Question - 3

(i) CREATE the tables;

Student (S_id, name, gender, dob, dept_no)

Department (dept_no, dept_name).

Faculty (F_id, name, designation, salary, dept_no);

> CREATE DATABASE college;

> USE college;

> SHOW tables;

> CREATE TABLE student (s_id int primary key not null, name varchar (25) not null, gender char(1), dob date not null, dept_no int not null);

> CREATE TABLE Department (dept_no int primary key not null, dept_name varchar (25));

> CREATE TABLE faculty (F_id int primary key not null, name varchar (25) not null, designation varchar (25) not null, salary varchar (25) not null, dept_no int not null);

(ii) ~~Describe student the student~~.

(ii) Describe the structure of all table.

> Describe student;

> Describe Department;

> Describe faculty;

(iii) Modify the student table to add a new field 'grade'.

> ALTER TABLE student
→ ADD column grade char(1);

(IV) Insert a least 5 tuples into each table

> INSERT INTO student (s_id, name, gender, dob, dept_no, grade) value (1, 'John', 'M', '2018-10-09', 101, 'A');

> Insert into student (s_id, name, gender, dob, dept_no, grade) value (2, 'Abhinav', 'M', '2000-08-29', 102, 'A');

> INSERT INTO student (s_id, name, gender, dob, dept_no, grade) value (3, 'Deepika', 'F', '2000-03-19', 103, 'B');

> INSERT INTO student (s_id, name, gender, dob, dept_no, grade) value (4, 'Rashmika', 'F', '2001-05-11', 104, 'C');

> INSERT INTO student (s_id, name, gender, dob, dept_no, grade) value (5, 'Virat', 'M', '2001-01-01', 105, 'B');

> INSERT INTO Department (Dept_no, dept_name) values
(~~VALUE~~ (101, 'CIVIL');

> Insert INTO Department (dept_no, dept_name) values
(102, 'computer');

> insert into Department (dept_no, dept_name)
values (103, 'electrical');

> INSERT into Department (Dept_no, dept_name) values (104, 'Electronics');

> INSERT into Department (Dept_no, dept_name) values (105, 'Mechanical');

> INSERT into faculty (F_id, name, designation, salary, dept_no) values (1001, 'Amitha', 'PRINCIPAL', 100000, 102);

> INSERT into faculty (F_id, name, designation, salary, dept_no) values (1002, 'Smristha', 'prof', 70000.101);

> INSERT into faculty (F_id, name, designation, salary, dept_no) values (1003, 'Gitesh', 'prof', 90000, 103);

> Insert INTO faculty (F_id, name, designation, salary, dept_no) values (1004, 'Nikesh', 'prof', 80000, 104);

> Insert INTO faculty (F_id, name, designation, salary, dept_no) values (1005, 'shibu', 'prof', 75000, 105);

(v) List the details of students in the ascending order of birth.

> Select * from student order by dob asc;

(vi) Display the details of students from computer department.

> Select * from student where dept_no = (select dept_no from department where dept_name = 'computer');

(vii) List the faculties in the descending order of salary

> select * from faculty order by salary desc;

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Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 32
Server version: 8.0.20 MySQL Community Server - GPL

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

mysql> CREATE DATABASE college;
Query OK, 1 row affected (0.01 sec)

mysql> USE college;
Database changed
mysql> show tables;
Empty set (0.01 sec)

mysql>  CREATE TABLE Student (S_id int primary key not null, name varchar(25)not null, gender char(1), dob date not null,dept_no int not null);
Query OK, 0 rows affected (0.07 sec)

mysql> CREATE TABLE Department (dept_no int primary key not null, dept_name varchar(25));
Query OK, 0 rows affected (0.07 sec)

mysql>  CREATE TABLE Faculty (F_id int primary key not null, name varchar(25)not null , designation varchar(25) not null, salary varchar(25)not null,dept_no i
nt not null);
Query OK, 0 rows affected (0.39 sec)

mysql> DESCRIBE Student;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| S_id    | int         | NO   | PRI | NULL    |       |
| name    | varchar(25) | NO   |     | NULL    |       |
| gender  | char(1)     | YES  |     | NULL    |       |
| dob     | date        | NO   |     | NULL    |       |
| dept_no | int         | NO   |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
5 rows in set (0.01 sec)

mysql>  DESCRIBE DEpartment;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| dept_no   | int         | NO   | PRI | NULL    |       |
| dept_name | varchar(25) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
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```
mysql> DESCRIBE Faculty;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| F_id        | int         | NO   | PRI | NULL    |       |
| name        | varchar(25) | NO   |     | NULL    |       |
| designation | varchar(25) | NO   |     | NULL    |       |
| salary      | varchar(25) | NO   |     | NULL    |       |
| dept_no     | int         | NO   |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)

mysql> ALTER TABLE Student
    -> ADD COLUMN GRADE char(1);
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>  INSERT INTO Student (S_id, name, gender, dob,dept_no) VALUES (1,'john','M','2018-10-09',101,'A');
ERROR 1136 (21S01): Column count doesn't match value count at row 1
mysql>  INSERT INTO Student (S_id, name, gender, dob,dept_no,grade) VALUES (1,'john','M','2018-10-09',101,'A');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Student (S_id, name, gender, dob,dept_no,grade) VALUES (2,'Abhinav','M','2000-08-29',102,'A');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Student (S_id, name, gender, dob,dept_no,grade) VALUES (3,'Deepika','F','2000-03-19',103,'B');
Query OK, 1 row affected (0.01 sec)

