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 | 20 |

| 1015 | Aradya | 101 | 20 |

| 1022 | Vyshnavi | 101 | 20 |

| 1023 | Vasishta | 101 | 20 |

| 1024 | Varun | 102 | 21 |

| 1025 | Viplav | 101 | 20 |

| 1032 | Sankalp. | 101 | 20 |

| 1033 | Sravan |101 | 20 |

| 1034 | Sai | 101 | 20 |

| 1035 | Sanvi | 103 | 21 |

| 1036 | Sanvitha | 103 | 21 |

| 1041 | Ram | 104 | 22 |

| 1042 | Ramya | 104 | 22 |

| 1043 | Radhika |101 | 20 |

| 1044 | Ruchi |101 | 20 |

| 1045 | Rakesh |101 | 20 |

| 1051 | Sarvalok | 101 | 20 |

| 1052 | Santhosh | 101 | 20 |

| 1053 | Samhitha | 101 | 20 |

| 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
Radhika	ECE
Akshay	CSE

| Aradya | CSE |

|Kiran | CSE |
| Nani |CSE |

| Radhika | ECE |

| Rakesh | ECE |

| Ram | ECE |

| Ramya | ECE |

| 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)