```
Windows PowerShell                                                    —  ☐  ✕

Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\DELL> docker pull mysql
Using default tag: latest
latest: Pulling from library/mysql
Digest: sha256:a43f6e7e7f3a5e5b90f857fbed4e3103ece771b19f0f75880f767cf66bbb6577
Status: Image is up to date for mysql:latest
docker.io/library/mysql:latest
PS C:\Users\DELL> docker images
REPOSITORY            TAG        IMAGE ID        CREATED          SIZE
sarthak_project       latest     54ce2ae5b6d4    2 hours ago      1.07GB
bank_proj.sql         latest     32fe72e7dd72    25 hours ago     564MB
project_final.py      latest     35831f4786ae    28 hours ago     1.07GB
mysql                 latest     8189e588b0e8    9 days ago       564MB
PS C:\Users\DELL>
```

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An image is a read-only template with instructions for creating a Docker container. Learn more

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1.78 GB / 1.78 GB in use   4 images   Last refresh: about 2 hours ago ↻

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	Name	Tag	Status	Created	Size	Actions
☐	**sarthak_project** 54ce2ae5b6d4 📋	latest	In use	about 2 hours ago	1.07 GB	▶ ⋮ 🗑
☐	**bank_proj.sql** 32fe72e7dd72 📋	latest	In use	1 day ago	564.35 MB	▶ ⋮ 🗑
☐	**project_final.py** 35831f4786ae 📋	latest	In use	1 day ago	1.07 GB	▶ ⋮ 🗑
☐	**mysql** 8189e588b0e8 📋	latest	In use	9 days ago	564.34 MB	▶ ⋮ 🗑

Showing 4 items

```
PS D:\work> docker ps -a
CONTAINER ID   IMAGE                     COMMAND                CREATED             STATUS                   PORTS                    NAMES
f151f827d0bd   sarthak_project           "python ./project_fi…"  31 seconds ago      Exited (1) 23 seconds ago                         sarthak_project_new
02ea1a23c2a6   sarthak_project           "python ./project_fi…"  About an hour ago   Exited (1) 58 minutes ago                         22c79debec62
22c79debec62   sarthak_project           "python ./project_fi…"  About an hour ago   Exited (1) 4 minutes ago                          sarthak_project
fb5ab987c8a8   mysql                     "docker-entrypoint.s…"  2 hours ago         Up 4 minutes             3306/tcp, 33060/tcp      mysqldb
a0bd8922dcf9   project_final.py:latest   "python ./project_fi…"  22 hours ago        Exited (1) 22 hours ago                           beautiful_beaver
31fa099495c0   bank_proj.sql:latest      "python ./project_fi…"  22 hours ago        Exited (1) 22 hours ago                           eager_agnesi
0b8ca9f0ed24   32fe72e7dd72              "docker-entrypoint.s…"  25 hours ago        Exited (1) 25 hours ago                           agitated_joliot
2e5f475746a4   project_final.py:latest   "python ./project_fi…"  25 hours ago        Exited (1) 25 hours ago                           confident_khayyam
5eca368de770   project_final.py:latest   "python ./project_fi…"  27 hours ago        Exited (1) 27 hours ago                           sharp_pasteur
c12971f527f2   35831f4786ae              "python ./project_fi…"  27 hours ago        Exited (1) 27 hours ago                           kind_newton
PS D:\work> docker run --name mysqldb --network project-network -e MYSQL_ROOT_PASSWORD=1234 -e MYSQL_DATABASE=bank -e MYSQL_PASSWORD=1234 -d mysql
docker: Error response from daemon: Conflict. The container name "/mysqldb" is already in use by container "fb5ab987c8a8fdd95b0c1d97d9267c81a257db08f6274049eca42df3c0affd27". You hav
e to remove (or rename) that container to be able to reuse that name.
See 'docker run --help'.
PS D:\work>
```

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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

