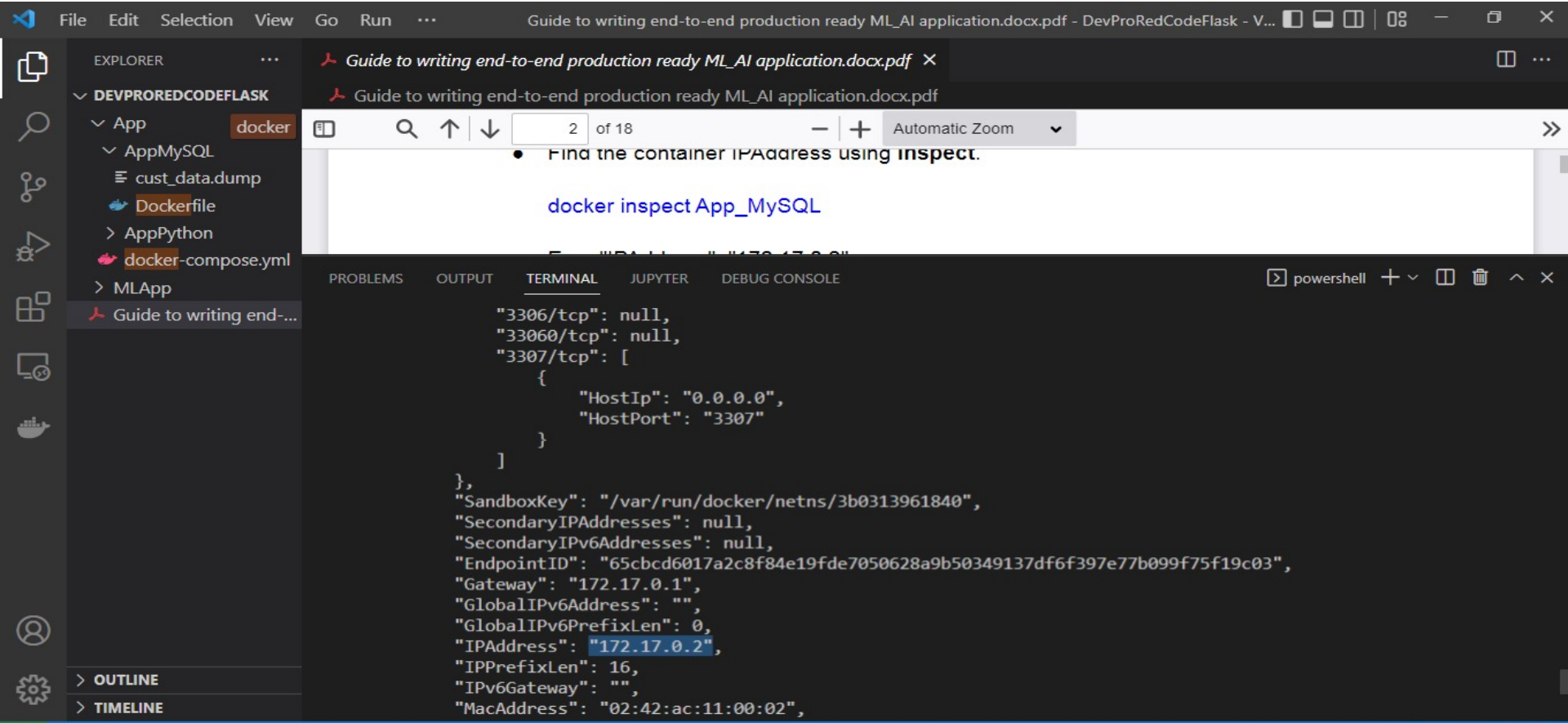
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
powershell
mysql 5.7.25 98455b9624a9 3 years ago 372MB
PS F:\DevProRedCodeFlask\App\AppMySQL> docker run -p 3306:3306 --mount type=bind,source=F:\DevProRedCodeFlask\App\AppMySQL\,target=/AppMySQL --name App_MySQL -d app_mysql
19b1117c9f4468f707728396b3e5e4e43f29353ba448b41a320ab583f7783d54
docker: Error response from daemon: Ports are not available: exposing port TCP 0.0.0.0:3306 -> 0.0.0.0:0: listen tcp 0.0.0.0:3306: bind: Only one usage of each socket address (protocol/network address/port) is normally permitted.
PS F:\DevProRedCodeFlask\App\AppMySQL> docker run -p 3307:3307 --mount type=bind,source=F:\DevProRedCodeFlask\App\AppMySQL\,target=/AppMySQL --name App_MySQL -d app_mysql
docker: Error response from daemon: Conflict. The container name "/App_MySQL" is already in use by container "19b1117c9f4468f707728396b3e5e4e43f29353ba448b41a320ab583f7783d54". You have to remove (or rename) that container to be able to reuse that name.
See 'docker run --help'.
PS F:\DevProRedCodeFlask\App\AppMySQL> docker rm -f 19b1117c9f4468f707728396b3e5e4e43f29353ba448b41a320ab583f7783d54
19b1117c9f4468f707728396b3e5e4e43f29353ba448b41a320ab583f7783d54
PS F:\DevProRedCodeFlask\App\AppMySQL> docker run -p 3307:3307 --mount type=bind,source=F:\DevProRedCodeFlask\App\AppMySQL\,target=/AppMySQL --name App_MySQL -d app_mysql
781299310ec0fce02c7d8a97f455227154473f5240610d67faa93fc314d6c497
PS F:\DevProRedCodeFlask\App\AppMySQL> docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
781299310ec0 app_mysql "docker-entrypoint.s…" 11 seconds ago Up 10 seconds 3306/tcp, 33060/tcp, 0.0.0.0:3307->3307/tcp App_MySQL
PS F:\DevProRedCodeFlask\App\AppMySQL>
OUTLINE
TIMELINE
0 0
Go Live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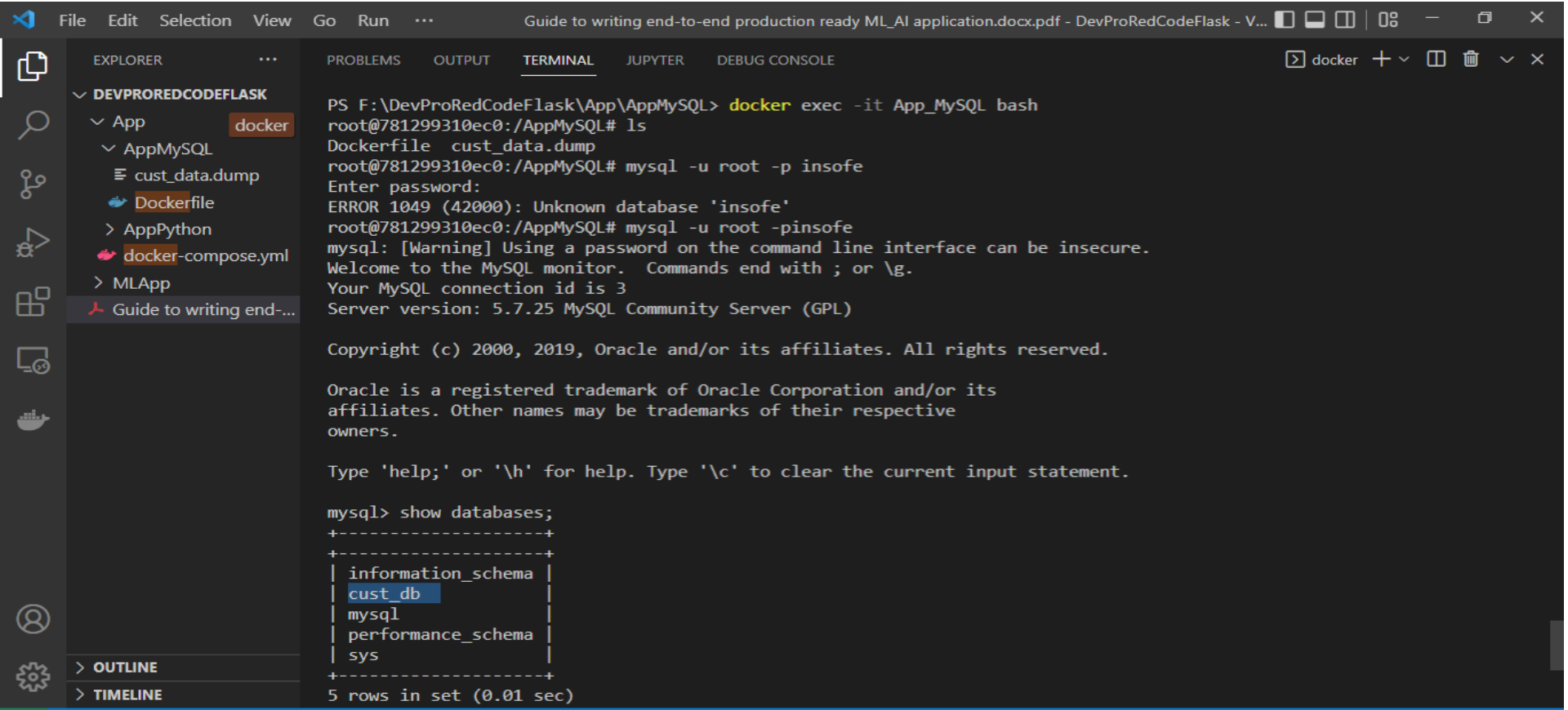
Find the container IPAddress using inspect.
docker inspect App_MySQL
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
powershell
"3306/tcp": null,
"33060/tcp": null,
"3307/tcp": [
{
"HostIp": "0.0.0.0",
"HostPort": "3307"
}
]
},
"SandboxKey": "/var/run/docker/netns/3b0313961840",
"SecondaryIPAddresses": null,
"SecondaryIPv6Addresses": null,
"EndpointID": "65cbcd6017a2c8f84e19fde7050628a9b50349137df6f397e77b099f75f19c03",
"Gateway": "172.17.0.1",
"GlobalIPv6Address": "",
"GlobalIPv6PrefixLen": 0,
"IPAddress": "172.17.0.2",
"IPPrefixLen": 16,
"IPv6Gateway": "",
"MacAddress": "02:42:ac:11:00:02",
0 0
Go Live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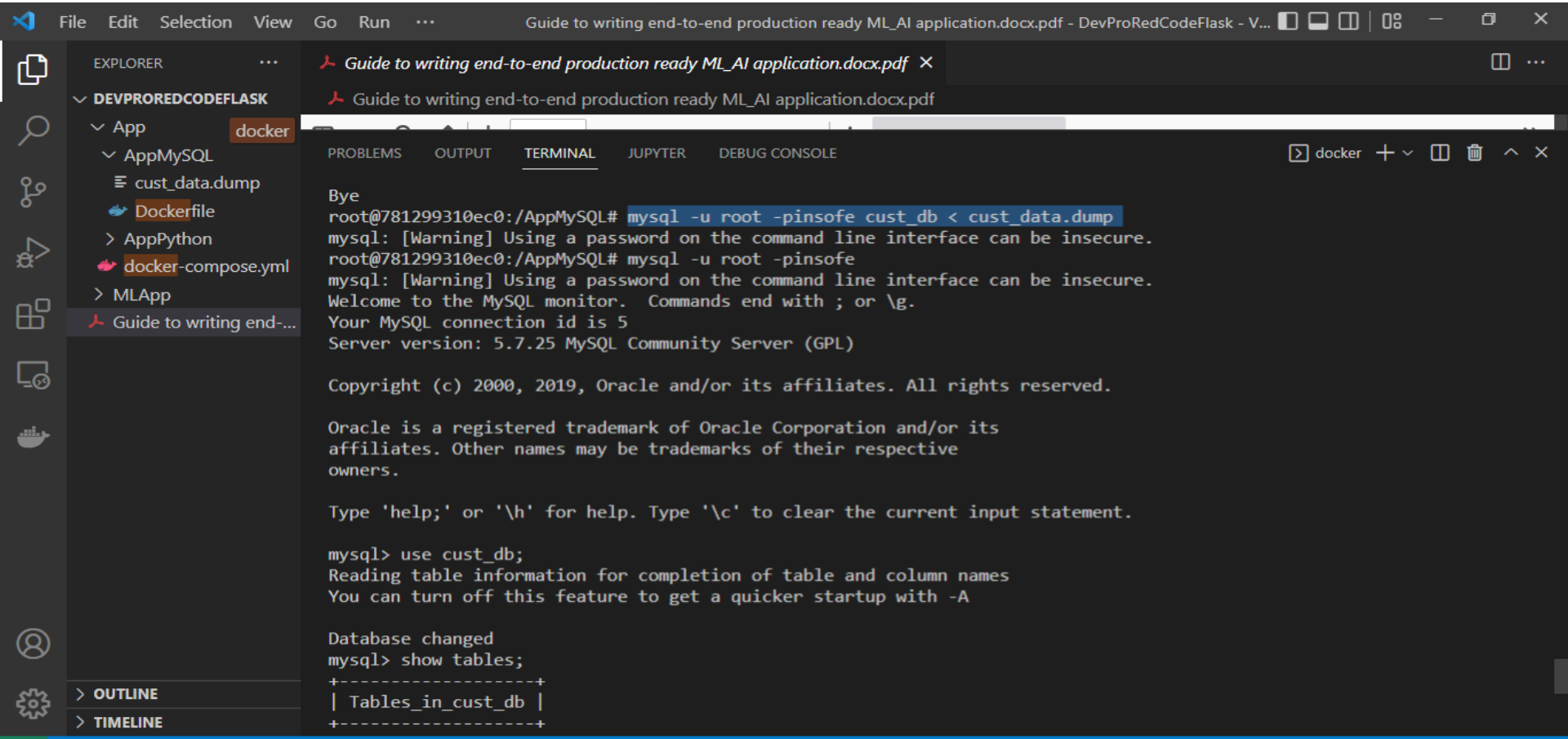
docker
PS F:\DevProRedCodeFlask\App\AppMySQL> docker exec -it App_MySQL bash
root@781299310ec0:/AppMySQL# ls
Dockerfile cust_data.dump
root@781299310ec0:/AppMySQL# mysql -u root -p insofe
Enter password:
ERROR 1049 (42000): Unknown database 'insofe'
root@781299310ec0:/AppMySQL# mysql -u root -pinsofe
mysql: [Warning] Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 3
Server version: 5.7.25 MySQL Community Server (GPL)
Copyright (c) 2000, 2019, Oracle and/or its affiliates. All rights reserved.
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> show databases;
+--------------------+
| information_schema |
| cust_db |
| mysql |
| performance_schema |
| sys |
+--------------------+
5 rows in set (0.01 sec)
0 0
Go Live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PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
Bye
root@781299310ec0:/AppMySQL# mysql -u root -pinsofe cust_db < cust_data.dump
mysql: [Warning] Using a password on the command line interface can be insecure.
root@781299310ec0:/AppMySQL# mysql -u root -pinsofe
mysql: [Warning] Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 5
Server version: 5.7.25 MySQL Community Server (GPL)
Copyright (c) 2000, 2019, Oracle and/or its affiliates. All rights reserved.
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affiliates. Other names may be trademarks of their respective
owners.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> use cust_db;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
Database changed
mysql> show tables;
+--------------------+
| Tables_in_cust_db |
+--------------------+
0 0
Go Live

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PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE docker

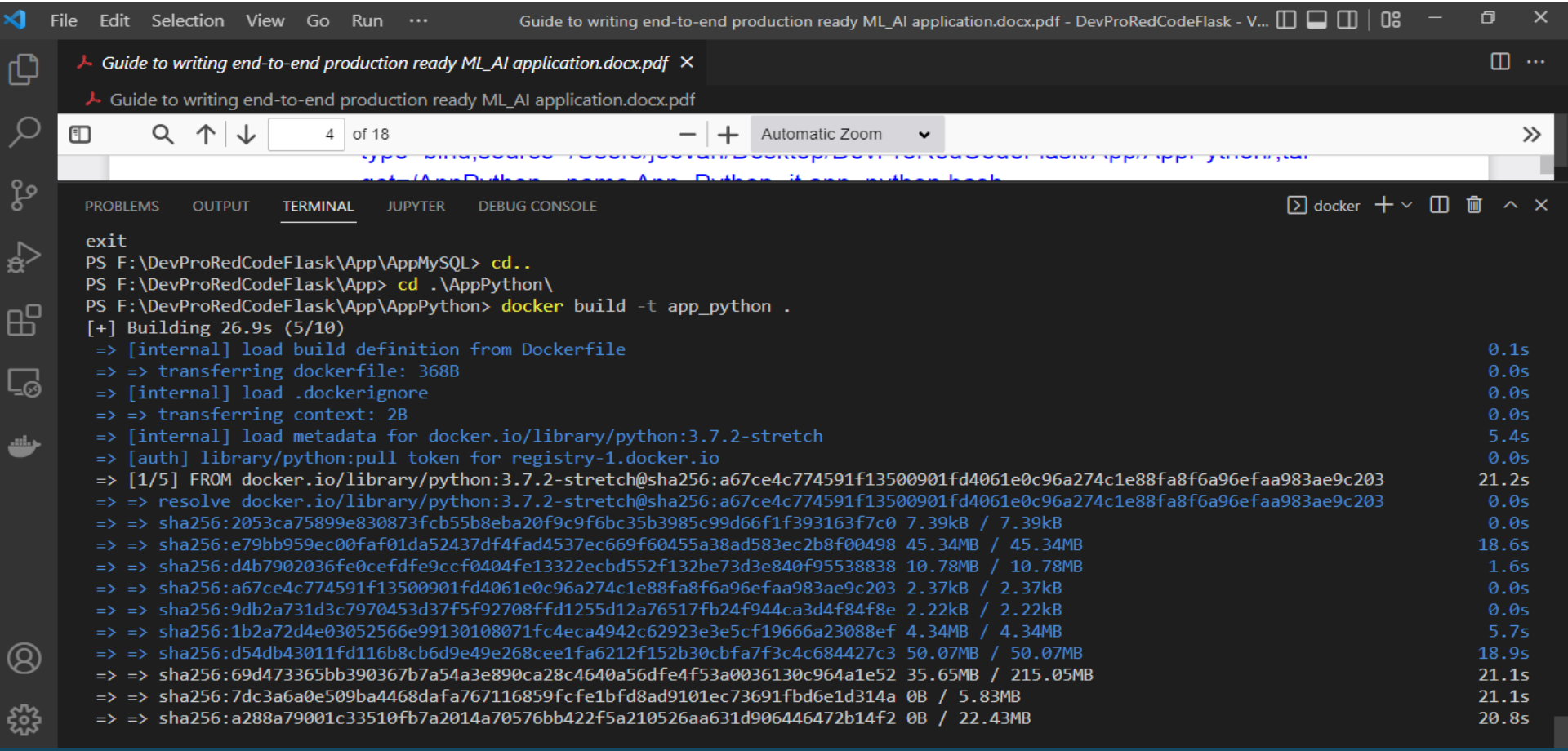
```
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+--------------------+
| Tables_in_cust_db |
6.4 |     4.857 |         5191 | no   |
|           3 |   37 | services   | married | high.school | no            | yes     | no    | telephone | may             | mon         |
  226 | 1        |   999 |        0 | nonexistent |          1.1 |        93.994 |         -36.4 |     4.857 |         5191 | no   |
+-------------+------+-----------+---------+-------------+---------------+---------+------+-----------+-----------------+-------------+----
------+----------+-------+----------+-------------+--------------+---------------+--------------+-----------+--------------+------+
3 rows in set (0.00 sec)

mysql> mysql> select count(*) from bank;
+-------+
| Num   |
+-------+
| 41188 |
+-------+
1 row in set (0.02 sec)

mysql>
```

