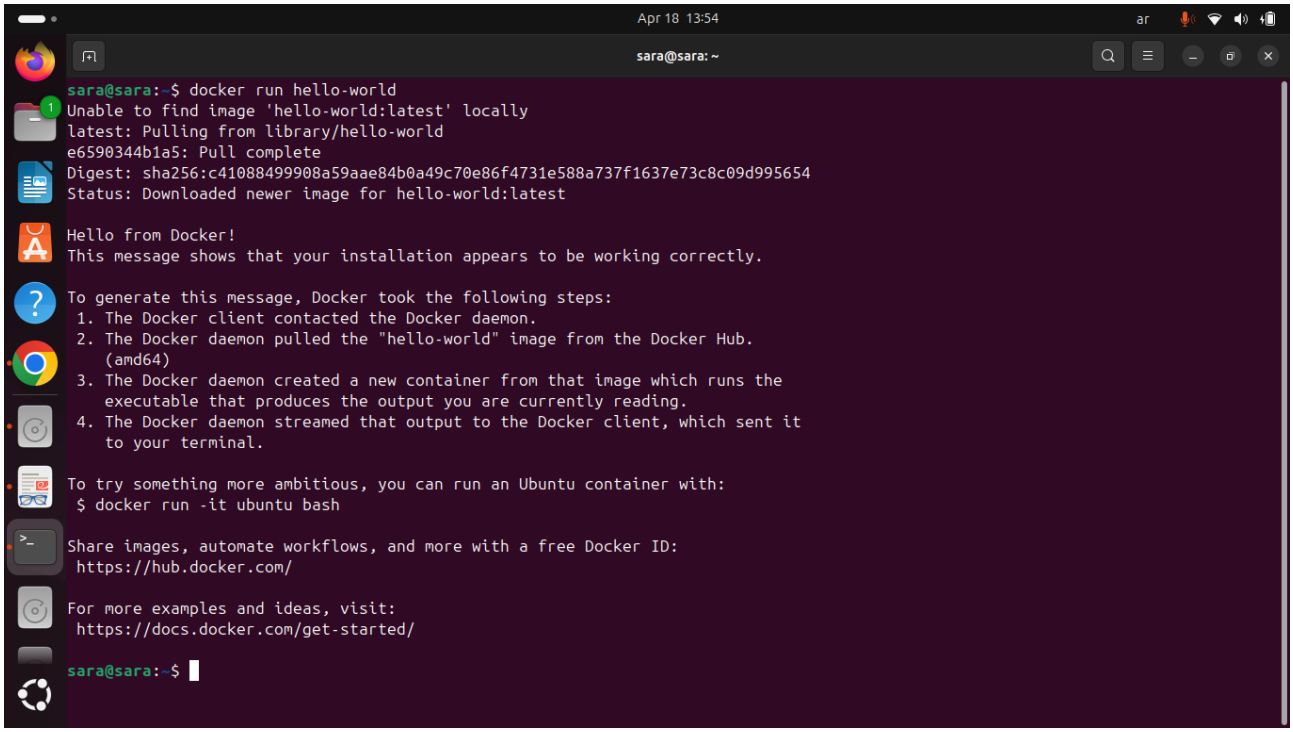
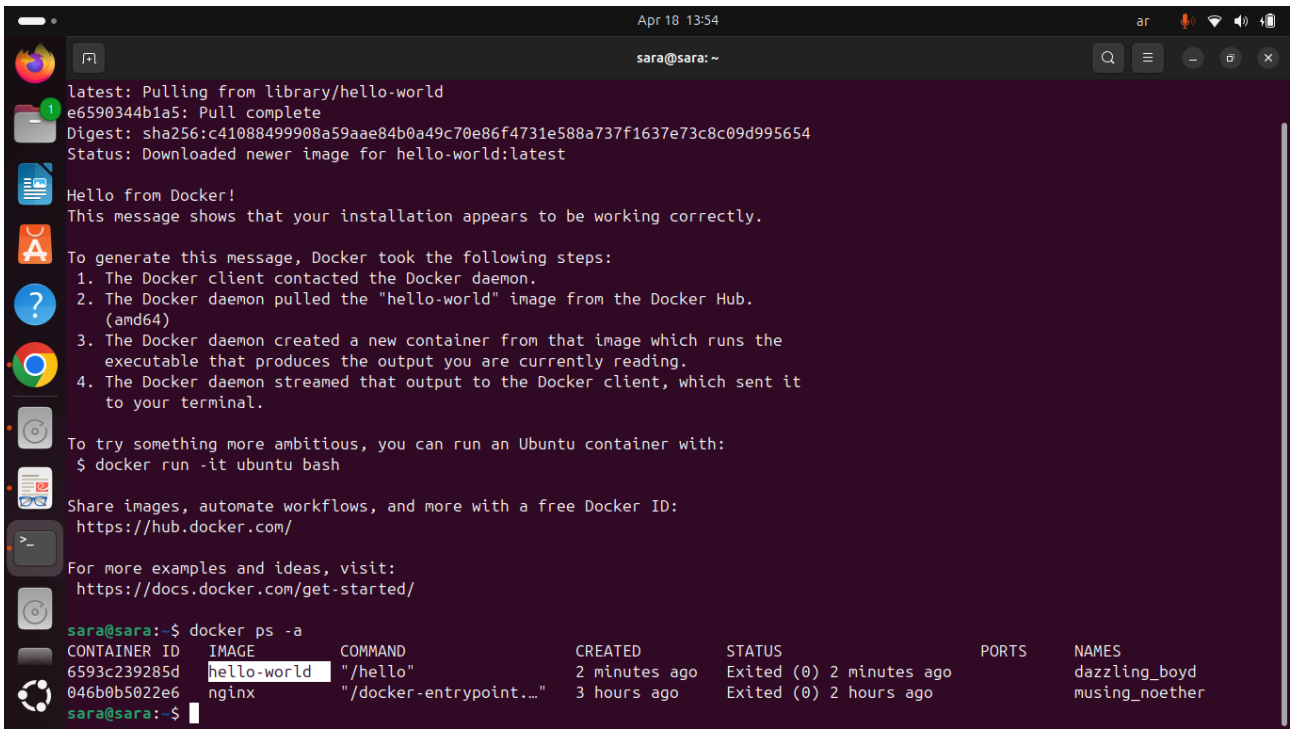
Problem 1:

- Run the container hello-world
- Check the container status
- Start the stopped container
- Remove the container
- Remove the image

