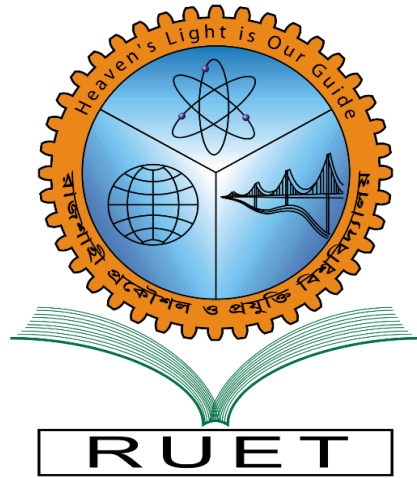# Rajshahi University of Engineering & Technology, Rajshahi



## Department of Electrical And Computer Engineering

Course Code        : ECE 2216

Course Title        : Database Systems Sessional

Experiment No.   :  01

Experiment Date  : 09-09-2024

Submission Date  : 17-09-2024

**Submitted To-**

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# Experiment No.: 01

## 1.1 Experiment Name:

Create a Database system for 'Class 21' where there are 2 tables for 'Odd' and 'Even' batch containing following information for 10 students.

- ID
- Name
- Contact
- Blood Group
- Major Subject
- Obtained Marks(100)

## 1.2 Objectives:

The goal is to perform various query operations on the database management system in MySql server. The key operations include:

1. INSERT
2. DELETE
3. UPDATE
4. CREATE
5. ALTER
6. DROP
7. TRUNKET
8. RENAME

These are the very basic operations for managing a basic database management system.

## 1.3 Query and Output:

**CREATE:**

The 'CREATE' query is used to create any new Database or Table in a SQL server. To create a new Database for Class 21 and new Tables under that , following query had been used.



```
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0011 seconds.)

CREATE DATABASE class_21;
```



```
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

CREATE TABLE even_batch ( ID int(255), Name varchar(255), contact int(255), blood_group varchar(255), major_subject varchar(255), obtained_marks int(255) );
```

```
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0006 seconds.)

CREATE TABLE odd_batch ( ID int, Name varchar(255), contact int(255), blood_group varchar(255), major_subject varchar(255), obtained_marks int(255) );
```

## INSERT:

To insert values in the following table of a database, the used query is:

INSERT INTO table_name (column1, column2, column3, ...)
VALUES (value1, value2, value3, ...);

✔ 10 rows inserted. (Query took 0.0005 seconds.)

INSERT INTO odd_batch (ID, Name, contact, blood_group, major_subject, obtained_marks) VALUES ('2110001', 'Sadik', '012345678', 'A+', 'DBMS', '20'),
('2110003', 'Samia', '012345898', 'B+', 'Neumerical Methods', '80'), ('2110005', 'Hridoy', '098345678', 'A-', '', ''), ('2110007', 'Himel',
'012345998', 'O+', 'Machine-1', '90'), ('2110011', 'Mosabbir', '012345123', 'A+', 'DBMS', '30'), ('2110013', 'Siam', '012344538', 'AB+', 'Neumerical
Methods', '95'), ('2110015', 'Khalid', '012345778', 'A+', 'Humanities', '90'), ('2110017', 'Turja', '0199845678', 'O-', 'Machine-1', '30'),
('2110019', 'Sabbir', '012395678', 'B-', 'DBMS', '67'), ('2110021', 'Farhat', '0123499478', 'A-', 'Neumerical Methods', '100');

[ Edit inline ] [ Edit ] [ Create PHP code ]

| ID | Name | contact | blood_group | major_subject | obtained_marks |
|---|---|---|---|---|---|
| 2110001 | Sadik | 12345678 | A+ | DBMS | 20 |
| 2110003 | Samia | 12345898 | B+ | Neumerical Methods | 80 |
| 2110005 | Hridoy | 98345678 | A- | | 0 |
| 2110007 | Himel | 12345998 | O+ | Machine-1 | 90 |
| 2110011 | Mosabbir | 12345123 | A+ | DBMS | 30 |
| 2110013 | Siam | 12344538 | AB+ | Neumerical Methods | 95 |
| 2110015 | Khalid | 12345778 | A+ | Humanities | 90 |
| 2110017 | Turja | 199845678 | O- | Machine-1 | 30 |
| 2110019 | Sabbir | 12395678 | B- | DBMS | 67 |
| 2110021 | Farhat | 123499478 | A- | Neumerical Methods | 100 |

## DELETE:

To delete specific columns or rows from a table , the following query is used:
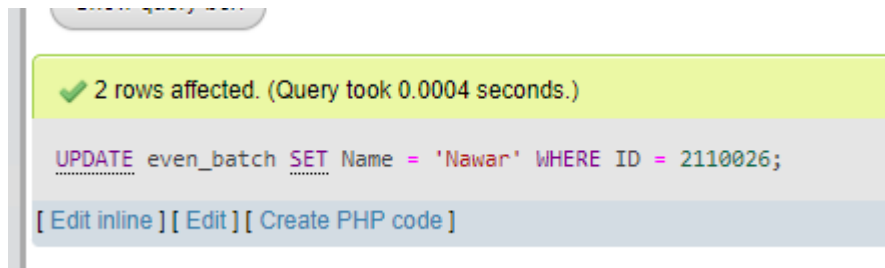DELETE FROM odd_batch WHERE ID='2110001';

✔ 1 row deleted. (Query took 0.0005 seconds.)

