

RISHIK CHAUDHARY
ASSIGNMENT OF DATA BASE MANAGEMENT SYSTEM
ROLLNO.-->AE-1240
COURSE-->BSC(HONS) COMPUTER SCIENCE
SUBMITTED ON-->2023-02-11

=> FIRST WE NEED CREATE A DATABASE
mysql> CREATE DATABASE RISHIK;
Query OK, 1 row affected (0.57 sec)

=> THEN USE THAT DATABASE TO CREATE FURTHER CREATE TABLES
mysql> USE RISHIK;
Database changed

***** FOLLOWING WE ARE CREATING AND DESCRIBING THE TABLES STUDENT,SOCIETY AND ENROLLMENT*****
mysql> CREATE TABLE STUDENT(
-> ROLLNO CHAR(6) PRIMARY KEY,
-> STUDENT_NAME VARCHAR(20),
-> COURSE ENUM('CS(HONS)', 'ELEC(HONS)', 'PMCS', 'LS', 'B.COM', 'CHEM(HONS)'),
-> DOB DATE);
Query OK, 0 rows affected (0.42 sec)

mysql> DESCRIBE STUDENT;

| Field | Type | Null | Key | Default | Extra |
|--------------|---|------|-----|---------|-------|
| ROLLNO | char(6) | NO | PRI | NULL | |
| STUDENT_NAME | varchar(20) | YES | | NULL | |
| COURSE | enum('CS(HONS)', 'ELEC(HONS)', 'PMCS', 'LS', 'B.COM', 'CHEM(HONS)') | YES | | NULL | |
| DOB | date | YES | | NULL | |

4 rows in set (0.07 sec)

mysql> CREATE TABLE SOCIETY(
-> SocID CHAR(6),
-> SocName ENUM('DHWANI', 'ENACTUS', 'BOOK WITH UVA', 'SASHAKT', 'NSS', 'DHUN', 'TURING', 'MYRAA', 'PICFIE'),
-> MentorName VARCHAR(15),
-> TotalSeats INT UNSIGNED,
-> CONSTRAINT PK1 PRIMARY KEY(SocID));
Query OK, 0 rows affected (0.49 sec)

mysql> DESCRIBE SOCIETY;

| Field | Type | Null | Key | Default |
|------------|---|------|-----|---------|
| SocID | char(6) | NO | PRI | NULL |
| SocName | enum('DHWANI', 'ENACTUS', 'BOOK WITH UVA', 'SASHAKT', 'NSS', 'DHUN', 'TURING', 'MYRAA', 'PICFIE') | YES | | NULL |
| MentorName | varchar(15) | YES | | NULL |
| TotalSeats | int unsigned | YES | | NULL |

4 rows in set (0.14 sec)

mysql> CREATE TABLE ENROLLMENT
-> (RollNo CHAR(6),
-> SID CHAR(6),
-> Date_Of_Enrollment DATE,
-> FOREIGN KEY(RollNo) REFERENCES STUDENT(RollNo),
-> FOREIGN KEY(SID) REFERENCES SOCIETY(SocID));
Query OK, 0 rows affected (2.25 sec)

mysql> DESCRIBE ENROLLMENT;

| Field | Type | Null | Key | Default | Extra |
|--------------------|---------|------|-----|---------|-------|
| RollNo | char(6) | YES | MUL | NULL | |
| SID | char(6) | YES | MUL | NULL | |
| Date_Of_Enrollment | date | YES | | NULL | |

3 rows in set (0.07 sec)