1-

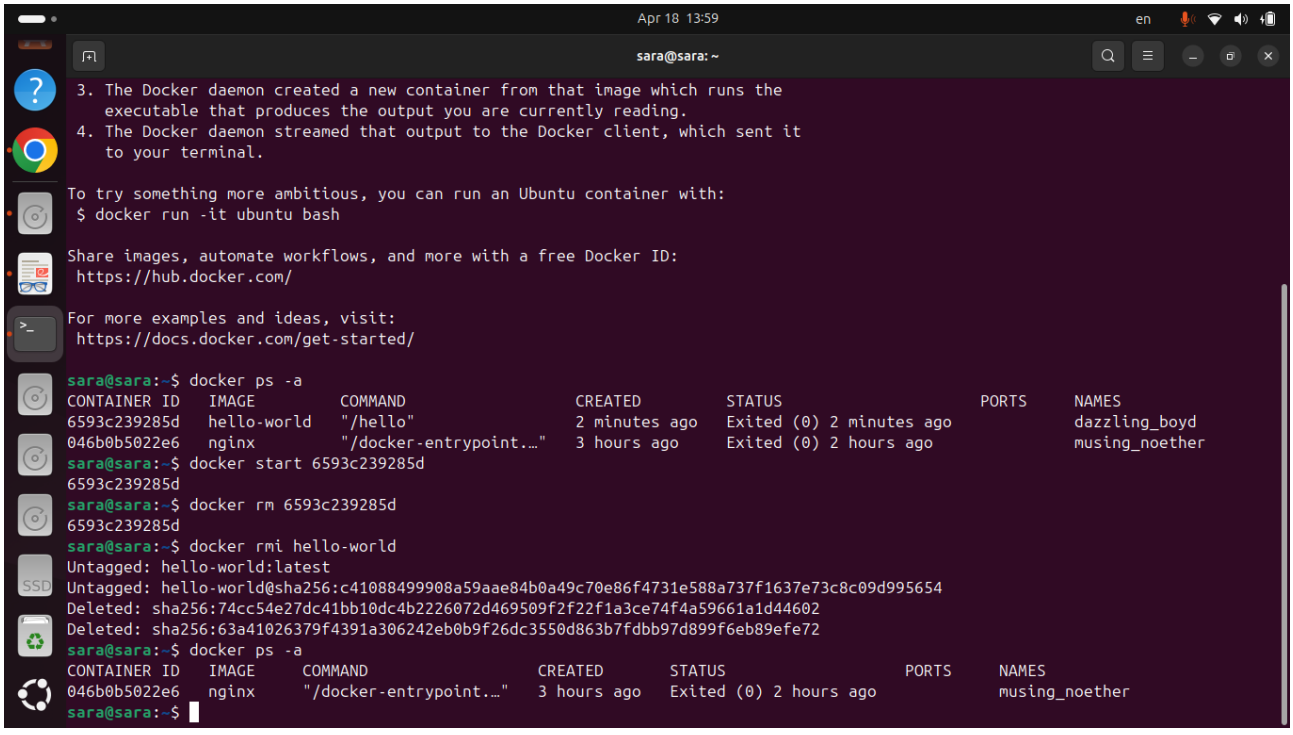


-



-

-

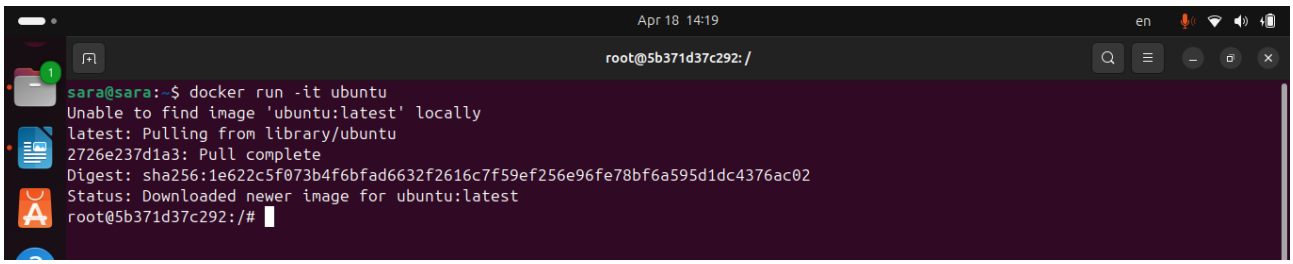


-

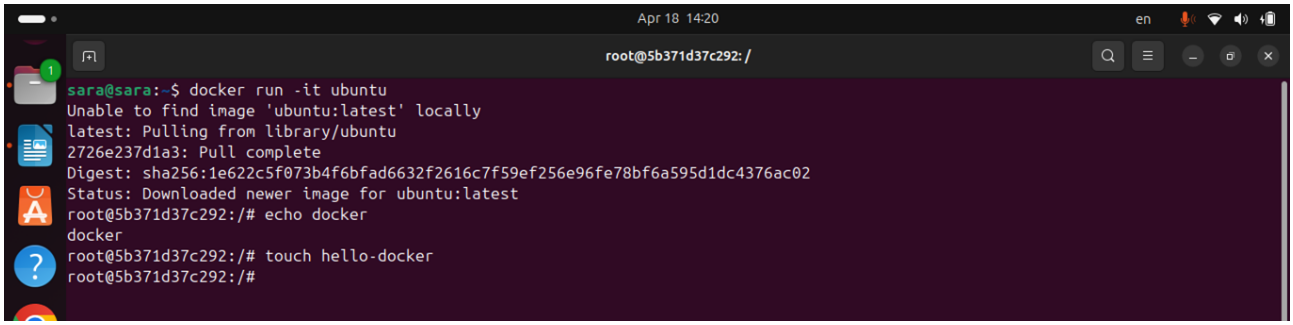
Problem 2:

- Run container centos or ubuntu in an interactive mode
- Run the following command in the container “echo docker”
- Open a bash shell in the container and touch a file named hello-docker
- Stop the container and remove it. Write your comment about the file hello-docker
- Remove all stopped containers

