

Verify Installation:

```
PS C:\Users\Medha K> docker -v
Docker version 29.2.0, build 0b9d198
PS C:\Users\Medha K>
```

Steps:

1. PostgreSQL Setup with Docker

- Pull the PostgreSQL image:

```
PS C:\Users\Medha K> docker pull postgres
Using default tag: latest
latest: Pulling from library/postgres
9b8484f1ale6: Pull complete
0c8d55a45e0d: Pull complete
d7071d8cd1af: Pull complete
6bc137f970e3: Pull complete
e3d994429678: Pull complete
67efc7fd0cb7: Pull complete
b61b9ed964eb: Pull complete
46dc4e6582cd: Pull complete
512b7ea3ac5d: Pull complete
b04fada31d68: Pull complete
f7652ec73b05: Pull complete
c4fa1de5526b: Pull complete
0b231e82c9b6: Pull complete
792e22228ecc: Download complete
63ef23ac419e: Download complete
Digest: sha256:3bb77a07b9ce8b8de0fe6d9b063adf20b9cca1068a1bcd054cac71a69ce0ca6
Status: Downloaded newer image for postgres:latest
docker.io/library/postgres:latest
PS C:\Users\Medha K>
```

- Create and start a PostgreSQL instance:

```
PS C:\Users\Medha K> docker run -d -p 5432:5432 --name postgres1 -e POSTGRES_
PASSWORD=pass12345 postgres
d04e43b35b99809d36875eb5438d1f16903df21833c9c0de0788b0fb5f209a92
PS C:\Users\Medha K>
```

- Open a terminal to the container:

```
PS C:\Users\Medha K> docker exec -it postgres1 bash
root@d04e43b35b99:/#
```

- Interact with PostgreSQL with psql:

```
PS C:\Users\Medha K> docker exec -it postgres1 bash
root@d04e43b35b99:/# psql -d postgres -U postgres
psql (18.1 (Debian 18.1-1.pgdg13+2))
Type "help" for help.

postgres=#
```

□	Name	Container ID	Image	Port(s)	CPU (%)	Last stat	Actions
□	● postgres1	d04e43b35b99	postgres	5432:5432 ↗	0%	12 min	■ : 🗑

Docker desktop app showing the containers:

The screenshot shows the Docker Desktop application interface. On the left, a sidebar menu includes options like Ask Gordon (BETA), Containers (selected), Images, Volumes, Kubernetes, Builds, Models, MCP Toolkit (BETA), Docker Hub, Docker Scout, and Extensions. The main area is titled "Containers" with a "Give feedback" link. It displays resource usage: Container CPU usage (0.01% / 800%) and Container memory usage (75.5MB / 5.53GB). A search bar and a filter for "Only show running containers" are present. A table lists two containers: "postgres1" (Image: postgres, Port(s): 5432:5432, CPU: 0%, Last std: 5 hours) and "docker_activity" (Image: -, Port(s): -, CPU: 0.01%, Last std: 2 minutes). Below the table, a "Walkthroughs" section offers links to "Multi-container applications" (8 mins) and "Persist your data between containers" (3 mins). The bottom status bar shows "Engine running", system resources (RAM 0.93 GB, CPU 0.00%), and disk usage (2.39 GB used / limit 1006.85 GB). The version is v4.59.0. The taskbar at the bottom shows various icons.

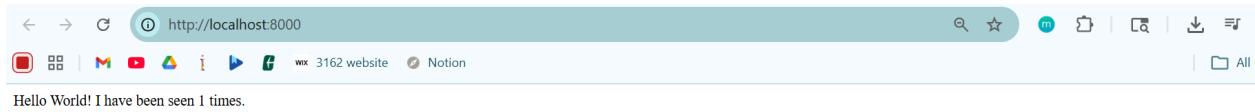
This screenshot shows the Docker Desktop interface with the "docker_activity" container selected. The sidebar remains the same. The main area shows the container's name, image ("redis:alpine"), and port mapping ("redis:6379:6379"). Another container, "server" (image: "docker_activity-server"), is also listed with its port mapping ("server:8000:8000"). To the right, a large panel displays the logs for the "server" container. The logs show the startup of a unicorn process and the booting of workers. The log output is as follows:

```
return func(*args, **kwargs)
^^^^^^^^^^^^^^^^^^^^^^^^^
File "/usr/local/lib/python3.12/site-packages/redis/connection.py", line 2603, in get_connection
    connection.connect()
File "/usr/local/lib/python3.12/site-packages/redis/connection.py", line 846, in connect
    self.connect_check_health(check_health=True)
File "/usr/local/lib/python3.12/site-packages/redis/connection.py", line 863, in connect_check_health
    raise ConnectionError(self._error_message(e))
redis.exceptions.ConnectionError: Error -2 connecting to redis:6379. Name or service not known.

[2026-02-04 01:00:29 +0000] [7] [INFO] Starting gunicorn 25.0.1
[2026-02-04 01:00:29 +0000] [7] [INFO] Listening at:
http://0.0.0.0:8000 (7)
[2026-02-04 01:00:29 +0000] [7] [INFO] Using worker: sync
[2026-02-04 01:00:29 +0000] [7] [INFO] Starting gunicorn 25.0.1
[2026-02-04 01:00:29 +0000] [7] [INFO] Listening at:
http://0.0.0.0:8000 (7)
[2026-02-04 01:00:29 +0000] [7] [INFO] Using worker: sync
[2026-02-04 01:00:29 +0000] [8] [INFO] Booting worker with pid: 8
[2026-02-04 01:00:29 +0000] [8] [INFO] Booting worker with pid: 8
```

The bottom status bar and taskbar are identical to the first screenshot.

Output obtained after the handson:



2nd time running:

