DOCKER COMMANDS

1. docker –version

Definition: Displays the installed Docker version.

Example: docker –version

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker --version
Docker version 27.3.1, build ce12230
```

2. docker images

Definition: Lists all available images on your system.

Example: docker images

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker images
REPOSITORY    TAG    IMAGE ID       CREATED           SIZE
frontend      v1     17c1c5615fb5   9 seconds ago     13.3MB
backend       v1     b3b56d1f0d23   31 seconds ago    141MB
mysql         v1     a078aeac8dbb   About a minute ago   590MB
```

3. docker rmi <image_id>

Definition: Removes a Docker image by its ID.

Example: docker rmi 17c1c5615fb5

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker rmi 17c1c5615fb5
Untagged: frontend:v1
Deleted: sha256:17c1c5615fb5706b5de35965a72c2dabeaa590fa976fcc59a498b2d6a64fd5f6
```

4. docker ps

Definition: Lists all running containers.

Example: docker ps

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker ps
CONTAINER ID   IMAGE      COMMAND               CREATED           STATUS              PORTS                NAMES
274781fd0088   mysql:v1   "docker-entrypoint.s…"   About a minute ago   Up About a minute   3306/tcp, 33060/tcp   mysql
```

5. docker ps –a

Definition: Lists all containers, including stopped ones.

Example: docker ps –a

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker ps -a
CONTAINER ID   IMAGE        COMMAND               CREATED           STATUS                     PORTS
     NAMES
4938460e9b51   frontend:v1  "/docker-entrypoint.…"   35 seconds ago    Exited (1) 34 seconds ago
     frontend
8e9bc88b70ff   backend:v1   "docker-entrypoint.s…"   About a minute ago   Exited (1) About a minute ago
     backend
274781fd0088   mysql:v1     "docker-entrypoint.s…"   About a minute ago   Up About a minute          3306/tcp, 33060/t
cp   mysql
```

6. docker run <image_name>

Definition: Creates and starts a new container from a specified image.

Example: docker run mysql

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker run mysql
Unable to find image 'mysql:latest' locally
latest: Pulling from library/mysql
eba3c26198b7: Already exists
97f7c8c33abe: Pull complete
aa23d877fa04: Pull complete
a143609ddd2d: Pull complete
78308a3437c4: Pull complete
c0880e4b3737: Pull complete
4bab267f9ce1: Pull complete
e575f6d9b17a: Pull complete
607f86c00053: Pull complete
cd68caa5febe: Pull complete
Digest: sha256:fd8d1b4e287c49e1e35eb5a103f337111947662130eb8a3e6c3e823813f47f7d
Status: Downloaded newer image for mysql:latest
2024-10-23 10:02:33+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 9.1.0-1.el9 started.
2024-10-23 10:02:34+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
2024-10-23 10:02:34+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 9.1.0-1.el9 started.
2024-10-23 10:02:34+00:00 [ERROR] [Entrypoint]: Database is uninitialized and password option is not specified
    You need to specify one of the following as an environment variable:
    - MYSQL_ROOT_PASSWORD
    - MYSQL_ALLOW_EMPTY_PASSWORD
    - MYSQL_RANDOM_ROOT_PASSWORD
```

7. docker run –it <image_name>

Definition: Starts an interactive container session.

Example: docker run -it mysql bash

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker run -it mysql bash
bash-5.1# ls
afs  boot  docker-entrypoint-initdb.d  home  lib64  mnt  proc  run   srv  tmp  var
bin  dev   etc                         lib   media  opt  root  sbin  sys  usr
bash-5.1# cd home/
bash-5.1# ls
bash-5.1# touch hello.txt
bash-5.1# ls
hello.txt
bash-5.1# echo "Hi, I'm Mahalakshmi" > hello.txt
bash-5.1# ls
hello.txt
bash-5.1# cat hello.txt
Hi, I'm Mahalakshmi
bash-5.1#
```

8. docker start <container_id>

Definition: Starts an existing stopped container

Example: docker start bbae17e50018

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/backend ]$ docker ps -a
CONTAINER ID   IMAGE       COMMAND              CREATED         STATUS                   PORTS                  NAMES
bbae17e50018   backend:v1  "docker-entrypoint.s…"  10 seconds ago  Exited (1) 6 seconds ago                         backe
nd
e68dd0374f5e   mysql:v1    "docker-entrypoint.s…"  38 seconds ago  Up 37 seconds            3306/tcp, 33060/tcp    mysql

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/backend ]$ docker start bbae17e50018
bbae17e50018
```

9. docker stop <container_id>

Definition: Stops a running container.