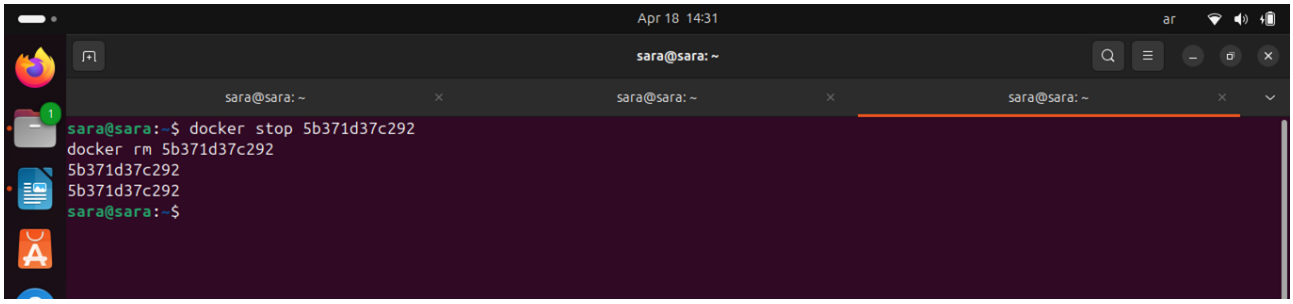
-



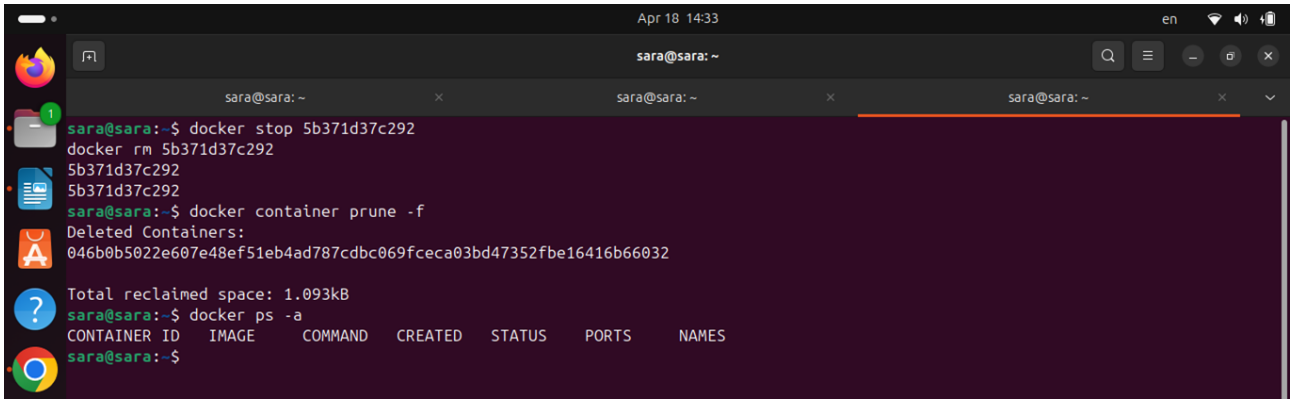
-



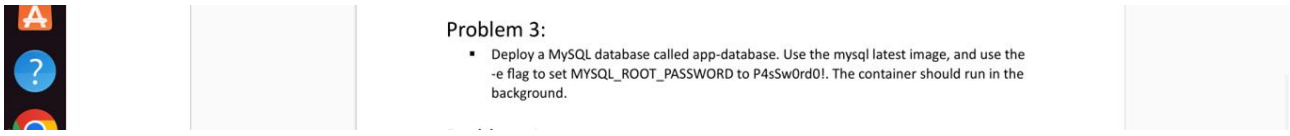
-



-



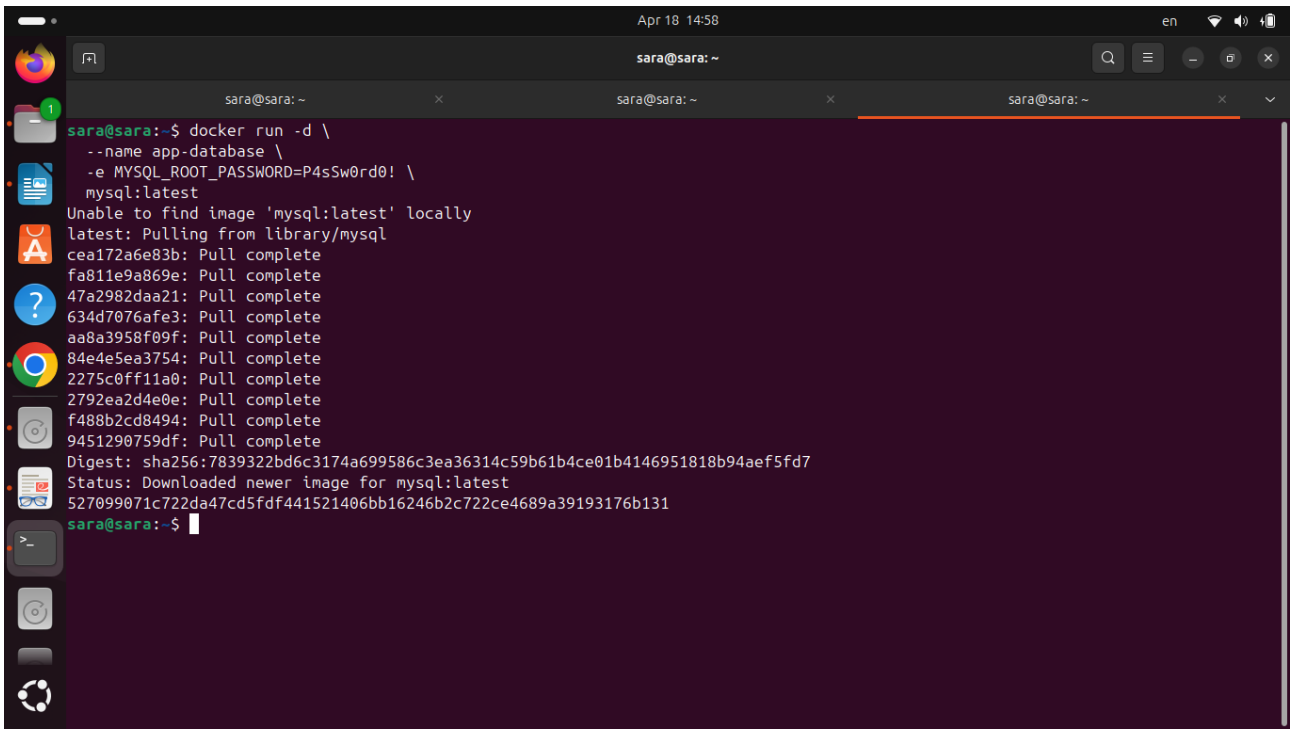
-



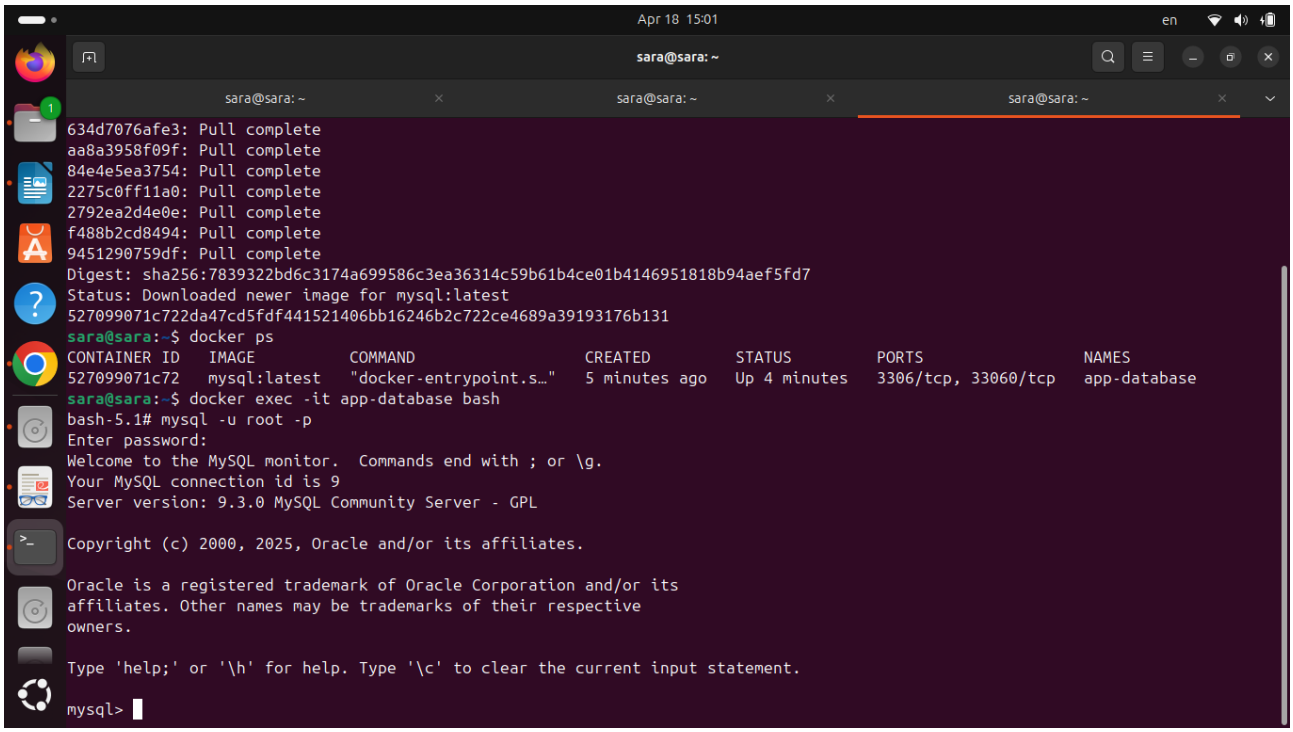
Problem 3:

- Deploy a MySQL database called app-database. Use the mysql latest image, and use the -e flag to set MYSQL_ROOT_PASSWORD to P4sSw0rd0!. The container should run in the background.

-

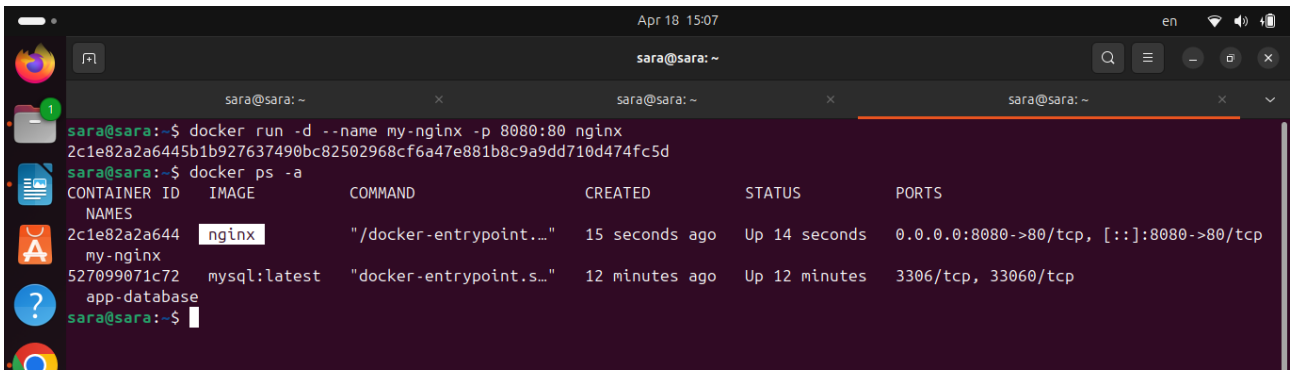

Apr 18 14:58
en
sara@sara: ~
sara@sara: ~
sara@sara: ~
sara@sara: ~
sara@sara:~$ docker run -d \
--name app-database \
-e MYSQL_ROOT_PASSWORD=P4sSw0rd0! \
mysql:latest
Unable to find image 'mysql:latest' locally
latest: Pulling from library/mysql
cea172a6e83b: Pull complete
fa811e9a869e: Pull complete
47a2982daa21: Pull complete
634d7076afe3: Pull complete
aa8a3958f09f: Pull complete
84e4e5ea3754: Pull complete
2275c0ff11a0: Pull complete
2792ea2d4e0e: Pull complete
f488b2cd8494: Pull complete
9451290759df: Pull complete
Digest: sha256:7839322bd6c3174a699586c3ea36314c59b61b4ce01b4146951818b94aef5fd7
Status: Downloaded newer image for mysql:latest
527099071c722da47cd5fdf441521406bb16246b2c722ce4689a39193176b131
sara@sara:~$

