DBMS LAB-3

NAME:- ABHISHIKTH BODA

ROLL NUMBER:- S20210010044

DATE:- 17-08-2022

PROBLEM 1:-

■ **Create table "Customers" with the following fields:-**

create table customers(

CustomerID Int,

Dateofbirth date,

Gender varchar(5),

CustomerName varchar(30),

City varchar(20),

country varchar(10)

);

Data to be inserted in the above table:-

```
CustomerID | Dateofbirth | Gender | CustomerName | City       | country
-----------+-------------+--------+--------------+------------+---------
        12 | 1996-11-10  | m      | Monk         | Hyderabad  | India
        15 | 1972-08-10  | f      | mars         | goa        | India
        20 | 1966-03-29  | f      | johny        | paris      | france
        25 | 1944-03-10  | f      | mans         | Hamburg    | Germany
       125 | 1999-12-10  | m      | Maggie       | Delhi      | India
       150 | 1991-12-10  | f      | don          | Oslo       | norway
       200 | 1968-11-29  | f      | lambie       | paris      | france
      1000 | 1989-10-10  | m      | John         | Delhi      | India
      1100 | 1979-01-10  | f      | Kens         | Berlin     | Germany
      1105 | 1989-10-10  | m      | manish       | Delhi      | India
      1106 | 1979-01-10  | f      | Kensive      | Berlin     | Germany
      1205 | 1998-11-10  | m      | Monk         | Delhi      | India
      1259 | 1999-12-10  | m      | Maggie       | Delhi      | India
      1507 | 1992-08-10  | f      | mars         | Oslo       | norway
      2004 | 1966-03-29  | f      | johny        | paris      | france
      2505 | 1960-03-10  | f      | Kelvin       | Hamburg    | Germany
```

■ **Create table "Products" with the following fields:-**

create table products(

CustomerID Int,

ProductID int,

ProductName varchar(20),

Availability varchar(20),

Price int

);

Data to be inserted in the following table:-

CustomerID	ProductID	ProductName	Availability	Price
1	1000	pen	yes	100
2	1100	toy	no	10
3	2505	pencil	yes	30
4	1205	duck	yes	50
6	200	hat	yes	10
7	2505	pot	no	90
9	1100	chalk	no	10

Answer the following questionnaires:-

TABLES AFTER INSERTING THE ABOVE DATA:-

Customers table:-

```
mysql> select * from customers;
+------------+------------+--------+--------------+-----------+---------+
| CustomerID | Dateofbirth | Gender | CustomerName | City      | country |
+------------+------------+--------+--------------+-----------+---------+
|         12 | 1996-11-10 | m      | Monk         | Hyderabad | India   |
|         15 | 1972-08-10 | f      | mars         | goa       | India   |
|         20 | 1966-03-29 | f      | johny        | paris     | france  |
|         25 | 1944-03-10 | f      | mans         | Hamburg   | Germany |
|        125 | 1999-12-10 | m      | Maggie       | Delhi     | India   |
|        150 | 1991-12-10 | f      | don          | Oslo      | norway  |
|        200 | 1968-11-29 | f      | lambie       | paris     | france  |
|       1000 | 1989-10-10 | m      | John         | Delhi     | India   |
|       1100 | 1979-01-10 | f      | Kens         | Berlin    | Germany |
|       1105 | 1989-10-10 | m      | manish       | Delhi     | India   |
|       1106 | 1979-01-10 | f      | Kensive      | Berlin    | Germany |
|       1205 | 1998-11-10 | m      | Monk         | Delhi     | India   |
|       1259 | 1999-12-10 | m      | Maggie       | Delhi     | India   |
|       1507 | 1992-08-10 | f      | mars         | Oslo      | norway  |
|       2004 | 1966-03-29 | f      | johny        | paris     | france  |
|       2505 | 1960-03-10 | f      | Kelvin       | Hamburg   | Germany |
+------------+------------+--------+--------------+-----------+---------+
16 rows in set (0.00 sec)

mysql>
```

Products table:-

```
mysql> select * from products;
+------------+-----------+-------------+--------------+-------+
| CustomerID | ProductID | ProductName | Availability | Price |
+------------+-----------+-------------+--------------+-------+
|          1 |      1000 | pen         | yes          |   100 |
|          2 |      1100 | toy         | no           |    10 |
|          3 |      2505 | pencil      | yes          |    30 |
|          4 |      1205 | duck        | yes          |    50 |
|          6 |       200 | hat         | yes          |    10 |
|          7 |      2505 | pot         | no           |    90 |
|          9 |      1100 | chalk       | no           |    10 |
+------------+-----------+-------------+--------------+-------+
7 rows in set (0.00 sec)

mysql>
```

