1)Create 3 tables named students,department,year

mysql> create database gen_ai;

Query OK, 1 row affected (0.01 sec)

mysql> use gen_ai;

Database changed

mysql> create table Department(Dept_ID int(10) primary key,Dept_Name varchar(10));

Query OK, 0 rows affected, 1 warning (0.02 sec)

mysql> create table Year(Year_ID int(10) primary key,Year_Name varchar(10));

Query OK, 0 rows affected, 1 warning (0.02 sec)

mysql> create table Student(Std_ID int(10) primary key,Std_Name varchar(10));

Query OK, 0 rows affected, 1 warning (0.02 sec)

2)student should contain relationship to both department and year

mysql> alter table Student add(Dept_ID int(10),foreign key(Dept_ID) references Department(Dept_ID),Year_ID int(10),foreign key(Year_ID) references Year(Year

_ID));

mysql> desc Department;

```
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| Dept_ID   | int         | NO   | PRI | NULL    |       |
| Dept_Name | varchar(10) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
```

2 rows in set (0.00 sec)

mysql> desc Year;

```
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| Year_ID   | int         | NO   | PRI | NULL    |       |
| Year_Name | varchar(10) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

mysql> desc Student;

```
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| Std_ID   | int         | NO   | PRI | NULL    |       |
| Std_Name | varchar(10) | YES  |     | NULL    |       |
| Dept_ID  | int         | YES  | MUL | NULL    |       |
| Year_ID  | int         | YES  | MUL | NULL    |       |
+----------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

4)store 5 students for each department

mysql> insert into Student values (1012,"Kiran",101,20);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1013,"Akshay",101,20);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1014,"Adithya",101,21);

Query OK, 1 row affected (0.01 sec)

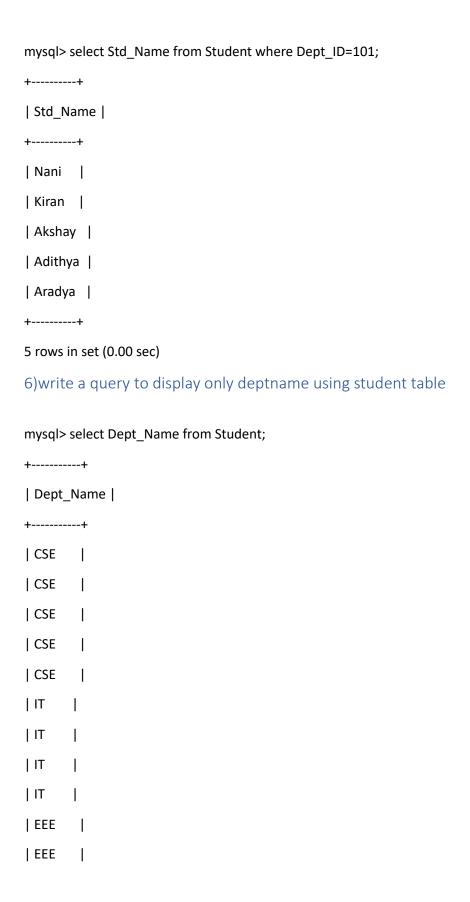mysql> insert into Student values (1015,"Aradya",101,21);

Query OK, 1 row affected (0.01 sec)

mysql> select *from Student;

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

| Std_ID | Std_Name | Dept_ID | Year_ID |

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

| 1011 | Nani | 101 | 20 |

| 1012 | Kiran | 101 | 20 |

| 1013 | Akshay | 101 | 20 |

| 1014 | Adithya | 101 | 21 |

| 1015 | Aradya | 101 | 21 |

| 1022 | Vyshnavi | 102 | 20 |

| 1033 | Sravan | 103 | 22 |

| 1044 | Ruchi | 104 | 21 |

| 1055 | Shanthi | 105 | 23 |

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

9 rows in set (0.00 sec)

mysql> insert into Student values (1023,"Vasishta",102,20);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1024,"Varun",102,21);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1025,"Viplav",102,20);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1032,"Sankalp",103,22);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1034,"Sai",103,21);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1035,"Sanvi",103,21);