mysql>  INSERT INTO Student (S_id, name, gender, dob,dept_no,grade) VALUES (4,'Rasmika','F','2001-05-11',104,'C');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Student (S_id, name, gender, dob,dept_no,grade) VALUES (5,'Virat','M','2001-01-01',105,'B');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Department (dept_no, dept_name) VALUES (101,'CIVIL');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Department (dept_no, dept_name) VALUES (102,'COMPUTER');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Department (dept_no, dept_name) VALUES (103,'ELECTRICAL');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Department (dept_no, dept_name) VALUES (104,'ELECTRONICS');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Department (dept_no, dept_name) VALUES (104,'MECHANICAL');
ERROR 1062 (23000): Duplicate entry '104' for key 'department.PRIMARY'
mysql> INSERT INTO Department (dept_no, dept_name) VALUES (105,'MECHANICAL');
Query OK, 1 row affected (0.01 sec)
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```
mysql> INSERT INTO Faculty (F_id, name, designation, salary,dept_no) VALUES (1001,'Anitha','PRINCIPAL',100000,102);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Faculty (F_id, name, designation, salary,dept_no) VALUES (1002,'Smitha','Prof',70000,101);,10
Query OK, 1 row affected (0.01 sec)

    -> ^C
mysql> INSERT INTO Faculty (F_id, name, designation, salary,dept_no) VALUES (1002,'Smitha','Prof',70000,101);
ERROR 1062 (23000): Duplicate entry '1002' for key 'faculty.PRIMARY'
mysql> INSERT INTO Faculty (F_id, name, designation, salary,dept_no) VALUES (1003,'Gilesh','Prof',90000,103);
    '>
    '> ^C
mysql> INSERT INTO Faculty (F_id, name, designation, salary,dept_no) VALUES (1003,'Gilesh','Prof',90000,103);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Faculty (F_id, name, designation, salary,dept_no) VALUES (1005,'Nikesh','Prof',80000,104);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Faculty (F_id, name, designation, salary,dept_no) VALUES (1004,'Shibu','Prof',75000,105);
Query OK, 1 row affected (0.01 sec)

mysql> select *from student;
+------+----------+--------+------------+---------+-------+
| S_id | name     | gender | dob        | dept_no | GRADE |
+------+----------+--------+------------+---------+-------+
|    1 | john     | M      | 2018-10-09 |     101 | A     |
|    2 | Abhinav  | M      | 2000-08-29 |     102 | A     |
|    3 | Deepika  | F      | 2000-03-19 |     103 | B     |
|    4 | Rasmika  | F      | 2001-05-11 |     104 | C     |
|    5 | Virat    | M      | 2001-01-01 |     105 | B     |
+------+----------+--------+------------+---------+-------+
5 rows in set (0.00 sec)

mysql>  select *from faculty;
+------+---------+------------+--------+---------+
| F_id | name    | designation | salary | dept_no |
+------+---------+------------+--------+---------+
| 1001 | Anitha  | PRINCIPAL  | 100000 |     102 |
| 1002 | Smitha  | Prof       |  70000 |     101 |
| 1003 | Gilesh  | Prof       |  90000 |     103 |
| 1004 | Shibu   | Prof       |  75000 |     105 |
| 1005 | Nikesh  | Prof       |  80000 |     104 |
+------+---------+------------+--------+---------+
5 rows in set (0.00 sec)

mysql> select *from department;
+---------+-----------+
| dept_no | dept_name |
+---------+-----------+
```

```
5 rows in set (0.00 sec)

mysql> select *from department;
+---------+-------------+
| dept_no | dept_name   |
+---------+-------------+
|     101 | CIVIL       |
|     102 | COMPUTER    |
|     103 | ELECTRICAL  |
|     104 | ELECTRONICS |
|     105 | MECHANICAL  |
+---------+-------------+
5 rows in set (0.00 sec)

mysql> Select *from student order by dob asc;
+------+---------+--------+------------+---------+-------+
| S_id | name    | gender | dob        | dept_no | GRADE |
+------+---------+--------+------------+---------+-------+
|    3 | Deepika | F      | 2000-03-19 |     103 | B     |
|    2 | Abhinav | M      | 2000-08-29 |     102 | A     |
|    5 | Virat   | M      | 2001-01-01 |     105 | B     |
|    4 | Rasmika | F      | 2001-05-11 |     104 | C     |
|    1 | john    | M      | 2018-10-09 |     101 | A     |
+------+---------+--------+------------+---------+-------+
5 rows in set (0.00 sec)

mysql> select * from student where dept_no=(select dept_no from department where dept_name='computer science');
Empty set (0.00 sec)

mysql> select * from student where dept_no=(select dept_no from department where dept_name='computer');
+------+---------+--------+------------+---------+-------+
| S_id | name    | gender | dob        | dept_no | GRADE |
+------+---------+--------+------------+---------+-------+
|    2 | Abhinav | M      | 2000-08-29 |     102 | A     |
+------+---------+--------+------------+---------+-------+
1 row in set (0.00 sec)

mysql> Select *from faculty order by salary desc;
+------+--------+-------------+--------+---------+
| F_id | name   | designation | salary | dept_no |
+------+--------+-------------+--------+---------+
| 1003 | Gilesh | Prof        |  90000 |     103 |
| 1005 | Nikesh | Prof        |  80000 |     104 |
| 1004 | Shibu  | Prof        |  75000 |     105 |
| 1002 | Smitha | Prof        |  70000 |     101 |
| 1001 | Anitha | PRINCIPAL   | 100000 |     102 |
+------+--------+-------------+--------+---------+
5 rows in set (0.00 sec)

mysql>
```