* Student Table

CREATE TABLE Student (

  StudentId int PRIMARY KEY,

  StudentName VARCHAR (20) NOT NULL,

  Address1 VARCHAR (20),

  Gender VARCHAR (15),

  Course VARCHAR (8)

);

* Course Table

CREATE TABLE Course (

  DeptNo int ,

  Dname VARCHAR (20) PRIMARY KEY,

  Location VARCHAR (10)

);

* Insert into Student

INSERT INTO Student VALUES (7369, ‘Vishu Singhal’, ‘Govindpuri’, ‘Male’, ‘BCA’);

INSERT INTO Student VALUES (7777, ‘Ramesh Chand’, ‘Chennai’, ‘Male’, ‘MCA’);

INSERT INTO Student VALUES (2233, ‘Suman Sharma’, ‘Delhi’, ‘Female’, ‘BBA’);

INSERT INTO Student VALUES (8899, ‘Sunil Kumar’, ‘Jaipur’, ‘Male’, ‘MCA’);

INSERT INTO Student VALUES (4455, ‘Neha Verma’, ‘Mumbai’, ‘Female’, NULL);

* Insert into Course

INSERT INTO Course VALUES (10, ‘BCA’, ‘Delhi’);

INSERT INTO Course VALUES (20, ‘MCA’, ‘Chennai’);

INSERT INTO Course VALUES (30, ‘BBA’, ‘Jaipur’);

INSERT INTO Course VALUES (40, ‘MBA’, ‘Mumbai’);

INSERT INTO Course VALUES (50, ‘B.Tech’, ‘Bangalore’);

SELECT \* FROM Student;

Output:

StudentId StudentName Address1 Gender Course

  2233 Suman Sharma Delhi Female BBA

  4455 Neha Verma Mumbai Female NULL

  7369 Vishu Singhal Govindpuri Male BCA

  7777 Ramesh Chand Chennai Male MCA

  8899 Sunil Kumar Jaipur Male MCA

SELECT StudentId, Course FROM Student;

Output:

StudentId Course

  2233 BBA

  4455 NULL

  7369 BCA

  7777 MCA

  8899 MCA

SELECT Dname, Location FROM Course;

Output:

Dname Location

BCA Delhi

MCA Chennai

BBA Jaipur

MBA Mumbai

B.Tech Bangalore

SELECT \* FROM Student WHERE Course = ‘MCA’;

Output:

StudentId StudentName Address1 Gender Course

  7777 Ramesh Chand Chennai Male MCA

  8899 Sunil Kumar Jaipur Male MCA

SELECT StudentName FROM Student WHERE StudentId IN (7369, 7777, 2233);

Output:

StudentName

Suman Sharma

Vishu Singhal

Ramesh Chand

SELECT s.StudentName

FROM Student s

JOIN Course c ON s.Course = c.Dname

WHERE c.DeptNo NOT IN (10, 40);

Output:

StudentName

Suman Sharma

Ramesh Chand

Sunil Kumar

SELECT StudentName FROM Student WHERE Course IS NULL;

Output:

StudentName

Neha Verma

SELECT StudentName FROM Student WHERE StudentName LIKE ‘S%’;

Output:

StudentName

Suman Sharma

Sunil Kumar

SELECT StudentName FROM Student WHERE StudentName LIKE ‘%s’;

Output:

StudentName

SELECT StudentName FROM Student WHERE StudentName LIKE ‘%s’;

Output:

StudentName

SELECT 10+5 AS Addition,

  30-5 AS Subtraction,

  90\*5 AS Multiplication,

  80/5 AS Division

FROM Course;

Output:

Addition Subtraction Multiplication Division

  15 25 450 16

  15 25 450 16

  15 25 450 16

  15 25 450 16

  15 25 450 16

* Add fee column (if needed)

ALTER TABLE Course ADD Fee int;

* Example Update

UPDATE Course SET Fee = 30000 WHERE Dname=’BCA’;

UPDATE Course SET Fee = 40000 WHERE Dname=’MCA’;

UPDATE Course SET Fee = 25000 WHERE Dname=’BBA’;

UPDATE Course SET Fee = 50000 WHERE Dname=’MBA’;

UPDATE Course SET Fee = 60000 WHERE Dname=’B.Tech’;

* Query

SELECT s.StudentName, c.Fee, (c.Fee\*0.10) AS Scholarship

FROM Student s

JOIN Course c ON s.Course = c.Dname;

Output:

StudentName Fee Scholarship

Vishu Singhal 30000 3000.00

Ramesh Chand 40000 4000.00

Sunil Kumar 40000 4000.00

Suman Sharma 25000 2500.00

SELECT StudentName FROM Student WHERE StudentName LIKE ‘\_k%’;

Output:

StudentName

SELECT StudentName FROM Student s

LEFT JOIN Course c ON s.Course = c.Dname

WHERE c.DeptNo IS NULL;

Output:

StudentName

Neha Verma

SELECT \* FROM Student ORDER BY Course ASC;

Output:

StudentId StudentName Address1 Gender Course

  4455 Neha Verma Mumbai Female NULL

  2233 Suman Sharma Delhi Female BBA

  7369 Vishu Singhal Govindpuri Male BCA

  7777 Ramesh Chand Chennai Male MCA

  8899 Sunil Kumar Jaipur Male MCA

SELECT COUNT(\*) FROM Student WHERE Course=’BCA’;

Output:

  1

SELECT COUNT(\*) FROM Student;

Output:

  5

CREATE TABLE Department (

  DeptId INT PRIMARY KEY,

  DeptName VARCHAR(30)

);

CREATE TABLE Teacher (

  TeacherId int NOT NULL,

  TeacherName VARCHAR(20) NOT NULL,

  Subject VARCHAR(15) NOT NULL

);

Output:

Program did not output anything!

ALTER TABLE Student

ADD CONSTRAINT fk\_course FOREIGN KEY (Course) REFERENCES Course(Dname);

Output:

Program did not output anything!

CREATE TABLE Library (

  BookId int PRIMARY KEY,

  ISBN VARCHAR(20) UNIQUE,

  Title VARCHAR(10)

);

Output:

Program did not output anything!

SELECT DISTINCT s.StudentName

FROM Student s

JOIN Course c ON s.Course = c.Dname

WHERE c.DeptNo IN (1,2);

Output:

StudentName

SELECT StudentName, Course FROM Student ORDER BY Course;

Output:

StudentName Course

Neha Verma NULL

Suman Sharma BBA

Vishu Singhal BCA

Ramesh Chand MCA

Sunil Kumar MCA

Q2

* CUSTOMER Table

CREATE TABLE Customer (

  SID int PRIMARY KEY,

  Last\_Name VARCHAR(15),

  First\_Name VARCHAR(15)

);

* ORDERS Table

CREATE TABLE Orders (

  Order\_ID int PRIMARY KEY,

  Order\_Date DATE,

  Customer\_SID int,

  Amount int CHECK (Amount > 20000),

  CONSTRAINT fk\_customer FOREIGN KEY (Customer\_SID) REFERENCES Customer(SID)

);

Output:

Program did not output anything!

* Insert into CUSTOMER

INSERT INTO Customer VALUES (101, ‘Singh’, ‘Vishu’);

INSERT INTO Customer VALUES (102, ‘Sharma’, ‘Neha’);

INSERT INTO Customer VALUES (103, ‘Verma’, ‘Ramesh’);

INSERT INTO Customer VALUES (104, ‘Kumar’, ‘Suresh’);

INSERT INTO Customer VALUES (105, ‘Thomas’, ‘Anil’);

* Insert into ORDERS

INSERT INTO Orders VALUES (201,’2025-01-10’, 101, 25000);

INSERT INTO Orders VALUES (202,’2025-02-15’, 102, 30000);

INSERT INTO Orders VALUES (203,’2025-03-20’, 103, 22000);

INSERT INTO Orders VALUES (204,’2025-04-05’, 104, 28000);

INSERT INTO Orders VALUES (205,’2025-05-12’, 105, 35000);

Output:

Program did not output anything!

SELECT c.SID, c.First\_Name, c.Last\_Name, o.Amount

FROM Customer c

JOIN Orders o ON c.SID = o.Customer\_SID;

Output:

SID First\_Name Last\_Name Amount

  101 Vishu Singh 25000

  102 Neha Sharma 30000

  103 Ramesh Verma 22000

  104 Suresh Kumar 28000

  105 Anil Thomas 35000

SELECT \* FROM Customer

WHERE First\_Name LIKE ‘%s’ OR Last\_Name LIKE ‘%s’;

Output:

SID Last\_Name First\_Name

  105 Thomas Anil

SELECT \* FROM Orders WHERE Amount BETWEEN 21000 AND 30000;

Output:

Order\_ID Order\_Date Customer\_SID Amount

  201 2025-01-10 101 25000

  202 2025-02-15 102 30000

  203 2025-03-20 103 22000

  204 2025-04-05 104 28000

SELECT Order\_ID, (Amount + 500) AS “New Amount” FROM Orders;

Output:

Order\_ID New Amount

  201 25500

  202 30500

  203 22500

  204 28500

  205 35500

SELECT Order\_ID, Amount AS Total\_Amount FROM Orders;

Output:

Order\_ID Total\_Amount

  201 25000

  202 30000

  203 22000

  204 28000

  205 35000

SELECT SUM(Amount) AS Total\_Orders

FROM Orders

WHERE Amount > 15000;

Output:

Total\_Orders

  140000

SELECT \* FROM Customer WHERE SID = 104

UNION

SELECT \* FROM Customer WHERE SID = 105;

Output:

SID Last\_Name First\_Name

  104 Kumar Suresh

  105 Thomas Anil