DELETE FROM odd_batch WHERE id=2110001;

[ Edit inline ] [ Edit ] [ Create PHP code ]

| ID | Name | contact | blood_group | major_subject | obtained_marks |
|---|---|---|---|---|---|
| 2110003 | Samia | 12345898 | B+ | Neumerical Methods | 80 |
| 2110005 | Hridoy | 98345678 | A- | | 0 |
| 2110007 | Himel | 12345998 | O+ | Machine-1 | 90 |
| 2110011 | Mosabbir | 12345123 | A+ | DBMS | 30 |
| 2110013 | Siam | 12344538 | AB+ | Neumerical Methods | 95 |
| 2110015 | Khalid | 12345778 | A+ | Humanities | 90 |
| 2110017 | Turja | 199845678 | O- | Machine-1 | 30 |
| 2110019 | Sabbir | 12395678 | B- | DBMS | 67 |
| 2110021 | Farhat | 123499478 | A- | Neumerical Methods | 100 |

**UPDATE:**

To update certain information on a table on a column used query is:

UPDATE even_batch
SET Name = 'Nawar'
WHERE ID = 2110026;

✔ 2 rows affected. (Query took 0.0004 seconds.)

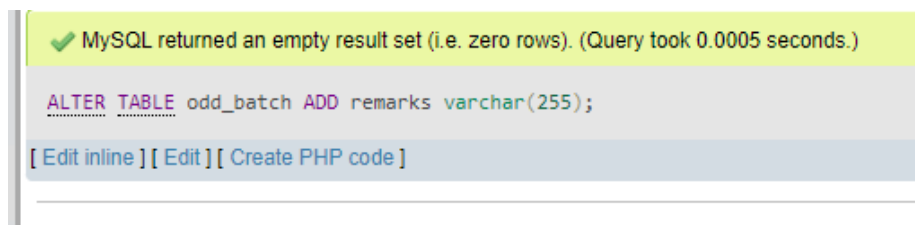UPDATE even_batch SET Name = 'Nawar' WHERE ID = 2110026;

[ Edit inline ] [ Edit ] [ Create PHP code ]

**ALTER:**

To make any changes in the table of any respective database, the Alter query is used. With this command, any new colum can be added or modified if necessary. The following query has been used to perform the operation.

ALTER TABLE table_name
ADD column_name datatype;

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

ALTER TABLE odd_batch ADD remarks varchar(255);

[ Edit inline ] [ Edit ] [ Create PHP code ]

| ID | Name | contact | blood_group | major_subject | obtained_marks | remarks |
|---|---|---|---|---|---|---|
| 2110003 | Samia | 12345898 | B+ | Neumerical Methods | 80 | NULL |
| 2110005 | Hridoy | 98345678 | A- | | 0 | NULL |
| 2110007 | Himel | 12345998 | O+ | Machine-1 | 90 | NULL |
| 2110011 | Mosabbir | 12345123 | A+ | DBMS | 30 | NULL |
| 2110013 | Siam | 12344538 | AB+ | Neumerical Methods | 95 | NULL |
| 2110015 | Khalid | 12345778 | A+ | Humanities | 90 | NULL |
| 2110017 | Turja | 199845678 | O- | Machine-1 | 30 | NULL |
| 2110019 | Sabbir | 12395678 | B- | DBMS | 67 | NULL |
| 2110021 | Farhat | 123499478 | A- | Neumerical Methods | 100 | NULL |

**DROP:**

For dropping a column in a table means deleting or removing the entire column irrespective of what is inside that specific column. The query for the task is:

ALTER TABLE table_name
DROP COLUMN column_name;

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

ALTER TABLE odd_batch DROP COLUMN remarks;

[ Edit inline ] [ Edit ] [ Create PHP code ]

| ID | Name | contact | blood_group | major_subject | obtained_marks |
|---|---|---|---|---|---|
| 2110003 | Samia | 12345898 | B+ | Neumerical Methods | 80 |
| 2110005 | Hridoy | 98345678 | A- | | 0 |
| 2110007 | Himel | 12345998 | O+ | Machine-1 | 90 |
| 2110011 | Mosabbir | 12345123 | A+ | DBMS | 30 |
| 2110013 | Siam | 12344538 | AB+ | Neumerical Methods | 95 |
| 2110015 | Khalid | 12345778 | A+ | Humanities | 90 |
| 2110017 | Turja | 199845678 | O- | Machine-1 | 30 |
| 2110019 | Sabbir | 12395678 | B- | DBMS | 67 |
| 2110021 | Farhat | 123499478 | A- | Neumerical Methods | 100 |

**TRUNKET:**

A TRUNCATE TABLE statement removes all rows from a table, but leaves the table structure intact. Query for this task is:

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0006 seconds.)

TRUNCATE TABLE even_batch;

[ Edit inline ] [ Edit ] [ Create PHP code ]

| ID | Name | contact | blood_group | major_subject | obtained_marks |
|---|---|---|---|---|---|

Query results operations

**RENAME:**

The RENAME TABLE statement is used to change the name of a table in a database. Query for changing the odd_batch table to new_batch is this:

RENAME TABLE old_table TO new_table