```
[root@frontedbackendpractical files]# ls
backend.df  createtable.sql  insertvalues.sql
[root@frontedbackendpractical files]# cat createtable.sql
CREATE TABLE priarworld (firstname varchar(20),rollnumber int(5));
[root@frontedbackendpractical files]# cat insertvalues.sql
INSERT INTO priarworld (firstname,rollnumber) VALUES ('pinky',1);
INSERT INTO priarworld (firstname,rollnumber) VALUES ('rani',2);
INSERT INTO priarworld (firstname,rollnumber) VALUES ('banti',3);
INSERT INTO priarworld (firstname,rollnumber) VALUES ('harsh',4);
INSERT INTO priarworld (firstname,rollnumber) VALUES ('paras',5);
INSERT INTO priarworld (firstname,rollnumber) VALUES ('pari',6);
[root@frontedbackendpractical files]# cat backend.df
FROM mysql
ENV MYSQL_DATABASE priar
COPY ./createtable.sql /docker-entrypoint-initdb.d/
COPY ./insertvalues.sql /docker-entrypoint-initdb.d/
[root@frontedbackendpractical files]#
```

```
[root@frontedbackendpractical files]# docker build . -f backend.df -t backend:b1
Sending build context to Docker daemon  4.096kB
Step 1/4 : FROM mysql
latest: Pulling from library/mysql
b380bbd43752: Pull complete
f23cbf2ecc5d: Pull complete
30cfc6c29c0a: Pull complete
b38609286cbe: Pull complete
8211d9e66cd6: Pull complete
2313f9eeca4a: Pull complete
7eb487d00da0: Pull complete
4d7421c8152e: Pull complete
77f3d8811a28: Pull complete
cce755338cba: Pull complete
69b753046b9f: Pull complete
b2e64b0ab53c: Pull complete
Digest: sha256:6d7d4524463fe6e2b893ffc2b89543c81dec7ef82fb2020a1b27606666464d87
Status: Downloaded newer image for mysql:latest
 ---> ecac195d15af
Step 2/4 : ENV MYSQL_DATABASE priar
 ---> Running in 29e1637a0452
Removing intermediate container 29e1637a0452
 ---> c08801aa5117
Step 3/4 : COPY ./createtable.sql /docker-entrypoint-initdb.d/
 ---> 9e283dd61f65
Step 4/4 : COPY ./insertvalues.sql /docker-entrypoint-initdb.d/
 ---> 5b582d38ee07
Successfully built 5b582d38ee07
Successfully tagged backend:b1
[root@frontedbackendpractical files]#
```

```
[root@frontedbackendpractical files]# docker build . -f backend.df -t backend:b1
Sending build context to Docker daemon  4.096kB
Step 1/4 : FROM mysql
latest: Pulling from library/mysql
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2313f9eeca4a: Pull complete
7eb487d00da0: Pull complete
4d7421c8152e: Pull complete
77f3d8811a28: Pull complete
cce755338cba: Pull complete
69b753046b9f: Pull complete
b2e64b0ab53c: Pull complete
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Step 3/4 : COPY ./createtable.sql /docker-entrypoint-initdb.d/
 ---> 9e283dd61f65
Step 4/4 : COPY ./insertvalues.sql /docker-entrypoint-initdb.d/
 ---> 5b582d38ee07
Successfully built 5b582d38ee07
Successfully tagged backend:b1
[root@frontedbackendpractical files]# docker images
REPOSITORY    TAG      IMAGE ID       CREATED          SIZE
backend       b1       5b582d38ee07   12 seconds ago   516MB
mysql         latest   ecac195d15af   3 weeks ago      516MB
[root@frontedbackendpractical files]#
```

```
[root@frontedbackendpractical files]# docker run -d -name db1 -p 3306:3306 -e MYSQL_ROOT_PASSWORD=123 backend:b1
unknown shorthand flag: 'n' in -name
See 'docker run --help'.
[root@frontedbackendpractical files]# docker run -d --name db1 -p 3306:3306 -e MYSQL_ROOT_PASSWORD=123 backend:b1
d3cc3287ab3a1d379da6365999b3df5763b306f388c864636186db3c896a2d3e
[root@frontedbackendpractical files]# docker ps
CONTAINER ID   IMAGE        COMMAND                CREATED         STATUS         PORTS                                                               NAMES
d3cc3287ab3a   backend:b1   "docker-entrypoint.s…"  7 seconds ago   Up 7 seconds   0.0.0.0:3306->3306/tcp, :::3306->3306/tcp, 33060/tcp                db1
[root@frontedbackendpractical files]# docker exec -it db1 bash
root@d3cc3287ab3a:/# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.27 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           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| priar              |
| sys                |
+--------------------+
5 rows in set (0.00 sec)

mysql>
```