0 0 Go Live


File Edit Selection View Go Run ...
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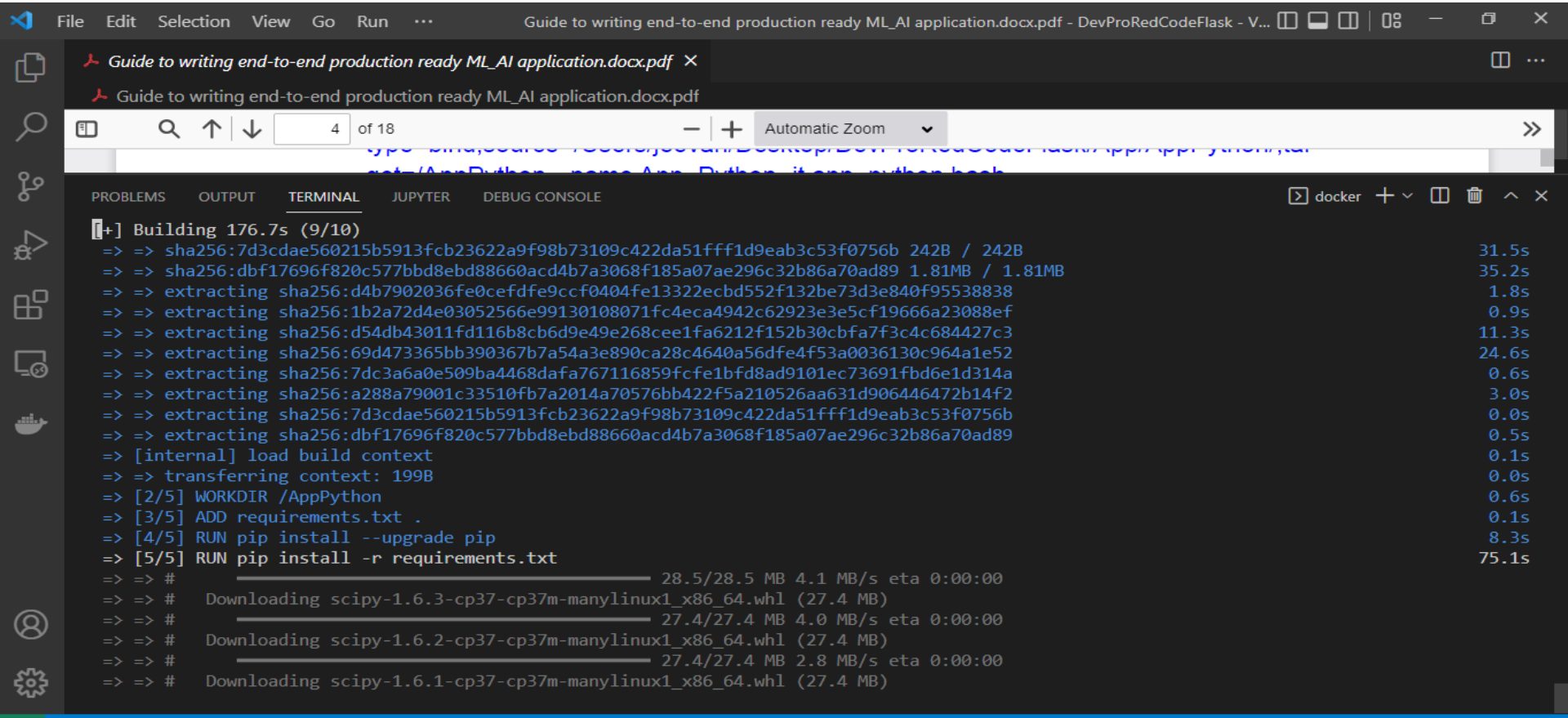
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
exit
PS F:\DevProRedCodeFlask\App\AppMySQL> cd..
PS F:\DevProRedCodeFlask\App> cd .\AppPython\
PS F:\DevProRedCodeFlask\App\AppPython> docker build -t app_python .
[+] Building 26.9s (5/10)
=> [internal] load build definition from Dockerfile 0.1s
=> => transferring dockerfile: 368B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/python:3.7.2-stretch 5.4s
=> [auth] library/python:pull token for registry-1.docker.io 0.0s
=> [1/5] FROM docker.io/library/python:3.7.2-stretch@sha256:a67ce4c774591f13500901fd4061e0c96a274c1e88fa8f6a96efaa983ae9c203 21.2s
=> => resolve docker.io/library/python:3.7.2-stretch@sha256:a67ce4c774591f13500901fd4061e0c96a274c1e88fa8f6a96efaa983ae9c203 0.0s
=> => sha256:2053ca75899e830873fcb55b8eba20f9c9f6bc35b3985c99d66f1f393163f7c0 7.39kB / 7.39kB 0.0s
=> => sha256:e79bb959ec00faf01da52437df4fad4537ec669f60455a38ad583ec2b8f00498 45.34MB / 45.34MB 18.6s
=> => sha256:d4b7902036fe0cefdfe9ccf0404fe13322ecbd552f132be73d3e840f95538838 10.78MB / 10.78MB 1.6s
=> => sha256:a67ce4c774591f13500901fd4061e0c96a274c1e88fa8f6a96efaa983ae9c203 2.37kB / 2.37kB 0.0s
=> => sha256:9db2a731d3c7970453d37f5f92708ffd1255d12a76517fb24f944ca3d4f84f8e 2.22kB / 2.22kB 0.0s
=> => sha256:1b2a72d4e03052566e99130108071fc4eca4942c62923e3e5cf19666a23088ef 4.34MB / 4.34MB 5.7s
=> => sha256:d54db43011fd116b8cb6d9e49e268cee1fa6212f152b30cbfa7f3c4c684427c3 50.07MB / 50.07MB 18.9s
=> => sha256:69d473365bb390367b7a54a3e890ca28c4640a56dfe4f53a0036130c964a1e52 35.65MB / 215.05MB 21.1s
=> => sha256:7dc3a6a0e509ba4468dafa767116859fcfe1bfd8ad9101ec73691fbd6e1d314a 0B / 5.83MB 21.1s
=> => sha256:a288a79001c33510fb7a2014a70576bb422f5a210526aa631d906446472b14f2 0B / 22.43MB 20.8s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docker
[+] Building 176.7s (9/10)
=> => sha256:7d3cdae560215b5913fcb23622a9f98b73109c422da51fff1d9eab3c53f0756b 242B / 242B 31.5s
=> => sha256:dbf17696f820c577bbd8ebd88660acd4b7a3068f185a07ae296c32b86a70ad89 1.81MB / 1.81MB 35.2s
=> => extracting sha256:d4b7902036fe0cefdfe9ccf0404fe13322ecbd552f132be73d3e840f95538838 1.8s
=> => extracting sha256:1b2a72d4e03052566e99130108071fc4eca4942c62923e3e5cf19666a23088ef 0.9s
=> => extracting sha256:d54db43011fd116b8cb6d9e49e268cee1fa6212f152b30cbfa7f3c4c684427c3 11.3s
=> => extracting sha256:69d473365bb390367b7a54a3e890ca28c4640a56dfe4f53a0036130c964a1e52 24.6s
=> => extracting sha256:7dc3a6a0e509ba4468dafa767116859fcfe1bfd8ad9101ec73691fbd6e1d314a 0.6s
=> => extracting sha256:a288a79001c33510fb7a2014a70576bb422f5a210526aa631d906446472b14f2 3.0s
=> => extracting sha256:7d3cdae560215b5913fcb23622a9f98b73109c422da51fff1d9eab3c53f0756b 0.0s
=> => extracting sha256:dbf17696f820c577bbd8ebd88660acd4b7a3068f185a07ae296c32b86a70ad89 0.5s
=> [internal] load build context 0.1s
=> => transferring context: 199B 0.0s
=> [2/5] WORKDIR /AppPython 0.6s
=> [3/5] ADD requirements.txt . 0.1s
=> [4/5] RUN pip install --upgrade pip 8.3s
=> [5/5] RUN pip install -r requirements.txt 75.1s
=> => # 28.5/28.5 MB 4.1 MB/s eta 0:00:00
=> => # Downloading scipy-1.6.3-cp37-cp37m-manylinux1_x86_64.whl (27.4 MB)
=> => # 27.4/27.4 MB 4.0 MB/s eta 0:00:00
=> => # Downloading scipy-1.6.2-cp37-cp37m-manylinux1_x86_64.whl (27.4 MB)
=> => # 27.4/27.4 MB 2.8 MB/s eta 0:00:00
=> => # Downloading scipy-1.6.1-cp37-cp37m-manylinux1_x86_64.whl (27.4 MB)
Go Live

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PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE docker

```
 => [internal] load metadata for docker.io/library/python:3.7.2-stretch                                    5.4s
 => [auth] library/python:pull token for registry-1.docker.io                                              0.0s
 => [1/5] FROM docker.io/library/python:3.7.2-stretch@sha256:a67ce4c774591f13500901fd4061e0c96a274c1e88fa  87.2s
 => => resolve docker.io/library/python:3.7.2-stretch@sha256:a67ce4c774591f13500901fd4061e0c96a274c1e88fa  0.0s
 => => sha256:2053ca75899e830873fcb55b8eba20f9c9f6bc35b3985c99d66f1f393163f7c0 7.39kB / 7.39kB             0.0s
 => => sha256:e79bb959ec00faf01da52437df4fad4537ec669f60455a38ad583ec2b8f00498 45.34MB / 45.34MB          18.6s
 => => sha256:d4b7902036fe0cefdfe9ccf0404fe13322ecbd552f132be73d3e840f95538838 10.78MB / 10.78MB          1.6s
 => => sha256:a67ce4c774591f13500901fd4061e0c96a274c1e88fa8f6a96efaa983ae9c203 2.37kB / 2.37kB            0.0s
 => => sha256:9db2a731d3c7970453d37f5f92708ffd1255d12a76517fb24f944ca3d4f84f8e 2.22kB / 2.22kB            0.0s
 => => sha256:1b2a72d4e03052566e99130108071fc4eca4942c62923e3e5cf19666a23088ef 4.34MB / 4.34MB            5.7s
 => => extracting sha256:7dc3a6a0e509ba4468dafa767116859fcfe1bfd8ad9101ec73691fbd6e1d314a                  0.6s
 => => extracting sha256:a288a79001c33510fb7a2014a70576bb422f5a210526aa631d906446472b14f2                  3.0s
 => => extracting sha256:7d3cdae560215b5913fcb23622a9f98b73109c422da51fff1d9eab3c53f0756b                  0.0s
 => => extracting sha256:dbf17696f820c577bbd8ebd88660acd4b7a3068f185a07ae296c32b86a70ad89                  0.5s
 => [internal] load build context                                                                          0.1s
 => => transferring context: 199B                                                                          0.0s
 => [2/5] WORKDIR /AppPython                                                                               0.6s
 => [3/5] ADD requirements.txt .                                                                           0.1s
 => [4/5] RUN pip install --upgrade pip                                                                    8.3s
 => [5/5] RUN pip install -r requirements.txt                                                            159.5s
 => exporting to image                                                                                    10.5s
 => => exporting layers                                                                                   10.4s
 => => writing image sha256:ac20e1a0a061f4ef1d762ae73c07d590163b73d0161a1a8e93d7417caf550cf4               0.0s
 => => naming to docker.io/library/app_python                                                              0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS F:\DevProRedCodeFlask\App\AppPython> docker run -p 1234:1234 --mount type=bind,source=F:\DevProRedCodeFlask\App\AppPython\,target=/AppPyt
hon --name App_Python -it app_python bash
root@e0e28edbf2b7:/AppPython#
```

⊗ 0 ⚠ 0 Go Live

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PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE powershell

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS F:\DevProRedCodeFlask> docker ps
CONTAINER ID   IMAGE        COMMAND                  CREATED          STATUS              PORTS
   NAMES
e0e28edbf2b7   app_python   "bash"                   2 minutes ago    Up About a minute   0.0.0.0:1234->1234/tcp
   App_Python
781299310ec0   app_mysql    "docker-entrypoint.s…"   26 minutes ago   Up 26 minutes       3306/tcp, 33060/tcp, 0.0.0.0:3307->3307/tcp
   App_MySQL
PS F:\DevProRedCodeFlask> docker inspect App_Python
[
    {
        "Id": "e0e28edbf2b7885eeae79f0be919ebb13f031a715093f277b62c36cb2798c50c",
        "Created": "2022-07-04T01:51:22.6645514Z",
        "Path": "bash",
        "Args": [],
        "State": {
            "Status": "running",
            "Running": true,
            "Paused": false,
            "Restarting": false,
```

⊗ 0 ⚠ 0 Go Live

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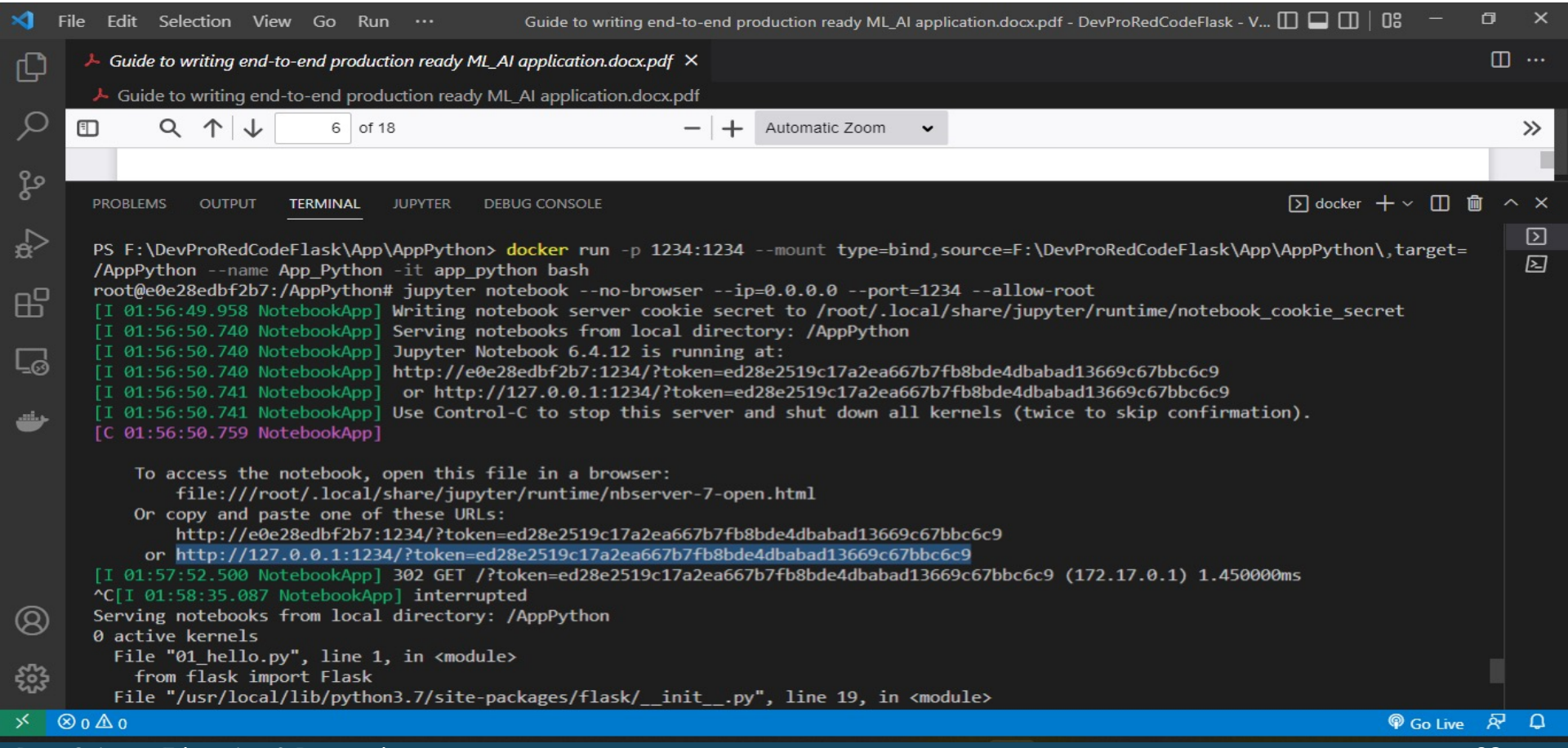
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE powershell


```
                }
            ]
        },
        "SandboxKey": "/var/run/docker/netns/ea908849bb6d",
        "SecondaryIPAddresses": null,
        "SecondaryIPv6Addresses": null,
        "EndpointID": "27e757f711c2a34ffd8ca39d6b4d840f0c87bffc5baf7999b2d73c1e70882254",
        "Gateway": "172.17.0.1",
        "GlobalIPv6Address": "",
        "GlobalIPv6PrefixLen": 0,
        "IPAddress": "172.17.0.3",
                "IPAMConfig": null,
                "Links": null,
                "Aliases": null,
                "NetworkID": "a1bb51240b0fc4c29da4de6958d78f66e6ad044c550c4e77b30fd8c31f8a8455",
                "EndpointID": "27e757f711c2a34ffd8ca39d6b4d840f0c87bffc5baf7999b2d73c1e70882254",
                "Gateway": "172.17.0.1",
                "IPAddress": "172.17.0.3",
                "IPPrefixLen": 16,
                "IPv6Gateway": "",
                "GlobalIPv6Address": "",
                "GlobalIPv6PrefixLen": 0,
                "MacAddress": "02:42:ac:11:00:03",
                "DriverOpts": null
```


⊗ 0 ⚠ 0 Go Live


File Edit Selection View Go Run ···
Guide to writing end-to-end production ready ML_AI application.docx.pdf - DevProRedCodeFlask - V...
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Automatic Zoom
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
PS F:\DevProRedCodeFlask\App\AppPython> docker run -p 1234:1234 --mount type=bind,source=F:\DevProRedCodeFlask\App\AppPython\,target=
/AppPython --name App_Python -it app_python bash
root@e0e28edbf2b7:/AppPython# jupyter notebook --no-browser --ip=0.0.0.0 --port=1234 --allow-root
[I 01:56:49.958 NotebookApp] Writing notebook server cookie secret to /root/.local/share/jupyter/runtime/notebook_cookie_secret
[I 01:56:50.740 NotebookApp] Serving notebooks from local directory: /AppPython
[I 01:56:50.740 NotebookApp] Jupyter Notebook 6.4.12 is running at:
[I 01:56:50.740 NotebookApp] http://e0e28edbf2b7:1234/?token=ed28e2519c17a2ea667b7fb8bde4dbabad13669c67bbc6c9
[I 01:56:50.741 NotebookApp] or http://127.0.0.1:1234/?token=ed28e2519c17a2ea667b7fb8bde4dbabad13669c67bbc6c9
[I 01:56:50.741 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 01:56:50.759 NotebookApp]
To access the notebook, open this file in a browser:
file:///root/.local/share/jupyter/runtime/nbserver-7-open.html
Or copy and paste one of these URLs:
http://e0e28edbf2b7:1234/?token=ed28e2519c17a2ea667b7fb8bde4dbabad13669c67bbc6c9
or http://127.0.0.1:1234/?token=ed28e2519c17a2ea667b7fb8bde4dbabad13669c67bbc6c9
[I 01:57:52.500 NotebookApp] 302 GET /?token=ed28e2519c17a2ea667b7fb8bde4dbabad13669c67bbc6c9 (172.17.0.1) 1.450000ms
^C[I 01:58:35.087 NotebookApp] interrupted
Serving notebooks from local directory: /AppPython
0 active kernels
File "01_hello.py", line 1, in <module>
from flask import Flask
File "/usr/local/lib/python3.7/site-packages/flask/__init__.py", line 19, in <module>
0 0
Go Live

notebooks/ | 01_Python_MySQL - Jupyter Not

127.0.0.1:1234/notebooks/notebooks/01_Python_MySQL.ipynb

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jupyter 01_Python_MySQL (autosaved) Logout

File Edit View Insert Cell Kernel Widgets Help | Notebook saved | Trusted | Python 3 (ipykernel)

Run | Code

In [1]:
```
import pandas as pd
```

In [4]:
```
connector = 'mysql+mysqlconnector://root:insofe@172.17.0.2:3306/cust_db'
```

In [5]:
```
bank = pd.read_sql("select * from bank", con=connector)
```

In [7]:
```
bank.head(3)
```

Out[7]:

	customer_no	age	job	marital	eduation	credit_default	housing	loan	contact	contacted_month	...	compaign	pdays	previous	poutcome	en
0	1	56	housemaid	married	basic.4y	no	no	no	telephone	may	...	1	999	0	nonexistent	
1	2	57	services	married	high.school	unknown	no	no	telephone	may	...	1	999	0	nonexistent	
2	3	37	services	married	high.school	no	yes	no	telephone	may	...	1	999	0	nonexistent	

3 rows × 22 columns

In [ ]:

notebooks/ | 02_Pandas_MySQL - Jupyter Not | 01_Python_MySQL - Jupyter Not

127.0.0.1:1234/notebooks/notebooks/02_Pandas_MySQL.ipynb

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jupyter 02_Pandas_MySQL (unsaved changes) Logout

File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3 (ipykernel)

Run Code

In [2]:
```
import sqlalchemy

engine = sqlalchemy.create_engine('mysql+mysqlconnector://root:insofe@172.17.0.2:3306/cust_db')
```

Read SQL database table into a DataFrame using pandas.read_sql_query

