Lab Assignment 8

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Batch: S1

Class :SE-IT

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Microsoft Windows [Version 10.0.26100.3194]

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C:\Users\Admin>MYSQL -u root -p

Enter password: \*\*\*\*

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 11

Server version: 8.0.40 MySQL Community Server - GPL

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owners.

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

mysql> -- Showing All Databases

mysql> **SHOW DATABASES;**

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

| Database |

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

| information\_schema |

| mysql |

| performance\_schema |

| sys |

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

4 rows in set (0.00 sec)

mysql> -- Creating the IT\_DEPT Database

mysql> **CREATE DATABASE IT\_DEPT;**

Query OK, 1 row affected (0.02 sec)

mysql> -- Using the IT\_DEPT Database

mysql> **USE IT\_DEPT;**

Database changed

mysql> --Creating Table *Student* in IT\_DEPT Database

mysql> **CREATE TABLE Students (**

**-> student\_id INT PRIMARY KEY,**

**-> name VARCHAR(50),**

**-> age INT**

**-> );**

Query OK, 0 rows affected (0.03 sec)

mysql> --Showing the Table *Students* in IT\_DEPT Database

mysql> **SHOW TABLES;**

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

| Tables\_in\_it\_dept |

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

| students |

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

1 row in set (0.02 sec)

mysql> --Creating Table C*ourses* in IT\_DEPT Database

mysql> **CREATE TABLE Courses (**

**-> course\_id INT PRIMARY KEY,**

**-> course\_name VARCHAR(100),**

**-> credits INT**

**-> );**

Query OK, 0 rows affected (0.04 sec)

mysql> --Showing Table Courses in IT**\_**DEPT Database

mysql> **SHOW TABLES;**

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

| Tables\_in\_it\_dept |

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

| courses |

| students |

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

2 rows in set (0.00 sec)

mysql> --Creating Table *Enrollments* in IT\_DEPT Database

> **CREATE TABLE Enrollments (**

**-> enrollment\_id INT PRIMARY KEY,**

**-> student\_id INT,**

**-> course\_id INT,**

**-> enrollment\_date DATE,**

**-> FOREIGN KEY (student\_id) REFERENCES Students(student\_id),**

**-> FOREIGN KEY (course\_id) REFERENCES Courses(course\_id)**

**-> );**

Query OK, 0 rows affected (0.04 sec)

mysql> --Showing Table *Enrollments* in IT\_DEPT Database

mysql> **SHOW TABLES;**

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

| Tables\_in\_it\_dept |

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

| courses |

| enrollments |

| students |

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

3 rows in set (0.00 sec)

mysql> --Creating Table *Professors* in IT\_DEPT Database

mysql> **CREATE TABLE Professors (**

**-> professor\_id INT PRIMARY KEY,**

**-> name VARCHAR(50),**

**-> department VARCHAR(100)**

**-> );**

Query OK, 0 rows affected (0.04 sec)

mysql> --Showing Table *Enrollments* in IT\_DEPT Database

mysql> **SHOW TABLES;**

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

| Tables\_in\_it\_dept |

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

| courses |

| enrollments |

| professors |

| students |

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

4 rows in set (0.00 sec)

mysql> --Inserting Records in Table *Students*

mysql> **INSERT INTO Students VALUES**

**-> (1, 'Alice', 22),**

**-> (2, 'Bob', 23),**

**-> (3, 'Charlie', 21),**

**-> (4, 'David', 22),**

**-> (5, 'Eve', 20);**

Query OK, 5 rows affected (0.02 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> --Describing Records in Table *Students*

mysql> **DESC STUDENTS ;**

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

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

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

| student\_id | int | NO | PRI | NULL | |

| name | varchar(50) | YES | | NULL | |

| age | int | YES | | NULL | |

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

3 rows in set (0.00 sec)

mysql> --Select From *Students*

mysql> **SELECT \* FROM STUDENTS ;**

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

| student\_id | name | age |

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

| 1 | Alice | 22 |

| 2 | Bob | 23 |

| 3 | Charlie | 21 |

| 4 | David | 22 |

| 5 | Eve | 20 |

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

5 rows in set (0.00 sec)

mysql> --Inserting Records in Table *Courses*

mysql> **INSERT INTO Courses VALUES**

**-> (101, 'Mathematics', 4),**

**-> (102, 'Physics', 3),**

**-> (103, 'Computer Science', 5),**

**-> (104, 'Biology', 3),**

**-> (105, 'Chemistry', 4);**

Query OK, 5 rows affected (0.01 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> --Describing Records in Table *Courses*

mysql> **DESC COURSES ;**

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

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

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

| course\_id | int | NO | PRI | NULL | |

| course\_name | varchar(100) | YES | | NULL | |

| credits | int | YES | | NULL | |

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

3 rows in set (0.00 sec)

