

Course Title: Database Systems Sessional

Course Code: ECE 2214

Date of submission: 21/09/2024

Lab report no: 02

Submitted To:

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Experiment No: 01

Experiment Name: Create a database containing following info for 10 students

- 1. Roll
- 2. Name
- 3. Semester
- 4. Major subject
- 5. Obtained Marks

Objectives: The objective of this project is to create a relational database for managing student records, capturing essential information such as Roll Number, Name, Semester, Major Subject, and Obtained Marks. This database aims to ensure accurate storage, easy retrieval, and effective management of academic performance data for ten students.

problem-1:create a relational database for managing student records, capturing essential information such as Roll Number, Name, Semester, Major Subject, and Obtained Marks **Code:**

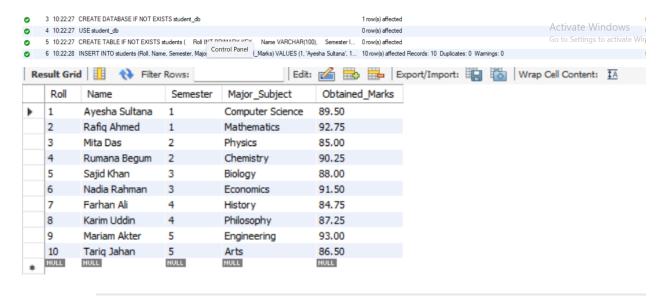
```
CREATE DATABASE IF NOT EXISTS student_db; USE student_db;
```

```
CREATE TABLE IF NOT EXISTS students (
Roll INT PRIMARY KEY,
Name VARCHAR(100),
Semester INT,
Major_Subject VARCHAR(100),
Obtained_Marks DECIMAL(5, 2)
);
```

INSERT INTO students (Roll, Name, Semester, Major Subject, Obtained Marks) VALUES

- (1, 'Ayesha Sultana', 1, 'Computer Science', 89.50),
- (2, 'Rafiq Ahmed', 1, 'Mathematics', 92.75).
- (3, 'Mita Das', 2, 'Physics', 85.00),
- (4, 'Rumana Begum', 2, 'Chemistry', 90.25),
- (5, 'Sajid Khan', 3, 'Biology', 88.00),
- (6, 'Nadia Rahman', 3, 'Economics', 91.50),
- (7, 'Farhan Ali', 4, 'History', 84.75),
- (8, 'Karim Uddin', 4, 'Philosophy', 87.25),
- (9, 'Mariam Akter', 5, 'Engineering', 93.00),
- (10, 'Tariq Jahan', 5, 'Arts', 86.50);

Output:



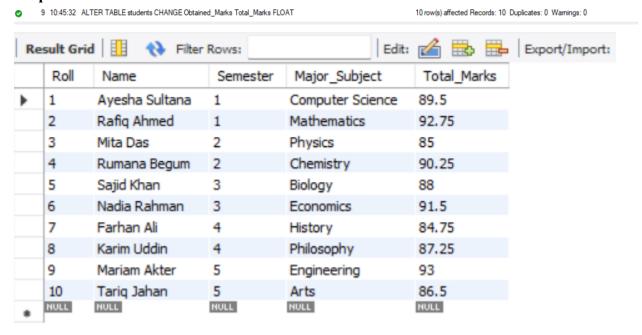
problem-2: Change a specific column name and data type

Code:

ALTER TABLE students

CHANGE Obtained Marks Total Marks FLOAT;

Output:



Problem-3: Add a new column named as log. Set the value applicable and not applicable for the condition

code:

CREATE DATABASE IF NOT EXISTS student_db;

```
USE student db;
CREATE TABLE IF NOT EXISTS students (
  Roll INT PRIMARY KEY,
  Name VARCHAR(100),
  Semester INT,
  Major Subject VARCHAR(100),
  Obtained Marks DECIMAL(5, 2)
);
INSERT INTO students (Roll, Name, Semester, Major Subject, Obtained Marks) VALUES
(1, 'Ayesha Sultana', 1, 'Computer Science', 89.50),
(2, 'Rafig Ahmed', 1, 'Mathematics', 92.75),
(3, 'Mita Das', 2, 'Physics', 85.00),
(4, 'Rumana Begum', 2, 'Chemistry', 90.25),
(5, 'Sajid Khan', 3, 'Biology', 88.00),
(6, 'Nadia Rahman', 3, 'Economics', 91.50),
(7, 'Farhan Ali', 4, 'History', 84.75),
(8, 'Karim Uddin', 4, 'Philosophy', 87.25),
(9, 'Mariam Akter', 5, 'Engineering', 93.00),
(10, 'Tariq Jahan', 5, 'Arts', 86.50);
ALTER TABLE students
ADD COLUMN log ENUM('applicable', 'not applicable') DEFAULT 'not applicable';
UPDATE students
SET log = 'applicable'
WHERE Obtained Marks > 75;
DESCRIBE students;
SELECT * FROM students;
```

Output:

96 11:39:42 UPDATE students SET log = CASE WHEN Total_Marks >= 90 THEN 'applicable' ELSE 'not applicable' E... 9 row(s) affected Rows matched: 9 Changed: 9 Warnings: 0

87 11:25:17 ALTER TABLE students ADD log VARCHAR(20)

0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0

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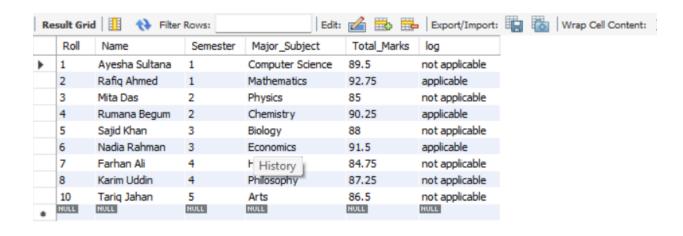
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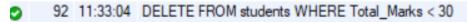


problem-4: delete the students info whose marks are below 30

Code:

DELETE FROM students WHERE Total Marks < 30;

output:



) 1 2	Roll 1 2 3	Name Ayesha Sultana Rafiq Ahmed Mita Das	Semester 1 1	Major_Subject Computer Science Mathematics	Total_Marks 89.5	not applicable	
	_	Rafiq Ahmed	1		89.5	not applicable	-
	_		1	Mathamatica			
3	3	Mita Dae		Mathematics	92.75	applicable	
		MILE DES	2	Physics	85	not applicable	
4	4	Rumana Begum	2	Chemistry	90.25	applicable	
5	5	Sajid Khan	3	Biology	88	not applicable	
6	6	Nadia Rahman	3	Economics	91.5	applicable	
7	7	Farhan Ali	4	History	84.75	not applicable	
8	В	Karim Uddin	4	Philosophy	87.25	not applicable	
1	10	Tariq Jahan	5	Arts	86.5	not applicable	
	HULL	NULL	NULL	NULL	NULL	NULL	not applica