```
pandas.read_sql_table(table_name, con, columns=None)
```

In [3]:
```
df = pd.read_sql_table('bank', engine)
df.head(3)
```

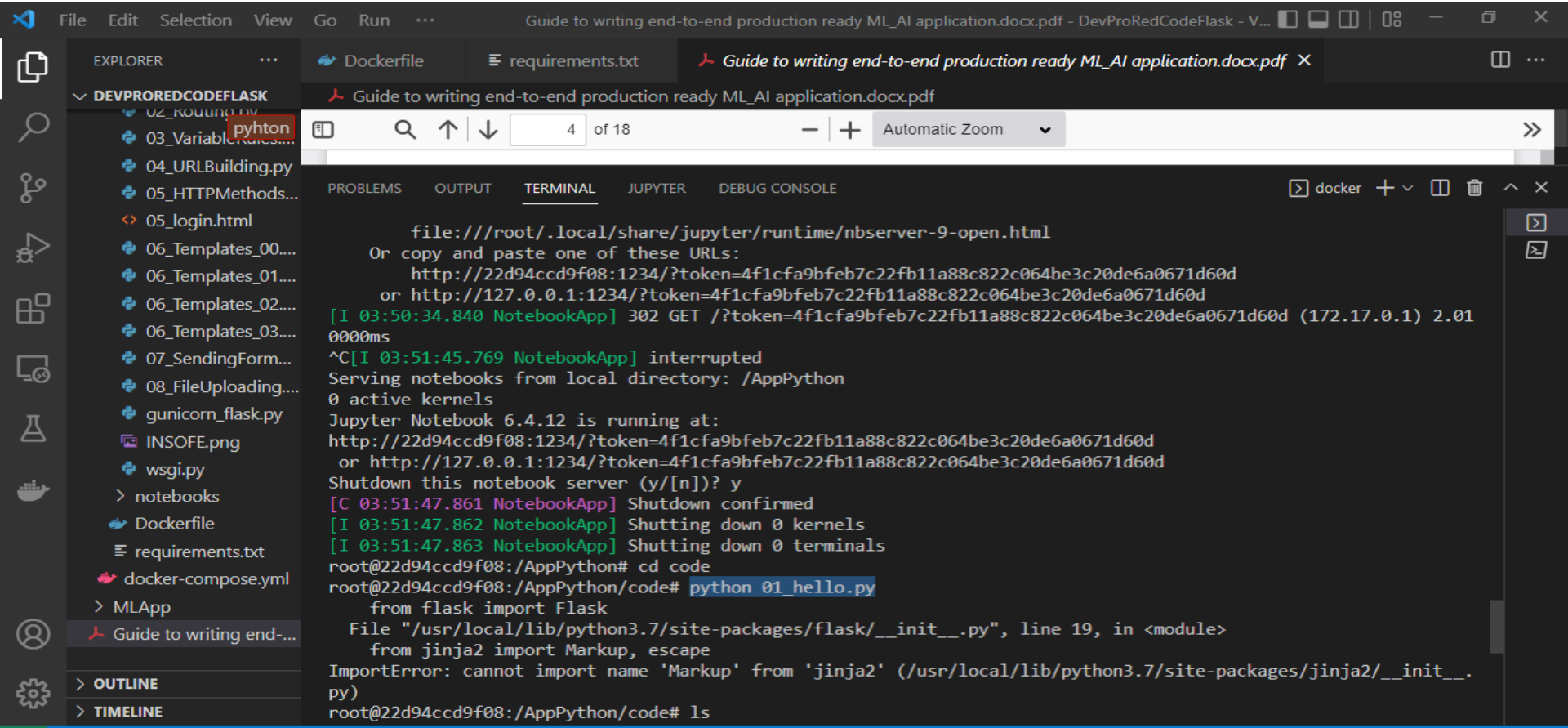
Out[3]:

	customer_no	age	job	marital	eduation	credit_default	housing	loan	contact	contacted_month	...	compaign	pdays	previous	poutcome	en
0	1	56	housemaid	married	basic.4y	no	no	no	telephone	may	...	1	999	0	nonexistent	
1	2	57	services	married	high.school	unknown	no	no	telephone	may	...	1	999	0	nonexistent	
2	3	37	services	married	high.school	no	yes	no	telephone	may	...	1	999	0	nonexistent	

3 rows × 22 columns

Read only selected columns

In [4]:
```
df = pd.read_sql_table('bank', engine, columns=["customer_no", "age", "job", "marital"])
df.head()
```


File Edit Selection View Go Run ...
Guide to writing end-to-end production ready ML_AI application.docx.pdf - DevProRedCodeFlask - V...
EXPLORER
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pyhton
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04_URLBuilding.py
05_HTTPMethods...
05_login.html
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06_Templates_01....
06_Templates_02....
06_Templates_03....
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docker
file:///root/.local/share/jupyter/runtime/nbserver-9-open.html
Or copy and paste one of these URLs:
http://22d94ccd9f08:1234/?token=4f1cfa9bfeb7c22fb11a88c822c064be3c20de6a0671d60d
or http://127.0.0.1:1234/?token=4f1cfa9bfeb7c22fb11a88c822c064be3c20de6a0671d60d
[I 03:50:34.840 NotebookApp] 302 GET /?token=4f1cfa9bfeb7c22fb11a88c822c064be3c20de6a0671d60d (172.17.0.1) 2.01
0000ms
^C[I 03:51:45.769 NotebookApp] interrupted
Serving notebooks from local directory: /AppPython
0 active kernels
Jupyter Notebook 6.4.12 is running at:
http://22d94ccd9f08:1234/?token=4f1cfa9bfeb7c22fb11a88c822c064be3c20de6a0671d60d
or http://127.0.0.1:1234/?token=4f1cfa9bfeb7c22fb11a88c822c064be3c20de6a0671d60d
Shutdown this notebook server (y/[n])? y
[C 03:51:47.861 NotebookApp] Shutdown confirmed
[I 03:51:47.862 NotebookApp] Shutting down 0 kernels
[I 03:51:47.863 NotebookApp] Shutting down 0 terminals
root@22d94ccd9f08:/AppPython# cd code
root@22d94ccd9f08:/AppPython/code# python 01_hello.py
from flask import Flask
File "/usr/local/lib/python3.7/site-packages/flask/__init__.py", line 19, in <module>
from jinja2 import Markup, escape
ImportError: cannot import name 'Markup' from 'jinja2' (/usr/local/lib/python3.7/site-packages/jinja2/__init__.
py)
root@22d94ccd9f08:/AppPython/code# ls
0 0
Go Live

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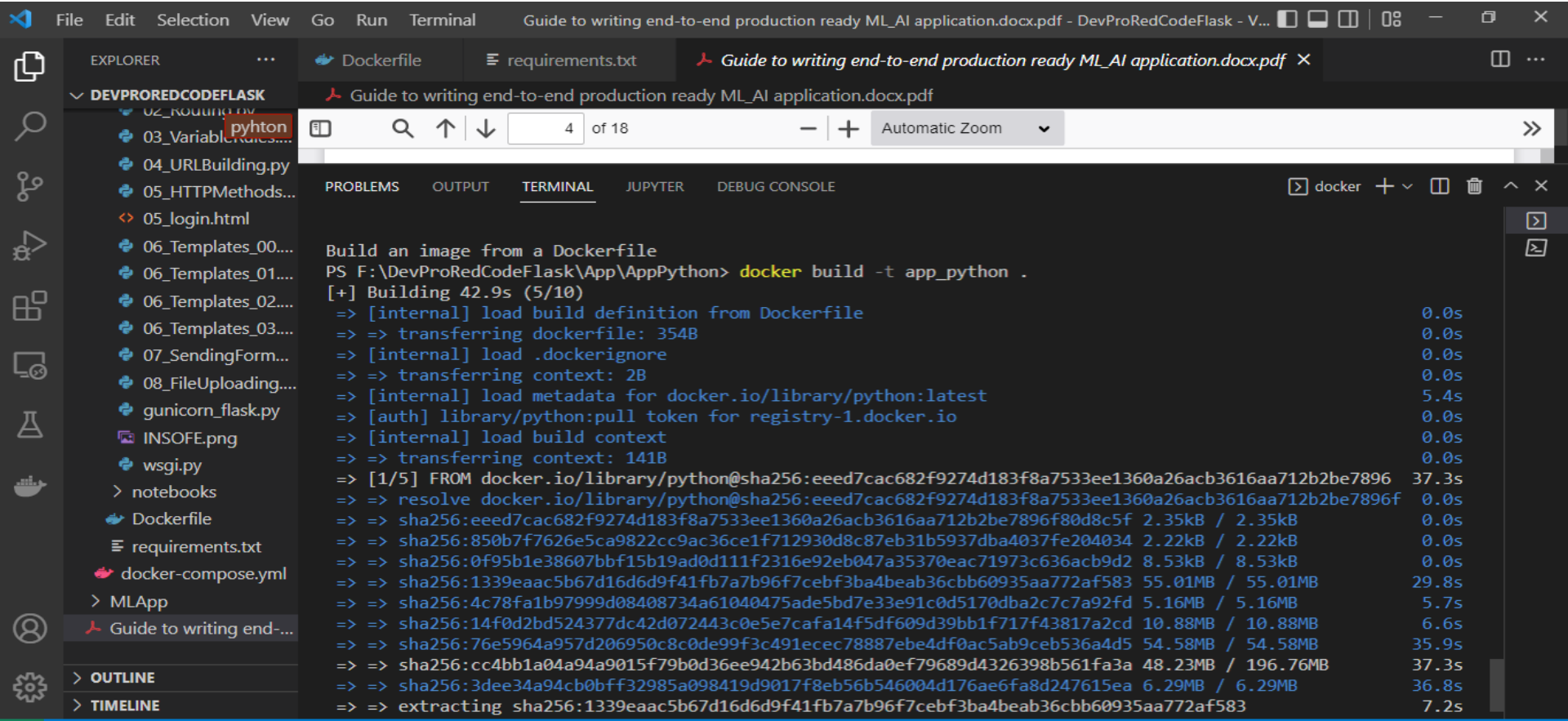
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE powershell