Example: docker stop abc123

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/backend ]$ docker ps
CONTAINER ID   IMAGE      COMMAND            CREATED           STATUS            PORTS                  NAMES
e68dd0374f5e   mysql:v1   "docker-entrypoint.s…"  About a minute ago   Up About a minute   3306/tcp, 33060/tcp    mysql

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/backend ]$ docker stop e68dd0374f5e
e68dd0374f5e
```

10. docker restart <container_id>

Definition: Restarts a running or stopped container

Example: docker restart e68dd0374f5e

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/backend ]$ docker restart e68dd0374f5e
e68dd0374f5e

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/backend ]$ docker ps
CONTAINER ID   IMAGE      COMMAND            CREATED         STATUS          PORTS                  NAMES
e68dd0374f5e   mysql:v1   "docker-entrypoint.s…"  2 minutes ago   Up 5 seconds   3306/tcp, 33060/tcp    mysql
```

11. docker rm <container_id>

Definition: Removes a stopped container.

Example: docker rm e68dd0374f5e

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/backend ]$ docker rm e68dd0374f5e
e68dd0374f5e
```

12. docker exec –it <container_id> bash

Definition: Executes a command in a running container

Example: docker exec -it f0ca432f6e72 bash

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker ps
CONTAINER ID   IMAGE      COMMAND            CREATED         STATUS          PORTS                  NAMES
f0ca432f6e72   mysql:v1   "docker-entrypoint.s…"  18 seconds ago   Up 17 seconds   3306/tcp, 33060/tcp    mysql

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker exec -it f0ca432f6e72 bash
[expense@f0ca432f6e72 /]$ ls
afs  boot  docker-entrypoint-initdb.d  etc   lib    media  opt   root  sbin  sys  usr
bin  dev   entrypoint.sh               home  lib64  mnt    proc  run   srv   tmp  var
[expense@f0ca432f6e72 /]$
```

13. docker logs <container_id>

Definition: Displays the logs of a container.
Example: docker logs f0ca432f6e72

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker ps
CONTAINER ID   IMAGE       COMMAND            CREATED        STATUS        PORTS                 NAMES
f0ca432f6e72   mysql:v1    "docker-entrypoint.s…"  3 minutes ago  Up 3 minutes  3306/tcp, 33060/tcp   mysql

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker logs f0ca432f6e72
2024-10-23 10:23:15+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.40-1.el9 started.
2024-10-23 10:23:15+00:00 [Note] [Entrypoint]: Initializing database files
2024-10-23T10:23:15.702250Z 0 [Warning] [MY-011068] [Server] The syntax '--skip-host-cache' is deprecated and will be remove
d in a future release. Please use SET GLOBAL host_cache_size=0 instead.
2024-10-23T10:23:15.702543Z 0 [System] [MY-013169] [Server] /usr/sbin/mysqld (mysqld 8.0.40) initializing of server in progr
ess as process 41
2024-10-23T10:23:15.704695Z 0 [Warning] [MY-010122] [Server] One can only use the --user switch if running as root
2024-10-23T10:23:15.712675Z 1 [System] [MY-013576] [InnoDB] InnoDB initialization has started.
2024-10-23T10:23:16.282297Z 1 [System] [MY-013577] [InnoDB] InnoDB initialization has ended.
2024-10-23T10:23:19.237934Z 6 [Warning] [MY-010453] [Server] root@localhost is created with an empty password ! Please consi
der switching off the --initialize-insecure option.
2024-10-23 10:23:22+00:00 [Note] [Entrypoint]: Database files initialized
```

14. docker inspect <container_id>

Definition: Provides detailed information about a container.
Example: docker inspect f0ca432f6e72

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker ps
CONTAINER ID   IMAGE       COMMAND            CREATED        STATUS        PORTS                 NAMES
f0ca432f6e72   mysql:v1    "docker-entrypoint.s…"  4 minutes ago  Up 4 minutes  3306/tcp, 33060/tcp   mysql

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker inspect f0ca432f6e72
[
    {
        "Id": "f0ca432f6e72af33ea952080d947ac45efe9229372fea2c945a087c24d26d6a2",
        "Created": "2024-10-23T10:23:14.288163756Z",
        "Path": "docker-entrypoint.sh",
        "Args": [
            "mysqld"
        ],
        "State": {
            "Status": "running",
            "Running": true,
            "Paused": false,
            "Restarting": false,
            "OOMKilled": false,
            "Dead": false,
            "Pid": 7089,
            "ExitCode": 0,
            "Error": "",
            "StartedAt": "2024-10-23T10:23:14.414330928Z",
            "FinishedAt": "0001-01-01T00:00:00Z"
        },
```