🔍 8189e588b0e8 ✕   ▮▮▮   ◯ Only show running containers

	Name	Image	Status	Port(s)	Last started	Actions
☐	mysqldb fb5ab987c8a8	mysql	Running		11 minutes ago	▮ ⋮ 🗑

```
See 'docker run --help'.
PS D:\work> docker ps
CONTAINER ID   IMAGE    COMMAND                CREATED        STATUS          PORTS                  NAMES
fb5ab987c8a8   mysql    "docker-entrypoint.s…"  2 hours ago    Up 11 minutes   3306/tcp, 33060/tcp    mysqldb
PS D:\work>
```

Docker > dockerfile > ...

```dockerfile
1    FROM python:3.11
2
3    # Set the working directory to /app
4    WORKDIR /app
5
6    RUN apt-get update && apt-get install -y default-libmysqlclient-dev
7    RUN pip install mysql-connector-python
8
9    COPY project_final.py .
10   # ADD /target /project_final.py
11
12   # Set environment variables
13   ENV MYSQL_HOST="mysqldb"
14   ENV MYSQL_USER="root"
15   ENV MYSQL_PASSWORD="1234"
16   ENV MYSQL_DATABASE="bank"
17
18   # Expose the port that the application will be running on
19   EXPOSE 9590
20   # Run the command to start the application
21   CMD [ "python", "./project_final.py" ]
22
23
```

```
PS D:\work>
PS D:\work>
PS D:\work>
PS D:\work> docker build -t sarthak_project .
[+] Building 4.6s (2/2) FINISHED
 => [internal] load build definition from Dockerfile                                                          2.3s
 => => transferring dockerfile: 2B                                                                            0.0s
 => [internal] load .dockerignore                                                                            4.4s
 => => transferring context: 2B                                                                              0.0s
failed to solve with frontend dockerfile.v0: failed to read dockerfile: open /var/lib/docker/tmp/buildkit-mount3234707636/Dockerfile: no such file or directory
PS D:\work> cd .\Docker\
PS D:\work\Docker> docker build -t sarthak_project .
[+] Building 3.9s (10/10) FINISHED
 => [internal] load build definition from Dockerfile                                                          0.3s
 => => transferring dockerfile: 575B                                                                          0.0s
 => [internal] load .dockerignore                                                                            0.3s
 => => transferring context: 2B                                                                              0.0s
 => [internal] load metadata for docker.io/library/python:3.11                                               2.9s
 => [internal] load build context                                                                            0.4s
 => => transferring context: 9.94kB                                                                          0.3s
 => [1/5] FROM docker.io/library/python:3.11@sha256:f7382f4f9dbc51183c72d621b9c196c1565f713a1fe40c119d215c961fa22815    0.0s
 => CACHED [2/5] WORKDIR /app                                                                                 0.0s
 => CACHED [3/5] RUN apt-get update && apt-get install -y default-libmysqlclient-dev                         0.0s
 => CACHED [4/5] RUN pip install mysql-connector-python                                                       0.0s
 => CACHED [5/5] COPY project_final.py .                                                                      0.0s
 => exporting to image                                                                                        0.2s
 => => exporting layers                                                                                       0.0s
 => => writing image sha256:54ce2ae5b6d42305a84f4ff73bc791c2010ad61cb32bd31c95c2f5ed9cb494ae                 0.0s
 => => naming to docker.io/library/sarthak_project                                                            0.0s
PS D:\work\Docker>
```

```
 => exporting to image
 => => exporting layers
 => => writing image sha256:54ce2ae5b6d42305a84f4ff73bc791c2010ad61cb32bd31c95c2f5ed9cb494ae
 => => naming to docker.io/library/sarthak_project
PS D:\work\Docker> docker images
REPOSITORY          TAG       IMAGE ID       CREATED         SIZE
sarthak_project     latest    54ce2ae5b6d4   3 hours ago     1.07GB
bank_proj.sql       latest    32fe72e7dd72   25 hours ago    564MB
project_final.py    latest    35831f4786ae   28 hours ago    1.07GB