root@ip-172-31-4-108:/files

```
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| priar              |
| sys                |
+--------------------+
5 rows in set (0.00 sec)

mysql> use priar;
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_priar  |
+------------------+
| priarworld       |
+------------------+
1 row in set (0.00 sec)

mysql> select * from priarworld;
+-----------+------------+
| firstname | rollnumber |
+-----------+------------+
| pinky     |          1 |
| rani      |          2 |
| banti     |          3 |
| harsh     |          4 |
| paras     |          5 |
| pari      |          6 |
+-----------+------------+
6 rows in set (0.00 sec)

mysql>
```
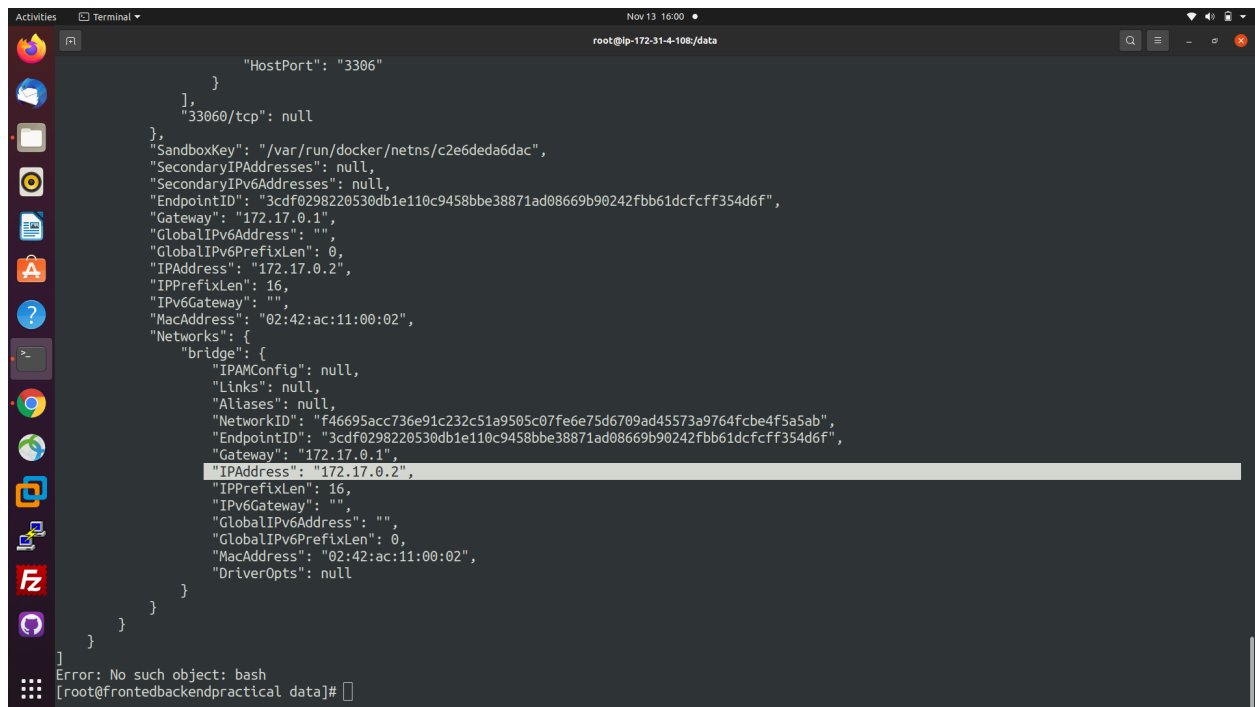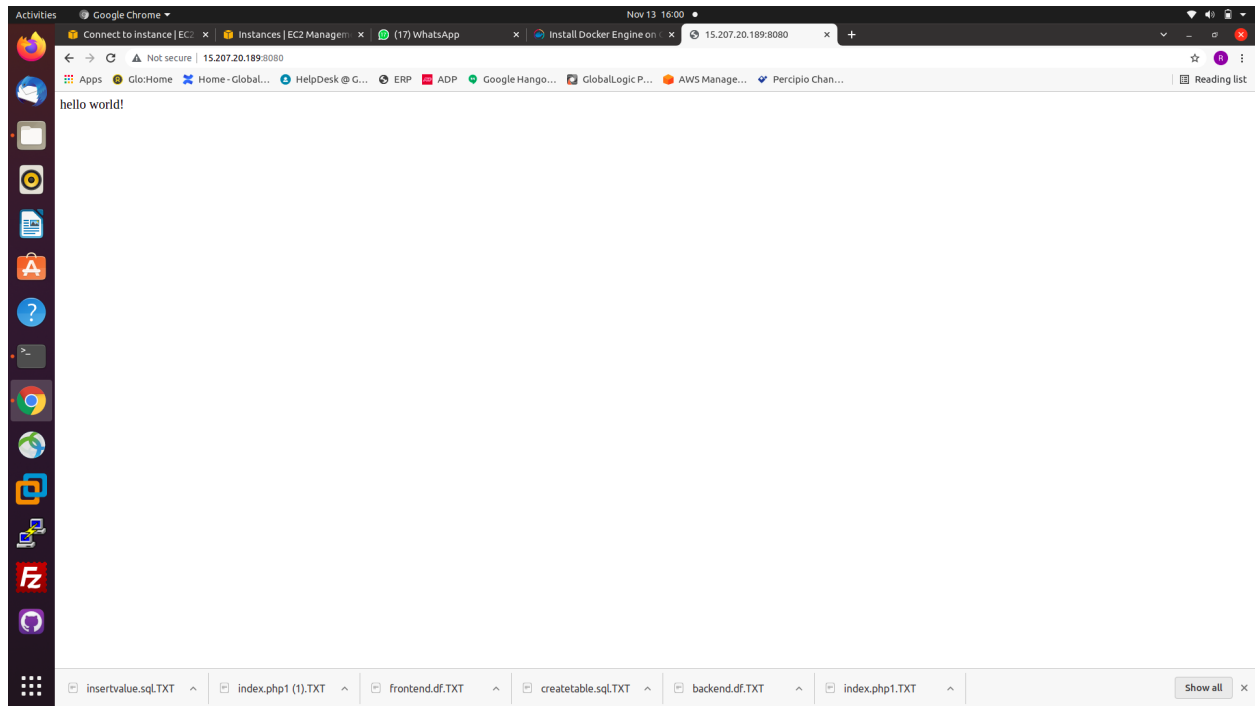
root@ip-172-31-4-108:/files

```
[root@frontedbackendpractical files]# docker images
REPOSITORY    TAG      IMAGE ID        CREATED          SIZE
frontend      f1       710fd283e093    42 seconds ago   902MB
backend       b1       5b582d38ee07    7 minutes ago    516MB
mysql         latest   ecac195d15af    3 weeks ago      516MB
centos        7        eeb6ee3f44bd    8 weeks ago      204MB
[root@frontedbackendpractical files]#
```