-

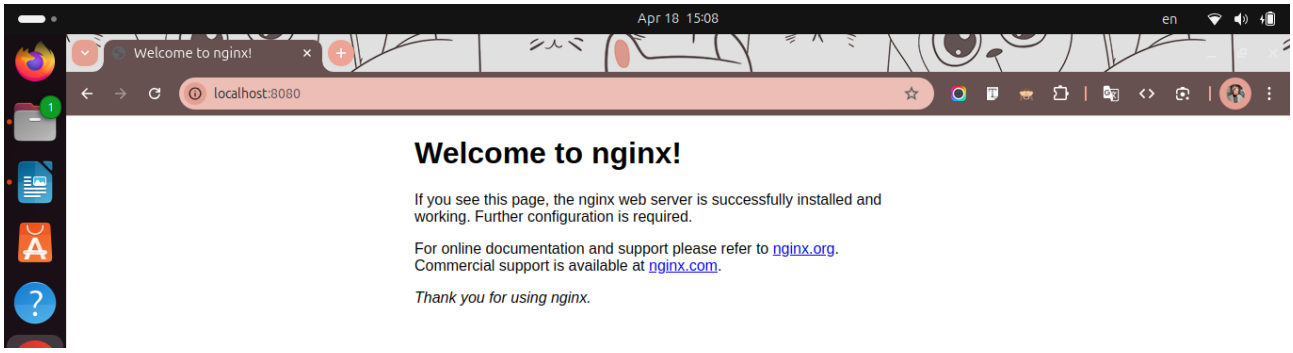

Apr 18 15:01
en
sara@sara: ~
sara@sara: ~
sara@sara: ~
sara@sara: ~
634d7076afe3: Pull complete
aa8a3958f09f: Pull complete
84e4e5ea3754: Pull complete
2275c0ff11a0: Pull complete
2792ea2d4e0e: Pull complete
f488b2cd8494: Pull complete
9451290759df: Pull complete
Digest: sha256:7839322bd6c3174a699586c3ea36314c59b61b4ce01b4146951818b94aef5fd7
Status: Downloaded newer image for mysql:latest
527099071c722da47cd5fdf441521406bb16246b2c722ce4689a39193176b131
sara@sara:~$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
527099071c72 mysql:latest "docker-entrypoint.s…" 5 minutes ago Up 4 minutes 3306/tcp, 33060/tcp app-database
sara@sara:~$ docker exec -it app-database bash
bash-5.1# mysql -u root -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 9.3.0 MySQL Community Server - GPL
Copyright (c) 2000, 2025, Oracle and/or its affiliates.
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>


Problem 4:
Run the image Nginx
Add html static files to the container and make sure they are accessible
Commit the container with image name IMAGE_NAME

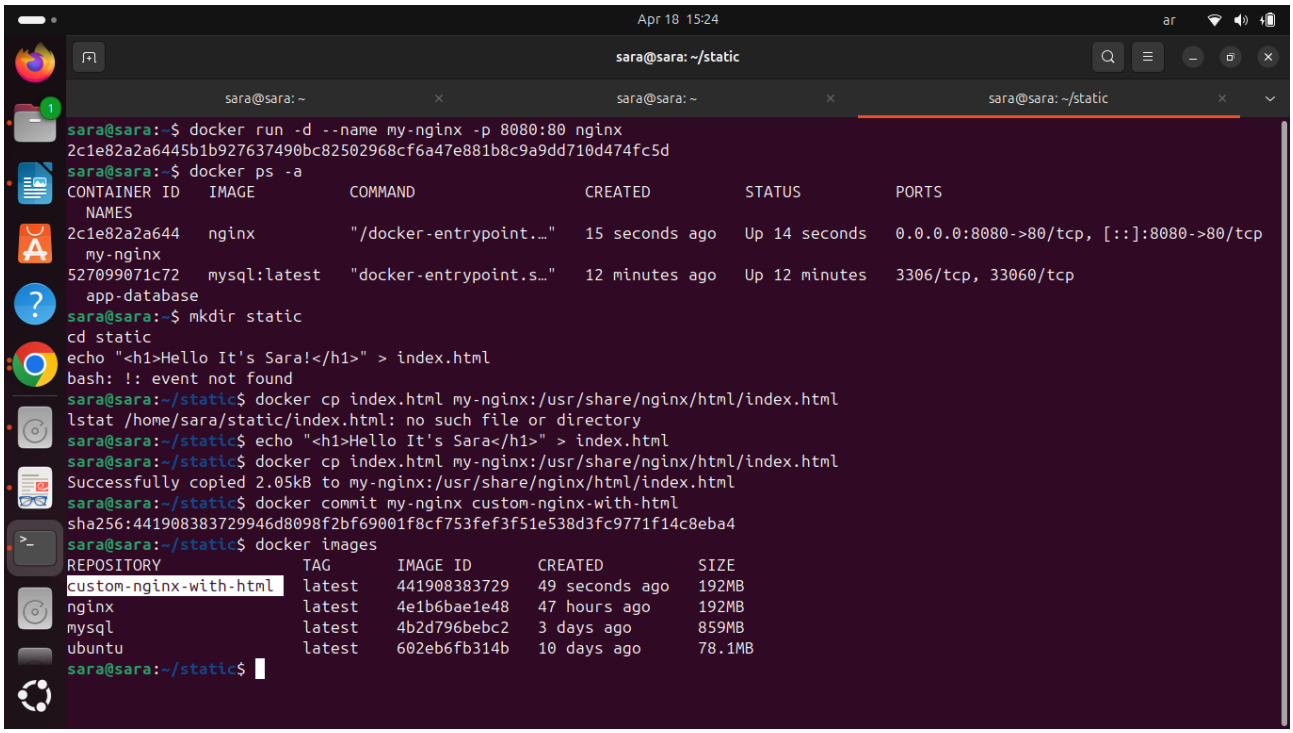
-


Apr 18 15:07
en
sara@sara: ~
sara@sara: ~
sara@sara: ~
sara@sara: ~
sara@sara:~$ docker run -d --name my-nginx -p 8080:80 nginx
2c1e82a2a6445b1b927637490bc82502968cf6a47e881b8c9a9dd710d474fc5d
sara@sara:~$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
NAMES
2c1e82a2a644 nginx "/docker-entrypoint.…" 15 seconds ago Up 14 seconds 0.0.0.0:8080->80/tcp, [::]:8080->80/tcp
my-nginx
527099071c72 mysql:latest "docker-entrypoint.s…" 12 minutes ago Up 12 minutes 3306/tcp, 33060/tcp
app-database
sara@sara:~$

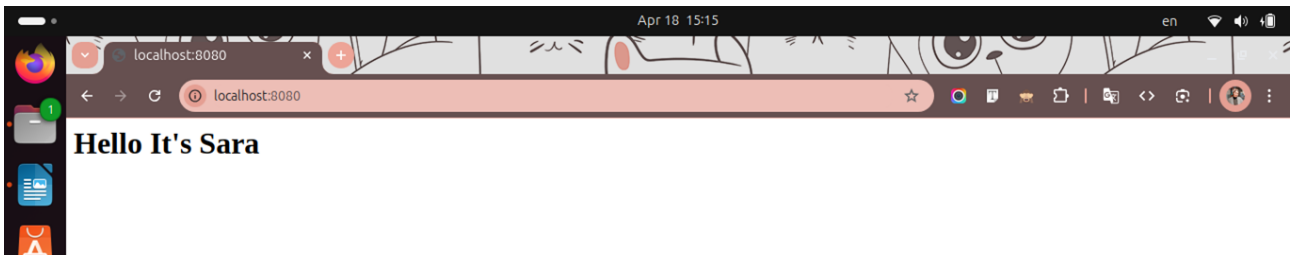
-


Apr 18 15:08
en
Welcome to nginx!
localhost:8080
Welcome to nginx!
If you see this page, the nginx web server is successfully installed and working. Further configuration is required.
For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.
Thank you for using nginx.