```
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS F:\DevProRedCodeFlask> docker ps
CONTAINER ID   IMAGE       COMMAND                  CREATED       STATUS       PORTS                                       NAMES
781299310ec0   app_mysql   "docker-entrypoint.s…"   2 hours ago   Up 2 hours   3306/tcp, 33060/tcp, 0.0.0.0:3307->3307/tcp   App_MySQ
L
PS F:\DevProRedCodeFlask> docker images
Error: No such container: ac20e1a0a061
PS F:\DevProRedCodeFlask> docker rm -f App_Python
App_Python
PS F:\DevProRedCodeFlask> docker rm -f ac20e1a0a061
Error: No such container: ac20e1a0a061
PS F:\DevProRedCodeFlask> docker rmi ac20e1a0a061
Untagged: app_python:latest
Deleted: sha256:ac20e1a0a061f4ef1d762ae73c07d590163b73d0161a1a8e93d7417caf550cf4
PS F:\DevProRedCodeFlask> docker ps -a
CONTAINER ID   IMAGE       COMMAND                  CREATED       STATUS       PORTS                                       NAMES
781299310ec0   app_mysql   "docker-entrypoint.s…"   2 hours ago   Up 2 hours   3306/tcp, 33060/tcp, 0.0.0.0:3307->3307/tcp   App_MySQ
L
PS F:\DevProRedCodeFlask> docker images
REPOSITORY   TAG       IMAGE ID       CREATED       SIZE
app_mysql    latest    bbcaecc8315e   2 hours ago   372MB
mysql        5.7.25    98455b9624a9   3 years ago   372MB
PS F:\DevProRedCodeFlask>
```

⊗ 0 ⚠ 0 Go Live


File Edit Selection View Go Run Terminal
Guide to writing end-to-end production ready ML_AI application.docx.pdf - DevProRedCodeFlask - V...
EXPLORER
DEVPROREDCODEFLASK
pyhton
03_Variable
04_URLBuilding.py
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05_login.html
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06_Templates_01....
06_Templates_02....
06_Templates_03....
07_SendingForm...
08_FileUploading....
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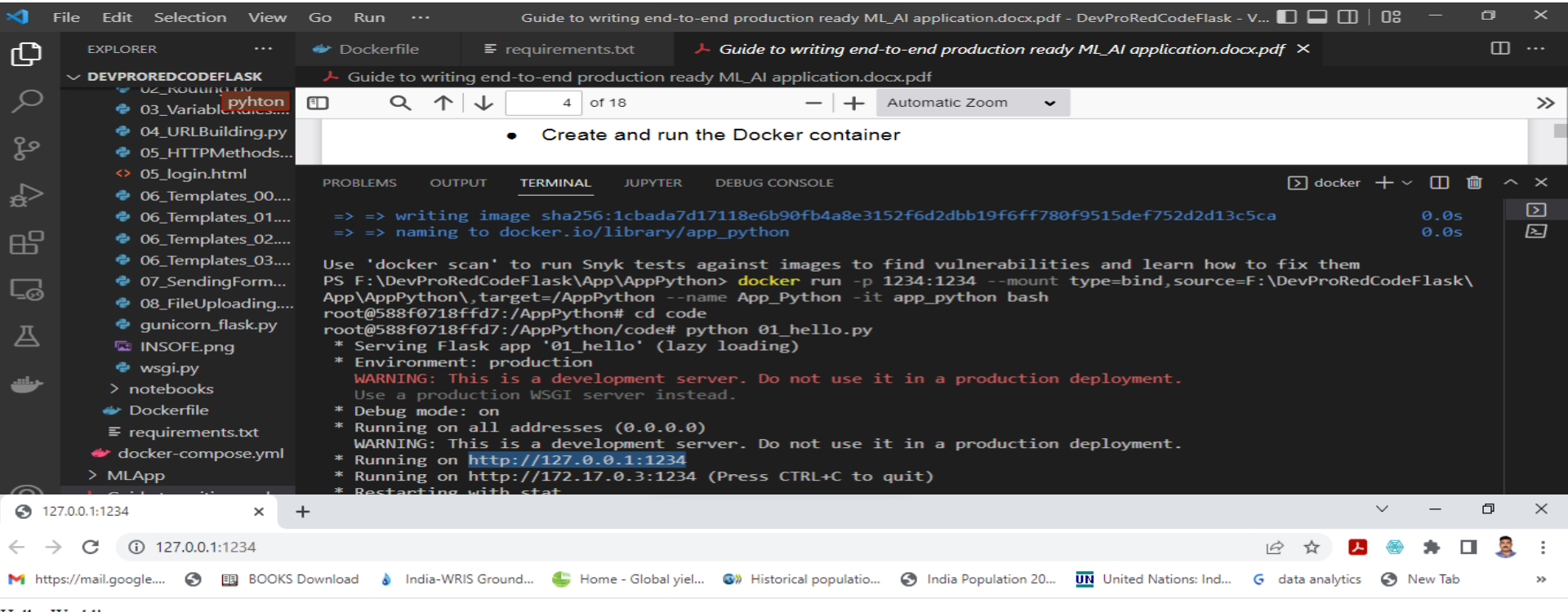
Automatic Zoom
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
Build an image from a Dockerfile
PS F:\DevProRedCodeFlask\App\AppPython> docker build -t app_python .
[+] Building 42.9s (5/10)
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 354B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/python:latest 5.4s
=> [auth] library/python:pull token for registry-1.docker.io 0.0s
=> [internal] load build context 0.0s
=> => transferring context: 141B 0.0s
=> [1/5] FROM docker.io/library/python@sha256:eeed7cac682f9274d183f8a7533ee1360a26acb3616aa712b2be7896 37.3s
=> => resolve docker.io/library/python@sha256:eeed7cac682f9274d183f8a7533ee1360a26acb3616aa712b2be7896f 0.0s
=> => sha256:eeed7cac682f9274d183f8a7533ee1360a26acb3616aa712b2be7896f80d8c5f 2.35kB / 2.35kB 0.0s
=> => sha256:850b7f7626e5ca9822cc9ac36ce1f712930d8c87eb31b5937dba4037fe204034 2.22kB / 2.22kB 0.0s
=> => sha256:0f95b1e38607bbf15b19ad0d111f2316e92eb047a35370eac71973c636acb9d2 8.53kB / 8.53kB 0.0s
=> => sha256:1339eaac5b67d16d6d9f41fb7a7b96f7cebf3ba4beab36cbb60935aa772af583 55.01MB / 55.01MB 29.8s
=> => sha256:4c78fa1b97999d08408734a61040475ade5bd7e33e91c0d5170dba2c7c7a92fd 5.16MB / 5.16MB 5.7s
=> => sha256:14f0d2bd524377dc42d072443c0e5e7cafa14f5df609d39bb1f717f43817a2cd 10.88MB / 10.88MB 6.6s
=> => sha256:76e5964a957d206950c8c0de99f3c491ecec78887ebe4df0ac5ab9ceb536a4d5 54.58MB / 54.58MB 35.9s
=> => sha256:cc4bb1a04a94a9015f79b0d36ee942b63bd486da0ef79689d4326398b561fa3a 48.23MB / 196.76MB 37.3s
=> => sha256:3dee34a94cb0bff32985a098419d9017f8eb56b546004d176ae6fa8d247615ea 6.29MB / 6.29MB 36.8s
=> => extracting sha256:1339eaac5b67d16d6d9f41fb7a7b96f7cebf3ba4beab36cbb60935aa772af583 7.2s
0 0
Go Live


File Edit Selection View Go Run
Guide to writing end-to-end production ready ML_AI application.docx.pdf - DevProRedCodeFlask - V...
EXPLORER
DEVPRORedCodeFlask
pyhton
03_Variable...
04_URLBuilding.py
05_HTTPMethods...
05_login.html
06_Templates_00...
06_Templates_01...
06_Templates_02...
06_Templates_03...
07_SendingForm...
08_FileUploading...
gunicorn_flask.py
INSOFE.png
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notebooks
Dockerfile
requirements.txt
docker-compose.yml
MLApp
Dockerfile
requirements.txt
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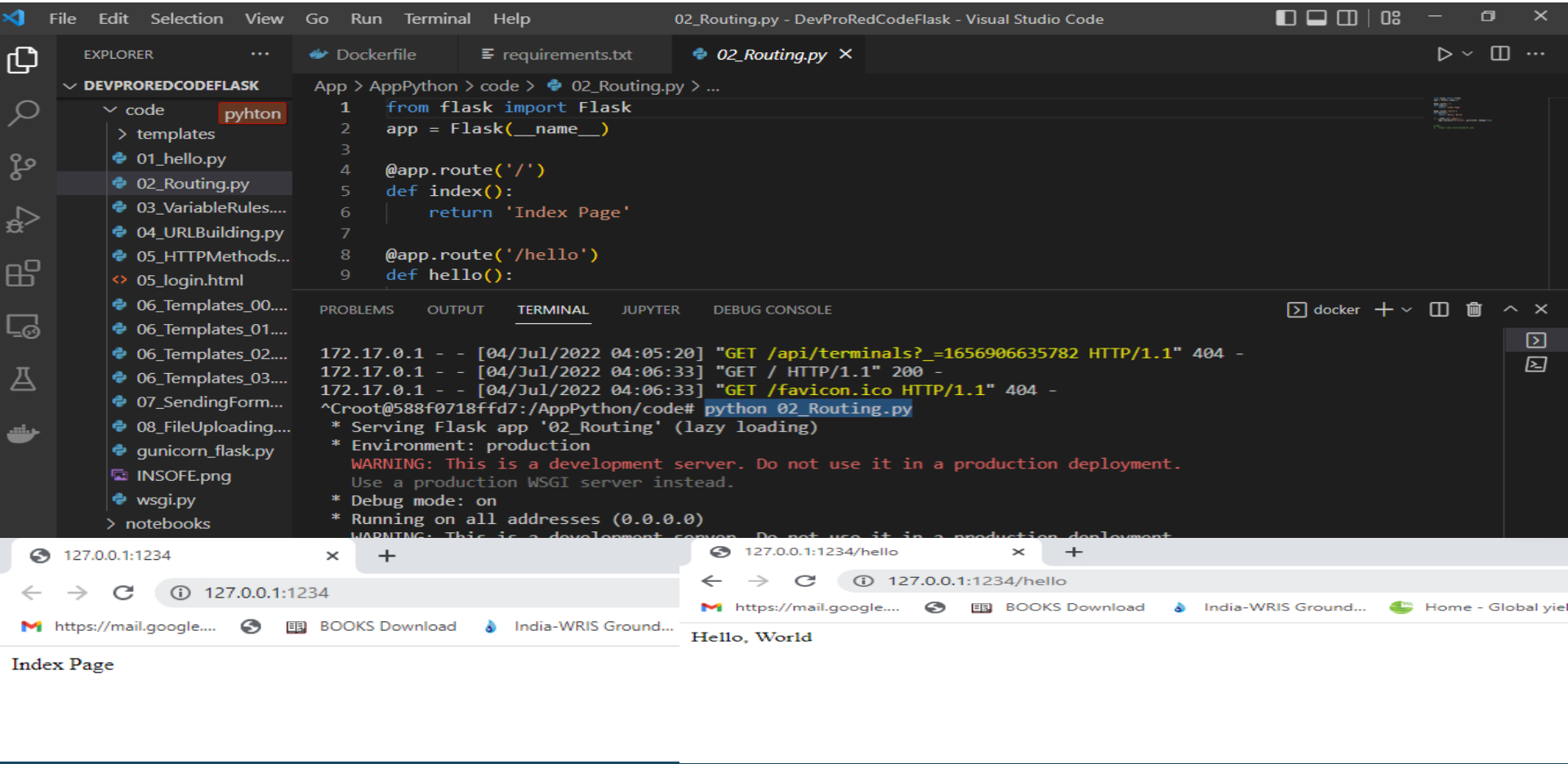
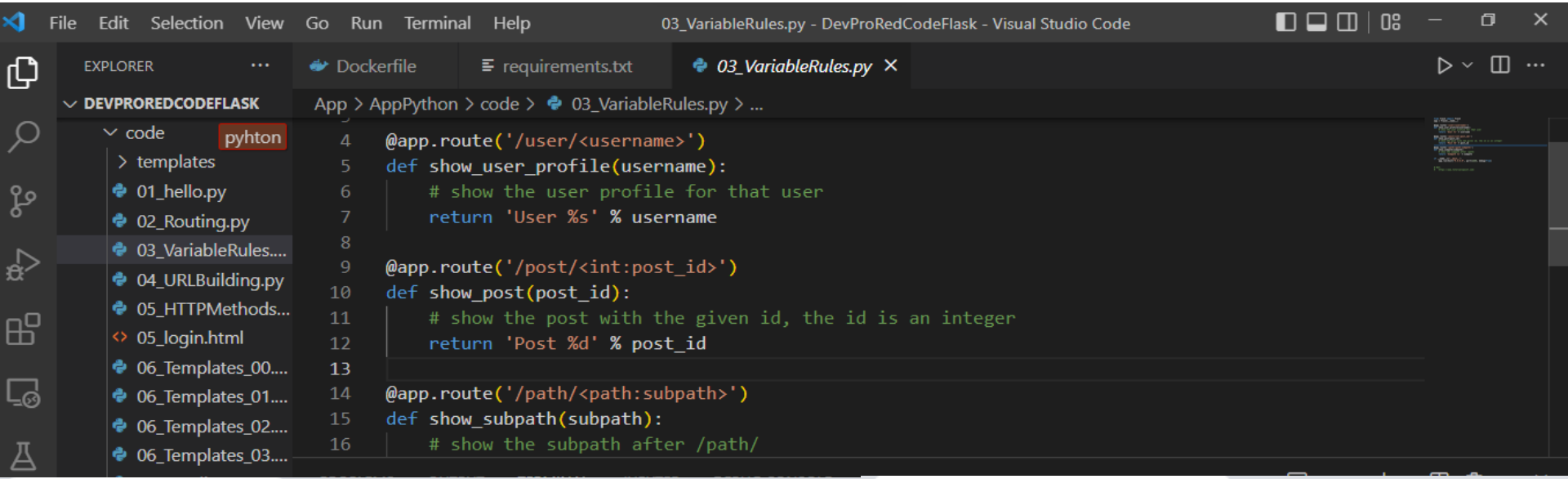
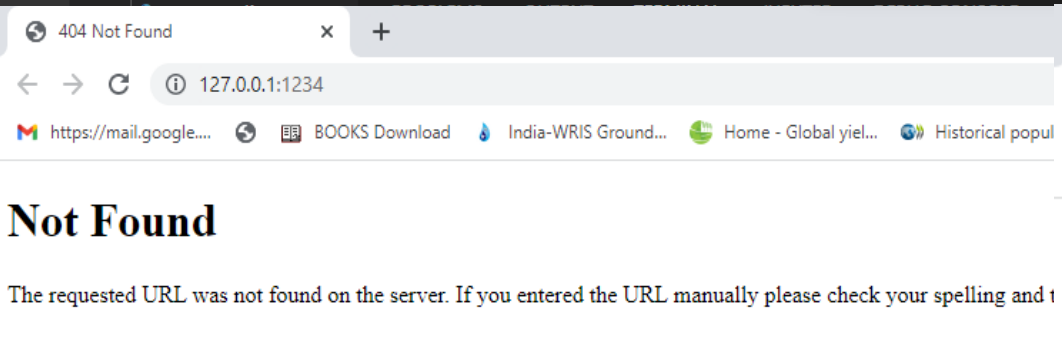
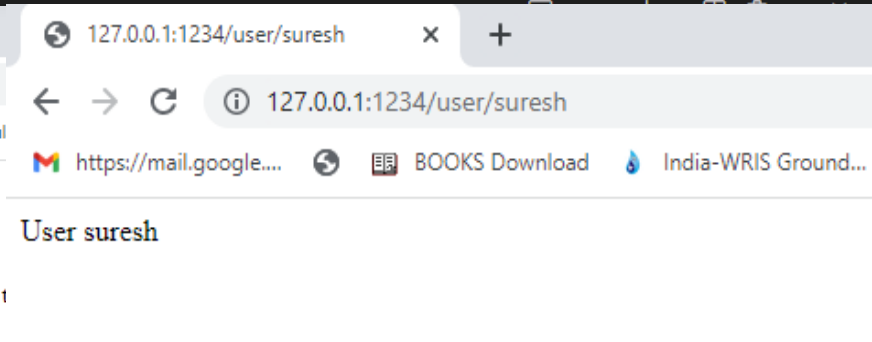
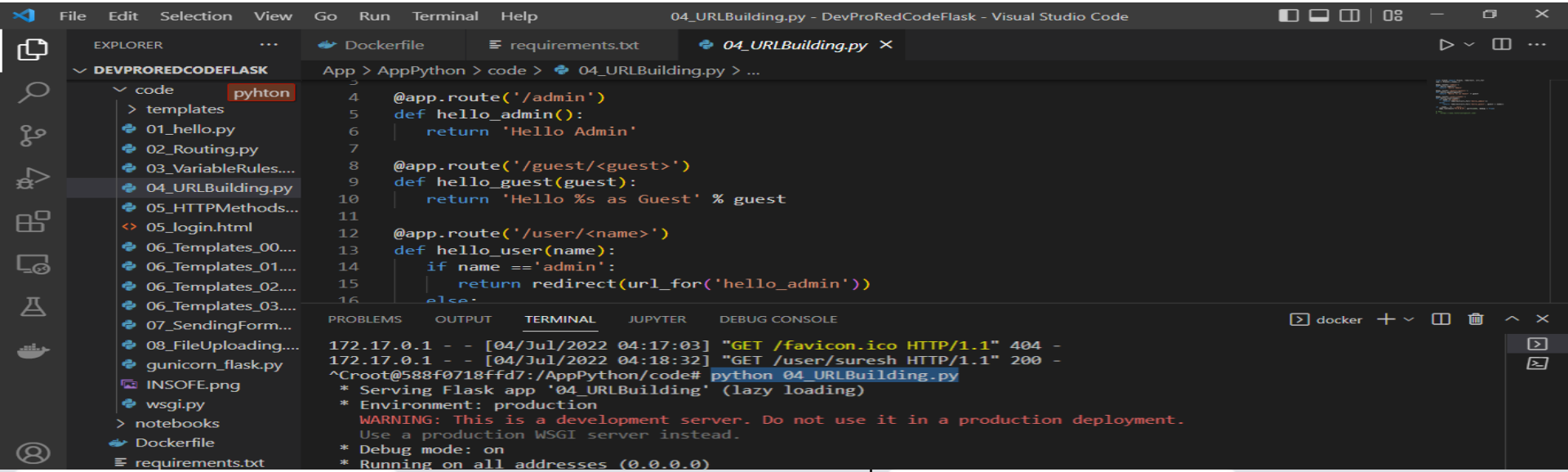
Automatic Zoom
Create and run the Docker container
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
=> => writing image sha256:1cbada7d17118e6b90fb4a8e3152f6d2dbb19f6ff780f9515def752d2d13c5ca 0.0s
=> => naming to docker.io/library/app_python 0.0s
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS F:\DevProRedCodeFlask\App\AppPython> docker run -p 1234:1234 --mount type=bind,source=F:\DevProRedCodeFlask\App\AppPython\,target=/AppPython --name App_Python -it app_python bash
root@588f0718ffd7:/AppPython# cd code
root@588f0718ffd7:/AppPython/code# python 01_hello.py
* Serving Flask app '01_hello' (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: on
* Running on all addresses (0.0.0.0)
WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://127.0.0.1:1234
* Running on http://172.17.0.3:1234 (Press CTRL+C to quit)
127.0.0.1:1234
127.0.0.1:1234
https://mail.google.... BOOKS Download India-WRIS Ground... Home - Global yiel... Historical populatio... India Population 20... United Nations: Ind... data analytics New Tab
Hello, World!

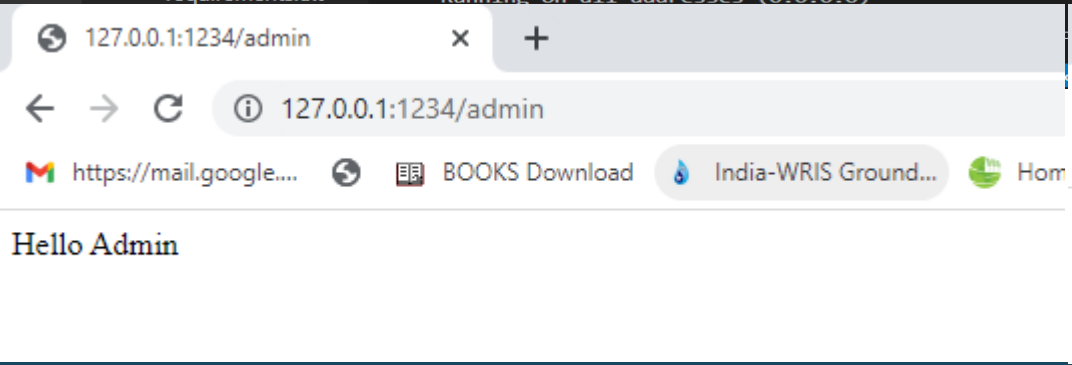

File Edit Selection View Go Run Terminal Help
02_Routing.py - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPROREDCODEFLASK
code
pyhton
templates
01_hello.py
02_Routing.py
03_VariableRules....
04_URLBuilding.py
05_HTTPMethods...
05_login.html
06_Templates_00....
06_Templates_01....
06_Templates_02....
06_Templates_03....
07_SendingForm...
08_FileUploading....
gunicorn_flask.py
INSOFE.png
wsgi.py
notebooks
Dockerfile
requirements.txt
02_Routing.py
App > AppPython > code > 02_Routing.py > ...
1 from flask import Flask
2 app = Flask(__name__)
3
4 @app.route('/')
5 def index():
6 return 'Index Page'
7
8 @app.route('/hello')
9 def hello():
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
172.17.0.1 - - [04/Jul/2022 04:05:20] "GET /api/terminals?_=1656906635782 HTTP/1.1" 404 -
172.17.0.1 - - [04/Jul/2022 04:06:33] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [04/Jul/2022 04:06:33] "GET /favicon.ico HTTP/1.1" 404 -
^Croot@588f0718ffd7:/AppPython/code# python 02_Routing.py
* Serving Flask app '02_Routing' (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: on
* Running on all addresses (0.0.0.0)
127.0.0.1:1234
127.0.0.1:1234
https://mail.google....
BOOKS Download
India-WRIS Ground...
Index Page
127.0.0.1:1234/hello
127.0.0.1:1234/hello
https://mail.google....
BOOKS Download
India-WRIS Ground...
Home - Global yiel
Hello, World

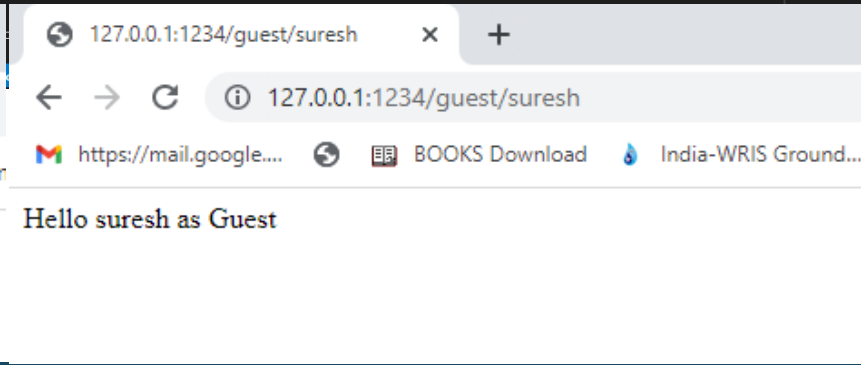

File Edit Selection View Go Run Terminal Help
03_VariableRules.py - DevProRedCodeFlask - Visual Studio Code
EXPLORER
Dockerfile
requirements.txt
03_VariableRules.py
DEVPROREDCODEFLASK
App > AppPython > code > 03_VariableRules.py > ...
code
pyhton
templates
01_hello.py
02_Routing.py
03_VariableRules....
04_URLBuilding.py
05_HTTPMethods...
05_login.html
06_Templates_00....
06_Templates_01....
06_Templates_02....
06_Templates_03....
@app.route('/user/<username>')
def show_user_profile(username):
# show the user profile for that user
return 'User %s' % username
@app.route('/post/<int:post_id>')
def show_post(post_id):
# show the post with the given id, the id is an integer
return 'Post %d' % post_id
@app.route('/path/<path:subpath>')
def show_subpath(subpath):
# show the subpath after /path/

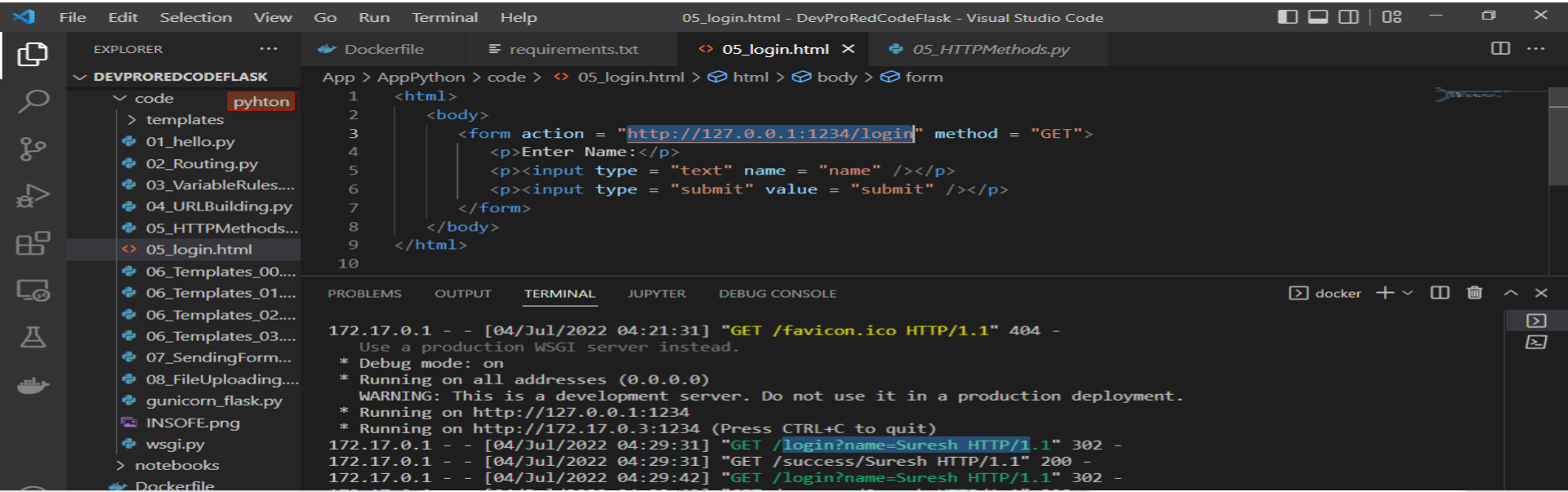

404 Not Found
127.0.0.1:1234
https://mail.google....
BOOKS Download
India-WRIS Ground...
Home - Global yiel...
Historical popul
Not Found
The requested URL was not found on the server. If you entered the URL manually please check your spelling and t

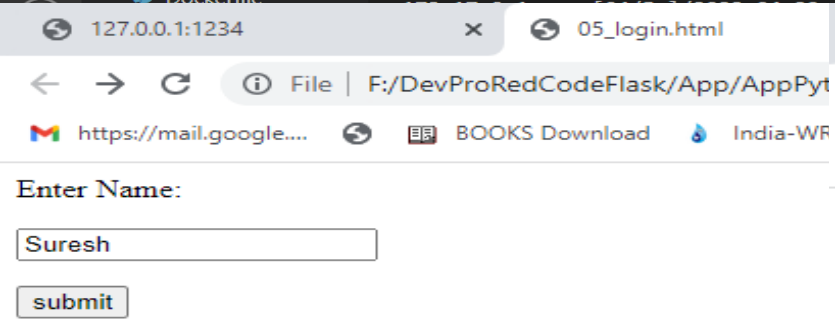

127.0.0.1:1234/user/suresh
127.0.0.1:1234/user/suresh
https://mail.google....
BOOKS Download
India-WRIS Ground...
User suresh

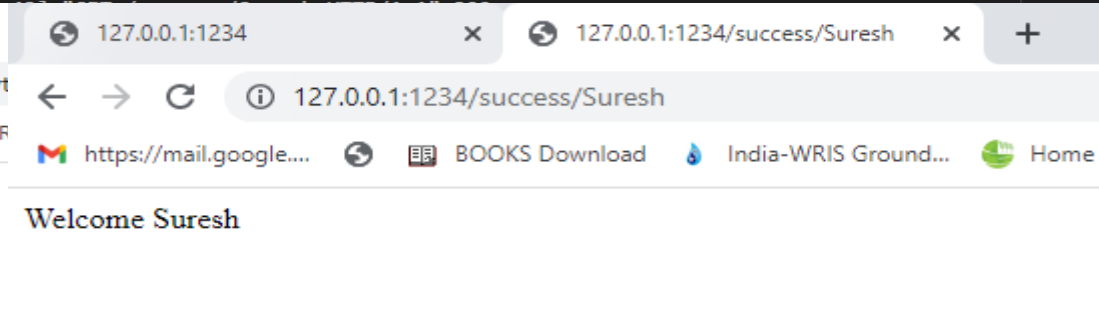

File Edit Selection View Go Run Terminal Help
04_URLBuilding.py - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPRORedCODEFLASK
code pyhton
templates
01_hello.py
02_Routing.py
03_VariableRules....
04_URLBuilding.py
05_HTTPMethods...
05_login.html
06_Templates_00....
06_Templates_01....
06_Templates_02....
06_Templates_03....
07_SendingForm...
08_FileUploading....
gunicorn_flask.py
INSOFE.png
wsgi.py
notebooks
Dockerfile
requirements.txt
Dockerfile
requirements.txt
04_URLBuilding.py
App > AppPython > code > 04_URLBuilding.py > ...
@app.route('/admin')
def hello_admin():
return 'Hello Admin'
@app.route('/guest/<guest>')
def hello_guest(guest):
return 'Hello %s as Guest' % guest
@app.route('/user/<name>')
def hello_user(name):
if name =='admin':
return redirect(url_for('hello_admin'))
else:
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
172.17.0.1 - - [04/Jul/2022 04:17:03] "GET /favicon.ico HTTP/1.1" 404 -
172.17.0.1 - - [04/Jul/2022 04:18:32] "GET /user/suresh HTTP/1.1" 200 -
^Croot@588f0718ffd7:/AppPython/code# python 04_URLBuilding.py
* Serving Flask app '04_URLBuilding' (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: on
* Running on all addresses (0.0.0.0)

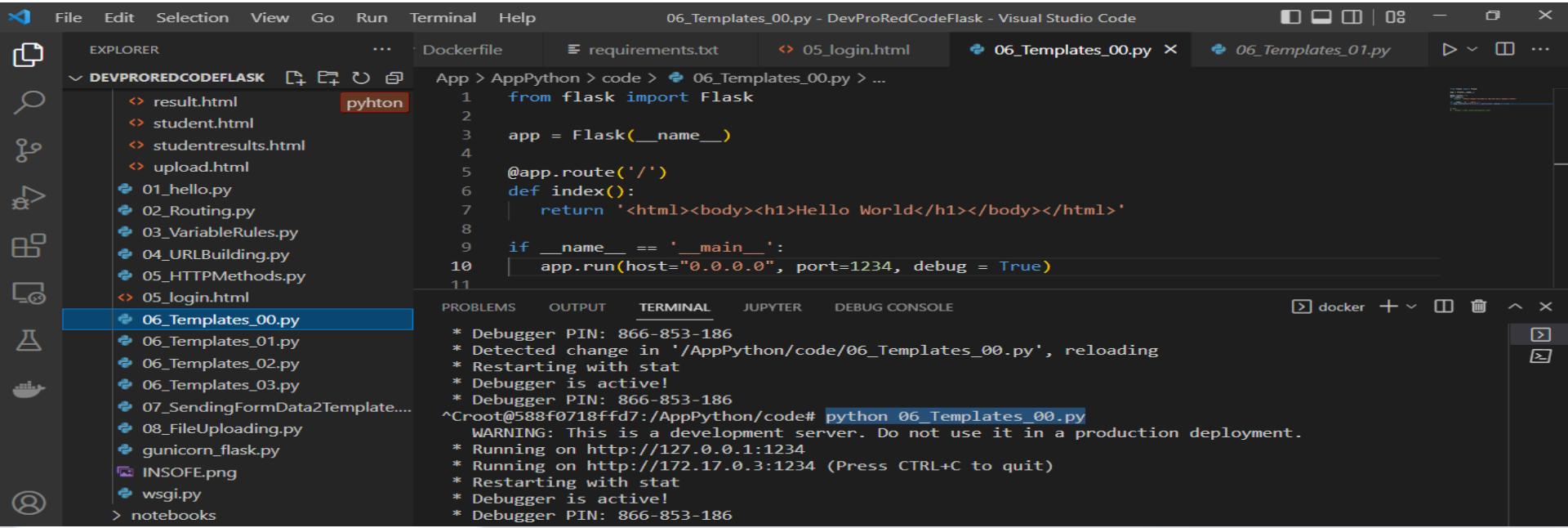

127.0.0.1:1234/admin
127.0.0.1:1234/admin
https://mail.google....
BOOKS Download
India-WRIS Ground...
Hello Admin

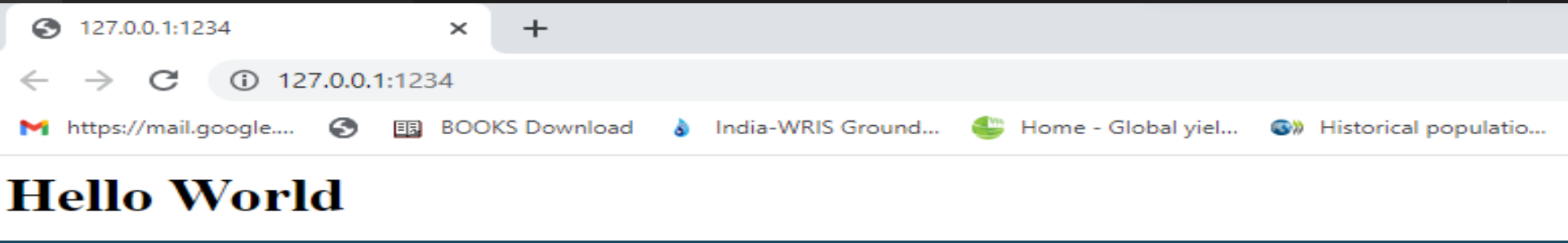

127.0.0.1:1234/guest/suresh
127.0.0.1:1234/guest/suresh
https://mail.google....
BOOKS Download
India-WRIS Ground...
Hello suresh as Guest

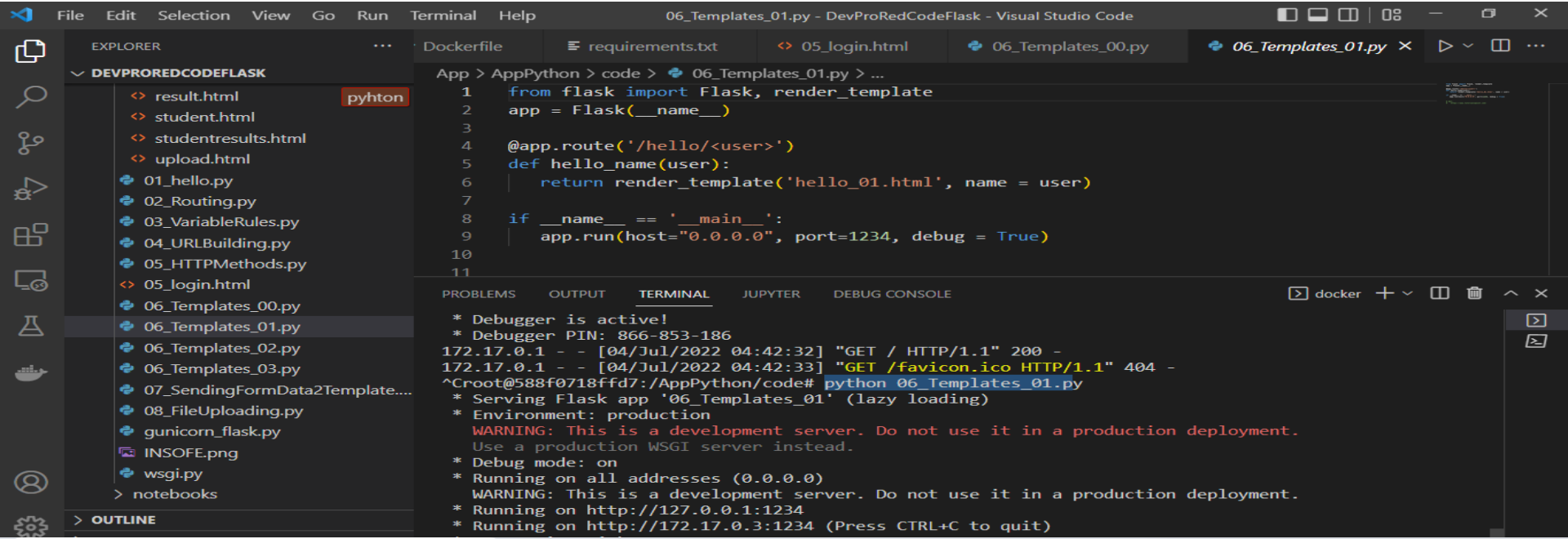

File Edit Selection View Go Run Terminal Help
05_login.html - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPRORedCODEFLASK
code
pyhton
templates
01_hello.py
02_Routing.py
03_VariableRules....
04_URLBuilding.py
05_HTTPMethods...
05_login.html
06_Templates_00....
06_Templates_01....
06_Templates_02....
06_Templates_03....
07_SendingForm...
08_FileUploading....
gunicorn_flask.py
INSOFE.png
wsgi.py
notebooks
Dockerfile
Dockerfile
requirements.txt
05_login.html
05_HTTPMethods.py
App > AppPython > code > 05_login.html > html > body > form
1 <html>
2 <body>
3 <form action = "http://127.0.0.1:1234/login" method = "GET">
4 Enter Name:
5 <input type = "text" name = "name" />
6 <input type = "submit" value = "submit" />
7 </form>
8 </body>
9 </html>
10
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
172.17.0.1 - - [04/Jul/2022 04:21:31] "GET /favicon.ico HTTP/1.1" 404 -
Use a production WSGI server instead.
* Debug mode: on
* Running on all addresses (0.0.0.0)
WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://127.0.0.1:1234
* Running on http://172.17.0.3:1234 (Press CTRL+C to quit)
172.17.0.1 - - [04/Jul/2022 04:29:31] "GET /login?name=Suresh HTTP/1.1" 302 -
172.17.0.1 - - [04/Jul/2022 04:29:31] "GET /success/Suresh HTTP/1.1" 200 -
172.17.0.1 - - [04/Jul/2022 04:29:42] "GET /login?name=Suresh HTTP/1.1" 302 -

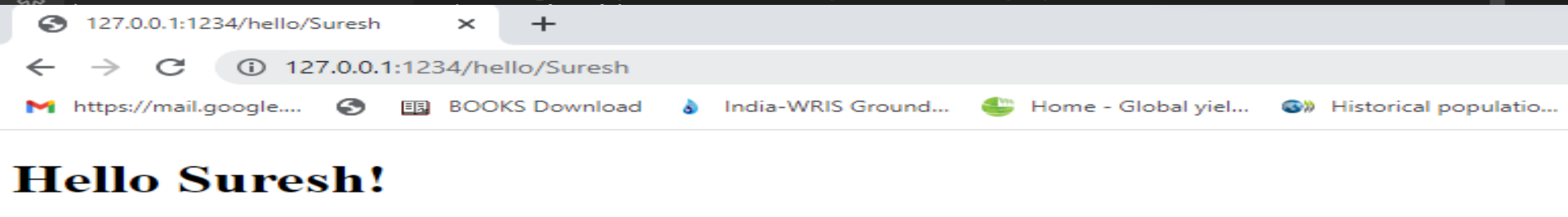

127.0.0.1:1234
05_login.html
File F:/DevProRedCodeFlask/App/AppPyt
https://mail.google....
BOOKS Download
Enter Name:
Suresh
submit

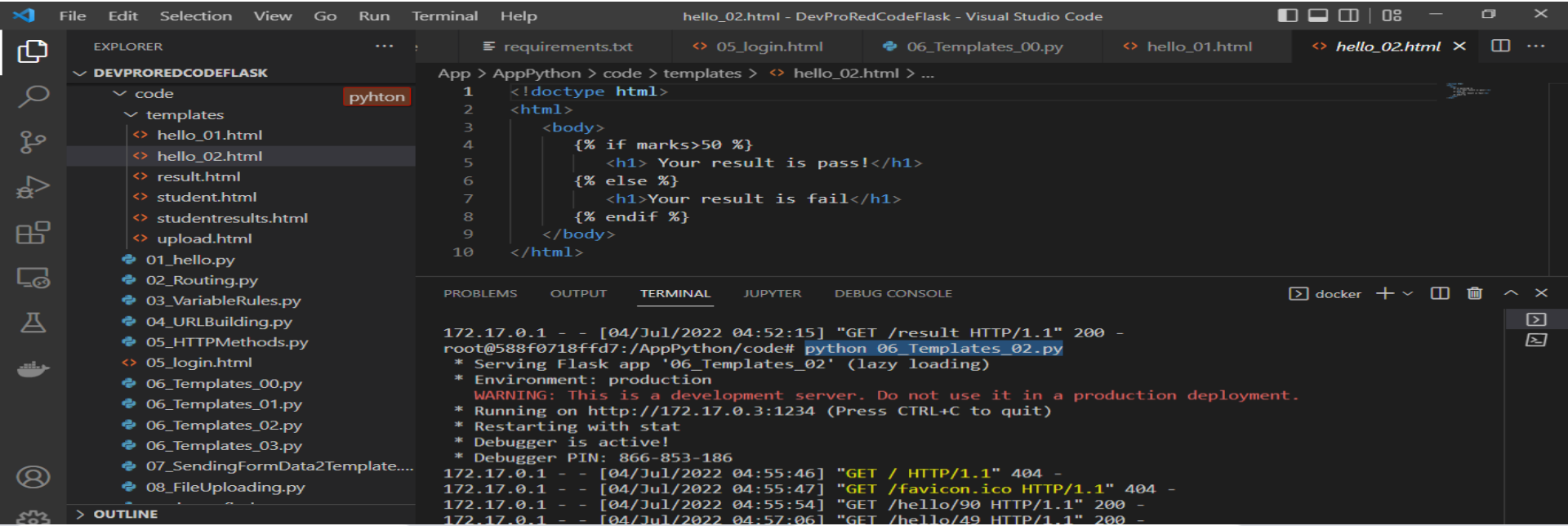

127.0.0.1:1234
127.0.0.1:1234/success/Suresh
127.0.0.1:1234/success/Suresh
https://mail.google....
BOOKS Download
India-WRIS Ground...
Home
Welcome Suresh

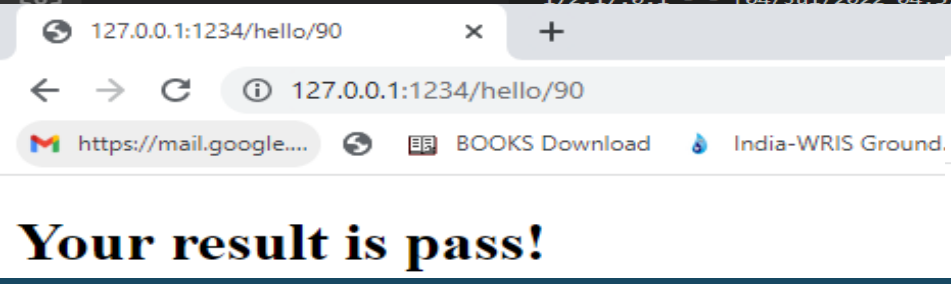

File Edit Selection View Go Run Terminal Help
06_Templates_00.py - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPROREDCODEFLASK
result.html
pyhton
student.html
studentresults.html
upload.html
01_hello.py
02_Routing.py
03_VariableRules.py
04_URLBuilding.py
05_HTTPMethods.py
05_login.html
06_Templates_00.py
06_Templates_01.py
06_Templates_02.py
06_Templates_03.py
07_SendingFormData2Template....
08_FileUploading.py
gunicorn_flask.py
INSOFE.png
wsgi.py
notebooks
Dockerfile
requirements.txt
05_login.html
06_Templates_00.py
06_Templates_01.py
App > AppPython > code > 06_Templates_00.py > ...
1 from flask import Flask
2
3 app = Flask(__name__)
4
5 @app.route('/')
6 def index():
7 return '<html><body><h1>Hello World</h1></body></html>'
8
9 if __name__ == '__main__':
10 app.run(host="0.0.0.0", port=1234, debug = True)
11
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
* Debugger PIN: 866-853-186
* Detected change in '/AppPython/code/06_Templates_00.py', reloading
* Restarting with stat
* Debugger is active!
* Debugger PIN: 866-853-186
^Croot@588f0718ffd7:/AppPython/code# python 06_Templates_00.py
WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://127.0.0.1:1234
* Running on http://172.17.0.3:1234 (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 866-853-186

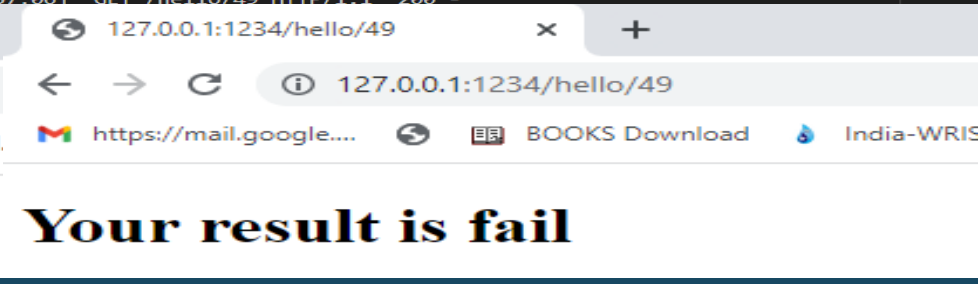

127.0.0.1:1234
127.0.0.1:1234
https://mail.google....
BOOKS Download
India-WRIS Ground...
Home - Global yiel...
Historical populatio...
Hello World

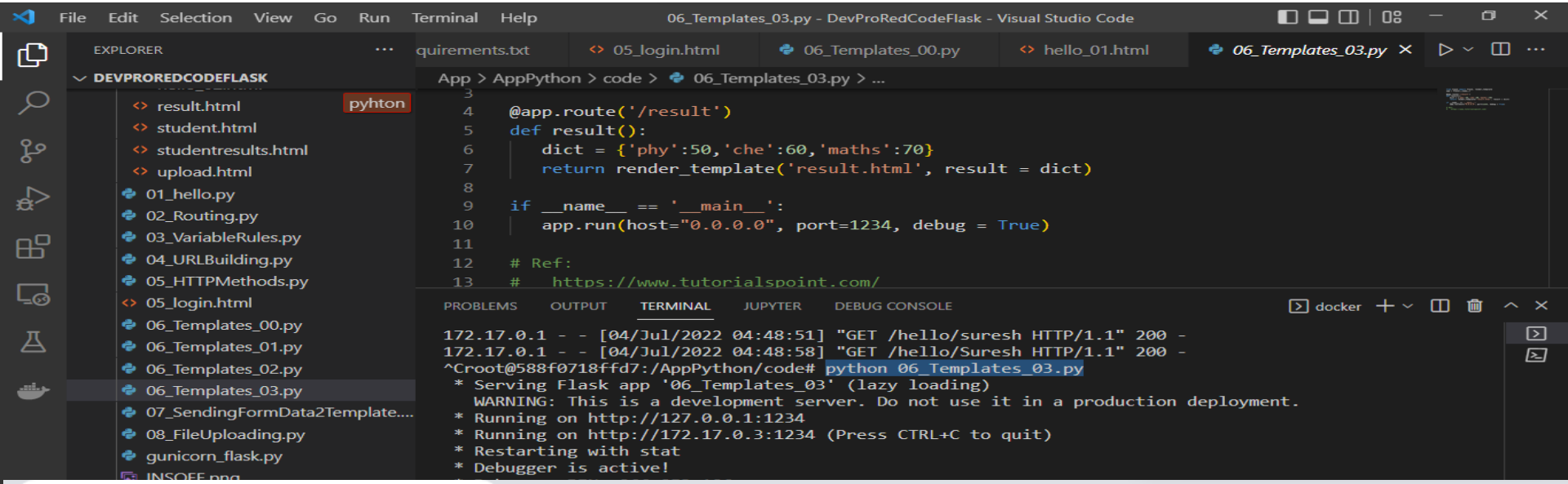

File Edit Selection View Go Run Terminal Help
06_Templates_01.py - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPROREDCODEFLASK
result.html
pyhton
student.html
studentresults.html
upload.html
01_hello.py
02_Routing.py
03_VariableRules.py
04_URLBuilding.py
05_HTTPMethods.py
05_login.html
06_Templates_00.py
06_Templates_01.py
06_Templates_02.py
06_Templates_03.py
07_SendingFormData2Template....
08_FileUploading.py
gunicorn_flask.py
INSOFE.png
wsgi.py
notebooks
OUTLINE
Dockerfile
requirements.txt
05_login.html
06_Templates_00.py
06_Templates_01.py
App > AppPython > code > 06_Templates_01.py > ...
1 from flask import Flask, render_template
2 app = Flask(__name__)
3
4 @app.route('/hello/<user>')
5 def hello_name(user):
6 return render_template('hello_01.html', name = user)
7
8 if __name__ == '__main__':
9 app.run(host="0.0.0.0", port=1234, debug = True)
10
11
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
* Debugger is active!
* Debugger PIN: 866-853-186
172.17.0.1 - - [04/Jul/2022 04:42:32] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [04/Jul/2022 04:42:33] "GET /favicon.ico HTTP/1.1" 404 -
^Croot@588f0718ffd7:/AppPython/code# python 06_Templates_01.py
* Serving Flask app '06_Templates_01' (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: on
* Running on all addresses (0.0.0.0)
WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://127.0.0.1:1234
* Running on http://172.17.0.3:1234 (Press CTRL+C to quit)

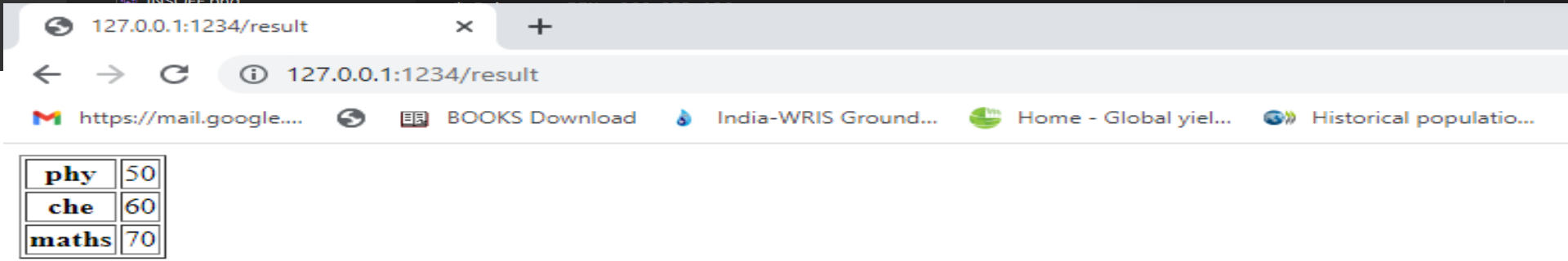

127.0.0.1:1234/hello/Suresh
127.0.0.1:1234/hello/Suresh
https://mail.google....
BOOKS Download
India-WRIS Ground...
Home - Global yiel...
Historical populatio...
Hello Suresh!

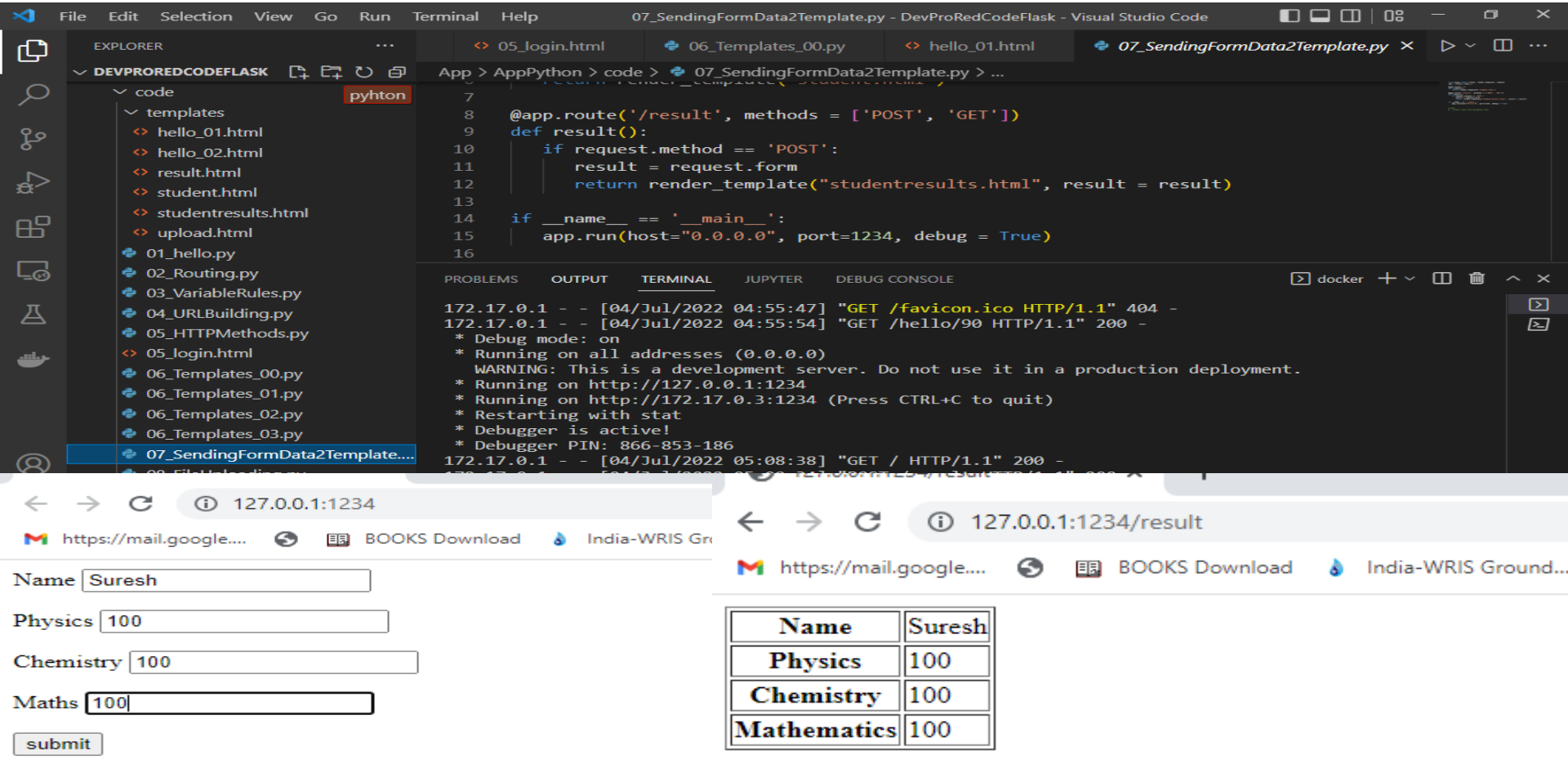

File Edit Selection View Go Run Terminal Help
hello_02.html - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPRORedCODEFLASK
code
pyhton
templates
hello_01.html
hello_02.html
result.html
student.html
studentresults.html
upload.html
01_hello.py
02_Routing.py
03_VariableRules.py
04_URLBuilding.py
05_HTTPMethods.py
05_login.html
06_Templates_00.py
06_Templates_01.py
06_Templates_02.py
06_Templates_03.py
07_SendingFormData2Template....
08_FileUploading.py
OUTLINE
requirements.txt
05_login.html
06_Templates_00.py
hello_01.html
hello_02.html
App > AppPython > code > templates > hello_02.html > ...
1 <!doctype html>
2 <html>
3 <body>
4 {% if marks>50 %}
5 <h1> Your result is pass!</h1>
6 {% else %}
7 <h1>Your result is fail</h1>
8 {% endif %}
9 </body>
10 </html>
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
172.17.0.1 - - [04/Jul/2022 04:52:15] "GET /result HTTP/1.1" 200 -
root@588f0718ffd7:/AppPython/code# python 06_Templates_02.py
* Serving Flask app '06_Templates_02' (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://172.17.0.3:1234 (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 866-853-186
172.17.0.1 - - [04/Jul/2022 04:55:46] "GET / HTTP/1.1" 404 -
172.17.0.1 - - [04/Jul/2022 04:55:47] "GET /favicon.ico HTTP/1.1" 404 -
172.17.0.1 - - [04/Jul/2022 04:55:54] "GET /hello/90 HTTP/1.1" 200 -
172.17.0.1 - - [04/Jul/2022 04:57:06] "GET /hello/49 HTTP/1.1" 200 -


127.0.0.1:1234/hello/90
127.0.0.1:1234/hello/90
https://mail.google....
BOOKS Download
India-WRIS Ground
Your result is pass!


127.0.0.1:1234/hello/49
127.0.0.1:1234/hello/49
https://mail.google....
BOOKS Download
India-WRIS
Your result is fail

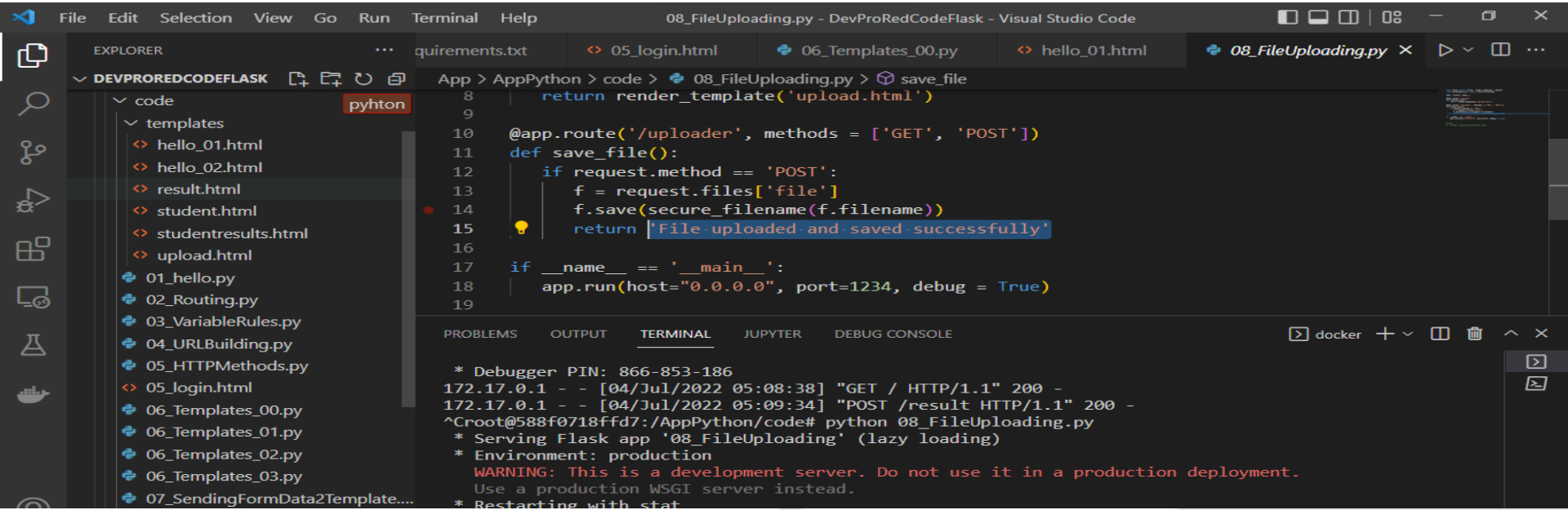

File Edit Selection View Go Run Terminal Help
06_Templates_03.py - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPRORedCODEFLASK
result.html
pyhton
student.html
studentresults.html
upload.html
01_hello.py
02_Routing.py
03_VariableRules.py
04_URLBuilding.py
05_HTTPMethods.py
05_login.html
06_Templates_00.py
06_Templates_01.py
06_Templates_02.py
06_Templates_03.py
07_SendingFormData2Template....
08_FileUploading.py
gunicorn_flask.py
quirements.txt
05_login.html
06_Templates_00.py
hello_01.html
06_Templates_03.py
App > AppPython > code > 06_Templates_03.py > ...
@app.route('/result')
def result():
dict = {'phy':50,'che':60,'maths':70}
return render_template('result.html', result = dict)
if __name__ == '__main__':
app.run(host="0.0.0.0", port=1234, debug = True)
# Ref:
# https://www.tutorialspoint.com/
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
172.17.0.1 - - [04/Jul/2022 04:48:51] "GET /hello/suresh HTTP/1.1" 200 -
172.17.0.1 - - [04/Jul/2022 04:48:58] "GET /hello/Suresh HTTP/1.1" 200 -
^Croot@588f0718ffd7:/AppPython/code# python 06_Templates_03.py
* Serving Flask app '06_Templates_03' (lazy loading)
WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://127.0.0.1:1234
* Running on http://172.17.0.3:1234 (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!

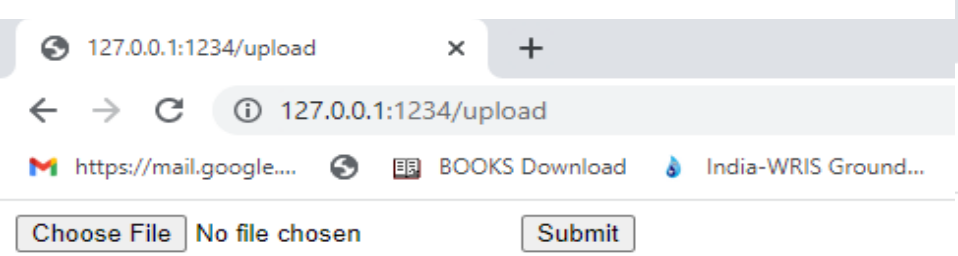

127.0.0.1:1234/result
127.0.0.1:1234/result
https://mail.google....
BOOKS Download
India-WRIS Ground...
Home - Global yiel...