15. docker build –t <image_name><Dockerfile_path>

Definition: Builds an image from a Dockerfile.
Example: docker build –t mysql .

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker build -t mysql:v1 .
[+] Building 0.5s (8/8) FINISHED                                                    docker:default
 => [internal] load build definition from Dockerfile                                         0.1s
 => => transferring dockerfile: 694B                                                          0.0s
 => [internal] load metadata for docker.io/library/mysql:8.0                                 0.2s
 => [internal] load .dockerignore                                                            0.0s
 => => transferring context: 2B                                                              0.0s
 => [1/3] FROM docker.io/library/mysql:8.0@sha256:bf79508626d6cad5bd82aa762109690e42467b1eefedab27946eccd69ab23069  0.0s
 => [internal] load build context                                                            0.0s
 => => transferring context: 67B                                                             0.0s
 => CACHED [2/3] RUN groupadd expense &&   useradd -g expense expense &&   chown -R expense:expense /var/lib/mysql  /va  0.0s
 => CACHED [3/3] ADD scripts/*.sql /docker-entrypoint-initdb.d                               0.0s
 => exporting to image                                                                       0.0s
 => => exporting layers                                                                      0.0s
 => => writing image sha256:a078aeac8dbb5f816bbb908d86ab093e476d8c12870bd0ce362b1958d91b700c  0.0s
 => => naming to docker.io/library/mysql:v1                                                   0.0s
```

16. docker tag <image_id> repository:tag

Definition: Tags an image for a repository
Example: docker tag mysql:v1 mahalakshmi2997/mysql:v1

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker tag mysql:v1 mahalakshmi2997/mysql:v1

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker images
REPOSITORY                TAG        IMAGE ID        CREATED          SIZE
frontend                  v1         17c1c5615fb5    38 minutes ago   13.3MB
backend                   v1         b3b56d1f0d23    38 minutes ago   141MB
mysql                     v1         a078aeac8dbb    39 minutes ago   590MB
mahalakshmi2997/mysql     v1         a078aeac8dbb    39 minutes ago   590MB
```

17. docker push repository:tag

Definition: Pushes an image to a Docker registry.
Example: docker push mahalakshmi2997/mysql:v1

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker push mahalakshmi2997/mysql:v1
The push refers to repository [docker.io/mahalakshmi2997/mysql]
71288717bfea: Pushed
c0682c52a333: Pushed
f8054f741e26: Layer already exists
7f837308dabb: Layer already exists
2e56af44b89a: Layer already exists
b6980a966213: Layer already exists
85a9467612ad: Layer already exists
151398595284: Layer already exists
96043e2a1ac2: Layer already exists
5fbba87e22de: Layer already exists
a2f4ab7f7e3c: Layer already exists
0dcb4cba47bb: Layer already exists
664144bd1f24: Layer already exists
v1: digest: sha256:983e800c5a6849ca452d7829c725ba6ed02c1822bf7ed8247683000fbbf1ede3 size: 3033
```

18. docker pull repository:tag

Definition: Pulls an image from a Docker registry
Example: docker pull mahalakshmi2997/mysql:v1

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1/mysql ]$ docker pull mahalakshmi2997/mysql:v1
v1: Pulling from mahalakshmi2997/mysql
Digest: sha256:983e800c5a6849ca452d7829c725ba6ed02c1822bf7ed8247683000fbbf1ede3
Status: Image is up to date for mahalakshmi2997/mysql:v1
docker.io/mahalakshmi2997/mysql:v1
```