mysql> INSERT INTO STUDENT VALUES(1240,"RISHIK CHAUDHARY","CS(HONS)","2004-04-06"),
-> (1103,"KAMAL PREET SINGH","B.COM","2005-05-20");
Query OK, 2 rows affected (0.34 sec)
mysql> INSERT INTO STUDENT VALUES(1603,"BHAVYA CHAUDHARY","B.COM","2000-01-12"),
-> (1524,"AJAY NAGAR","CHEM(HONS)","2003-12-25");
Query OK, 2 rows affected (0.11 sec)
Records: 2 Duplicates: 0 Warnings: 0
mysql> INSERT INTO STUDENT VALUES
-> (1004,"ADHIRAJ SINGH","LS","2004-09-18"),
-> (1212,"HARMAN DEEP","ELEC(HONS)","2005-02-17"),
-> (1823,"YASHIKA BHALLA","LS","2003-11-12"),

```
-> (1815,"TANISHKA BHALLA","CHEM(HONS)","2004-07-18");
Query OK, 4 rows affected (0.22 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT*FROM STUDENT;
+-----+-----+-----+-----+
| ROLLNO | STUDENT_NAME | COURSE | DOB |
+-----+-----+-----+-----+
| 1004 | ADHIRAJ SINGH | LS | 2004-09-18 |
| 1103 | KAMAL PREET SINGH | B.COM | 2005-05-20 |
| 1212 | HARMAN DEEP | ELEC(HONS) | 2005-02-17 |
| 1240 | RISHIK CHAUDHARY | CS(HONS) | 2004-04-06 |
| 1260 | MILES MORALES | CS(HONS) | 2004-03-06 |
| 1524 | AJAY NAGAR | CHEM(HONS) | 2003-12-25 |
| 1603 | BHAVYA CHAUDHARY | B.COM | 2000-01-12 |
| 1800 | GAURAV TANDON | PMCS | 2000-08-30 |
| 1815 | TANISHKA BHALLA | CHEM(HONS) | 2004-07-18 |
| 1823 | YASHIKA BHALLA | LS | 2003-11-12 |
+-----+-----+-----+-----+
10 rows in set (0.06 sec)
```

```
mysql> ALTER TABLE SOCIETY
-> MODIFY MentorName VARCHAR(20);
Query OK, 0 rows affected (0.62 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> DESCRIBE SOCIETY;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default |
+-----+-----+-----+-----+
| SocID | char(6) | NO | PRI | NULL |
| SocName | enum('DHWANI','ENACTUS','BOOK WITH UVA','SASHAKT','NSS','DHUN','TURING','MYRAA','PICFIE') | YES | | NULL |
| MentorName | varchar(20) | YES | | NULL |
| TotalSeats | int unsigned | YES | | NULL |
+-----+-----+-----+-----+
4 rows in set (0.06 sec)
```

```
mysql> INSERT INTO SOCIETY VALUES(1001,"DHWANI","MISS MONIKA",40),
-> (1002,"DHUN","MISS MONIKA",20),
-> (1003,"NSS","DR. SUNITA JETLEY",50),
-> (1004,"ENACTUS","DR. MANOJ",30),
-> (1005,"TURING","DR.SUNITA NARANG",10),
-> (1006,"BOOK WITH UVA","MR KUMAR",30),
-> (1007,"SASHAKT","DR. SUNITA JETLEY",20);
Query OK, 7 rows affected (0.12 sec)
Records: 7  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT*FROM SOCIETY;
+-----+-----+-----+-----+
| SocID | SocName | MentorName | TotalSeats |
+-----+-----+-----+-----+
| 1001 | DHWANI | MISS MONIKA | 40 |
| 1002 | DHUN | MISS MONIKA | 20 |
| 1003 | NSS | DR. SUNITA JETLEY | 50 |
| 1004 | ENACTUS | DR. MANOJ | 30 |
| 1005 | TURING | DR.SUNITA NARANG | 10 |
| 1006 | BOOK WITH UVA | MR KUMAR | 30 |
| 1007 | SASHAKT | DR. SUNITA JETLEY | 20 |
+-----+-----+-----+-----+
7 rows in set (0.00 sec)
```

```
mysql> INSERT INTO ENROLLMENT VALUES(1815,1004,"2021-04-15"),
-> (1603,1003,"2022-06-20");
Query OK, 2 rows affected (0.24 sec)
Records: 2  Duplicates: 0  Warnings: 0
```

```
mysql> INSERT INTO ENROLLMENT VALUES(1823,1003,"2021-11-30");
Query OK, 1 row affected (0.23 sec)
```

```
mysql> SELECT*FROM ENROLLMENT;
+-----+-----+-----+
| RollNo | SID | Date_Of_Enrollment |
+-----+-----+-----+
| 1240 | 1001 | 2023-01-23 |
| 1260 | 1002 | 2023-02-01 |
| 1815 | 1004 | 2021-04-15 |
| 1603 | 1003 | 2022-06-20 |
| 1823 | 1003 | 2021-11-30 |
+-----+-----+-----+
5 rows in set (0.00 sec)
```

*****FROM HERE WE SOLVING QUERIES WITH THEIR CORESSPONDING OUTPUT*****

Q.1--> Retrieve names of students enrolled in any society

```
ANS-1 mysql> SELECT STUDENT_NAME FROM STUDENT WHERE EXISTS(SELECT* FROM ENROLLMENT WHERE STUDENT.RollNo=ENROLLMENT.RollNo);
+-----+
| STUDENT_NAME |
+-----+
| RISHIK CHAUDHARY |
| MILES MORALES |
| BHAVYA CHAUDHARY |
| TANISHKA BHALLA |
| YASHIKA BHALLA |
+-----+
5 rows in set (0.00 sec)
```