mysql               latest    8189e588b0e8   9 days ago      564MB
PS D:\work\Docker>
```

```
PS D:\work\Docker> docker network ls
NETWORK ID     NAME                DRIVER    SCOPE
a3c3078596fd   bridge              bridge    local
f4eff67ab8d5   host                host      local
ef465a5d75f5   none                null      local
7e5b5b97e1bc   project-mysql-net   bridge    local
60556c10139f   project-network     bridge    local
PS D:\work\Docker>
```

```
docker: Error response from daemon: Conflict. The container name "/sarthak_project" is already in use by container "22c79debec6284227f98856d67266a0338cc171695b9a348fade158875d58b48".
 You have to remove (or rename) that container to be able to reuse that name.
See 'docker run --help'.
PS D:\work\Docker> docker rm sarthak_project
sarthak_project
PS D:\work\Docker> docker run -d -it --name sarthak_project -e MYSQL_HOST=mysqldb -e MYSQL_PORT=3306 -e MYSQL_DATABASE=bank -e MYSQL_USER=root -e MYSQL_PASSWORD=1234 -p 9090:9090 --n
etwork project-network sarthak_project
afafc1120b69b2cc1bffa88f7f5086a65c3aeafc4106a81474351d242ee50aae
PS D:\work\Docker> docker ps
CONTAINER ID   IMAGE   COMMAND                CREATED        STATUS          PORTS                 NAMES
fb5ab987c8a8   mysql   "docker-entrypoint.s…" 2 hours ago    Up 17 minutes   3306/tcp, 33060/tcp   mysqldb
PS D:\work\Docker> docker ps -a
CONTAINER ID   IMAGE                      COMMAND                CREATED             STATUS                      PORTS                 NAMES
afafc1120b69   sarthak_project            "python ./project_fi…" 11 seconds ago      Exited (1) 5 seconds ago                          sarthak_project
f151f827d0bd   sarthak_project            "python ./project_fi…" 13 minutes ago      Exited (1) 13 minutes ago                        sarthak_project_new
02ea1a23c2a6   sarthak_project            "python ./project_fi…" About an hour ago   Exited (1) About an hour ago                     22c79debec62
fb5ab987c8a8   mysql                      "docker-entrypoint.s…" 2 hours ago         Up 17 minutes               3306/tcp, 33060/tcp   mysqldb
a0bd8922dcf9   project_final.py:latest    "python ./project_fi…" 23 hours ago        Exited (1) 23 hours ago                          beautiful_beaver
31fa099495c0   bank_proj.sql:latest       "docker-entrypoint.s…" 23 hours ago        Exited (1) 23 hours ago                          eager_agnesi
0b8ca9f0ed24   32fe72e7dd72               "docker-entrypoint.s…" 25 hours ago        Exited (1) 25 hours ago                          agitated_joliot
2e5f475746a4   project_final.py:latest    "python ./project_fi…" 26 hours ago        Exited (1) 26 hours ago                          confident_khayyam
5eca368de770   project_final.py:latest    "python ./project_fi…" 27 hours ago        Exited (1) 27 hours ago                          sharp_pasteur
c12971f527f2   35831f4786ae               "python ./project_fi…" 27 hours ago        Exited (1) 27 hours ago                          kind_newton
PS D:\work\Docker>
```

Ln 10, Col 1   Spaces: 4   UTF-8   CRLF   Python   3.11.0 64-bit

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Q 54ce2ae5b6d4   ⬚ ○ Only show running containers

	Name	Image	Status	Port(s)	Last started	Actions
☐	**22c79debec62** 02ea1a23c2a6	sarthak_pr(	Exited (1)		1 hour ago	▶ ⋮ 🗑
☐	**sarthak_project** f151f827d0bd	sarthak_pr(	Exited (1)	9090:9090 ↗	1 second ago	▶ ⋮ 🗑
☐	**sarthak_project** afafc1120b69	sarthak_pr(	Exited (1)	9090:9090 ↗	46 seconds ago	▶ ⋮ 🗑

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mysqldb mysql
fb5ab987c8a8

STATUS
Running (19 minutes ago)

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Open in external terminal

```
sh-4.4# mysql -uroot
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: NO)
sh-4.4# mysql -uroot -p 1234
Enter password:
ERROR 1049 (42000): Unknown database '1234'
sh-4.4# mysql -uroot -p1234
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 18
Server version: 8.0.33 MySQL Community Server - GPL

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owners.

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

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| bank               |
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
```

RAM 3.32 GB CPU 0.50%   Not connected to Hub

v4.18.0