19. docker network ls

Definition: Lists all Docker networks.
Example: docker network ls

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker network ls
NETWORK ID      NAME       DRIVER     SCOPE
9f3b6b2babff    bridge     bridge     local
d0277db951af    host       host       local
c467c318920f    none       null       local
```

20. docker network create <network_name>

Definition: Creates a new Docker network.
Example: docker network create Lakshmi

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker network create lakshmi
86f3f02d81c29eeb63400a365038b94b209edc564d97b23c9b331de7380f7c33

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker network ls
NETWORK ID      NAME      DRIVER    SCOPE
9f3b6b2babff    bridge    bridge    local
d0277db951af    host      host      local
86f3f02d81c2    lakshmi   bridge    local
c467c318920f    none      null      local
```

21. docker network rm <network_name>

Definition: Removes an existing Docker network.
Example: docker network rm lakshmi

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker network rm lakshmi
lakshmi

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker network ls
NETWORK ID      NAME      DRIVER    SCOPE
9f3b6b2babff    bridge    bridge    local
d0277db951af    host      host      local
c467c318920f    none      null      local
```

22. docker volume ls

Definition: Lists all Docker volumes.
Example: docker volume ls

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker volume ls
DRIVER     VOLUME NAME
local      4f1361af90060216b4dd4267d4bdd01c7e95a5eb3abf334cf7bf2a58cec19520
local      6d4b13daaf64e3e0b4e70b512c726e30feba1bf12cf99cb648a07440d17196de
local      7cef497c85b75bc77591b8d5d79c9de29e579f49d96cb89a495f0da243eed470
local      8d441e1922fb4c99a93055de7ce8a1b31055da9952a542d5421b953530e26d0d
local      a4bf44e947053eeb6b2c42c7d015bad1228184db662db24fc545e3cd6dffb03c
local      ac450fe2f546556ed5220bc76afc001213a4e76e4448f108ec681a55a727cb57
local      b6c675222febf7159af4213cfe601f33778eb449ae4829cf8eff33462a461e7f
local      b97ad97010012b76f5f5730507d0927db32c67cc1fe195e411002a385ee6932b
local      bd2bdff1ee540803969caa255c9a42871c088ca09da503156b3aa3ed1459161d
local      c03519fa1111696503913d555f7d90d5b860dca193bf188001ced8698ccd25df
local      d8101964d4fb279e520a540581560b2a9b3cca1c5530bb78947a3eee9d622f92
```

23. docker volume create <volume_name>

Definition: Creates a new Docker volume

Example: docker volume create lakshmi

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker volume create lakshmi
lakshmi

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker volume ls
DRIVER      VOLUME NAME
local       4f1361af90060216b4dd4267d4bdd01c7e95a5eb3abf334cf7bf2a58cec19520
local       6d4b13daaf64e3e0b4e70b512c726e30feba1bf12cf99cb648a07440d17196de
local       7cef497c85b75bc77591b8d5d79c9de29e579f49d96cb89a495f0da243eed470
local       8d441e1922fb4c99a93055de7ce8a1b31055da9952a542d5421b953530e26d0d
local       a4bf44e947053eeb6b2c42c7d015bad1228184db662db24fc545e3cd6dffb03c
local       ac450fe2f546556ed5220bc76afc001213a4e76e4448f108ec681a55a727cb57
local       b6c675222febf7159af4213cfe601f33778eb449ae4829cf8eff33462a461e7f
local       b97ad97010012b76f5f5730507d0927db32c67cc1fe195e411002a385ee6932b
local       bd2bdff1ee540803969caa255c9a42871c088ca09da503156b3aa3ed1459161d
local       c03519fa1111696503913d555f7d90d5b860dca193bf188001ced8698ccd25df
local       d8101964d4fb279e520a540581560b2a9b3cca1c5530bb78947a3eee9d622f92
local       lakshmi
```

24. docker volume rm <volume_name>

Definition: Removes a Docker volume.

Example: docker volume rm lakshmi

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker volume rm lakshmi
lakshmi

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker volume ls
DRIVER      VOLUME NAME
local       4f1361af90060216b4dd4267d4bdd01c7e95a5eb3abf334cf7bf2a58cec19520
local       6d4b13daaf64e3e0b4e70b512c726e30feba1bf12cf99cb648a07440d17196de
local       7cef497c85b75bc77591b8d5d79c9de29e579f49d96cb89a495f0da243eed470
local       8d441e1922fb4c99a93055de7ce8a1b31055da9952a542d5421b953530e26d0d
local       a4bf44e947053eeb6b2c42c7d015bad1228184db662db24fc545e3cd6dffb03c
local       ac450fe2f546556ed5220bc76afc001213a4e76e4448f108ec681a55a727cb57
local       b6c675222febf7159af4213cfe601f33778eb449ae4829cf8eff33462a461e7f
local       b97ad97010012b76f5f5730507d0927db32c67cc1fe195e411002a385ee6932b
local       bd2bdff1ee540803969caa255c9a42871c088ca09da503156b3aa3ed1459161d
local       c03519fa1111696503913d555f7d90d5b860dca193bf188001ced8698ccd25df
local       d8101964d4fb279e520a540581560b2a9b3cca1c5530bb78947a3eee9d622f92
```