-


Apr 18 15:24
ar
sara@sara: ~/static
sara@sara: ~
sara@sara: ~
sara@sara: ~/static
sara@sara:~$ docker run -d --name my-nginx -p 8080:80 nginx
2c1e82a2a6445b1b927637490bc82502968cf6a47e881b8c9a9dd710d474fc5d
sara@sara:~$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
NAMES
2c1e82a2a644 nginx "/docker-entrypoint.…" 15 seconds ago Up 14 seconds 0.0.0.0:8080->80/tcp, [::]:8080->80/tcp
my-nginx
527099071c72 mysql:latest "docker-entrypoint.s…" 12 minutes ago Up 12 minutes 3306/tcp, 33060/tcp
app-database
sara@sara:~$ mkdir static
cd static
echo "<h1>Hello It's Sara!</h1>" > index.html
bash: !: event not found
sara@sara:~/static$ docker cp index.html my-nginx:/usr/share/nginx/html/index.html
lstat /home/sara/static/index.html: no such file or directory
sara@sara:~/static$ echo "<h1>Hello It's Sara</h1>" > index.html
sara@sara:~/static$ docker cp index.html my-nginx:/usr/share/nginx/html/index.html
Successfully copied 2.05kB to my-nginx:/usr/share/nginx/html/index.html
sara@sara:~/static$ docker commit my-nginx custom-nginx-with-html
sha256:441908383729946d8098f2bf69001f8cf753fef3f51e538d3fc9771f14c8eba4
sara@sara:~/static$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
custom-nginx-with-html latest 441908383729 49 seconds ago 192MB
nginx latest 4e1b6bae1e48 47 hours ago 192MB
mysql latest 4b2d796bebc2 3 days ago 859MB
ubuntu latest 602eb6fb314b 10 days ago 78.1MB
sara@sara:~/static$

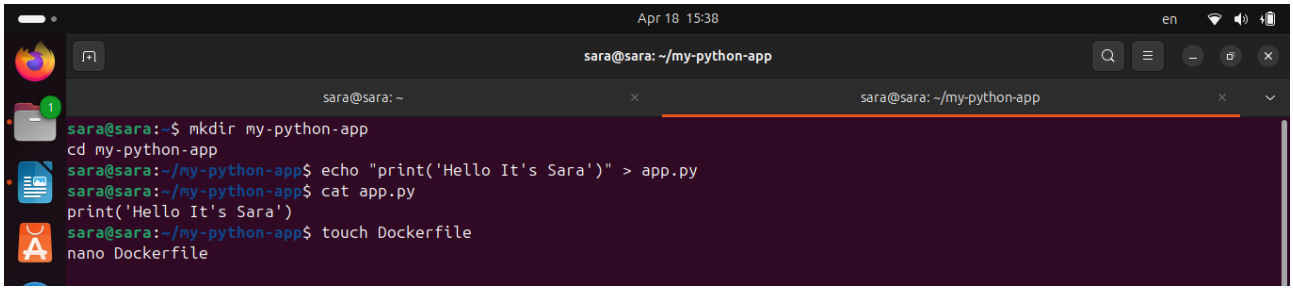
-


Apr 18 15:15
en
localhost:8080
localhost:8080
Hello It's Sara

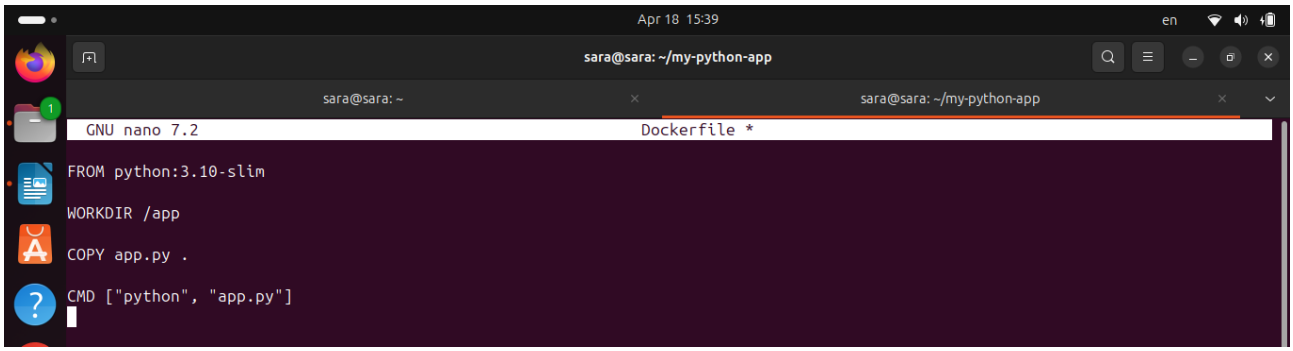
Problem 5:

- Create a python simple app
- Create a dockerfile to containerize the python app
- Build the image and test it
- (Bonus)create a dockerfile for the same app in smaller size using multi staging
- Push the created image into your docker hub repo

