INT-332 Practical-5

Example 1: Practice Questions on GHCR

Windows PowerShell

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PS C:\Users\sr302> mkdir flask-ghcr

Directory: C:\Users\sr302

Mode	LastWriteTime	Length	Name
----	-------------	------	----
d-----	2/20/2026 12:17 PM		flask-ghcr

PS C:\Users\sr302> cd flask-ghcr

PS C:\Users\sr302\flask-ghcr> notepad app.py

PS C:\Users\sr302\flask-ghcr> notepad requirements.txt

PS C:\Users\sr302\flask-ghcr> notepad Dockerfile

PS C:\Users\sr302\flask-ghcr> dir

Directory: C:\Users\sr302\flask-ghcr

Mode	LastWriteTime	Length	Name

```
----            ------------     ------ ----

-a----     2/20/2026  12:18 PM         200 app.py

-a----     2/20/2026  12:21 PM         161 Dockerfile.txt

-a----     2/20/2026  12:20 PM           5 requirements.txt



PS C:\Users\sr302\flask-ghcr>ren Dockerfile.txt Dockerfile

PS C:\Users\sr302\flask-ghcr> dir



    Directory: C:\Users\sr302\flask-ghcr



Mode           LastWriteTime     Length Name

----            ------------     ------ ----

-a----     2/20/2026  12:18 PM         200 app.py

-a----     2/20/2026  12:21 PM         161 Dockerfile

-a----     2/20/2026  12:20 PM           5 requirements.txt



PS C:\Users\sr302\flask-ghcr>docker build -t ghcr.io/rajyadav23/flask-ghcr:v1 .

[+] Building 189.9s (10/10) FINISHED                         docker:desktop-linux

 => [internal] load build definition from Dockerfile                    0.1s

 => => transferring dockerfile: 200B                        0.0s

 => [internal] load metadata for docker.io/library/python:3.10-slim              31.4s

 => [internal] load .dockerignore                       0.0s

 => => transferring context: 2B                     0.0s

 => [1/5] FROM docker.io/library/python:3.10-slim@sha256:e508a34e5491225a76fbb9e0f43ebde1f691c6a689d0
134.1s

 => => resolve docker.io/library/python:3.10-slim@sha256:e508a34e5491225a76fbb9e0f43ebde1f691c6a689d096
0.0s

 => => sha256:63ebb7511fc188c7eca8836db8cac7bc37e7d188bd4e5fc617fa0f20979d8a7e 250B / 250B       1.6s
```

```
=> => sha256:690eaffcf0e9a6e579bf82062d0d78590bd1bc000a309b8e76ff4ca460bcdb6f 1.29MB / 1.29MB       39.6s

=> => sha256:d0d1977db48579fff601d66e8aa7525a837b9b23aa7f8e0d3e1de01d8fb6ace6 13.82MB / 13.82MB
133.2s

=> => extracting sha256:690eaffcf0e9a6e579bf82062d0d78590bd1bc000a309b8e76ff4ca460bcdb6f       0.3s

=> => extracting sha256:d0d1977db48579fff601d66e8aa7525a837b9b23aa7f8e0d3e1de01d8fb6ace6       0.7s

=> => extracting sha256:63ebb7511fc188c7eca8836db8cac7bc37e7d188bd4e5fc617fa0f20979d8a7e       0.0s

=> [internal] load build context                           0.1s

=> => transferring context: 285B                           0.1s

=> [2/5] WORKDIR /app                           0.1s

=> [3/5] COPY requirements.txt .                           0.1s

=> [4/5] RUN pip install -r requirements.txt                           24.4s

=> [5/5] COPY app.py .                           0.1s

=> exporting to image                           1.4s

=> => exporting layers                           0.8s

=> => exporting manifest sha256:85c063422c188af8bb591bb2f7c7105c5bdf17a08147d111554bd8acdc3b954f
0.0s

=> => exporting config sha256:804ae4c9360a16e5245c5d1f5ca44a39a5751b939a2081d1ed92a06d50e06759
0.0s

=> => exporting attestation manifest sha256:12051993ca94752cf01dbe8ba630c34f06af95301172c5a8853ac7a73f
0.0s

=> => exporting manifest list sha256:eedb6de583051141cd35a42ed0daaad420b0eb841da0357084534c32ed496db9
0.0s

=> => naming to ghcr.io/rajyadav23/flask-ghcr:v1                           0.0s

=> => unpacking to ghcr.io/rajyadav23/flask-ghcr:v1                           0.4s

PS C:\Users\sr302\flask-ghcr> docker login ghcr.io

Authenticating with existing credentials... [Username: rajyadav23]


i Info → To login with a different account, run 'docker logout' followed by 'docker login'


Login Succeeded

PS C:\Users\sr302\flask-ghcr> docker push ghcr.io/rajyadav23/flask-ghcr:v1

The push refers to repository [ghcr.io/rajyadav23/flask-ghcr]
```

