Step-1: code for creating a database

```
-- 1.Creating a database
create database Employee;
```

Response:

```
1  16:00:44  create database Employee                1 row(s) affected                0.390 sec
```

Step-2: Activate Database

```
-- Activate Database
use Employee;
```

Response:

```
2  16:01:54  use Employee                           0 row(s) affected                0.000 sec
```

Step-3: Create a table with emp_info

```
create table emp_info
(
first_name varchar(20),
last_name varchar(20),
id int not null,
age int,
city varchar(20),
state varchar(10)
);
```

```
-- Creating a table
create table emp_info
(
first_name varchar(20),
last_name varchar(20),
id int not null,
age int,
city varchar(20),
state varchar(10),
primary key(id)
);
```

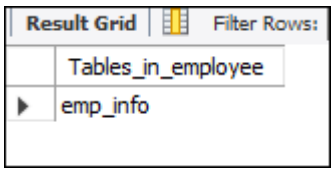
Response:

```
3  16:04:49  create table emp_info (first_name varchar(20), last_name varchar(20), id int not null,...  0 row(s) affected  0.656 sec
```

Step-4: Show the tables which are created

```
show tables;
```

Response:



Step-5: Insert data into the tables

```
-- Insert values into the table
insert into emp_info values ( 'John','Jones',99980,45,'Payson','Arizona');
insert into emp_info values ( 'Mary','Jones',99982,25,'Payson','Arizona');
insert into emp_info values ( 'Eric','Edwards',88232,32,'San Diego','California');
insert into emp_info values ( 'Mary Ann','Edwards',88233,32,'Phoenix','Arizona');
insert into emp_info values ( 'Ginger','Howell',98002,42,'Cottonwood','Arizona');
insert into emp_info values ( 'Sebastian','Smith',92001,23,'Gila Bend','Arizona');
insert into emp_info values ( 'Gus','Gray',22322,35,'Bagdad','Arizona');
insert into emp_info values ( 'Mary Ann','May',32326,52,'Tucson','Arizona');
insert into emp_info values ( 'Erica','Williams',32327,60,'Show Low','Arizona');
insert into emp_info values ( 'Leroy','Brown',32380,22,'Pinetop','Arizona');
insert into emp_info values ( 'Elroy','Cleaver',32382,22,'Globe','Arizona');
```

Response:

✓	6	16:29:55	insert into emp_info values ('John','Jones',99980,45,'Payson','Arizona')	1 row(s) affected
✓	7	16:29:56	insert into emp_info values ('Mary','Jones',99982,25,'Payson','Arizona')	1 row(s) affected
✓	8	16:29:56	insert into emp_info values ('Eric','Edwards',88232,32,'San Diego','California')	1 row(s) affected
✓	9	16:29:56	insert into emp_info values ('Mary Ann','Edwards',88233,32,'Phoenix','Arizona')	1 row(s) affected
✓	10	16:29:56	insert into emp_info values ('Ginger','Howell',98002,42,'Cottonwood','Arizona')	1 row(s) affected
✓	11	16:29:56	insert into emp_info values ('Sebastian','Smith',92001,23,'Gila Bend','Arizona')	1 row(s) affected
✓	12	16:29:56	insert into emp_info values ('Gus','Gray',22322,35,'Bagdad','Arizona')	1 row(s) affected
✓	13	16:29:56	insert into emp_info values ('Mary Ann','May',32326,52,'Tucson','Arizona')	1 row(s) affected
✓	14	16:29:56	insert into emp_info values ('Erica','Williams',32327,60,'Show Low','Arizona')	1 row(s) affected
✓	15	16:29:56	insert into emp_info values ('Leroy','Brown',32380,22,'Pinetop','Arizona')	1 row(s) affected
✓	16	16:29:56	insert into emp_info values ('Elroy','Cleaver',32382,22,'Globe','Arizona')	1 row(s) affected

Note: As I have defined my id attribute as “not null “ -----Will it take null values

-→ No

Proof:

```
-- Trying to insert null values in attribute "id"
insert into emp_info values ( 'Elroy','Cleaver',null,22,'Globe','Arizona');
insert into emp_info values ( 'Elroy','Cleaver',,22,'Globe','Arizona');
```

Response:

#	Time	Action	Message
1	16:39:02	insert into emp_info values ('Elroy','Cleaver',null,22,'Globe','Arizona')	Error Code: 1048. Column 'id' cannot be null
2	16:39:23	insert into emp_info values ('Elroy','Cleaver',,22,'Globe','Arizona')	Error Code: 1064. You have an error in your SQL syntax; check the manual that corre...

