1) Write the command to create a new database titled trackStudents.

Selected Answer:

CREATE DATABASE trackStudents;

2. Write the command to display all the databases available on the MySQL server to ensure that trackStudents database is listed as one of the available databases.

Selected Answer:

SHOW DATABASE;

3. 3) Write the command to change control to use the trackStudents database.

Selected Answer:

USE trackStudents;

4. Write the command to create the student table as shown below. DO NOT INSERT ANY VALUES IN THE TABLE.

The S\_code should be the primary key for this table, and it should be automatically assigned by the database engine. Use the ENUM data type for S\_Year to list the different years a student can be in. S\_code S\_name S\_year

1 Anne 1st

2 Bob 1 st

3 Peter 2nd

4 Tracy 3rd

5 Tom 2nd

6 Paul 2nd

7 Smith 3rd

8 Mary 1st

9 John 2nd

=> CREATE TABLE Student (

S\_code INT AUTO\_INCREMENT PRIMARY KEY,

S\_name VARCHAR(50),

S\_year ENUM('1st', '2nd', '3rd')

);

5) Write the command to display the structure of the Student table to show the columns and their data types.

Selected Answer:

DESCRIBE Student;

SHOW COLUMNS FROM Student;

6. Write the command to create the Course table. DO NOT INSERT VALUES INTO THE TABLE.

The C\_code should be the primary key for this table, and it should be automatically assigned by the database engine.

CREATE TABLE Course (

C\_code INT PRIMARY KEY AUTO\_INCREMENT,

C\_name VARCHAR(255),

C\_book VARCHAR(255)

);

7) Write the command to create the StudentCourse table.

The (S\_code,C\_code) should be the primary key for this table.

=>CREATE TABLE StudentCourse (

S\_code INT,

C\_code INT,

PRIMARY KEY (S\_code, C\_code)

);

8) Write the command to display the tables in the trackStudents database.

Selected Answer:

SHOW TABLES;

9) Write the command to display the Foreign Key references in the StudentCourse table.

SHOW CREATE TABLE StudentCourse;

10) The Course table need to be updated as shown below. Use the ALTER TABLE command to add the new column to the table. Use the ENUM data type for C\_year.

ALTER TABLE Course

ADD COLUMN C\_year ENUM('1st', '2nd', '3rd');

11) Write the command to display the structure  of the Course table.

DESCRIBE Course;

SHOW CREATE TABLE Course;

12) 1. Write the commane to insert the first two rows from the Student table and the Course table using the values in the tables shown below

INSERT INTO Student (S\_code, S\_name, S\_year) VALUES (1, 'Anne', 'Ist'); INSERT INTO Student (S\_code, S \_name, S year) VALUES (2, 'Bob', 'Ist'); INSERT INTO Course (C\_code, C \_name, C\_book) VALUES (1, 'Database Model', "Introduction to Databases'); INSERT INTO Course (C code, C\_ name, C\_book) VALUES (2, 'Distributed Systems', 'Advanced Systems");

13. (2) Try inserting the first two rows from the StudentCourse table shown below. What error did you receive?

Provide the insertion command as well as the error received in your answer.

INSERT INTO StudentCourse (S\_code, C code, grade) VALUES (1, 4, 'A');

INSERT INTO StudentCourse (S\_code, C\_code, grade) VALUES (2, 4, 'B');

The error received might be:

Error: Duplicate entry '4' for key

'PRIMARY'

14. (3) Insert two more rows into the Course table using the values in the sample table given below.

INSERT INTO Course (C\_code, C\_name, C\_book) VALUES (3, 'Software Engineering', 'Software Engineering Applications');

INSERT INTO Course (C\_code, C\_name, C\_book) VALUES (4, 'Programming Languages', 'From Fortan to Java');

Question 15

4) Write the command to insert the first two rows from the StudentCourse table again.

INSERT INTO StudentCourse (S\_code, C\_code, grade) VALUES (1, 4, 'A');

INSERT INTO StudentCourse (S\_code, C\_code, grade) VALUES (2, 4, 'B');

Question 16

5) Using the SELECT command display all rows in the three tables

SELECT \* FROM Student;

SELECT \* FROM Course;

SELECT \* FROM StudentCourse;

Question 17

6) Write the command to update the year for Course 1 to be ‘1st' instead of ‘2nd'

UPDATE Course SET C\_year = '1st' WHERE C\_code = 1;

Question 18

7) Write the command to display the updated row in the Course table.

SELECT \* FROM Course WHERE C\_code = 1;

Question 19

8) Write the command to display the name of the books taught in the 1st year

SELECT C\_book

FROM Course

WHERE C\_year = '1st';

Question 20  
9) Display the rows in the StudentCourse table including the student’s name and the course name. Check the expected output below

SELECT\_CODE, S\_NAME, C\_CODE,C\_NAME,GRADE

FROM STUDENTCOURSE;

### **Question 21**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
|  | 10) Delete the rows in the StudentCourse table with C\_code = 4.  How many rows will be deleted? | |  |  |  |
|  |  |  |  |  |

DELETE FROM StudentCourse WHERE C\_code = 4;

SELECT COUNT(\*) FROM StudentCourse WHERE C\_code = 4;

DELETE FROM StudentCourse

WHERE C\_code = 4;