1. Alter table and set CustomerID in Customers table as primary key.

ANSWER:-

```
mysql> alter table customers
    -> add primary key(CustomerID);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

2. Set CustomerID in the products table as Foreignkey which references CustomerID in Customers table.

ANSWER:-

```
mysql> alter table products
    -> add foreign key (ProductID) references customers(CustomerID);
Query OK, 7 rows affected (0.03 sec)
Records: 7  Duplicates: 0  Warnings: 0

mysql>
```

3. Set a default value for Availability as "YES".

ANSWER:-

```
mysql> alter table products
    -> alter Availability set default 'YES';
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

4. Selects all customers with a CustomerName that have "or" in any position.

ANSWER:-

```
mysql> select CustomerID,CustomerName from customers
    -> where CustomerName like '%or%';
Empty set (0.01 sec)

mysql>
```

5. Insert CustomerID =2505 in the Products table (Assume CustomerID=2505 is not there in Customers table).

ANSWER:-

```
mysql> insert into products(CustomerID) values(2505);
Query OK, 1 row affected (0.01 sec)

mysql> select * from products;
+------------+-----------+-------------+--------------+-------+
| CustomerID | ProductID | ProductName | Availability | Price |
+------------+-----------+-------------+--------------+-------+
|          1 |      1000 | pen         | yes          |   100 |
|          2 |      1100 | toy         | no           |    10 |
|          3 |      2505 | pencil      | yes          |    30 |
|          4 |      1205 | duck        | yes          |    50 |
|          6 |       200 | hat         | yes          |    10 |
|          7 |      2505 | pot         | no           |    90 |
|          9 |      1100 | chalk       | no           |    10 |
|       2505 |      NULL | NULL        | YES          |  NULL |
+------------+-----------+-------------+--------------+-------+
8 rows in set (0.00 sec)

mysql>
```

6. Select all fields from "Customers" where the country is "Germany" and the city is "Berlin".

ANSWER:-

```
mysql> select * from customers
    -> where country = 'Germany' and city = 'Berlin';
+------------+------------+--------+--------------+--------+---------+
| CustomerID | Dateofbirth | Gender | CustomerName | City   | country |
+------------+------------+--------+--------------+--------+---------+
|       1100 | 1979-01-10 | f      | Kens         | Berlin | Germany |
|       1106 | 1979-01-10 | f      | Kensive      | Berlin | Germany |
+------------+------------+--------+--------------+--------+---------+
2 rows in set (0.02 sec)

mysql>
```

7. Selects all fields from "Customers" where the country is not "Germany".

ANSWER:-

```
mysql> select * from customers
    -> where not country= 'Germany';
+------------+------------+--------+--------------+-----------+---------+
| CustomerID | Dateofbirth | Gender | CustomerName | City      | country |
+------------+------------+--------+--------------+-----------+---------+
|         12 | 1996-11-10 | m      | Monk         | Hyderabad | India   |
|         15 | 1972-08-10 | f      | mars         | goa       | India   |
|         20 | 1966-03-29 | f      | johny        | paris     | france  |
|        125 | 1999-12-10 | m      | Maggie       | Delhi     | India   |
|        150 | 1991-12-10 | f      | don          | Oslo      | norway  |
|        200 | 1968-11-29 | f      | lambie       | paris     | france  |
|       1000 | 1989-10-10 | m      | John         | Delhi     | India   |
|       1105 | 1989-10-10 | m      | manish       | Delhi     | India   |
|       1205 | 1998-11-10 | m      | Monk         | Delhi     | India   |
|       1259 | 1999-12-10 | m      | Maggie       | Delhi     | India   |
|       1507 | 1992-08-10 | f      | mars         | Oslo      | norway  |
|       2004 | 1966-03-29 | f      | johny        | paris     | france  |
+------------+------------+--------+--------------+-----------+---------+
12 rows in set (0.00 sec)

mysql>
```

8. Select all records where the value of the City column starts with the letter "a".

ANSWER:-

```
mysql> select * from customers
    -> where City like 'a%';
Empty set (0.00 sec)

mysql>
```

9. Select all records where the value of the City column starts with letter "a" and ends with the letter "b".

ANSWER:-

```
mysql> select * from customers
    -> where City like 'a%b';
Empty set (0.00 sec)

mysql>
```