Hence it is proved that we cannot insert null values into a table when an “not null “ is defined

Step-6:

```
-- Now how to see the data which we have inserted --> use DQL (SELECT)
select * from emp_info;
```

Here what does it mean by “ * “ :: Star means everything (The whole table will be retrieved)

This will give u all the information from the table

Response:

first_name	last_name	id	age	city	state
Gus	Gray	22322	35	Bagdad	Arizona
Mary Ann	May	32326	52	Tucson	Arizona
Erica	Williams	32327	60	Show Low	Arizona
Leroy	Brown	32380	22	Pinetop	Arizona
Elroy	Cleaver	32382	22	Globe	Arizona
Eric	Edwards	88232	32	San Diego	California
Mary Ann	Edwards	88233	32	Phoenix	Arizona
Sebastian	Smith	92001	23	Gila Bend	Arizona
Ginger	Howell	98002	42	Cottonwood	Arizona
John	Jones	99980	45	Payson	Arizona
Mary	Jones	99982	25	Payson	Arizona
NULL	NULL	NULL	NULL	NULL	NULL

Now lets say that you want to fetch only the firstname , lastname from the table

```
-- Fetching only the firstname and lastname from the table
select first_name,last_name from emp_info;
```

Output:

first_name	last_name
Gus	Gray
Mary Ann	May
Erica	Williams
Leroy	Brown
Elroy	Cleaver
Eric	Edwards
Mary Ann	Edwards
Sebastian	Smith
Ginger	Howell
John	Jones
Mary	Jones

Step-7: How to find how many records exist in the particular table

```
-- How to find how many records exist in the particular table
select count(*) from emp_info;
```

Response:

Result Grid

count(*)
11

Note: Here we can either perform count on whole record or count on primary key

-→ Output would be same for both

Result Grid

	count(*)
▶	11

Here I got the title as **count(*)** -→ I want to change it to the **Records_count**

We can do it using <u>alias:</u>

```
-- Giving alias name for the same
select count(id) as Records_count from emp_info;
```

Response:

Result Grid

	Records_count
▶	11

```
-- Fetching only the firstname and lastname from the table
-- Here changing first_name,last_name to firstname and lastname
select first_name as firstname ,last_name as lastname from emp_info;
```

Response:

	firstname	lastname
▶	Gus	Gray
	Mary Ann	May
	Erica	Williams
	Leroy	Brown
	Elroy	Cleaver
	Eric	Edwards
	Mary Ann	Edwards
	Sebastian	Smith
	Ginger	Howell
	John	Jones

This can be for assignment: FILTERING IN TERMS OF DATA

Lets say that you are dealing with the huge database, here you want to how many males and females

Now lets perform some filters

1. Select the firstname, lastname, city from the table
2. Select the firstname, lastname, city from the table whose age is greater than 30
3. From the above table, Select the records whose age is greater than 30 and less than 50
4. From the above table, Select the records whose firstname starts with 'E'
5. From the above table, Select the customer records whose lastname ends with 'S'
6. From the above table, Select the customer records whose age is either 22 or 32
7. From the above table, Select the customer records whose age is either 22 or 32 or 21 or 25 or 32 or 10 or 12 or 52 or 46 or 33 or 24 or 52 or 65 or …..
8. From the above table, Select the customer records whose city has letter " A " in it.
9. Get the record whose firstname is 'Erica' ,lastname is 'Williams' and id=32337

1. Select the firstname, lastname, city from the table

```
-- 1.   Select the firstname, lastname, city from the table
select first_name,last_name,city from emp_info;
```

Output:

first_name	last_name	city
Gus	Gray	Bagdad
Mary Ann	May	Tucson
Erica	Williams	Show Low
Leroy	Brown	Pinetop
Elroy	Cleaver	Globe
Eric	Edwards	San Diego
Mary Ann	Edwards	Phoenix
Sebastian	Smith	Gila Bend
Ginger	Howell	Cottonwood
John	Jones	Payson

2. Select the firstname, lastname, city from the table whose age is greater than 30

```
-- 2 .  Select the firstname, lastname, city from the table whose age is greater than 30
select first_name,last_name,city from emp_info where age>30;
```

Output:

first_name	last_name	city
Gus	Gray	Bagdad
Mary Ann	May	Tucson
Erica	Williams	Show Low
Eric	Edwards	San Diego
Mary Ann	Edwards	Phoenix
Ginger	Howell	Cottonwood
John	Jones	Payson

