**Name :Vishal singh**

**Subject:DBMS**

**PRN:1132220536**

**SLIP\_1.**

MariaDB [slip\_1]> create table department(d\_no int primary key not null,d\_name varchar(10),location varchar(10));

Query OK, 0 rows affected (0.236 sec)

MariaDB [slip\_1]> create table employee(e\_no int primary key not null,e\_name varchar(10),salary decimal(10,2) check(salary > 0),commission decimal(5,2),designation varchar(10),d\_no int,foreign key(d\_no) references department(d\_no) on delete cascade on update cascade);

Query OK, 0 rows affected (0.317 sec)

MariaDB [slip\_1]> desc department;

+----------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+----------+-------------+------+-----+---------+-------+

| d\_no | int(11) | NO | PRI | NULL | |

| d\_name | varchar(10) | YES | | NULL | |

| location | varchar(10) | YES | | NULL | |

+----------+-------------+------+-----+---------+-------+

3 rows in set (0.099 sec)

MariaDB [slip\_1]> desc employee;

+-------------+---------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-------------+---------------+------+-----+---------+-------+

| e\_no | int(11) | NO | PRI | NULL | |

| e\_name | varchar(10) | YES | | NULL | |

| salary | decimal(10,2) | YES | | NULL | |

| commission | decimal(5,2) | YES | | NULL | |

| designation | varchar(10) | YES | | NULL | |

| d\_no | int(11) | YES | MUL | NULL | |

+-------------+---------------+------+-----+---------+-------+

6 rows in set (0.016 sec)

MariaDB [slip\_1]> insert into department values(1001,'science','nasik');

Query OK, 1 row affected (0.058 sec)

MariaDB [slip\_1]> insert into department values(1002,'arts','pune');

Query OK, 1 row affected (0.100 sec)

MariaDB [slip\_1]> insert into department values(1003,'commerce','patna');

Query OK, 1 row affected (0.033 sec)

MariaDB [slip\_1]> insert into department values(1004,'science','kolkata');

Query OK, 1 row affected (0.066 sec)

MariaDB [slip\_1]> select \* from department;

+------+----------+----------+

| d\_no | d\_name | location |

+------+----------+----------+

| 1001 | science | nasik |

| 1002 | arts | pune |

| 1003 | commerce | patna |

| 1004 | science | kolkata |

+------+----------+----------+

4 rows in set (0.092 sec)

MariaDB [slip\_1]> insert into employee values(501,'vishal',20000,0.25,'manager',1001);

Query OK, 1 row affected (0.172 sec)

MariaDB [slip\_1]> insert into employee values(502,'singh',30000,0.15,'student',1001);

Query OK, 1 row affected (0.056 sec)

MariaDB [slip\_1]> insert into employee values(503,'aditi',70000,0.27,'student',1002);

Query OK, 1 row affected (0.045 sec)

MariaDB [slip\_1]> insert into employee values(504,'sudh',10000,0.15,'student',1001);

Query OK, 1 row affected (0.048 sec)

MariaDB [slip\_1]> select \* from employee;

+------+--------+----------+------------+-------------+------+

| e\_no | e\_name | salary | commission | designation | d\_no |

+------+--------+----------+------------+-------------+------+

| 501 | vishal | 20000.00 | 0.25 | manager | 1001 |

| 502 | singh | 30000.00 | 0.15 | student | 1001 |

| 503 | aditi | 70000.00 | 0.27 | student | 1002 |

| 504 | sudh | 10000.00 | 0.15 | student | 1001 |

+------+--------+----------+------------+-------------+------+

4 rows in set (0.001 sec)

MariaDB [slip\_1]> select \* from department;

+------+----------+----------+

| d\_no | d\_name | location |

+------+----------+----------+

| 1001 | science | nasik |

| 1002 | arts | pune |

| 1003 | commerce | patna |

| 1004 | science | kolkata |

+------+----------+----------+

4 rows in set (0.000 sec)

MariaDB [slip\_1]> select max(salary),min(salary),avg(salary),designation from employee group by designation;

+-------------+-------------+--------------+-------------+

| max(salary) | min(salary) | avg(salary) | designation |

+-------------+-------------+--------------+-------------+

| 20000.00 | 20000.00 | 20000.000000 | manager |

| 70000.00 | 10000.00 | 36666.666667 | student |

+-------------+-------------+--------------+-------------+

2 rows in set (0.001 sec)

MariaDB [slip\_1]> select \* from employee,department where employee.d\_no=department.d\_no and department.location='pune';

+------+--------+----------+------------+-------------+------+------+--------+----------+

| e\_no | e\_name | salary | commission | designation | d\_no | d\_no | d\_name | location |

+------+--------+----------+------------+-------------+------+------+--------+----------+

| 503 | aditi | 70000.00 | 0.27 | student | 1002 | 1002 | arts | pune |

+------+--------+----------+------------+-------------+------+------+--------+----------+

1 row in set (0.143 sec)