mysql> --Select from *Courses*

mysql> **SELECT\*FROM COURSES ;**

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

| course\_id | course\_name | credits |

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

| 101 | Mathematics | 4 |

| 102 | Physics | 3 |

| 103 | Computer Science | 5 |

| 104 | Biology | 3 |

| 105 | Chemistry | 4 |

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

5 rows in set (0.00 sec)

mysql> --Inserting Records in Table *Enrollments*

mysql> **INSERT INTO Enrollments VALUES**

**-> (1, 1, 101, '2024-01-10'),**

**-> (2, 2, 102, '2024-01-12'),**

**-> (3, 3, 103, '2024-01-15'),**

**-> (4, 4, 104, '2024-01-18'),**

**-> (5, 5, 105, '2024-01-20');**

Query OK, 5 rows affected (0.02 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> --Describing Records in Table *Enrollments*

mysql> **DESC ENROLLMENTS ;**

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

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

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

| enrollment\_id | int | NO | PRI | NULL | |

| student\_id | int | YES | MUL | NULL | |

| course\_id | int | YES | MUL | NULL | |

| enrollment\_date | date | YES | | NULL | |

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

4 rows in set (0.00 sec)

mysql> --Select From *Students*

mysql**> SELECT \* FROM ENROLLMENTS ;**

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

| enrollment\_id | student\_id | course\_id | enrollment\_date |

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

| 1 | 1 | 101 | 2024-01-10 |

| 2 | 2 | 102 | 2024-01-12 |

| 3 | 3 | 103 | 2024-01-15 |

| 4 | 4 | 104 | 2024-01-18 |

| 5 | 5 | 105 | 2024-01-20 |

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

5 rows in set (0.00 sec)

mysql> --Inserting Records in Table *Professors*

mysql> **INSERT INTO Professors VALUES**

-> (1, 'Dr. Smith', 'Mathematics'),

-> (2, 'Dr. Johnson', 'Physics'),

-> (3, 'Dr. Brown', 'Computer Science'),

-> (4, 'Dr. White', 'Biology'),

-> (5, 'Dr. Green', 'Chemistry');

Query OK, 5 rows affected (0.02 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> --Describing Records in Table *Professors*

mysql> **DESC PROFESSORS ;**

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

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

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

| professor\_id | int | NO | PRI | NULL | |

| name | varchar(50) | YES | | NULL | |

| department | varchar(100) | YES | | NULL | |

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

3 rows in set (0.00 sec)

mysql> --Select From *Professrors*

mysql**> SELECT \* FROM PROFESSORS ;**

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

| professor\_id | name | department |

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

| 1 | Dr. Smith | Mathematics |

| 2 | Dr. Johnson | Physics |

| 3 | Dr. Brown | Computer Science |

| 4 | Dr. White | Biology |

| 5 | Dr. Green | Chemistry |

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

5 rows in set (0.00 sec)

mysql> --Creating View From Table *Students*

mysql> **CREATE VIEW StudentView AS**

**-> SELECT student\_id, name, age FROM Students;**

Query OK, 0 rows affected (0.02 sec)

mysql> --Creating View Using Table *Students* and *Courses* named as *CourseEnrollment*

mysql> **CREATE VIEW CourseEnrollment AS**

**-> SELECT**

**-> Enrollments.enrollment\_id,**

**-> Students.name AS student\_name,**

**-> Courses.course\_name,**

**-> Enrollments.enrollment\_date**

**-> FROM Enrollments**

**-> JOIN Students ON Enrollments.student\_id = Students.student\_id**

**-> JOIN Courses ON Enrollments.course\_id = Courses.course\_id;**

Query OK, 0 rows affected (0.01 sec)

mysql> --Select From *CourseEnrollment*

mysql> **SELECT \* FROM CourseEnrollment;**

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

| enrollment\_id | student\_name | course\_name | enrollment\_date |

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

| 1 | Alice | Mathematics | 2024-01-10 |

| 2 | Bob | Physics | 2024-01-12 |

| 3 | Charlie | Computer Science | 2024-01-15 |

| 4 | David | Biology | 2024-01-18 |

| 5 | Eve | Chemistry | 2024-01-20 |

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

5 rows in set (0.00 sec)

mysql> --Creating View using WITH CHECK OPTION named as *ProfessorView*

mysql> **CREATE VIEW ProfessorView AS**

**-> SELECT \* FROM Professors**

**-> WHERE department = 'Mathematics'**

**-> WITH CHECK OPTION;**

Query OK, 0 rows affected (0.01 sec)

mysql> -- Select From *ProfessorView*

mysql> **SELECT \* FROM ProfessorView;**

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

| professor\_id | name | department |

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

| 1 | Dr. Smith | Mathematics |

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

1 row in set (0.01 sec)

