CREATE TABLE Student (

StudentID INT PRIMARY KEY,

StudentName VARCHAR(50),

CourseID INT

);

INSERT INTO Student (StudentID, StudentName, CourseID)

VALUES

(1, 'Amita', 101),

(2, 'Neha', 102),

(3, 'Sagar', 103),

(4, 'sneha', 106),

(5, 'Shubham', 105);

CREATE TABLE Course (

CourseID INT PRIMARY KEY,

CourseName VARCHAR(50)

);

INSERT INTO Course (CourseID, CourseName)

VALUES

(101, 'Physics'),

(102, 'Chemistry'),

(103, 'Biology'),

(104, 'Biology');

**1. Creating Tables**

SQL

CREATE TABLE Student (

StudentID INT PRIMARY KEY,

StudentName VARCHAR(50),

CourseID INT

);

INSERT INTO Student (StudentID, StudentName, CourseID)

VALUES

(1, 'Amita', 101),

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CREATE TABLE Course (

CourseID INT PRIMARY KEY,

CourseName VARCHAR(50)

);

INSERT INTO Course (CourseID, CourseName)

VALUES

(101, 'Physics'),

(102, 'Chemistry'),

(103, 'Biology'),

(104, 'Biology');

**2. Finding all types of Joins**

a. Inner Join:

SQL

SELECT Student.StudentName, Course.CourseName

FROM Student

INNER JOIN Course ON Student.CourseID = Course.CourseID;

b. Left Join:

SQL

SELECT Student.StudentName, Course.CourseName

FROM Student

LEFT JOIN Course ON Student.CourseID = Course.CourseID;

c. Right Join:

SQL

SELECT Student.StudentName, Course.CourseName

FROM Student

RIGHT JOIN Course ON Student.CourseID = Course.CourseID;

d. Full Outer Join:

SQL

SELECT Student.StudentName, Course.CourseName

FROM Student

FULL OUTER JOIN Course ON Student.CourseID = Course.CourseID;

**3. Creating Different Views**

a. View of Students and their Courses:

SQL

CREATE VIEW Student\_Course\_View AS

SELECT Student.StudentName, Course.CourseName

FROM Student

INNER JOIN Course ON Student.CourseID = Course.CourseID;

b. View of Students who have not taken any course:

SQL

CREATE VIEW Students\_Without\_Course AS

SELECT StudentName

FROM Student

WHERE CourseID NOT IN (SELECT CourseID FROM Course);

c. View of Courses with no students:

SQL

CREATE VIEW Courses\_Without\_Students AS

SELECT CourseName

FROM Course

WHERE CourseID NOT IN (SELECT CourseID FROM Student);

To display the views:

SQL

SELECT \* FROM Student\_Course\_View;

SELECT \* FROM Students\_Without\_Course;

SELECT \* FROM Courses\_Without\_Students;