Historical populatio...
phy 50
che 60
maths 70

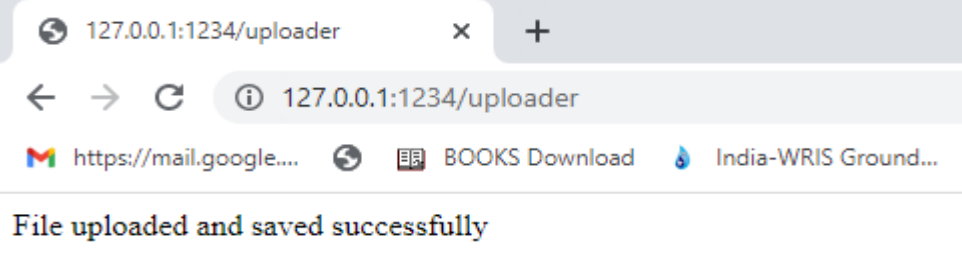

File Edit Selection View Go Run Terminal Help
07_SendingFormData2Template.py - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPROREDCODEFLASK
code
pyhton
templates
hello_01.html
hello_02.html
result.html
student.html
studentresults.html
upload.html
01_hello.py
02_Routing.py
03_VariableRules.py
04_URLBuilding.py
05_HTTPMethods.py
05_login.html
06_Templates_00.py
06_Templates_01.py
06_Templates_02.py
06_Templates_03.py
07_SendingFormData2Template....
05_login.html
06_Templates_00.py
hello_01.html
07_SendingFormData2Template.py
App > AppPython > code > 07_SendingFormData2Template.py > ...
@app.route('/result', methods = ['POST', 'GET'])
def result():
if request.method == 'POST':
result = request.form
return render_template("studentresults.html", result = result)
if __name__ == '__main__':
app.run(host="0.0.0.0", port=1234, debug = True)
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
172.17.0.1 - - [04/Jul/2022 04:55:47] "GET /favicon.ico HTTP/1.1" 404 -
172.17.0.1 - - [04/Jul/2022 04:55:54] "GET /hello/90 HTTP/1.1" 200 -
* Debug mode: on
* Running on all addresses (0.0.0.0)
WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://127.0.0.1:1234
* Running on http://172.17.0.3:1234 (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 866-853-186
172.17.0.1 - - [04/Jul/2022 05:08:38] "GET / HTTP/1.1" 200 -

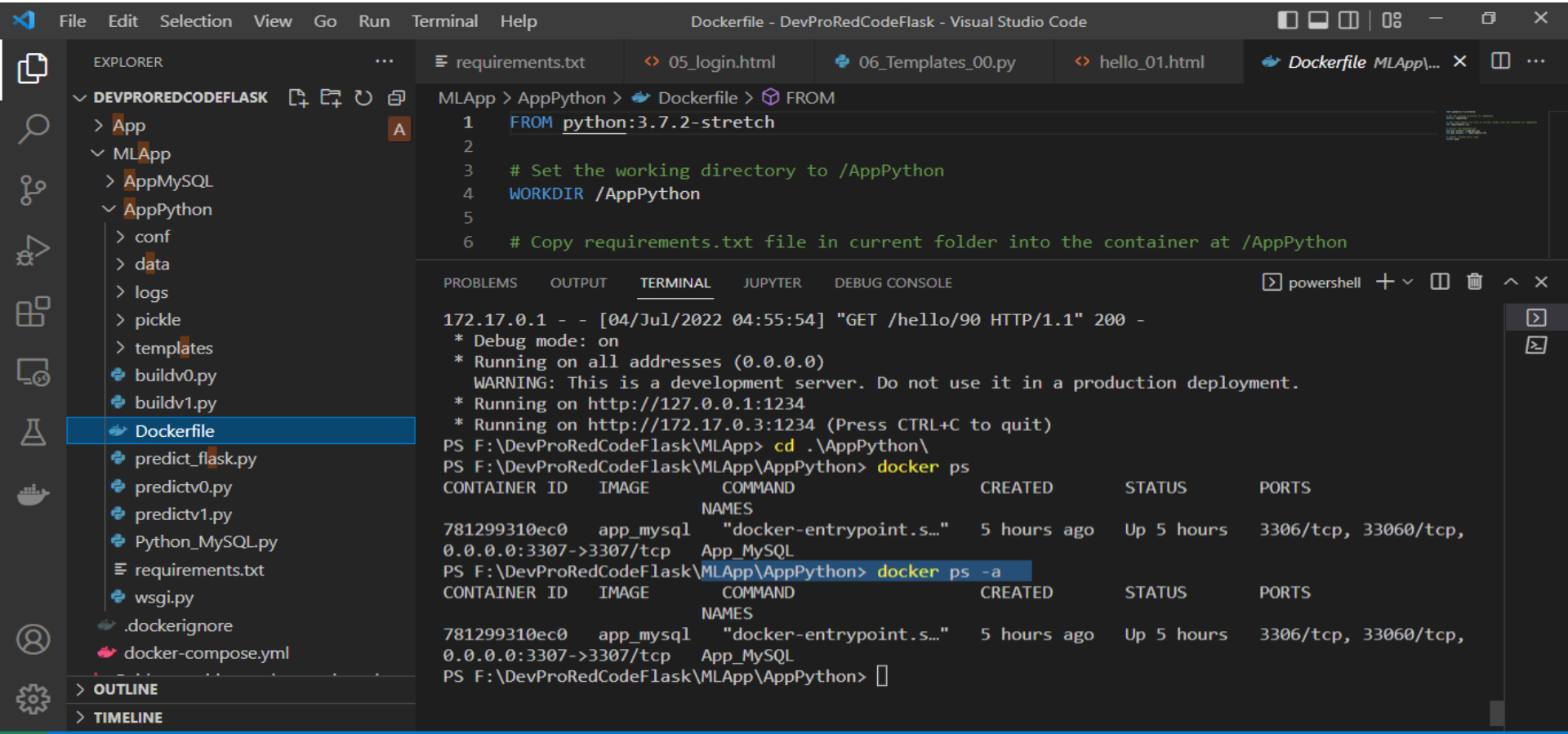
127.0.0.1:1234
https://mail.google....
BOOKS Download
India-WRIS Gr
Name Suresh
Physics 100
Chemistry 100
Maths 100
submit

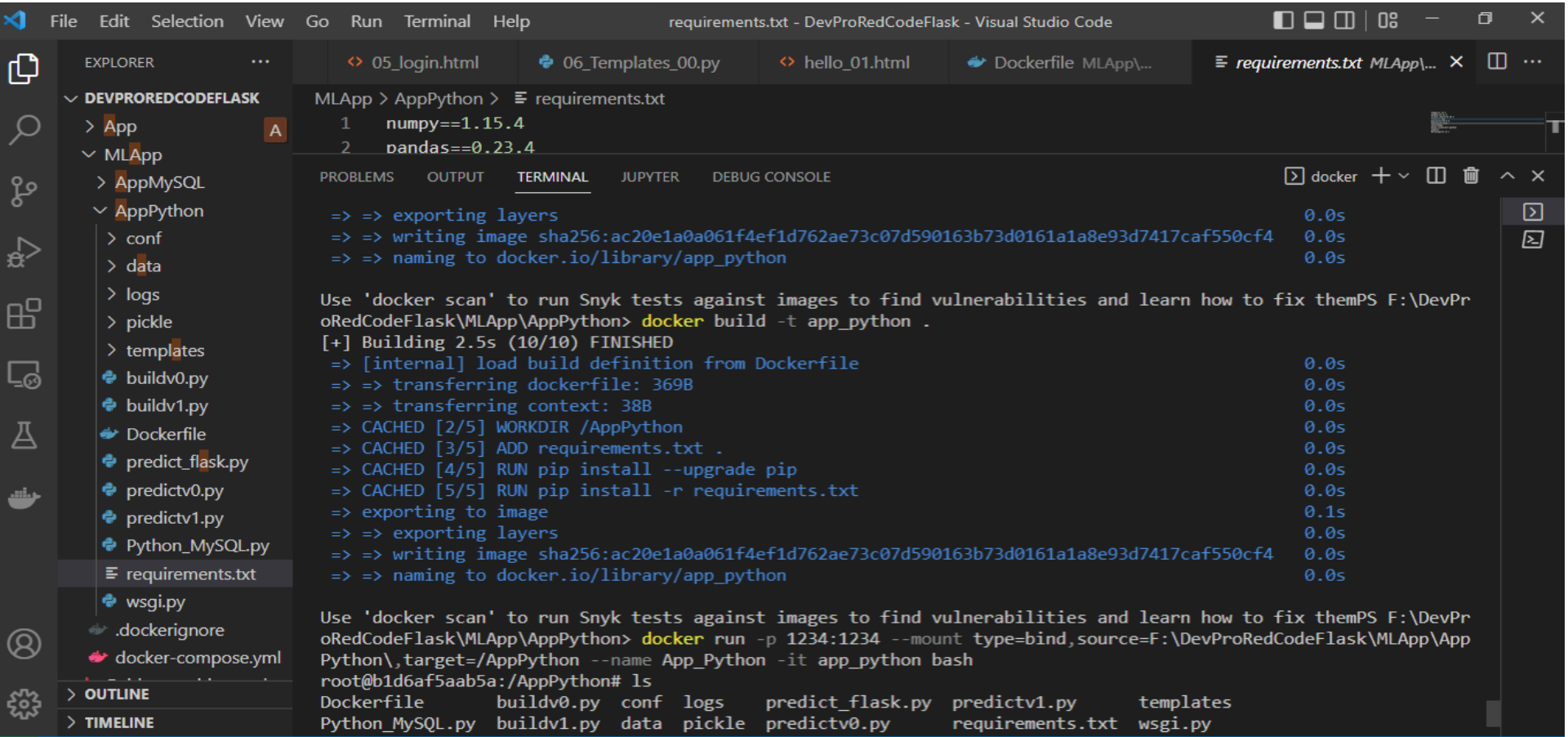
127.0.0.1:1234/result
https://mail.google....
BOOKS Download
India-WRIS Ground...
Name Suresh
Physics 100
Chemistry 100
Mathematics 100

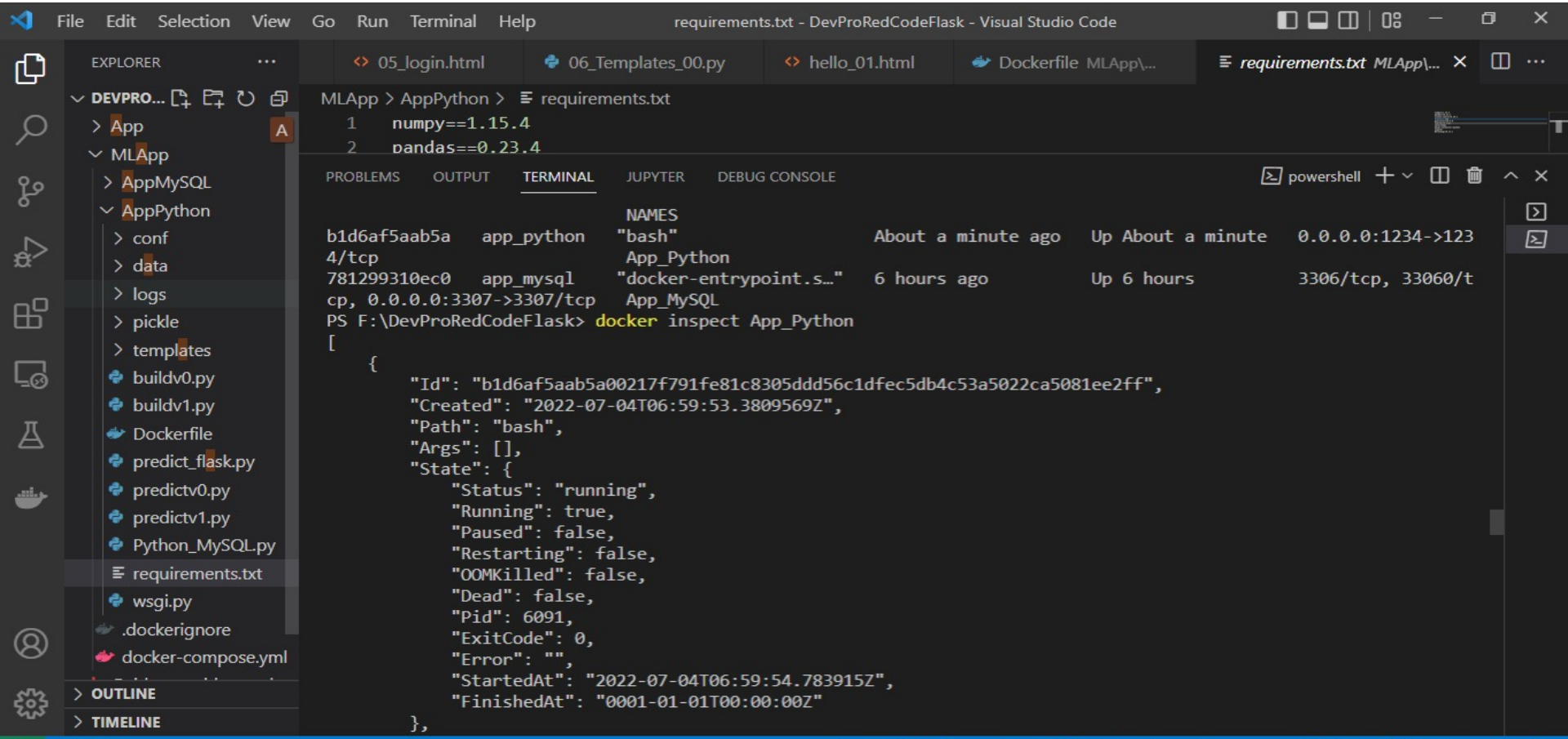

File Edit Selection View Go Run Terminal Help
08_FileUploading.py - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPROREDCODEFLASK
code
pyhton
templates
hello_01.html
hello_02.html
result.html
student.html
studentresults.html
upload.html
01_hello.py
02_Routing.py
03_VariableRules.py
04_URLBuilding.py
05_HTTPMethods.py
05_login.html
06_Templates_00.py
06_Templates_01.py
06_Templates_02.py
06_Templates_03.py
07_SendingFormData2Template....
quirements.txt
05_login.html
06_Templates_00.py
hello_01.html
08_FileUploading.py
App > AppPython > code > 08_FileUploading.py > save_file
return render_template('upload.html')
@app.route('/uploader', methods = ['GET', 'POST'])
def save_file():
if request.method == 'POST':
f = request.files['file']
f.save(secure_filename(f.filename))
return 'File uploaded and saved successfully'
if __name__ == '__main__':
app.run(host="0.0.0.0", port=1234, debug = True)
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
* Debugger PIN: 866-853-186
172.17.0.1 - - [04/Jul/2022 05:08:38] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [04/Jul/2022 05:09:34] "POST /result HTTP/1.1" 200 -
^Croot@588f0718ffd7:/AppPython/code# python 08_FileUploading.py
* Serving Flask app '08_FileUploading' (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Restarting with stat

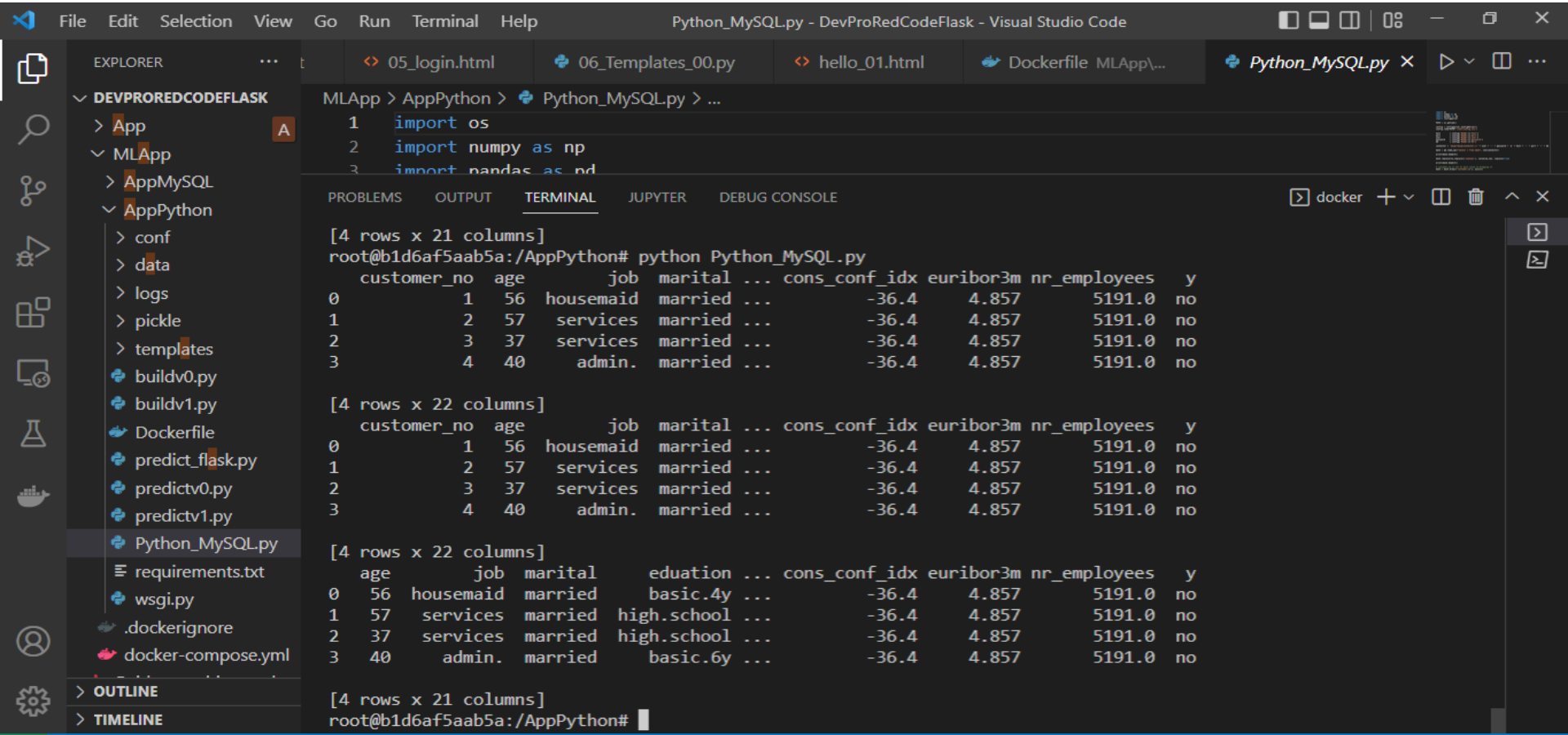

127.0.0.1:1234/upload
127.0.0.1:1234/upload
https://mail.google....
BOOKS Download
India-WRIS Ground...
Choose File
No file chosen
Submit


127.0.0.1:1234/uploader
127.0.0.1:1234/uploader
https://mail.google....
BOOKS Download
India-WRIS Ground...
File uploaded and saved successfully


File Edit Selection View Go Run Terminal Help
Dockerfile - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPROREDCODEFLASK
App
MLApp
AppMySQL
AppPython
conf
data
logs
pickle
templates
buildv0.py
buildv1.py
Dockerfile
predict_flask.py
predictv0.py
predictv1.py
Python_MySQL.py
requirements.txt
wsgi.py
.dockerignore
docker-compose.yml
OUTLINE
TIMELINE
requirements.txt
05_login.html
06_Templates_00.py
hello_01.html
Dockerfile MLApp\...
MLApp > AppPython > Dockerfile > FROM
1 FROM python:3.7.2-stretch
2
3 # Set the working directory to /AppPython
4 WORKDIR /AppPython
5
6 # Copy requirements.txt file in current folder into the container at /AppPython
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
powershell
172.17.0.1 - - [04/Jul/2022 04:55:54] "GET /hello/90 HTTP/1.1" 200 -
* Debug mode: on
* Running on all addresses (0.0.0.0)
WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://127.0.0.1:1234
* Running on http://172.17.0.3:1234 (Press CTRL+C to quit)
PS F:\DevProRedCodeFlask\MLApp> cd .\AppPython\
PS F:\DevProRedCodeFlask\MLApp\AppPython> docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
NAMES
781299310ec0 app_mysql "docker-entrypoint.s…" 5 hours ago Up 5 hours 3306/tcp, 33060/tcp,
0.0.0.0:3307->3307/tcp App_MySQL
PS F:\DevProRedCodeFlask\MLApp\AppPython> docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
NAMES
781299310ec0 app_mysql "docker-entrypoint.s…" 5 hours ago Up 5 hours 3306/tcp, 33060/tcp,
0.0.0.0:3307->3307/tcp App_MySQL
PS F:\DevProRedCodeFlask\MLApp\AppPython>
0 0
Ln 1, Col 1 Spaces: 4 UTF-8 LF Dockerfile Go Live Prettier


File Edit Selection View Go Run Terminal Help
requirements.txt - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPROREDCODEFLASK
App
MLApp
AppMySQL
AppPython
conf
data
logs
pickle
templates
buildv0.py
buildv1.py
Dockerfile
predict_flask.py
predictv0.py
predictv1.py
Python_MySQL.py
requirements.txt
wsgi.py
.dockerignore
docker-compose.yml
OUTLINE
TIMELINE
05_login.html
06_Templates_00.py
hello_01.html
Dockerfile MLApp\...
requirements.txt MLApp\...
MLApp > AppPython > requirements.txt
1 numpy==1.15.4
2 pandas==0.23.4
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
=> => exporting layers 0.0s
=> => writing image sha256:ac20e1a0a061f4ef1d762ae73c07d590163b73d0161a1a8e93d7417caf550cf4 0.0s
=> => naming to docker.io/library/app_python 0.0s
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix themPS F:\DevPr
oRedCodeFlask\MLApp\AppPython> docker build -t app_python .
[+] Building 2.5s (10/10) FINISHED
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 369B 0.0s
=> => transferring context: 38B 0.0s
=> CACHED [2/5] WORKDIR /AppPython 0.0s
=> CACHED [3/5] ADD requirements.txt . 0.0s
=> CACHED [4/5] RUN pip install --upgrade pip 0.0s
=> CACHED [5/5] RUN pip install -r requirements.txt 0.0s
=> exporting to image 0.1s
=> => exporting layers 0.0s
=> => writing image sha256:ac20e1a0a061f4ef1d762ae73c07d590163b73d0161a1a8e93d7417caf550cf4 0.0s
=> => naming to docker.io/library/app_python 0.0s
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix themPS F:\DevPr
oRedCodeFlask\MLApp\AppPython> docker run -p 1234:1234 --mount type=bind,source=F:\DevProRedCodeFlask\MLApp\App
Python\,target=/AppPython --name App_Python -it app_python bash
root@b1d6af5aab5a:/AppPython# ls
Dockerfile buildv0.py conf logs predict_flask.py predictv1.py templates
Python_MySQL.py buildv1.py data pickle predictv0.py requirements.txt wsgi.py
0 0
Ln 4, Col 13 Spaces: 4 UTF-8 LF pip requirements Go Live Prettier


File Edit Selection View Go Run Terminal Help
requirements.txt - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPRO...
App
MLApp
AppMySQL
AppPython
conf
data
logs
pickle
templates
buildv0.py
buildv1.py
Dockerfile
predict_flask.py
predictv0.py
predictv1.py
Python_MySQL.py
requirements.txt
wsgi.py
.dockerignore
docker-compose.yml
OUTLINE
TIMELINE
05_login.html
06_Templates_00.py
hello_01.html
Dockerfile MLApp\...
requirements.txt MLApp\...
MLApp > AppPython > requirements.txt
1 numpy==1.15.4
2 pandas==0.23.4
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
powershell
NAMES
b1d6af5aab5a app_python "bash" About a minute ago Up About a minute 0.0.0.0:1234->1234/tcp App_Python
781299310ec0 app_mysql "docker-entrypoint.s…" 6 hours ago Up 6 hours 3306/tcp, 33060/tcp, 0.0.0.0:3307->3307/tcp App_MySQL
PS F:\DevProRedCodeFlask> docker inspect App_Python
[
{
"Id": "b1d6af5aab5a00217f791fe81c8305ddd56c1dfec5db4c53a5022ca5081ee2ff",
"Created": "2022-07-04T06:59:53.3809569Z",
"Path": "bash",
"Args": [],
"State": {
"Status": "running",
"Running": true,
"Paused": false,
"Restarting": false,
"OOMKilled": false,
"Dead": false,
"Pid": 6091,
"ExitCode": 0,
"Error": "",
"StartedAt": "2022-07-04T06:59:54.783915Z",
"FinishedAt": "0001-01-01T00:00:00Z"
},
Ln 4, Col 13 Spaces: 4 UTF-8 LF pip requirements Go Live Prettier


File Edit Selection View Go Run Terminal Help
Python_MySQL.py - DevProRedCodeFlask - Visual Studio Code
EXPLORER
DEVPROREDCODEFLASK
App
MLApp
AppMySQL
AppPython
conf
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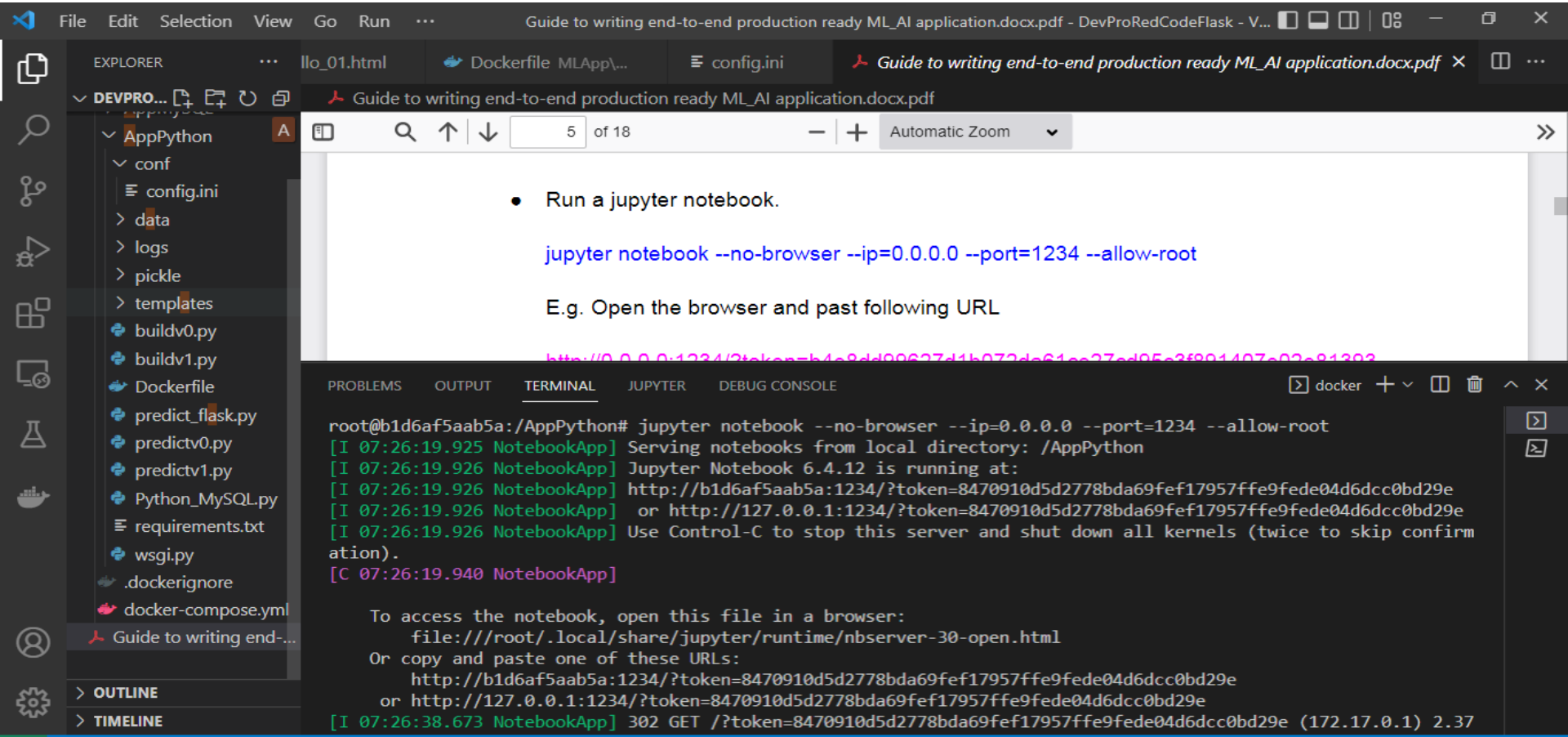
templates
buildv0.py
buildv1.py
Dockerfile
predict_flask.py
predictv0.py
predictv1.py
Python_MySQL.py
requirements.txt
wsgi.py
.dockerignore
docker-compose.yml
OUTLINE
TIMELINE
05_login.html
06_Templates_00.py
hello_01.html
Dockerfile MLApp\...
Python_MySQL.py
MLApp > AppPython > Python_MySQL.py > ...
1 import os
2 import numpy as np
3 import pandas as pd
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