MariaDB [slip\_1]> select \* from employee;

+------+--------+----------+------------+-------------+------+

| e\_no | e\_name | salary | commission | designation | d\_no |

+------+--------+----------+------------+-------------+------+

| 501 | vishal | 20000.00 | 0.25 | manager | 1001 |

| 502 | singh | 30000.00 | 0.15 | student | 1001 |

| 503 | aditi | 70000.00 | 0.27 | student | 1002 |

| 504 | sudh | 10000.00 | 0.15 | student | 1001 |

+------+--------+----------+------------+-------------+------+

4 rows in set (0.000 sec)

MariaDB [slip\_1]> insert into employee values(505,'akash',4500,'0.11','accountant',1002);

Query OK, 1 row affected (0.049 sec)

MariaDB [slip\_1]> select \* from employee,department where employee.d\_no=department.d\_no and department.location='pune';

+------+--------+----------+------------+-------------+------+------+--------+----------+

| e\_no | e\_name | salary | commission | designation | d\_no | d\_no | d\_name | location |

+------+--------+----------+------------+-------------+------+------+--------+----------+

| 503 | aditi | 70000.00 | 0.27 | student | 1002 | 1002 | arts | pune |

| 505 | akash | 4500.00 | 0.11 | accountant | 1002 | 1002 | arts | pune |

+------+--------+----------+------------+-------------+------+------+--------+----------+

2 rows in set (0.001 sec)

MariaDB [slip\_1]> select \* from department;

+------+----------+----------+

| d\_no | d\_name | location |

+------+----------+----------+

| 1001 | science | nasik |

| 1002 | arts | pune |

| 1003 | commerce | patna |

| 1004 | science | kolkata |

+------+----------+----------+

4 rows in set (0.000 sec)

MariaDB [slip\_1]> select \* from employee;

+------+--------+----------+------------+-------------+------+

| e\_no | e\_name | salary | commission | designation | d\_no |

+------+--------+----------+------------+-------------+------+

| 501 | vishal | 20000.00 | 0.25 | manager | 1001 |

| 502 | singh | 30000.00 | 0.15 | student | 1001 |

| 503 | aditi | 70000.00 | 0.27 | student | 1002 |

| 504 | sudh | 10000.00 | 0.15 | student | 1001 |

| 505 | akash | 4500.00 | 0.11 | accountant | 1002 |

+------+--------+----------+------------+-------------+------+

5 rows in set (0.000 sec)

MariaDB [slip\_1]> insert into employee values(506,'yash',5400,'0.14','accountant',1001);

Query OK, 1 row affected (0.051 sec)

MariaDB [slip\_1]> select \* from employee,department where employee.d\_no=department.d\_no and designation='accountant' and location='nasik';

+------+--------+---------+------------+-------------+------+------+---------+----------+

| e\_no | e\_name | salary | commission | designation | d\_no | d\_no | d\_name | location |

+------+--------+---------+------------+-------------+------+------+---------+----------+

| 506 | yash | 5400.00 | 0.14 | accountant | 1001 | 1001 | science | nasik |

+------+--------+---------+------------+-------------+------+------+---------+----------+

1 row in set (0.001 sec)

MariaDB [slip\_1]> select \* from employee;

+------+--------+----------+------------+-------------+------+

| e\_no | e\_name | salary | commission | designation | d\_no |

+------+--------+----------+------------+-------------+------+

| 501 | vishal | 20000.00 | 0.25 | manager | 1001 |

| 502 | singh | 30000.00 | 0.15 | student | 1001 |

| 503 | aditi | 70000.00 | 0.27 | student | 1002 |

| 504 | sudh | 10000.00 | 0.15 | student | 1001 |

| 505 | akash | 4500.00 | 0.11 | accountant | 1002 |

| 506 | yash | 5400.00 | 0.14 | accountant | 1001 |

+------+--------+----------+------------+-------------+------+

6 rows in set (0.000 sec)

MariaDB [slip\_1]> select \* from department;

+------+----------+----------+

| d\_no | d\_name | location |

+------+----------+----------+

| 1001 | science | nasik |

| 1002 | arts | pune |

| 1003 | commerce | patna |

| 1004 | science | kolkata |

+------+----------+----------+

4 rows in set (0.001 sec)

MariaDB [slip\_1]> select d\_name ,e\_name from department,employee where employee.d\_no=department.d\_no;

+---------+--------+

| d\_name | e\_name |

+---------+--------+

| science | vishal |

| science | singh |

| arts | aditi |

| science | sudh |

| arts | akash |

| science | yash |

+---------+--------+

6 rows in set (0.001 sec)

MariaDB [slip\_1]> select d\_name ,e\_name from department,employee where employee.d\_no=department.d\_no order by d\_name;

+---------+--------+

| d\_name | e\_name |

+---------+--------+

| arts | akash |

| arts | aditi |

| science | singh |

| science | yash |

| science | vishal |

| science | sudh |

+---------+--------+

6 rows in set (0.001 sec)