9380771111f7: Pushed

d0d1977db485: Pushing 2.163MB/13.82MB

7c67b35dfb14: Pushed

bd9093e412ac: Pushed

0c8d55a45c0d: Pushing 6.685MB/29.78MB

690eaffcf0e9: Pushed

63ebb7511fc1: Pushed

c19e17520ba6: Pushing 4.162MB/4.767MB

20ab1fa4477b: Pushed

failed to copy: failed to do request: Put "https://ghcr.io/v2/rajyadav23/flask-ghcr/blobs/upload/692cd650-695f-4a75-901e-5f06f1a07ebe?digest=sha256%3Ac19e17520ba63bc1f11fa3cbe8ac712dae564cb40760037f35cf0461dafad083": write tcp 192.168.65.3:33702->192.168.65.1:3128: write: broken pipe

PS C:\Users\sr302\flask-ghcr> docker push ghcr.io/rajyadav23/flask-ghcr:v1

The push refers to repository [ghcr.io/rajyadav23/flask-ghcr]

20ab1fa4477b: Already exists

9380771111f7: Layer already exists

d0d1977db485: Pushed

7c67b35dfb14: Layer already exists

c19e17520ba6: Pushed

bd9093e412ac: Layer already exists

0c8d55a45c0d: Pushed

63ebb7511fc1: Layer already exists

690eaffcf0e9: Layer already exists

v1: digest: sha256:eedb6de583051141cd35a42ed0daaad420b0eb841da0357084534c32ed496db9 size: 856

PS C:\Users\sr302\flask-ghcr> docker rmi ghcr.io/rajyadav23/flask-ghcr:v1

Untagged: ghcr.io/rajyadav23/flask-ghcr:v1

Deleted: sha256:eedb6de583051141cd35a42ed0daaad420b0eb841da0357084534c32ed496db9

PS C:\Users\sr302\flask-ghcr> docker login ghcr.io

Authenticating with existing credentials... [Username: rajyadav23]

i Info → To login with a different account, run 'docker logout' followed by 'docker login'

Login did not succeed, error: Error response from daemon: Get "https://ghcr.io/v2/": net/http: request canceled while waiting for connection (Client.Timeout exceeded while awaiting headers)

2026/02/20 12:34:05 notifying Desktop of credentials store update: Post "http://ipc/registry/credstore-updated": context deadline exceeded

Username (rajyadav23): rajyadav23

Password:

Login Succeeded

PS C:\Users\sr302\flask-ghcr> docker pull ghcr.io/rajyadav23/flask-ghcr:v1

v1: Pulling from rajyadav23/flask-ghcr

9380771111f7: Pull complete

c19e17520ba6: Pull complete

7c67b35dfb14: Pull complete

bd9093e412ac: Pull complete

20ab1fa4477b: Download complete

Digest: sha256:eedb6de583051141cd35a42ed0daaad420b0eb841da0357084534c32ed496db9

Status: Downloaded newer image for ghcr.io/rajyadav23/flask-ghcr:v1

ghcr.io/rajyadav23/flask-ghcr:v1

PS C:\Users\sr302\flask-ghcr> docker run -p 5000:5000 ghcr.io/rajyadav23/flask-ghcr:v1

 * Serving Flask app 'app'

 * Debug mode: off

WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.

 * Running on all addresses (0.0.0.0)

 * Running on http://127.0.0.1:5000

 * Running on http://172.17.0.2:5000
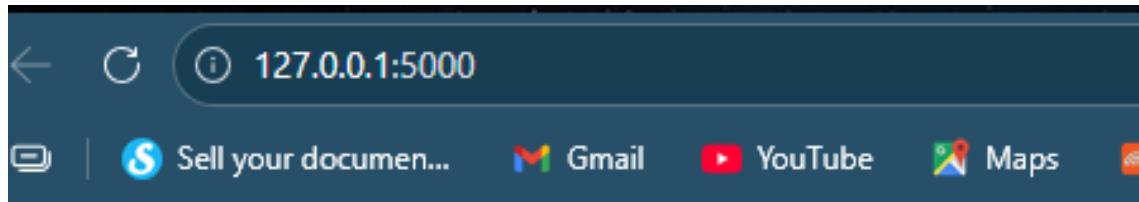
Press CTRL+C to quit