Query OK, 1 row affected (0.02 sec)

mysql> insert into Student values (1036,"Sanvitha",103,21);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1041,"Ram",104,22);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1042,"Ramya",104,22);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1043,"Radhika",104,21);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1045,"Rakesh",104,21);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1051,"Sarvalok",105,22);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1052,"Santhosh",105,22);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1053,"Samhitha",105,22);

Query OK, 1 row affected (0.01 sec)

mysql> insert into Student values (1054,"Sajay",105,22);

Query OK, 1 row affected (0.01 sec)

```
mysql> select *from Student;

+--------+----------+---------+---------+
| Std_ID | Std_Name | Dept_ID | Year_ID |
+--------+----------+---------+---------+
|   1011 | Nani     |     101 |      20 |
|   1012 | Kiran    |     101 |      20 |
|   1013 | Akshay   |     101 |      20 |
|   1014 | Adithya  |     101 |      21 |
|   1015 | Aradya   |     101 |      21 |
|   1022 | Vyshnavi |     102 |      20 |
|   1023 | Vasishta |     102 |      20 |
|   1024 | Varun    |     102 |      21 |
|   1025 | Viplav   |     102 |      20 |
|   1032 | Sankalp  |     103 |      22 |
|   1033 | Sravan   |     103 |      22 |
|   1034 | Sai      |     103 |      21 |
|   1035 | Sanvi    |     103 |      21 |
|   1036 | Sanvitha |     103 |      21 |
|   1041 | Ram      |     104 |      22 |
|   1042 | Ramya    |     104 |      22 |
|   1043 | Radhika  |     104 |      21 |
|   1044 | Ruchi    |     104 |      21 |
|   1045 | Rakesh   |     104 |      21 |
|   1051 | Sarvalok |     105 |      22 |
|   1052 | Santhosh |     105 |      22 |
|   1053 | Samhitha |     105 |      22 |
|   1054 | Sajay    |     105 |      22 |
|   1055 | Shanthi  |     105 |      23 |
+--------+----------+---------+---------+
24 rows in set (0.00 sec)
```

5)write a query to display students from CSE department

```
mysql> select Std_Name from Student where Dept_ID=101;
+----------+
| Std_Name |
+----------+
| Nani     |
| Kiran    |
| Akshay   |
| Adithya  |
| Aradya   |
+----------+
5 rows in set (0.00 sec)
```

6)write a query to display only deptname using student table

```
mysql> select Dept_Name from Student;
+-----------+
| Dept_Name |
+-----------+
| CSE       |
| CSE       |
| CSE       |
| CSE       |
| CSE       |
| IT        |
| IT        |
| IT        |
| IT        |
| EEE       |
| EEE       |
```

```
| EEE      |

| EEE      |

| EEE      |

| ECE      |

| ECE      |

| ECE      |

| ECE      |

| ECE      |

| CIVIL    |

| CIVIL    |

| CIVIL    |

| CIVIL    |

| CIVIL    |

+-----------+
```

24 rows in set (0.00 sec)

7)write a query to display students sorted by dept and firstname

mysql> select Std_Name,Dept_Name from Student order by Std_Name,Dept_Name;

```
+----------+-----------+

| Std_Name | Dept_Name |

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

| Adithya  | CSE       |

| Akshay   | CSE       |

| Aradya   | CSE       |

| Kiran    | CSE       |

| Nani     | CSE       |

| Radhika  | ECE       |

| Rakesh   | ECE       |

| Ram      | ECE       |
```

```
| Ramya    | ECE      |
| Ruchi    | ECE      |
| Sai      | EEE      |
| Sajay    | CIVIL    |
| Samhitha | CIVIL    |
| Sankalp  | EEE      |
| Santhosh | CIVIL    |
| Sanvi    | EEE      |
| Sanvitha | EEE      |
| Sarvalok | CIVIL    |
| Shanthi  | CIVIL    |
| Sravan   | EEE      |
| Varun    | IT       |
| Vasishta | IT       |
| Viplav   | IT       |
| Vyshnavi | IT       |
+----------+----------+
24 rows in set (0.00 sec)
```