25. docker compose up -d

Definition: Starts services defined in a docker-compose.yml file.

Example: docker compose up –d

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker compose up -d
WARN[0000] /home/ec2-user/expense-docker-1/docker-compose.yaml: the attribute `version` is obsolete, it will be ignored, ple
ase remove it to avoid potential confusion
[+] Running 3/3
 ✔ Container backend   Started                                                                                          2.0s
 ✔ Container frontend  Started                                                                                          2.5s
 ✔ Container mysql     Started                                                                                          1.3s
```

26. docker compose down

Definition: Stops and removes services created by Docker Compose.

Example: docker compose down

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$  docker compose down
WARN[0000] /home/ec2-user/expense-docker-1/docker-compose.yaml: the attribute `version` is obsolete, it will be ignored, ple
ase remove it to avoid potential confusion
[+] Running 4/4
 ⸜ Container frontend                 Removed                                                                      0.6s
 ⸜ Container backend                  Removed                                                                      0.0s
 ⸜ Container mysql                    Removed                                                                      1.9s
 ⸜ Network expense-docker-1_default   Removed                                                                      0.4s
```

27. docker compose ps

Definition: Lists the status of Docker Compose services.

Example: docker compose ps

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$  docker compose ps
WARN[0000] /home/ec2-user/expense-docker-1/docker-compose.yaml: the attribute `version` is obsolete, it will be ignored, ple
ase remove it to avoid potential confusion
NAME        IMAGE                         COMMAND                 SERVICE     CREATED         STATUS          PORTS
backend     mahalakshmi2997/backend:v1    "docker-entrypoint.s…"  backend     7 seconds ago   Up 5 seconds    8080-8081/tcp
frontend    mahalakshmi2997/frontend:v1   "/docker-entrypoint.…"  frontend    6 seconds ago   Up 5 seconds    0.0.0.0:80->80/t
cp, :::80->80/tcp
mysql       mahalakshmi2997/mysql:v1      "docker-entrypoint.s…"  mysql       7 seconds ago   Up 6 seconds    3306/tcp, 33060/
tcp
```

28. docker commit <container_id> <new_image_name>

Definition: Creates a new image from a container's changes.

Example: docker commit 346c1d723767 frontend1:v2

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker commit 346c1d723767 frontend1:v2
sha256:6f3d409c101dbd0533b75d0354919a6a71ef2da864760a8dc64d16a30a1f3b83

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker images
REPOSITORY                 TAG       IMAGE ID        CREATED          SIZE
frontend1                  v2        6f3d409c101d    5 seconds ago    193MB
frontend                   v1        17c1c5615fb5    53 minutes ago   13.3MB
backend                    v1        b3b56d1f0d23    53 minutes ago   141MB
mahalakshmi2997/mysql      v1        a078aeac8dbb    54 minutes ago   590MB
mysql                      v1        a078aeac8dbb    54 minutes ago   590MB
mahalakshmi2997/backend    v1        ef979bfd426a    2 days ago       150MB
mahalakshmi2997/frontend   v1        ff06ef081852    5 days ago       193MB
```

29. docker rename <old_name> <new_name>

Definition: Renames an existing container

Example: docker rename frontend1 web

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker rename frontend web

54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker ps
CONTAINER ID    IMAGE                        COMMAND                 CREATED         STATUS          PORTS
                NAMES
346c1d723767    mahalakshmi2997/frontend:v1  "/docker-entrypoint.…"  4 minutes ago   Up 4 minutes    0.0.0.0:80->80/tcp, :::
80->80/tcp    web
c3d6f279a922    mahalakshmi2997/backend:v1   "docker-entrypoint.s…"  4 minutes ago   Up 4 minutes    8080-8081/tcp
                backend
0c12814c841b    mahalakshmi2997/mysql:v1     "docker-entrypoint.s…"  4 minutes ago   Up 4 minutes    3306/tcp, 33060/tcp
                mysql
```

30. docker login

Definition: Logs into a Docker registry (Docker Hub or private).
Example: docker login

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker login
Authenticating with existing credentials...
WARNING! Your password will be stored unencrypted in /home/ec2-user/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credential-stores

Login Succeeded
```