[4 rows x 21 columns]
root@b1d6af5aab5a:/AppPython# python Python_MySQL.py
customer_no age job marital ... cons_conf_idx euribor3m nr_employees y
0 1 56 housemaid married ... -36.4 4.857 5191.0 no
1 2 57 services married ... -36.4 4.857 5191.0 no
2 3 37 services married ... -36.4 4.857 5191.0 no
3 4 40 admin. married ... -36.4 4.857 5191.0 no
[4 rows x 22 columns]
customer_no age job marital ... cons_conf_idx euribor3m nr_employees y
0 1 56 housemaid married ... -36.4 4.857 5191.0 no
1 2 57 services married ... -36.4 4.857 5191.0 no
2 3 37 services married ... -36.4 4.857 5191.0 no
3 4 40 admin. married ... -36.4 4.857 5191.0 no
[4 rows x 22 columns]
age job marital education ... cons_conf_idx euribor3m nr_employees y
0 56 housemaid married basic.4y ... -36.4 4.857 5191.0 no
1 57 services married high.school ... -36.4 4.857 5191.0 no
2 37 services married high.school ... -36.4 4.857 5191.0 no
3 40 admin. married basic.6y ... -36.4 4.857 5191.0 no
[4 rows x 21 columns]
root@b1d6af5aab5a:/AppPython#
Ln 1, Col 1 Spaces: 4 UTF-8 LF Python 3.7.3 64-bit Go Live Prettier


File Edit Selection View Go Run ...
Guide to writing end-to-end production ready ML_AI application.docx.pdf - DevProRedCodeFlask - V...
EXPLORER
llo_01.html
Dockerfile MLApp\...
config.ini
Guide to writing end-to-end production ready ML_AI application.docx.pdf
DEVPRO...
AppPython
conf
config.ini
data
logs
pickle
templates
buildv0.py
buildv1.py
Dockerfile
predict_flask.py
predictv0.py
predictv1.py
Python_MySQL.py
requirements.txt
wsgi.py
.dockerignore
docker-compose.yml
Guide to writing end-...
OUTLINE
TIMELINE
Guide to writing end-to-end production ready ML_AI application.docx.pdf
5 of 18
Automatic Zoom
Run a jupyter notebook.
jupyter notebook --no-browser --ip=0.0.0.0 --port=1234 --allow-root
E.g. Open the browser and past following URL
PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
docker
root@b1d6af5aab5a:/AppPython# jupyter notebook --no-browser --ip=0.0.0.0 --port=1234 --allow-root
[I 07:26:19.925 NotebookApp] Serving notebooks from local directory: /AppPython
[I 07:26:19.926 NotebookApp] Jupyter Notebook 6.4.12 is running at:
[I 07:26:19.926 NotebookApp] http://b1d6af5aab5a:1234/?token=8470910d5d2778bda69fef17957ffe9fede04d6dcc0bd29e
[I 07:26:19.926 NotebookApp] or http://127.0.0.1:1234/?token=8470910d5d2778bda69fef17957ffe9fede04d6dcc0bd29e
[I 07:26:19.926 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 07:26:19.940 NotebookApp]
To access the notebook, open this file in a browser:
file:///root/.local/share/jupyter/runtime/nbserver-30-open.html
Or copy and paste one of these URLs:
http://b1d6af5aab5a:1234/?token=8470910d5d2778bda69fef17957ffe9fede04d6dcc0bd29e
or http://127.0.0.1:1234/?token=8470910d5d2778bda69fef17957ffe9fede04d6dcc0bd29e
[I 07:26:38.673 NotebookApp] 302 GET /?token=8470910d5d2778bda69fef17957ffe9fede04d6dcc0bd29e (172.17.0.1) 2.37
Go Live

Home Page - Select or create a n | Bank_Application - Jupyter Noteb | 127.0.0.1:1234/notebooks/Bank_Application.ipynb

https://mail.google.... | BOOKS Download | India-WRIS Ground... | Home - Global yiel... | Historical populatio... | India Population 20... | United Nations: Ind... | data analytics | New Tab

jupyter Bank_Application (unsaved changes) Logout

File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3 (ipykernel)

Run Code

Column or Attribute names

In [13]:
```
data.columns
```

Out[13]:
```
Index(['customer_no', 'age', 'job', 'marital', 'eduation', 'credit_default',
       'housing', 'loan', 'contact', 'contacted_month', 'day_of_week',
       'duration', 'compaign', 'pdays', 'previous', 'poutcome', 'emp_var_rate',
       'cons_price_idx', 'cons_conf_idx', 'euribor3m', 'nr_employees', 'y'],
      dtype='object')
```

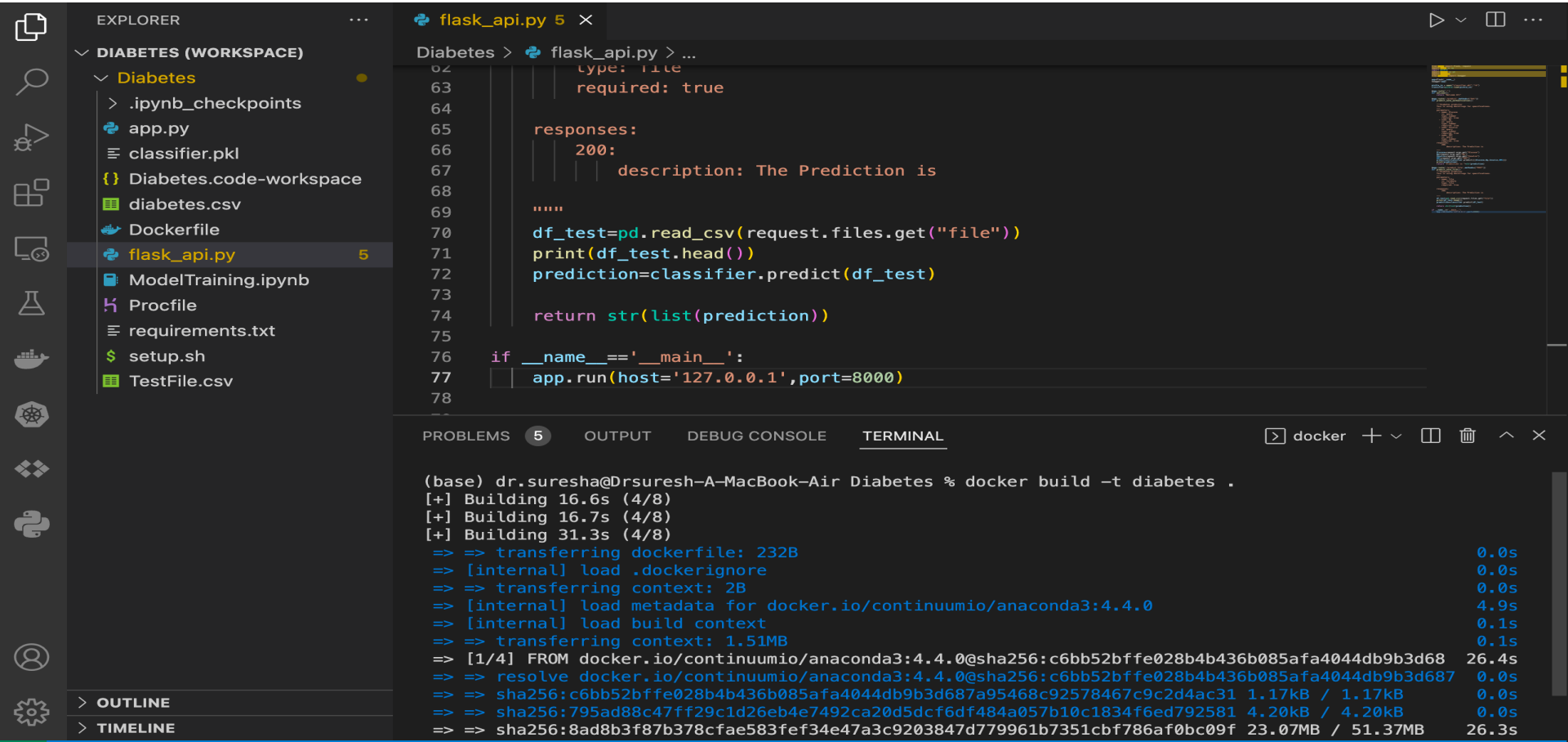
Display first 5 and last 5 records

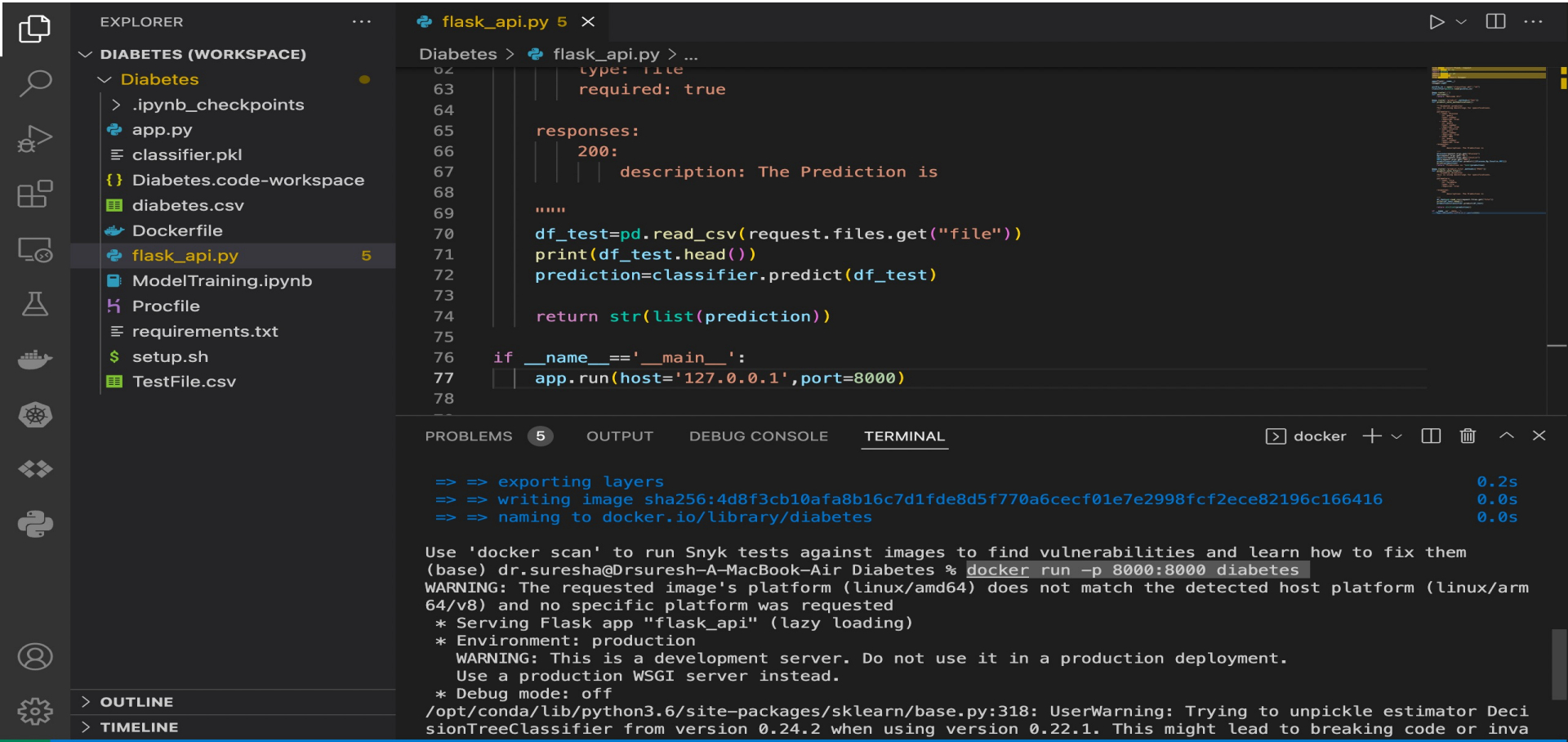
In [14]:
```
data.head(3)
```

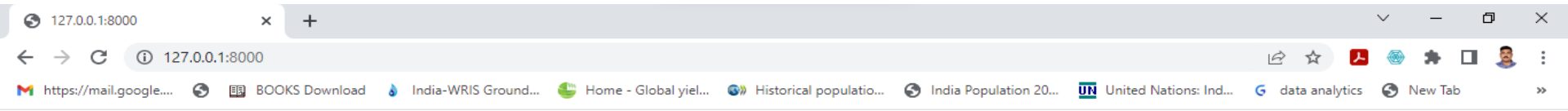
Out[14]:

	customer_no	age	job	marital	eduation	credit_default	housing	loan	contact	contacted_month	...	compaign	pdays	previous	poutcome	en
0	1	56	housemaid	married	basic.4y	no	no	no	telephone	may	...	1	999	0	nonexistent	
1	2	57	services	married	high.school	unknown	no	no	telephone	may	...	1	999	0	nonexistent	
2	3	37	services	married	high.school	no	yes	no	telephone	may	...	1	999	0	nonexistent	

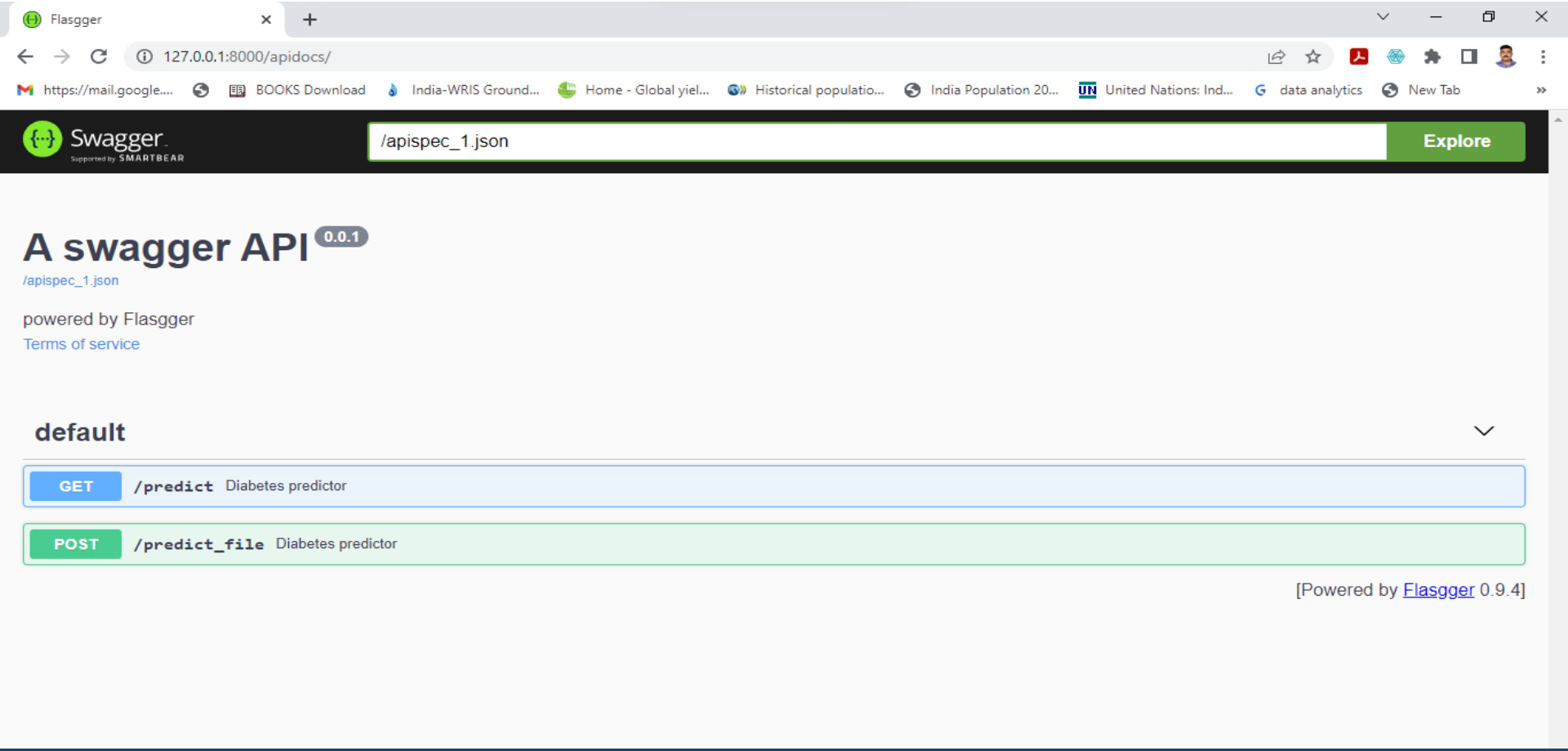
3 rows × 22 columns

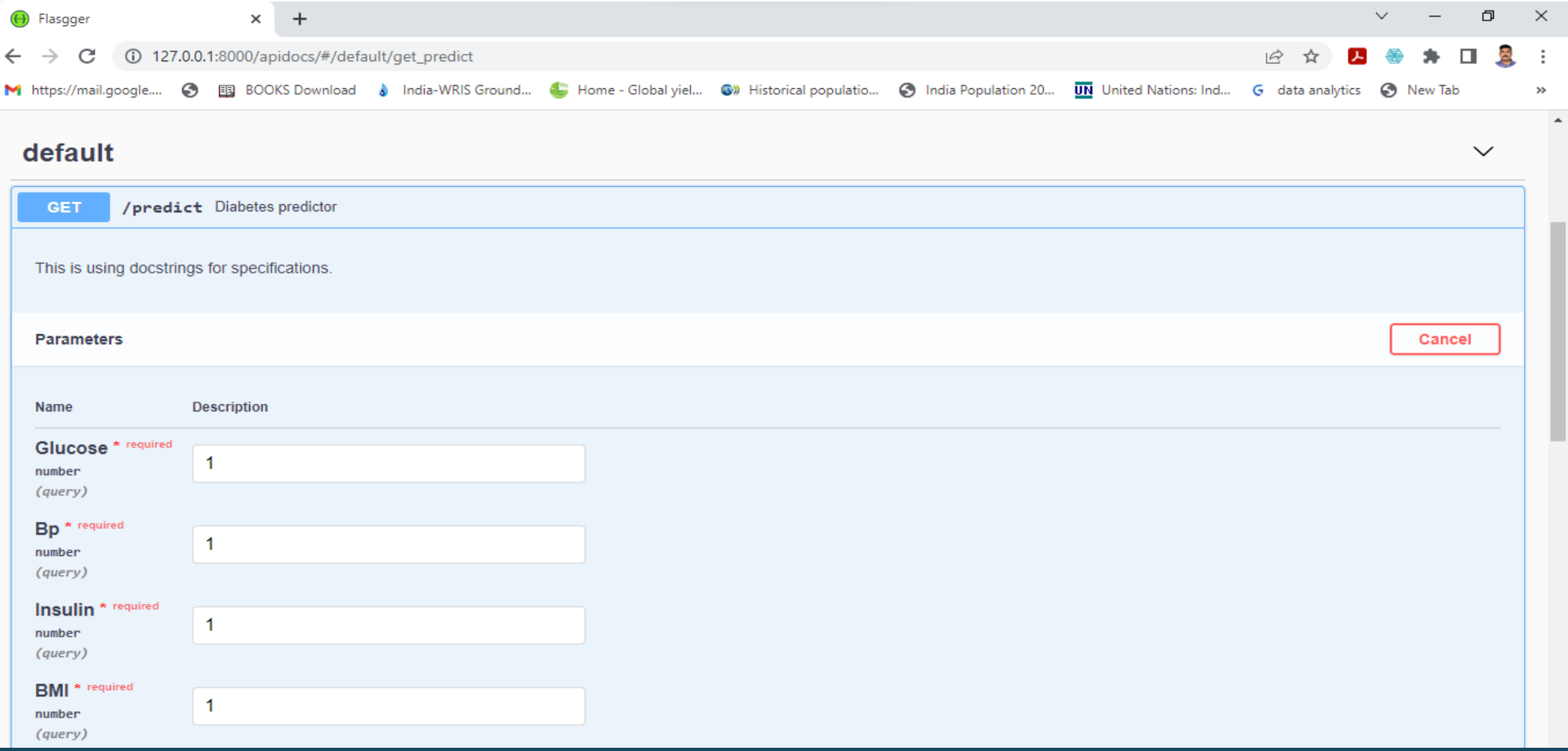

EXPLORER
DIABETES (WORKSPACE)
Diabetes
.ipynb_checkpoints
app.py
classifier.pkl
Diabetes.code-workspace
diabetes.csv
Dockerfile
flask_api.py 5
ModelTraining.ipynb
Procfile
requirements.txt
setup.sh
TestFile.csv
OUTLINE
TIMELINE
flask_api.py 5
Diabetes > flask_api.py > ...
63 required: true
65 responses:
66 200:
67 description: The Prediction is
69 """
70 df_test=pd.read_csv(request.files.get("file"))
71 print(df_test.head())
72 prediction=classifier.predict(df_test)
74 return str(list(prediction))
76 if __name__=='__main__':
77 app.run(host='127.0.0.1',port=8000)
PROBLEMS 5
OUTPUT
DEBUG CONSOLE
TERMINAL
docker
(base) dr.suresha@Drsuresh-A-MacBook-Air Diabetes % docker build -t diabetes .
[+] Building 16.6s (4/8)
[+] Building 16.7s (4/8)
[+] Building 31.3s (4/8)
=> => transferring dockerfile: 232B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/continuumio/anaconda3:4.4.0 4.9s
=> [internal] load build context 0.1s
=> => transferring context: 1.51MB 0.1s
=> [1/4] FROM docker.io/continuumio/anaconda3:4.4.0@sha256:c6bb52bffe028b4b436b085afa4044db9b3d68 26.4s
=> => resolve docker.io/continuumio/anaconda3:4.4.0@sha256:c6bb52bffe028b4b436b085afa4044db9b3d687 0.0s
=> => sha256:c6bb52bffe028b4b436b085afa4044db9b3d687a95468c92578467c9c2d4ac31 1.17kB / 1.17kB 0.0s
=> => sha256:795ad88c47ff29c1d26eb4e7492ca20d5dcf6df484a057b10c1834f6ed792581 4.20kB / 4.20kB 0.0s
=> => sha256:8ad8b3f87b378cfae583fef34e47a3c9203847d779961b7351cbf786af0bc09f 23.07MB / 51.37MB 26.3s
0 5 Cloud Code Connect to Google Cloud -- INSERT -- Ln 77, Col 28 Spaces: 2 UTF-8 CRLF Python 3.9.13 64-bit


EXPLORER
DIABETES (WORKSPACE)
Diabetes
.ipynb_checkpoints
app.py
classifier.pkl
Diabetes.code-workspace
diabetes.csv
Dockerfile
flask_api.py 5
ModelTraining.ipynb
Procfile
requirements.txt
setup.sh
TestFile.csv
OUTLINE
TIMELINE
flask_api.py 5
Diabetes > flask_api.py > ...
63 required: true
65 responses:
66 200:
67 description: The Prediction is
69 """
70 df_test=pd.read_csv(request.files.get("file"))
71 print(df_test.head())
72 prediction=classifier.predict(df_test)
74 return str(list(prediction))
76 if __name__=='__main__':
77 app.run(host='127.0.0.1',port=8000)
PROBLEMS 5
OUTPUT
DEBUG CONSOLE
TERMINAL
docker
=> => exporting layers 0.2s
=> => writing image sha256:4d8f3cb10afa8b16c7d1fde8d5f770a6cecf01e7e2998fcf2ece82196c166416 0.0s
=> => naming to docker.io/library/diabetes 0.0s
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
(base) dr.suresha@Drsuresh-A-MacBook-Air Diabetes % docker run -p 8000:8000 diabetes
WARNING: The requested image's platform (linux/amd64) does not match the detected host platform (linux/arm64/v8) and no specific platform was requested
* Serving Flask app "flask_api" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
/opt/conda/lib/python3.6/site-packages/sklearn/base.py:318: UserWarning: Trying to unpickle estimator DecisionTreeClassifier from version 0.24.2 when using version 0.22.1. This might lead to breaking code or inva
0 5
Cloud Code
Connect to Google Cloud
-- INSERT --
Ln 77, Col 28
Spaces: 2
UTF-8
CRLF
Python
3.9.13 64-bit


127.0.0.1:8000
127.0.0.1:8000
https://mail.google....
BOOKS Download
India-WRIS Ground...
Home - Global yiel...
Historical populatio...
India Population 20...
United Nations: Ind...
data analytics
New Tab

Welcome All


Flasgger
127.0.0.1:8000/apidocs/
https://mail.google....
BOOKS Download
India-WRIS Ground...
Home - Global yiel...
Historical populatio...
India Population 20...
United Nations: Ind...
data analytics
New Tab
Swagger
Supported by SMARTBEAR
/apispec_1.json
Explore
A swagger API
0.0.1
/apispec_1.json
powered by Flasgger
Terms of service
default
GET
/predict
Diabetes predictor
POST
/predict_file
Diabetes predictor
[Powered by Flasgger 0.9.4]


Flasgger
127.0.0.1:8000/apidocs/#/default/get_predict
https://mail.google....
BOOKS Download
India-WRIS Ground...
Home - Global yiel...
Historical populatio...
India Population 20...
United Nations: Ind...
data analytics
New Tab
default
GET
/predict
Diabetes predictor
This is using docstrings for specifications.
Parameters
Cancel
Name
Description
Glucose * required
number
(query)
1
Bp * required
number
(query)
1
Insulin * required
number
(query)
1
BMI * required
number
(query)
1

Flasgger

127.0.0.1:8000/apidocs/#/default/get_predict

https://mail.google.... BOOKS Download India-WRIS Ground... Home - Global yiel... Historical populatio... India Population 20... United Nations: Ind... data analytics New Tab

Request URL