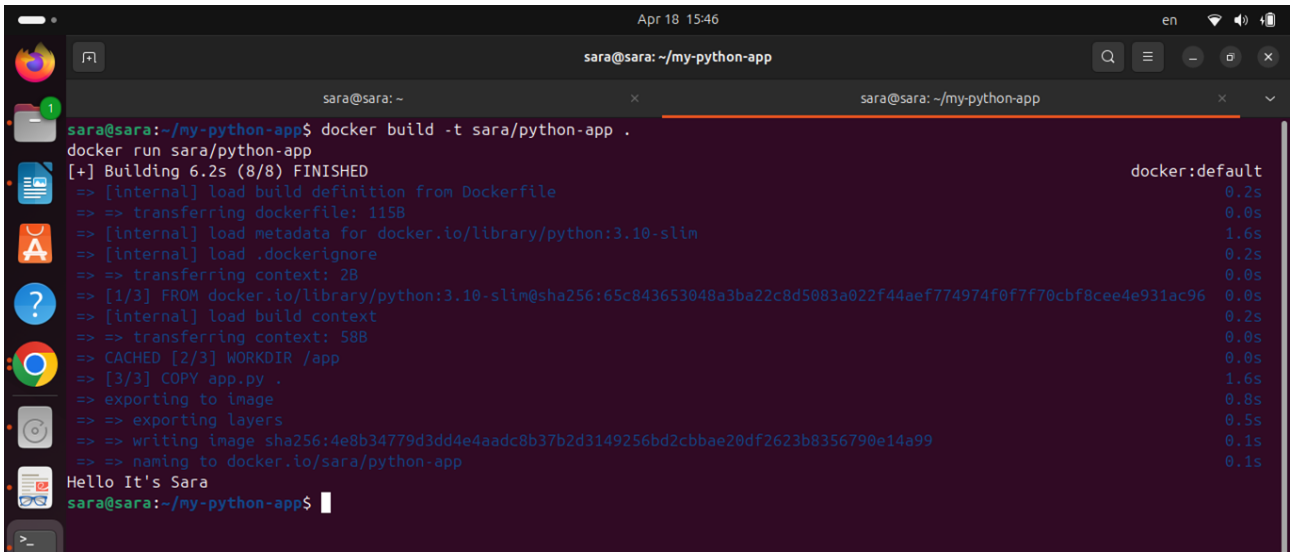
-



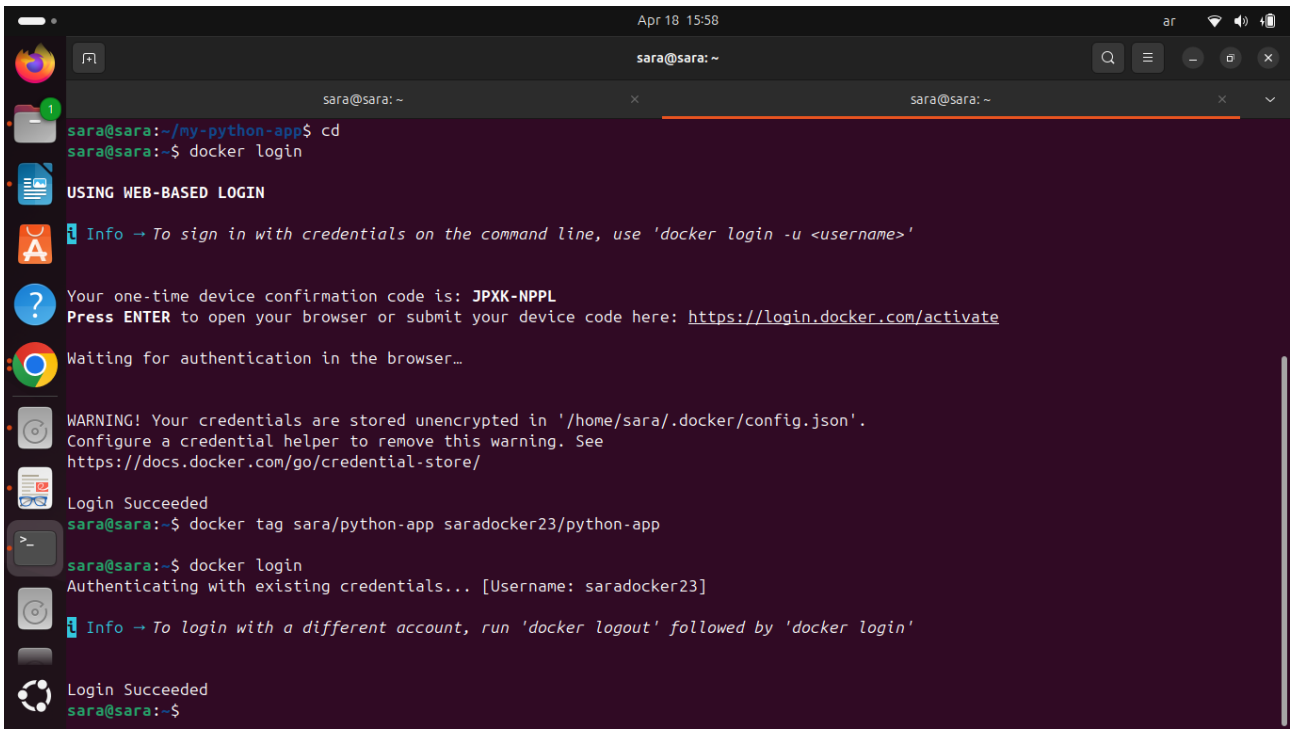
-



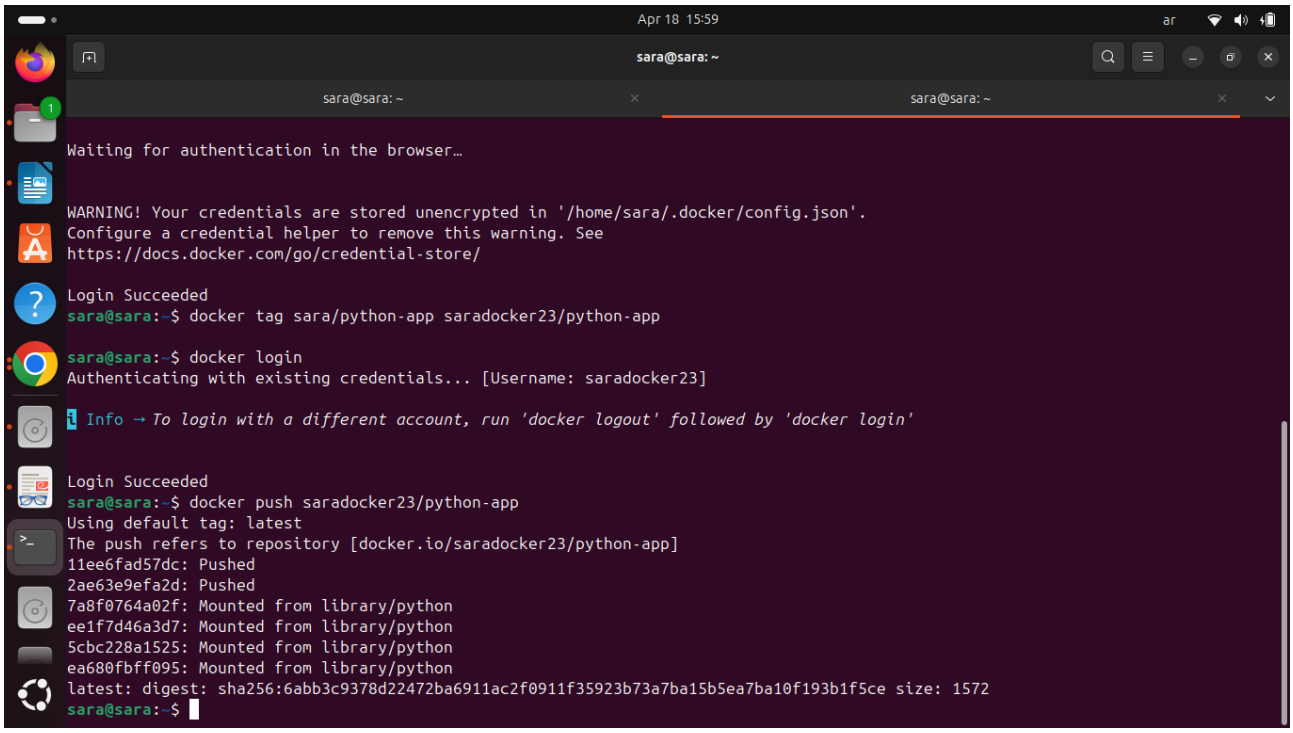
-



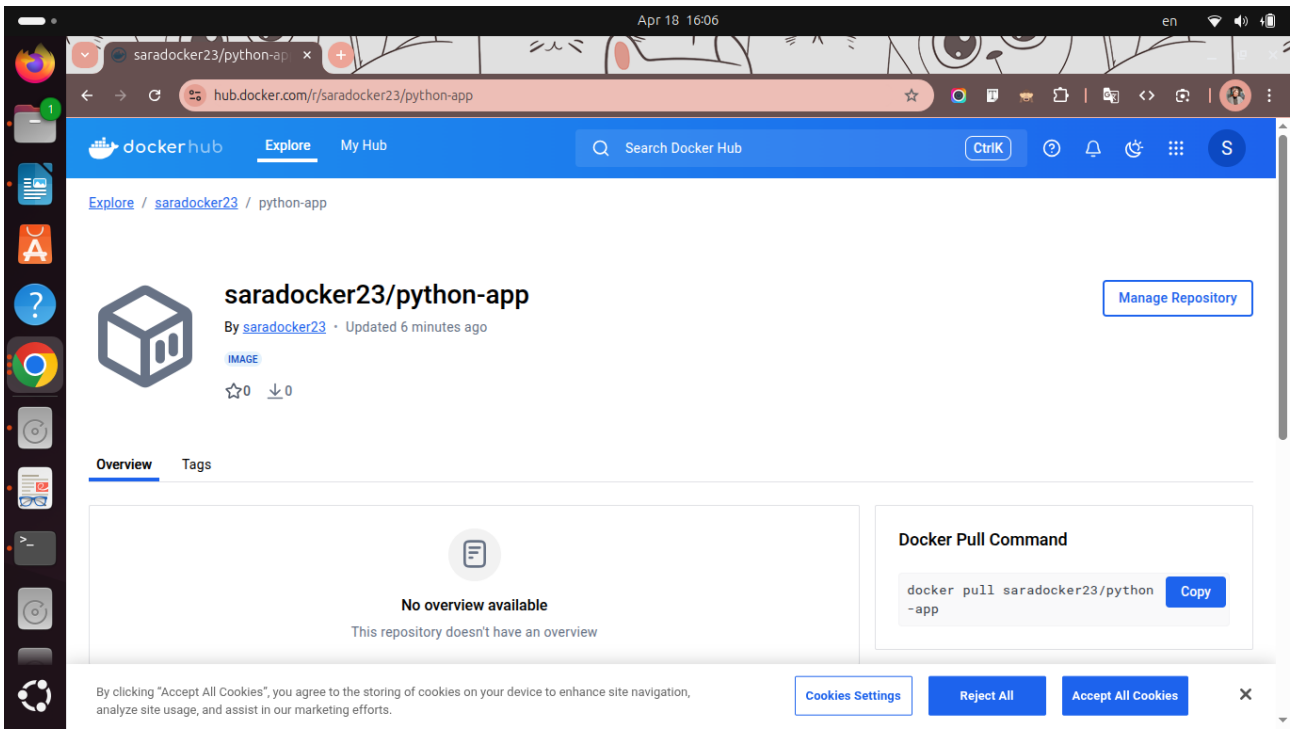
-


Apr 18 15:58
ar
sara@sara: ~
sara@sara: ~
sara@sara: ~
sara@sara:~/my-python-app$ cd
sara@sara:~$ docker login
USING WEB-BASED LOGIN
Info → To sign in with credentials on the command line, use 'docker login -u <username>'
Your one-time device confirmation code is: JPXK-NPPL
Press ENTER to open your browser or submit your device code here: https://login.docker.com/activate
Waiting for authentication in the browser…
WARNING! Your credentials are stored unencrypted in '/home/sara/.docker/config.json'.
Configure a credential helper to remove this warning. See
https://docs.docker.com/go/credential-store/
Login Succeeded
sara@sara:~$ docker tag sara/python-app saradocker23/python-app
sara@sara:~$ docker login
Authenticating with existing credentials... [Username: saradocker23]
Info → To login with a different account, run 'docker logout' followed by 'docker login'
Login Succeeded
sara@sara:~$

-


Apr 18 15:59
ar
sara@sara: ~
sara@sara: ~
sara@sara: ~
Waiting for authentication in the browser…
WARNING! Your credentials are stored unencrypted in '/home/sara/.docker/config.json'.