hello world!

                "HostPort": "3306"
            }
        ],
        "33060/tcp": null
    },
    "SandboxKey": "/var/run/docker/netns/c2e6deda6dac",
    "SecondaryIPAddresses": null,
    "SecondaryIPv6Addresses": null,
    "EndpointID": "3cdf0298220530db1e110c9458bbe38871ad08669b90242fbb61dcfcff354d6f",
    "Gateway": "172.17.0.1",
    "GlobalIPv6Address": "",
    "GlobalIPv6PrefixLen": 0,
    "IPAddress": "172.17.0.2",
    "IPPrefixLen": 16,
    "IPv6Gateway": "",
    "MacAddress": "02:42:ac:11:00:02",
    "Networks": {
        "bridge": {
            "IPAMConfig": null,
            "Links": null,
            "Aliases": null,
            "NetworkID": "f46695acc736e91c232c51a9505c07fe6e75d6709ad45573a9764fcbe4f5a5ab",
            "EndpointID": "3cdf0298220530db1e110c9458bbe38871ad08669b90242fbb61dcfcff354d6f",
            "Gateway": "172.17.0.1",
            "IPAddress": "172.17.0.2",
            "IPPrefixLen": 16,
            "IPv6Gateway": "",
            "GlobalIPv6Address": "",
            "GlobalIPv6PrefixLen": 0,
            "MacAddress": "02:42:ac:11:00:02",
            "DriverOpts": null
        }
    }
}
]
Error: No such object: bash
[root@frontedbackendpractical data]#

```
                                    root@ip-172-31-4-108:/data

    while($row = $result->fetch_assoc()) {
        echo "Name: "  . $row["firstname"]. " " . $row["rollnumber"]. "<br>";
    }
} else {
    echo "0 results";
}
$conn->close();
?>
[root@frontedbackendpractical data]# docker exec -it db1 bash
root@d3cc3287ab3a:/# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 8.0.27 MySQL Community Server - GPL

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owners.

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

mysql> ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY '123';
Query OK, 0 rows affected (0.01 sec)

mysql> ALTER USER 'root'@'%' IDENTIFIED WITH mysql_native_password BY '123';
Query OK, 0 rows affected (0.01 sec)

mysql> exit
Bye
root@d3cc3287ab3a:/# exit
exit
[root@frontedbackendpractical data]# docker restart db1
db1
[root@frontedbackendpractical data]# docker restart fd1
fd1
[root@frontedbackendpractical data]#
```

Name: pinky 1
Name: rani 2
Name: banti 3
Name: harsh 4
Name: paras 5
Name: pari 6

root@frontedbackendpractical:/files

```
[root@frontedbackendpractical centos]# cd /files/
[root@frontedbackendpractical files]# ls
backend.df  createtable.sql  frontend.df  insertvalues.sql
[root@frontedbackendpractical files]# cat frontend.df
FROM centos:7
#MAINTAINER "priar world"
#LABEL "APP"="Devlopement"
RUN yum install httpd -y
RUN yum install https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm -y
RUN yum install http://rpms.remirepo.net/enterprise/remi-release-7.rpm -y
RUN yum install yum-utils -y
RUN yum-config-manager --enable  remi-php72 -y
RUN yum install php php-mcrypt php-cli php-gd php-curl php-mysql php-ldap php-zip php-fileinfo -y
EXPOSE 80
RUN systemctl enable httpd
CMD ["httpd", "-D", "FOREGROUND"]
[root@frontedbackendpractical files]# 
```

root@frontedbackendpractical:/data

```
[root@frontedbackendpractical data]# ls
index.php
[root@frontedbackendpractical data]# cat index.php
<?php
$servername = "172.17.0.2";
$username = "root";
$password = "123";
$dbname = "priar";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "SELECT firstname,rollnumber FROM priarworld";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
  // output data of each row
  while($row = $result->fetch_assoc()) {
    echo "Name: "  . $row["firstname"]. " " . $row["rollnumber"]. "<br>";
  }
} else {
  echo "0 results";
}
$conn->close();
?>
[root@frontedbackendpractical data]# 
```

Q) Frontend / backend problem
→ cd /files
→ vi create table.sql
→ vi insert values.sql
→ vi backend.df
→ docker build . -f backend.df -t backend:b1
→ docker rm -f $(docker ps -a -q)
→ docker run -d --name db1 -p 3306:3306 -e
          MySQL_ROOT-PASSWORD = 123 backend: b1
→ docker ps
→ docker exec -it db1 bash
→ mysql -u root -p
          → password = 123
→ show databases;
→ use priar;
→ show tables;
→ select * from priarworld;
→ exit
→ vi frontend.df
→ docker build . -f frontend.df -t frontend:f1
→ docker images
→ mkdir /data
→ cd /data
→ vi index.php ("Hellow orld")
→ cd /file

→ docker run -d --name fd1 -v /data:/var/www/Html
    -p 8010:80 frontend:f1

→ docker ps

→ docker Inspect db1 bash

→ cd Html

→ vi Index.php   { $servername: "Ip address
                     Username: root
                     password: "123"
                     dbname: "prior"

[─ if error comes related
       to connection (database)

→ mysql →   ALTER USER 'root'@'localhost' IDENTIFIED

        WITH mysq-native-password BY '123';

→ ALTER USER 'root@'%' IDENTIFIED WITH

        mysql-native-password BY '123';