10. Select all records where the value of the City column does NOT start with the letter "a".

ANSWER:-

```
mysql> select * from customers
    -> where not City like 'a%';
+------------+------------+--------+--------------+-----------+---------+
| CustomerID | Dateofbirth | Gender | CustomerName | City      | country |
+------------+------------+--------+--------------+-----------+---------+
|         12 | 1996-11-10 | m      | Monk         | Hyderabad | India   |
|         15 | 1972-08-10 | f      | mars         | goa       | India   |
|         20 | 1966-03-29 | f      | johny        | paris     | france  |
|         25 | 1944-03-10 | f      | mans         | Hamburg   | Germany |
|        125 | 1999-12-10 | m      | Maggie       | Delhi     | India   |
|        150 | 1991-12-10 | f      | don          | Oslo      | norway  |
|        200 | 1968-11-29 | f      | lambie       | paris     | france  |
|       1000 | 1989-10-10 | m      | John         | Delhi     | India   |
|       1100 | 1979-01-10 | f      | Kens         | Berlin    | Germany |
|       1105 | 1989-10-10 | m      | manish       | Delhi     | India   |
|       1106 | 1979-01-10 | f      | Kensive      | Berlin    | Germany |
|       1205 | 1998-11-10 | m      | Monk         | Delhi     | India   |
|       1259 | 1999-12-10 | m      | Maggie       | Delhi     | India   |
|       1507 | 1992-08-10 | f      | mars         | Oslo      | norway  |
|       2004 | 1966-03-29 | f      | johny        | paris     | france  |
|       2505 | 1960-03-10 | f      | Kelvin       | Hamburg   | Germany |
+------------+------------+--------+--------------+-----------+---------+
16 rows in set (0.00 sec)

mysql>
```

11. Select all records where the first letter of the City is an "a" or a "c" or an "s".

ANSWER:-

```
mysql> select * from customers
    -> where City like '[acs]%';
Empty set (0.00 sec)

mysql>
```

12. Select all records where the first letter of the City starts with anything from an "a" to an "f".

ANSWER:-

```
mysql> select * from customers where City regexp '^[ABCDEF]';
+------------+------------+--------+--------------+--------+---------+
| CustomerID | Dateofbirth | Gender | CustomerName | City   | country |
+------------+------------+--------+--------------+--------+---------+
|        125 | 1999-12-10 | m      | Maggie       | Delhi  | India   |
|       1000 | 1989-10-10 | m      | John         | Delhi  | India   |
|       1100 | 1979-01-10 | f      | Kens         | Berlin | Germany |
|       1105 | 1989-10-10 | m      | manish       | Delhi  | India   |
|       1106 | 1979-01-10 | f      | Kensive      | Berlin | Germany |
|       1205 | 1998-11-10 | m      | Monk         | Delhi  | India   |
|       1259 | 1999-12-10 | m      | Maggie       | Delhi  | India   |
+------------+------------+--------+--------------+--------+---------+
7 rows in set (0.03 sec)

mysql>
```

13. Select all the records where the Country is NOT "Norway" and NOT "France".

ANSWER:-

```
mysql> select * from customers
    -> where Country != 'norway' and Country != 'france';
+------------+------------+--------+--------------+-----------+---------+
| CustomerID | Dateofbirth | Gender | CustomerName | City      | country |
+------------+------------+--------+--------------+-----------+---------+
|         12 | 1996-11-10 | m      | Monk         | Hyderabad | India   |
|         15 | 1972-08-10 | f      | mars         | goa       | India   |
|         25 | 1944-03-10 | f      | mans         | Hamburg   | Germany |
|        125 | 1999-12-10 | m      | Maggie       | Delhi     | India   |
|        150 | 1991-12-10 | f      | don          | Oslo      | norway  |
|       1000 | 1989-10-10 | m      | John         | Delhi     | India   |
|       1100 | 1979-01-10 | f      | Kens         | Berlin    | Germany |
|       1105 | 1989-10-10 | m      | manish       | Delhi     | India   |
|       1106 | 1979-01-10 | f      | Kensive      | Berlin    | Germany |
|       1205 | 1998-11-10 | m      | Monk         | Delhi     | India   |
|       1259 | 1999-12-10 | m      | Maggie       | Delhi     | India   |
|       1507 | 1992-08-10 | f      | mars         | Oslo      | norway  |
|       2505 | 1960-03-10 | f      | Kelvin       | Hamburg   | Germany |
+------------+------------+--------+--------------+-----------+---------+
13 rows in set (0.00 sec)

mysql>
```

14. Select all the records where the value of the ProductName column is alphabetically between 'Hat' and 'Pen'.

ANSWER:-

```
mysql> select * from products
    -> where ProductName between 'Hat' and 'Pen';
+------------+-----------+-------------+--------------+-------+
| CustomerID | ProductID | ProductName | Availability | Price |
+------------+-----------+-------------+--------------+-------+
|          1 |      1000 | pen         | yes          |   100 |
|          6 |       200 | hat         | yes          |    10 |
+------------+-----------+-------------+--------------+-------+
2 rows in set (0.00 sec)

mysql>
```

