DBMS EXPERIMENTS
AMOGH GARG-2020UCO1688
EXPERIMENT-4

CREATING TABLES:
create table student(Roll_Number int primary key,Name varchar(20),DOB date,Address varchar(20));
alter table student add column marks int;
alter table student add column phone_number varchar(10);
create table paper(code int primary key,name_of_paper varchar(10));
create table details(Roll_Number int not null,code int not null,attendance int,marks int,foreign key(Roll_Number) references student(Roll_Number), foreign key(code) references paper(code));

INSERTING VALUES:
insert into paper values (1,'Paper-1'),(2,'Paper-2');
insert into student values (1,'Amogh Garg','2002-09-20','UP','80','8130463841'),(2,'Akshat Barwal','2002-02-10','Delhi','85','0909098888');
insert into details values (1,1,90,85),(1,2,95,75),(2,1,100,90),(2,2,90,80);

```
MariaDB [question_4]> select * from student;
+-------------+---------------+------------+---------+-------+--------------+
| Roll_Number | Name          | DOB        | Address | marks | phone_number |
+-------------+---------------+------------+---------+-------+--------------+
|           1 | Amogh Garg    | 2002-09-20 | UP      |    80 | 8130463841   |
|           2 | Akshat Barwal | 2002-02-10 | Delhi   |    85 | 0909098888   |
+-------------+---------------+------------+---------+-------+--------------+
2 rows in set (0.003 sec)

MariaDB [question_4]> select * from paper;
+------+---------------+
| code | name_of_paper |
+------+---------------+
|    1 | Paper-1       |
|    2 | Paper-2       |
+------+---------------+
2 rows in set (0.001 sec)

MariaDB [question_4]> select * from details;
+-------------+------+------------+-------+
| Roll_Number | code | attendance | marks |
+-------------+------+------------+-------+
|           1 |    1 |         90 |    85 |
|           1 |    2 |         95 |    75 |
|           2 |    1 |        100 |    90 |
|           2 |    2 |         90 |    80 |
+-------------+------+------------+-------+
4 rows in set (0.001 sec)
```

1. Table student- Primary key is Roll_Number
Table paper- Primary key is code;
Table details- Foreign key is Roll_Number and code

2. select s.Roll_Number,s.Name,s.DOB,s.Address,s.phone_number from student s,details d
where s.Roll_Number=d.Roll_Number and d.code=2 and d.attendance>75 and d.marks>60;

```
MariaDB [question_4]> select s.Roll_Number,s.Name,s.DOB,s.Address,s.phone_number from student s,details d
    -> where s.Roll_Number=d.Roll_Number and d.code=2 and d.attendance>75 and d.marks>60;
+-------------+--------------+------------+---------+--------------+
| Roll_Number | Name         | DOB        | Address | phone_number |
+-------------+--------------+------------+---------+--------------+
|           1 | Amogh Garg   | 2002-09-20 | UP      | 8130463841   |
|           2 | Akshat Barwal| 2002-02-10 | Delhi   | 0909098888   |
+-------------+--------------+------------+---------+--------------+
2 rows in set (0.004 sec)
```

3. select s.Roll_Number,s.Name,s.DOB,s.Address,s.phone_number from student s,details d
where s.Roll_Number=d.Roll_Number and d.code=1 and s.Address='Delhi' and d.marks>60;

```
MariaDB [question_4]> select s.Roll_Number,s.Name,s.DOB,s.Address,s.phone_number from student s,details d
    -> where s.Roll_Number=d.Roll_Number and d.code=1 and s.Address='Delhi' and d.marks>60;
+-------------+--------------+------------+---------+--------------+
| Roll_Number | Name         | DOB        | Address | phone_number |
+-------------+--------------+------------+---------+--------------+
|           2 | Akshat Barwal| 2002-02-10 | Delhi   | 0909098888   |
+-------------+--------------+------------+---------+--------------+
1 row in set (0.003 sec)
```

4. select s.Roll_Number,s.Name,sum(d.marks),sum(d.attendance) from student s,details d
where s.Roll_Number=d.Roll_Number group by d.Roll_Number;

```
MariaDB [question_4]> select s.Roll_Number,s.Name,sum(d.marks),sum(d.attendance) from student s,details d
    -> where s.Roll_Number=d.Roll_Number group by d.Roll_Number;
+-------------+--------------+--------------+-------------------+
| Roll_Number | Name         | sum(d.marks) | sum(d.attendance) |
+-------------+--------------+--------------+-------------------+
|           1 | Amogh Garg   |          160 |               185 |
|           2 | Akshat Barwal|          170 |               190 |
+-------------+--------------+--------------+-------------------+
2 rows in set (0.005 sec)
```

5. select s.Roll_Number,s.Name,s.DOB,s.Address,s.phone_number from student s,details d
where s.Roll_Number=d.Roll_Number and d.code=2 order by d.marks desc limit 1;

```
MariaDB [question_4]> select s.Roll_Number,s.Name,s.DOB,s.Address,s.phone_number from student s,details d
    -> where s.Roll_Number=d.Roll_Number and d.code=2 order by d.marks desc limit 1;
+-------------+--------------+------------+---------+--------------+
| Roll_Number | Name         | DOB        | Address | phone_number |
+-------------+--------------+------------+---------+--------------+
|           2 | Akshat Barwal| 2002-02-10 | Delhi   | 0909098888   |
+-------------+--------------+------------+---------+--------------+
1 row in set (0.001 sec)
```