Configure a credential helper to remove this warning. See
https://docs.docker.com/go/credential-store/
Login Succeeded
sara@sara:~$ docker tag sara/python-app saradocker23/python-app
sara@sara:~$ docker login
Authenticating with existing credentials... [Username: saradocker23]
Info → To login with a different account, run 'docker logout' followed by 'docker login'
Login Succeeded
sara@sara:~$ docker push saradocker23/python-app
Using default tag: latest
The push refers to repository [docker.io/saradocker23/python-app]
11ee6fad57dc: Pushed
2ae63e9efa2d: Pushed
7a8f0764a02f: Mounted from library/python
ee1f7d46a3d7: Mounted from library/python
5cbc228a1525: Mounted from library/python
ea680fbff095: Mounted from library/python
latest: digest: sha256:6abb3c9378d22472ba6911ac2f0911f35923b73a7ba15b5ea7ba10f193b1f5ce size: 1572
sara@sara:~$

-


Apr 18 16:06
en
saradocker23/python-ap
hub.docker.com/r/saradocker23/python-app
dockerhub
Explore
My Hub
Search Docker Hub
CtrlK
S
Explore / saradocker23 / python-app
saradocker23/python-app
By saradocker23 • Updated 6 minutes ago
IMAGE
0
0
Manage Repository
Overview
Tags
No overview available
This repository doesn't have an overview
Docker Pull Command
docker pull saradocker23/python-app
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