```
http://127.0.0.1:8000/predict?Glucose=1&Bp=1&Insulin=1&BMI=1
```

Server response

Code	Details
200	Response body

```
Prediction is [0]
```

Download

Response headers

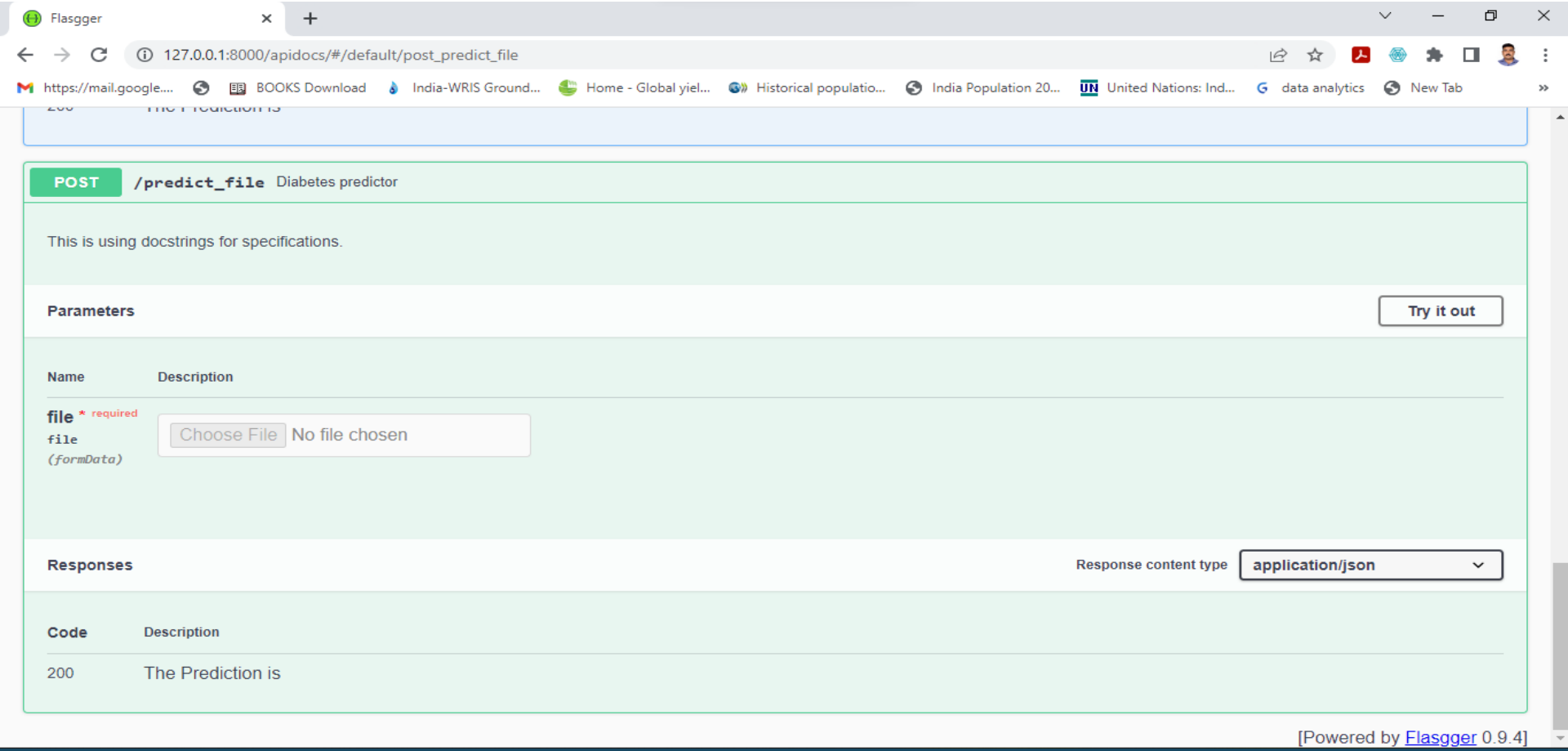
```
content-length: 17
content-type: text/html; charset=utf-8
date: Wed, 06 Jul 2022 06:56:38 GMT
server: Werkzeug/0.15.5 Python/3.6.1
```

Responses

Code	Description
200	The Prediction is

POST /predict_file Diabetes predictor

[Powered by Flasgger 0.9.4]


Flasgger
127.0.0.1:8000/apidocs/#/default/post_predict_file
https://mail.google....
BOOKS Download
India-WRIS Ground...
Home - Global yiel...
Historical populatio...
India Population 20...
United Nations: Ind...
data analytics
New Tab
POST
/predict_file
Diabetes predictor
This is using docstrings for specifications.
Parameters
Try it out
Name
Description
file * required
file
(formData)
Choose File
No file chosen
Responses
Response content type
application/json
Code
Description
200
The Prediction is
[Powered by Flasgger 0.9.4]

Flasgger

127.0.0.1:8000/apidocs/#/default/post_predict_file

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file * required

file

(formData)

Choose File TestFile.csv

Execute **Clear**

Responses Response content type application/json

Curl

```
curl -X POST "http://127.0.0.1:8000/predict_file" -H "accept: application/json" -H "Content-Type: multipart/form-data" -F "file=@TestFile.csv;type=text/csv"
```

Request URL

```
http://127.0.0.1:8000/predict_file
```

Server response

Code	Details
200	Response body

```
[1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 0, 0, 1]
```

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Assignment:

How to deploy Docker app on Heroku?