15. Select all the records from product table where price is between 50 and 100.

ANSWER:-

```
mysql> select * from products
    -> where Price between 50 and 100;
+------------+-----------+-------------+--------------+-------+
| CustomerID | ProductID | ProductName | Availability | Price |
+------------+-----------+-------------+--------------+-------+
|          1 |      1000 | pen         | yes          |   100 |
|          4 |      1205 | duck        | yes          |    50 |
|          7 |      2505 | pot         | no           |    90 |
+------------+-----------+-------------+--------------+-------+
3 rows in set (0.00 sec)

mysql>
```

16. Drop primary and foreign key constraints from both the tables.

ANSWER:-

```
mysql> alter table products
    -> drop foreign key products_ibfk_1;
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> alter table customers
    -> drop primary key;
Query OK, 16 rows affected (0.05 sec)
Records: 16  Duplicates: 0  Warnings: 0
```

17. Delete the record of all customers who are from country Brazil and city Victoria.

ANSWER:-

```
mysql> select ProductName from products
    -> where Price < 50;
+-------------+
| ProductName |
+-------------+
| toy         |
| pencil      |
| hat         |
| chalk       |
+-------------+
4 rows in set (0.00 sec)

mysql>
```

18. List the available products under Rs.50.

ANSWER:-

```
mysql> select ProductName from products
    -> where Price < 50;
+-------------+
| ProductName |
+-------------+
| toy         |
| pencil      |
| hat         |
| chalk       |
+-------------+
4 rows in set (0.00 sec)

mysql>
```

19.Find the Customer details those are not belongs to "Delhi" and "Hamburg".

ANSWER:-

```
mysql> select * from customers
    -> where city != 'Delhi' and city != 'Hamburg';
+------------+------------+--------+--------------+-----------+---------+
| CustomerID | Dateofbirth | Gender | CustomerName | City      | country |
+------------+------------+--------+--------------+-----------+---------+
|         12 | 1996-11-10 | m      | Monk         | Hyderabad | India   |
|         15 | 1972-08-10 | f      | mars         | goa       | India   |
|         20 | 1966-03-29 | f      | johny        | paris     | france  |
|        150 | 1991-12-10 | f      | don          | Oslo      | norway  |
|        200 | 1968-11-29 | f      | lambie       | paris     | france  |
|       1100 | 1979-01-10 | f      | Kens         | Berlin    | Germany |
|       1106 | 1979-01-10 | f      | Kensive      | Berlin    | Germany |
|       1507 | 1992-08-10 | f      | mars         | Oslo      | norway  |
|       2004 | 1966-03-29 | f      | johny        | paris     | france  |
+------------+------------+--------+--------------+-----------+---------+
9 rows in set (0.00 sec)

mysql>
```

20. Select the customer names who are major (above 18 years).

ANSWER:-

```
mysql> select * from customers
    -> where (year(curdate())-year(Dateofbirth)) > 18;
+------------+------------+--------+--------------+-----------+---------+
| CustomerID | Dateofbirth | Gender | CustomerName | City      | country |
+------------+------------+--------+--------------+-----------+---------+
|         12 | 1996-11-10 | m      | Monk         | Hyderabad | India   |
|         15 | 1972-08-10 | f      | mars         | goa       | India   |
|         20 | 1966-03-29 | f      | johny        | paris     | france  |
|         25 | 1944-03-10 | f      | mans         | Hamburg   | Germany |
|        125 | 1999-12-10 | m      | Maggie       | Delhi     | India   |
|        150 | 1991-12-10 | f      | don          | Oslo      | norway  |
|        200 | 1968-11-29 | f      | lambie       | paris     | france  |
|       1000 | 1989-10-10 | m      | John         | Delhi     | India   |
|       1100 | 1979-01-10 | f      | Kens         | Berlin    | Germany |
|       1105 | 1989-10-10 | m      | manish       | Delhi     | India   |
|       1106 | 1979-01-10 | f      | Kensive      | Berlin    | Germany |
|       1205 | 1998-11-10 | m      | Monk         | Delhi     | India   |
|       1259 | 1999-12-10 | m      | Maggie       | Delhi     | India   |
|       1507 | 1992-08-10 | f      | mars         | Oslo      | norway  |
|       2004 | 1966-03-29 | f      | johny        | paris     | france  |
|       2505 | 1960-03-10 | f      | Kelvin       | Hamburg   | Germany |
+------------+------------+--------+--------------+-----------+---------+
16 rows in set (0.01 sec)

mysql>
```

←THE END→