3. From the above table ,Select the records whose age is greater than 30 and less than 50

```
-- 3 .  From the above table ,Select the records  whose age is greater than 30 and less than 50
select * from emp_info where age>30 and age<50;
```

Output:

first_name	last_name	id	age	city	state
Gus	Gray	22322	35	Bagdad	Arizona
Eric	Edwards	88232	32	San Diego	California
Mary Ann	Edwards	88233	32	Phoenix	Arizona
Ginger	Howell	98002	42	Cottonwood	Arizona
John	Jones	99980	45	Payson	Arizona
NULL	NULL	NULL	NULL	NULL	NULL

4. From the above table, Select the records whose firstname starts with ‘E’

```
-- 4. From the above table, Select the records  whose firstname starts with 'E'
select * from emp_info where first_name like 'E%';
-- U can use lowercase as well:: In both ways it works same --> select * from emp_info where first_name like 'e%';
```

Output:

first_name	last_name	id	age	city	state
Erica	Williams	32327	60	Show Low	Arizona
Elroy	Cleaver	32382	22	Globe	Arizona
Eric	Edwards	88232	32	San Diego	California
NULL	NULL	NULL	NULL	NULL	NULL

5. From the above table, Select the customer records whose lastname ends with 'S'

```
-- 5.   From the above table, Select the customer records  whose lastname ends with 'S'
select * from emp_info where last_name like '%S';
```

Output:

first_name	last_name	id	age	city	state
Erica	Williams	32327	60	Show Low	Arizona
Eric	Edwards	88232	32	San Diego	California
Mary Ann	Edwards	88233	32	Phoenix	Arizona
John	Jones	99980	45	Payson	Arizona
Mary	Jones	99982	25	Payson	Arizona
NULL	NULL	NULL	NULL	NULL	NULL

6. From the above table, Select the customer records whose age is 22,32

```
-- 6.   From the above table, Select the customer records  whose age is 22,32
select * from emp_info where age=22 or age=32;
-- The above is one way of doing it
```

Output:

first_name	last_name	id	age	city	state
Leroy	Brown	32380	22	Pinetop	Arizona
Elroy	Cleaver	32382	22	Globe	Arizona
Eric	Edwards	88232	32	San Diego	California
Mary Ann	Edwards	88233	32	Phoenix	Arizona
NULL	NULL	NULL	NULL	NULL	NULL

```
-- The other way of doing same is by using " in " operator
select * from emp_info where age in (22,32);
```

Output:

first_name	last_name	id	age	city	state
Leroy	Brown	32380	22	Pinetop	Arizona
Elroy	Cleaver	32382	22	Globe	Arizona
Eric	Edwards	88232	32	San Diego	California
Mary Ann	Edwards	88233	32	Phoenix	Arizona
NULL	NULL	NULL	NULL	NULL	NULL

7. From the above table, Select the customer records whose age is either 22 or 32 or 21 or 25 or 32 or 10 or 12 or 52 or 46 or 33 or 24 or 52 or 65 or …..

```
-- The effective use of "in operator " is when u have large number for conditions
select * from emp_info where age in (22,32,42,52,62,72);
```

Output:

first_name	last_name	id	age	city	state
Mary Ann	May	32326	52	Tucson	Arizona
Leroy	Brown	32380	22	Pinetop	Arizona
Elroy	Cleaver	32382	22	Globe	Arizona
Eric	Edwards	88232	32	San Diego	California
Mary Ann	Edwards	88233	32	Phoenix	Arizona
Ginger	Howell	98002	42	Cottonwood	Arizona
NULL	NULL	NULL	NULL	NULL	NULL

8. From the above table, Select the customer records whose city has letter “A” in it.

```
-- 8.   From the above table, Select the customer records  whose city has letter “A” in it.
select * from emp_info where city like '%a%';
```

Output:

first_name	last_name	id	age	city	state
Gus	Gray	22322	35	Bagdad	Arizona
Eric	Edwards	88232	32	San Diego	California
Sebastian	Smith	92001	23	Gila Bend	Arizona
John	Jones	99980	45	Payson	Arizona
Mary	Jones	99982	25	Payson	Arizona
NULL	NULL	NULL	NULL	NULL	NULL

9. Get the record whose firstname is ‘Gus’ ,lastname is ‘Gray’ and id=22322

```sql
-- 9.Get the record whose firstname is ‘Gus’ ,lastname is ‘Gray’ and id=22322
select * from emp_info where first_name='Gus' and last_name='Gray' and  id=22322;
```

Output:

first_name	last_name	id	age	city	state
Gus	Gray	22322	35	Bagdad	Arizona
NULL	NULL	NULL	NULL	NULL	NULL