31. docker logout

Definition: Logs out from a Docker registry.
Example: docker logout

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker logout
Removing login credentials for https://index.docker.io/v1/
```

32. docker history <image_name>

Definition: Displays the history of an image's layers.
Example: docker history mysql

```
54.197.187.6 | 172.31.18.15 | t3.micro | https://github.com/lakshmimungara/expense-docker-1.git
[ ec2-user@ip-172-31-18-15 ~/expense-docker-1 ]$ docker history mysql:v1
IMAGE          CREATED         CREATED BY                                     SIZE     COMMENT
a078aeac8dbb   58 minutes ago  USER expense                                   0B       buildkit.dockerfile.v0
<missing>      58 minutes ago  ADD scripts/*.sql /docker-entrypoint-initdb…   326B     buildkit.dockerfile.v0
<missing>      58 minutes ago  RUN /bin/sh -c groupadd expense &&  useradd …  3.65kB   buildkit.dockerfile.v0
<missing>      58 minutes ago  ENV MYSQL_ROOT_PASSWORD=ExpenseApp@1           0B       buildkit.dockerfile.v0
<missing>      8 days ago      CMD ["mysqld"]                                 0B       buildkit.dockerfile.v0
<missing>      8 days ago      EXPOSE map[3306/tcp:{} 33060/tcp:{}]           0B       buildkit.dockerfile.v0
<missing>      8 days ago      ENTRYPOINT ["docker-entrypoint.sh"]            0B       buildkit.dockerfile.v0
<missing>      8 days ago      RUN /bin/sh -c ln -s usr/local/bin/docker-en…  34B      buildkit.dockerfile.v0
<missing>      8 days ago      COPY docker-entrypoint.sh /usr/local/bin/ # …  13.8kB   buildkit.dockerfile.v0
<missing>      8 days ago      VOLUME [/var/lib/mysql]                        0B       buildkit.dockerfile.v0
<missing>      8 days ago      RUN /bin/sh -c set -eux;  microdnf install -…  312MB    buildkit.dockerfile.v0
<missing>      8 days ago      ENV MYSQL_SHELL_VERSION=8.0.40-1.el9           0B       buildkit.dockerfile.v0
<missing>      8 days ago      RUN /bin/sh -c set -eu; {   echo '[mysql-to…  215B     buildkit.dockerfile.v0
<missing>      8 days ago      RUN /bin/sh -c set -eux;  microdnf install -…  146MB    buildkit.dockerfile.v0
<missing>      8 days ago      RUN /bin/sh -c set -eu; {   echo '[mysql8.0…  225B     buildkit.dockerfile.v0
<missing>      8 days ago      ENV MYSQL_VERSION=8.0.40-1.el9                 0B       buildkit.dockerfile.v0
<missing>      8 days ago      ENV MYSQL_MAJOR=8.0                            0B       buildkit.dockerfile.v0
<missing>      8 days ago      RUN /bin/sh -c set -eux;  key='BCA4 3417 C3B…  3.17kB   buildkit.dockerfile.v0
<missing>      8 days ago      RUN /bin/sh -c set -eux;  microdnf install -…  16.5MB   buildkit.dockerfile.v0
<missing>      8 days ago      RUN /bin/sh -c set -eux;  arch="$(uname -m)"…  2.36MB   buildkit.dockerfile.v0
<missing>      8 days ago      ENV GOSU_VERSION=1.17                          0B       buildkit.dockerfile.v0
<missing>      8 days ago      RUN /bin/sh -c set -eux;  groupadd --system …  2.77kB   buildkit.dockerfile.v0
<missing>      4 weeks ago     CMD ["/bin/bash"]                              0B       buildkit.dockerfile.v0
<missing>      4 weeks ago     ADD oraclelinux-9-slim-amd64-rootfs.tar.xz /…  113MB    buildkit.dockerfile.v0
```