mysql> --Creating (adding) a Column(status) in *StudentView*

mysql> **CREATE OR REPLACE VIEW StudentView AS**

**-> SELECT student\_id, name, age, 'Active' AS status FROM Students;**

Query OK, 0 rows affected (0.01 sec)

mysql> --Select From *StudentView*

mysql**> SELECT \* FROM StudentView;**

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

| student\_id | name | age | status |

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

| 1 | Alice | 22 | Active |

| 2 | Bob | 23 | Active |

| 3 | Charlie | 21 | Active |

| 4 | David | 22 | Active |

| 5 | Eve | 20 | Active |

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

5 rows in set (0.00 sec)

mysql> --Describing records in *StudentView*

mysql> **DESC StudentView;**

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

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

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

| student\_id | int | NO | | NULL | |

| name | varchar(50) | YES | | NULL | |

| age | int | YES | | NULL | |

| status | varchar(6) | NO | | | |

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

4 rows in set (0.00 sec)

mysql> --Removing Column(status) in *StudentView*

mysql> **CREATE OR REPLACE VIEW StudentView AS**

**-> SELECT student\_id, name, age FROM Students;**

Query OK, 0 rows affected (0.01 sec)

mysql> --Describing records in *StudentView*

mysql> **DESC StudentView;**

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

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

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

| student\_id | int | NO | | NULL | |

| name | varchar(50) | YES | | NULL | |

| age | int | YES | | NULL | |

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

3 rows in set (0.00 sec)

mysql> --Select From *StudentView*

mysql> **SELECT \* FROM StudentView;**

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

| student\_id | name | age |

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

| 1 | Alice | 22 |

| 2 | Bob | 23 |

| 3 | Charlie | 21 |

| 4 | David | 22 |

| 5 | Eve | 20 |

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

5 rows in set (0.00 sec)

mysql> --Droping (deleting) view *StudentView*

mysql> **DROP VIEW IF EXISTS StudentView;**

Query OK, 0 rows affected (0.01 sec)

mysql> --Checked whether the *StudentView* is droped or not

mysql> **SELECT \* FROM StudentView;**

ERROR 1146 (42S02): Table 'it\_dept.studentview' doesn't exist

mysql> --Renaming the column name of view

mysql> **RENAME TABLE CourseEnrollment TO StudentCourseDetails;**

Query OK, 0 rows affected (0.01 sec)

mysql> --Checking whether the rename query is been worked

mysql> **Select \* from CourseEnrollment ;**

ERROR 1146 (42S02): Table 'it\_dept.courseenrollment' doesn't exist

mysql> --Select from StudentCourseDetails

mysql> **Select \* from StudentCourseDetails ;**

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

| enrollment\_id | student\_name | course\_name | enrollment\_date |

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

| 1 | Alice | Mathematics | 2024-01-10 |

| 2 | Bob | Physics | 2024-01-12 |

| 3 | Charlie | Computer Science | 2024-01-15 |

| 4 | David | Biology | 2024-01-18 |

| 5 | Eve | Chemistry | 2024-01-20 |

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

5 rows in set (0.00 sec)

mysql> --Select From ProfessorView

mysql> **Select \* from ProfessorView ;**

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

| professor\_id | name | department |

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

| 1 | Dr. Smith | Mathematics |

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

1 row in set (0.00 sec)

mysql> --Inserting new record in the ProfessorView

mysql> **INSERT INTO ProfessorsView (professor\_id, name, department)**

**-> VALUES (6, 'Dr. Alan Turing', 'Mathematics');**

Query OK, 1 row affected (0.00 sec)

mysql> --Select from ProfessorView

mysql> **Select \* from ProfessorView ;**

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

| professor\_id | name | department |

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

| 1 | Dr. Smith | Mathematics |

| 6 | Dr. Alan Turing | Mathematics |

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

2 rows in set (0.00 sec)

mysql> --Updating ProfessorView

mysql> **UPDATE ProfessorView**

**-> SET name = 'Dr. Ramanujan'**

**-> WHERE professor\_id = 6;**

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> --Select from ProfessorView

mysql> **Select \* from ProfessorView ;**

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

| professor\_id | name | department |

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

| 1 | Dr. Smith | Mathematics |

| 6 | Dr. Ramanujan | Mathematics |

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

2 rows in set (0.00 sec)

mysql> --Deleting row from ProfessorView

mysql**> DELETE FROM Professors**

**-> WHERE department = 'Mathematics' AND professor\_id = 1;**

Query OK, 1 row affected (0.02 sec)

mysql> --Select from ProfessorView

mysql> **Select \* from ProfessorView ;**

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

| professor\_id | name | department |

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

| 6 | Dr. Ramanujan | Mathematics |

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

1 row in set (0.00 sec)

mysql>