172.17.0.1 - - [20/Feb/2026 07:07:05] "GET / HTTP/1.1" 200 -
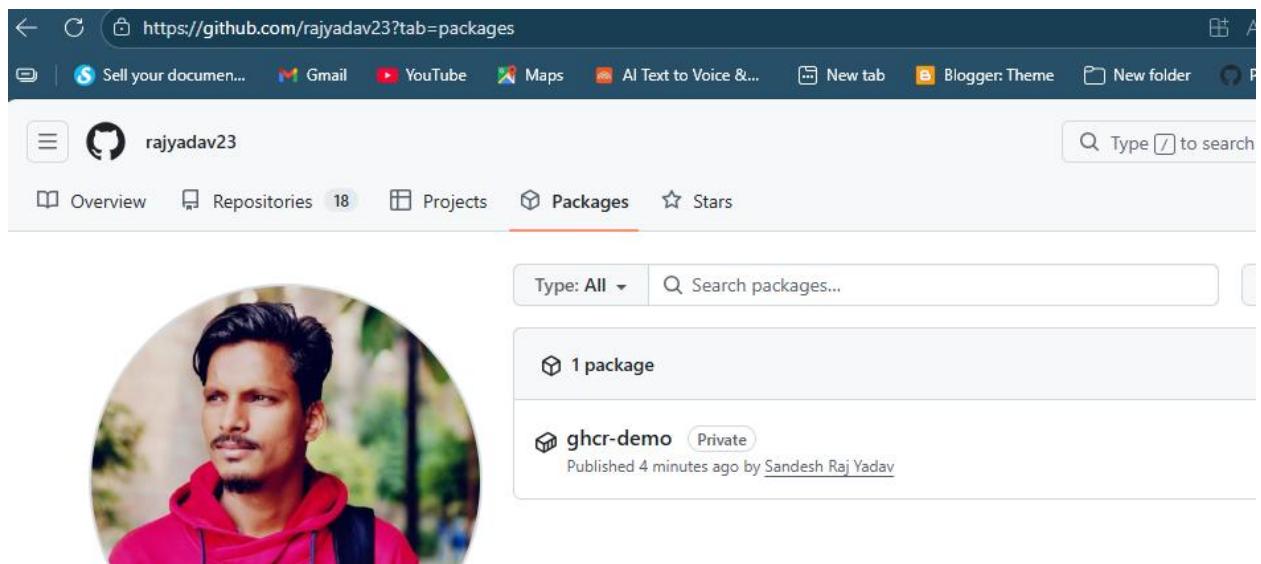
172.17.0.1 - - [20/Feb/2026 07:07:05] "GET /favicon.ico HTTP/1.1" 404 -

172.17.0.1 - - [20/Feb/2026 07:08:26] "GET /.well-known/appspecific/com.chrome.devtools.json HTTP/1.1" 404 -

<mark>Output</mark>

<mark>Example 2: Customized MySQL Docker image</mark>

Windows PowerShell

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```
PS C:\Users\sr302>mkdir mysql-ghcr


    Directory: C:\Users\sr302


Mode          LastWriteTime      Length Name
----          -------------      ------ ----
d-----     2/20/2026  12:47 PM          mysql-ghcr



PS C:\Users\sr302> cd mysql-ghcr
PS C:\Users\sr302\mysql-ghcr> notepad init.sql
PS C:\Users\sr302\mysql-ghcr> notepad Dockerfile
PS C:\Users\sr302\mysql-ghcr>ren Dockerfile.txt Dockerfile
PS C:\Users\sr302\mysql-ghcr> dir


    Directory: C:\Users\sr302\mysql-ghcr


Mode          LastWriteTime      Length Name
----          -------------      ------ ----
-a----     2/20/2026  12:49 PM      126 Dockerfile
-a----     2/20/2026  12:48 PM      251 init.sql



PS C:\Users\sr302\mysql-ghcr> docker build -t ghcr.io/rajyadav23/mysql-college:v1 .
```