Q.2--> Retrieve all society names

```
ANS-->
mysql> SELECT SocName FROM SOCIETY;
+-----+
| SocName |
+-----+
| DHWANI |
| DHUN |
| NSS |
| ENACTUS |
| TURING |
| BOOK WITH UVA |
| SASHAKT |
+-----+
7 rows in set (0.00 sec)
```

Q.3-->Retrieve students' names starting with letter 'A'

```
ANS-->
mysql> SELECT STUDENT_NAME FROM STUDENT WHERE STUDENT_NAME LIKE 'A%';
+-----+
| STUDENT_NAME |
+-----+
| ADHIRAJ SINGH |
| AJAY NAGAR |
+-----+
2 rows in set (0.34 sec)
```

Q.4-->Retrieve students' details studying in courses 'computer science' or 'chemistry'

```
ANS-->
mysql> SELECT STUDENT_NAME FROM STUDENT WHERE COURSE IN("CS(HONS)","CHEM(HONS)");
+-----+
| STUDENT_NAME |
+-----+
| RISHIK CHAUDHARY |
| MILES MORALES |
| AJAY NAGAR |
| TANISHKA BHALLA |
+-----+
4 rows in set (0.00 sec)
```

Q.5-->. Retrieve students' names whose roll no either starts with 1

```
ANS-->
mysql> SELECT STUDENT_NAME FROM STUDENT WHERE ROLLNO LIKE "1%";
+-----+
| STUDENT_NAME |
+-----+
| RISHIK CHAUDHARY |
| MILES MORALES |
| AJAY NAGAR |
| BHAVYA CHAUDHARY |
| GAURAV TANDON |
| TANISHKA BHALLA |
| YASHIKA BHALLA |
+-----+
7 rows in set (0.15 sec)
```

Q.6-->Find society details with more than N TotalSeats where N is to be input by the user

```
mysql> SELECT * FROM SOCIETY WHERE TotalSeats > #N;
-> 20
-> ;
+-----+-----+-----+-----+
| SocID | SocName | MentorName | TotalSeats |
+-----+-----+-----+-----+
| 1001 | DHWANI | MISS MONIKA | 40 |
| 1003 | NSS | DR. SUNITA JETLEY | 50 |
| 1004 | ENACTUS | DR. SINGH | 30 |
| 1006 | BOOK WITH UVA | MR KUMAR | 30 |
+-----+-----+-----+-----+
```

Q.7-->Update society table for mentor name of a specific society

```
ANS-->
mysql> UPDATE SOCIETY
-> SET MentorName="DR. SINGH" WHERE SocName LIKE "ENACTUS%";
Query OK, 1 row affected (0.09 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> SELECT*FROM SOCIETY;
```

| SocID | SocName | MentorName | TotalSeats |
|-------|---------------|-------------------|------------|
| 1001 | DHWANI | MISS MONIKA | 40 |
| 1002 | DHUN | MISS MONIKA | 20 |
| 1003 | NSS | DR. SUNITA JETLEY | 50 |
| 1004 | ENACTUS | DR. SINGH | 30 |
| 1005 | TURING | DR.SUNITA NARANG | 10 |
| 1006 | BOOK WITH UVA | MR KUMAR | 30 |
| 1007 | SASHAKT | DR. SUNITA JETLEY | 20 |

7 rows in set (0.00 sec)

Q.8-->Find society names in which more than five students have enrolled

ANS-->

```
mysql> SELECT SocName,COUNT(*)FROM SOCIETY S,ENROLLMENT E WHERE S.SocID=E.SID GROUP BY E.SID HAVING COUNT(*)>1;
```

| SocName | COUNT(*) |
|---------|----------|
| DHWANI | 2 |
| NSS | 2 |
| ENACTUS | 2 |

3 rows in set (0.04 sec)

Q.9-->Find the name of youngest student enrolled in society ‘NSS’

ANS-->

```
mysql> SELECT ROLLNO,MIN(DATEDIFF(CURDATE(),Date_Of_Enrollment))FROM ENROLLMENT;
```

| ROLLNO | MIN(DATEDIFF(CURDATE(),Date_Of_Enrollment)) |
|--------|---|
| 1240 | 375 |

1 row in set (0.00 sec)

Q.10-->Find the name of most popular society (on the basis of enrolled students).

ANS-->

```
mysql> SELECT S.SocName,COUNT(E.SID)AS ENROLLMENT_COUNT
-> FROM ENROLLMENT E
-> JOIN SOCIETY S ON E.SID=S.SocId
-> GROUP BY ENROLLMENT_COUNT DESC
-> LIMIT 1;
```