```
[+] Building 4.6s (8/8) FINISHED                          docker:desktop-linux
 => [internal] load build definition from Dockerfile                      0.1s
 => => transferring dockerfile: 130B                              0.1s
 => [internal] load metadata for docker.io/library/mysql:8.0                3.1s
 => [auth] library/mysql:pull token for registry-1.docker.io              0.0s
 => [internal] load .dockerignore                          0.0s
 => => transferring context: 2B                             0.0s
 => [internal] load build context                           0.1s
 => => transferring context: 350B                           0.0s
 => CACHED [1/2] FROM
docker.io/library/mysql:8.0@sha256:a3dff78d876222746a0bacc36dd7e4bf9e673c85fb7ee0  0.1s
 => => resolve
docker.io/library/mysql:8.0@sha256:a3dff78d876222746a0bacc36dd7e4bf9e673c85fb7ee0d12ed25
 0.1s
 => [2/2] COPY init.sql /docker-entrypoint-initdb.d/                 0.1s
 => exporting to image                             0.5s
 => => exporting layers                            0.2s
 => => exporting manifest
sha256:b8b88df3180cb0936860b827b97953e17e9533a4ac664c31906e06accd5d880e      0.0s
 => => exporting config
sha256:b882ed83f7c3bcdbd06e8a995d16513e588ae678a0584ef65928b56a8ef0add3       0.0s
 => => exporting attestation manifest
sha256:f3f1d4479577e8cb4e4936baaca064def0f4b65749891557b0bbc82813  0.1s
 => => exporting manifest list
sha256:6b4a7862ee908f4e6a369a4f964125886fa4cd81a11af35adf5488d1af6e9446  0.0s
 => => naming to ghcr.io/rajyadav23/mysql-college:v1                 0.0s
 => => unpacking to ghcr.io/rajyadav23/mysql-college:v1               0.1s
PS C:\Users\sr302\mysql-ghcr> docker login ghcr.io
Authenticating with existing credentials... [Username: rajyadav23]


i Info → To login with a different account, run 'docker logout' followed by 'docker login'
```

Login Succeeded

PS C:\Users\sr302\mysql-ghcr> docker push ghcr.io/rajyadav23/mysql-college:v1

The push refers to repository [ghcr.io/rajyadav23/mysql-college]

08b4b2059620: Waiting

8814198b348b: Waiting

0644bff8d158: Waiting

bfb2a1b21556: Pushed

a490c097310f: Pushed

3ca1b3148b2f: Pushed

1b381ad27e95: Pushed

2b38f4979592: Pushed

d6b535e661c2: Pushed

74a8e4bbd9fe: Pushed

85b08b5b9055: Pushed

25e72585209f: Pushed

7aee539d1d90: Pushed

v1: digest: sha256:6b4a7862ee908f4e6a369a4f964125886fa4cd81a11af35adf5488d1af6e9446 size: 856

PS C:\Users\sr302\mysql-ghcr> docker rmi ghcr.io/rajyadav23/mysql-college:v1

Untagged: ghcr.io/rajyadav23/mysql-college:v1

Deleted: sha256:6b4a7862ee908f4e6a369a4f964125886fa4cd81a11af35adf5488d1af6e9446

PS C:\Users\sr302\mysql-ghcr> docker login ghcr.io

Authenticating with existing credentials... [Username: rajyadav23]

i Info → To login with a different account, run 'docker logout' followed by 'docker login'

Login Succeeded

PS C:\Users\sr302\mysql-ghcr> docker pull ghcr.io/rajyadav23/mysql-college:v1

v1: Pulling from rajyadav23/mysql-college

08b4b2059620: Pull complete

a490c097310f: Download complete

Digest: sha256:6b4a7862ee908f4e6a369a4f964125886fa4cd81a11af35adf5488d1af6e9446

Status: Downloaded newer image for ghcr.io/rajyadav23/mysql-college:v1

ghcr.io/rajyadav23/mysql-college:v1

PS C:\Users\sr302\mysql-ghcr>docker run -d --name mysql-container -e
MYSQL_ROOT_PASSWORD=root123 -p 3306:3306

 ghcr.io/rajyadav23/mysql-college:v1

f5651d3b5a6a348c24beaecd7b98261b2da8851bbaa4a76d87f3701d893f2f6d

PS C:\Users\sr302\mysql-ghcr> docker exec -it mysql-container mysql -u root -p

Enter password:

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 8

Server version: 8.0.45 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

Output

mysql> SHOW DATABASES;

+--------------------+

| Database |

+--------------------+

| college_db |

| information_schema |

| mysql |

| performance_schema |

| sys |

+--------------------+

5 rows in set (0.04 sec)

mysql>USE college_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_college_db |

+----------------------+

| students |

+----------------------+

1 row in set (0.01 sec)

mysql>SELECT * FROM students;

+----+-------------------+------------+

| id | name | department |

+----+-------------------+------------+

| 1 | Sandesh Raj Yadav | CSE |

| 2 | Raj Kushwaha | IT |

| 3 | Shubham yadav | BBA |

+----+-------------------+------------+

3 rows in set (0.00 sec)

rajyadav23

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📦 **flask-ghcr** Private
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📦 **mysql-college** Private
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