

*“Heaven's Light is Our Guide”*



# **Rajshahi University of Engineering & Technology**

**Department of Electrical & Computer Engineering**

## **Course Title**

**Data Base Systems Sessional**

**Course No: ECE 2216**

**Lab Report No. 01**

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## Experiment No. : 01

### Experiment Name : Introduction to MySQL database

#### Objectives :

The objective of this lab is to design and implement a database system for managing student information for Class 21. The class is divided into two batches: odd and even, based on student ID. The database will consist of two tables to store relevant information such as student ID, name, contact, blood group, major subject, and marks obtained out of 100.

#### Database Structure

#### Queries & Output :

##### 1.Create Database:

```
CREATE DATABASE class21;
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0007 seconds.)

```
CREATE DATABASE class21;
```

##### 2.Create Odd Batch Table:

```
CREATE TABLE odd_batch (  
    ID INT PRIMARY KEY,  
    Name VARCHAR(50),  
    Contact VARCHAR(15),  
    Blood_Group VARCHAR(5),  
    Major_Subject VARCHAR(50),  
    Obtained_Marks INT  
);
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
CREATE TABLE odd_batch ( ID INT PRIMARY KEY, Name VARCHAR(50), Contact VARCHAR(15), Blood_Group VARCHAR(5), Major_Subject  
VARCHAR(50), Obtained_Marks INT );
```

[\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Create PHP code \]](#)

##### 3.Create Even Batch Table:

```
CREATE TABLE even_batch (
```

```

        ID INT PRIMARY KEY,
        Name VARCHAR(50),
        Contact VARCHAR(15),
        Blood_Group VARCHAR(5),
        Major_Subject VARCHAR(50),
        Obtained_Marks INT
    );

```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```

CREATE TABLE even_batch ( ID INT PRIMARY KEY, Name VARCHAR(50), Contact VARCHAR(15), Blood_Group VARCHAR(5), Major_Subject
VARCHAR(50), Obtained_Marks INT );

```

[\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Create PHP code \]](#)

#### 4.Insert into Odd Batch

```

INSERT INTO odd_batch (ID, Name, Contact, Blood_Group, Major_Subject,
Obtained_Marks) VALUES

```

```

(1, 'Sadik', '1234567890', 'A+', 'ECE 1203', 85),
(3, 'Samia', '0987654321', 'B+', 'ECE 1203', 84),
(5, 'Hridoy', '9876543210', 'O-', 'ECE 1203', 82),
(7, 'Himel', '5678901234', 'AB+', 'ECE 1203', 95),
(9, 'Prithu', '6789012345', 'A-', 'ECE 1203', 75);

```

✓ 5 rows inserted. (Query took 0.0028 seconds.)

```

INSERT INTO odd_batch (ID, Name, Contact, Blood_Group, Major_Subject, Obtained_Marks) VALUES (1, 'Sadik', '1234567890',
'A+', 'ECE 1203', 85), (3, 'Samia', '0987654321', 'B+', 'ECE 1203', 84), (5, 'Hridoy', '9876543210', 'O-', 'ECE 1203',
82), (7, 'Himel', '5678901234', 'AB+', 'ECE 1203', 95), (9, 'Prithu', '6789012345', 'A-', 'ECE 1203', 75);

```

[\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Create PHP code \]](#)

#### 4.Insert into Even Batch

```

INSERT INTO even_batch (ID, Name, Contact, Blood_Group, Major_Subject,
Obtained_Marks) VALUES

```

```

(2, 'Nahid', '1122334455', 'O+', 'ECE 1203', 89),
(4, 'Radia', '2233445566', 'A-', 'ECE 1203', 74),
(6, 'Jahin', '3344556677', 'B+', 'ECE 1203', 80),
(8, 'Zanifa', '4455667788', 'AB-', 'ECE 1203', 82),
(10, 'Rubaid', '5566778899', 'O+', 'ECE 1203', 90);

```

✓ 5 rows inserted. (Query took 0.0004 seconds.)








```
INSERT INTO even_batch (ID, Name, Contact, Blood_Group, Major_Subject, Obtained_Marks) VALUES (2, 'Nahid', '1122334455', 'O+', 'ECE 1203', 89), (4, 'Radia', '2233445566', 'A-', 'ECE 1203', 74), (6, 'Jahin', '3344556677', 'B+', 'ECE 1203', 80), (8, 'Zanifa', '4455667788', 'AB-', 'ECE 1203', 82), (10, 'Rubaid', '5566778899', 'O+', 'ECE 1203', 90);
```

[\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Create PHP code \]](#)

**5. DELETE Operation :** Delete a record from the odd\_batch table.

```
DELETE FROM odd_batch WHERE ID = 5;
```

**Before Deletion**

<div>← T →</div>				ID	Name	Contact	Blood_Group	Major_Subject	Obtained_Marks
<input type="checkbox"/>	 Edit	 Copy	 Delete	1	Sadik	1234567890	A+	ECE 1203	85
<input type="checkbox"/>	 Edit	 Copy	 Delete	3	Samia	0987654321	B+	ECE 1203	84
<input type="checkbox"/>	 Edit	 Copy	 Delete	5	Hridoy	9876543210	O-	ECE 1203	82
<input type="checkbox"/>	 Edit	 Copy	 Delete	7	Himel	5678901234	AB+	ECE 1203	95
<input type="checkbox"/>	 Edit	 Copy	 Delete	9	Prithu	6789012345	A-	ECE 1203	75

**After Deletion**

<div>← T →</div>				ID	Name	Contact	Blood_Group	Major_Subject	Obtained_Marks
<input type="checkbox"/>	 Edit	 Copy	 Delete	1	Sadik	1234567890	A+	ECE 1203	85
<input type="checkbox"/>	 Edit	 Copy	 Delete	3	Samia	0987654321	B+	ECE 1203	84
<input type="checkbox"/>	 Edit	 Copy	 Delete	7	Himel	5678901234	AB+	ECE 1203	95
<input type="checkbox"/>	 Edit	 Copy	 Delete	9	Prithu	6789012345	A-	ECE 1203	75
















**5. UPDATE Operation :** Update the contact number and marks for a student in the even\_batch.

```
UPDATE even_batch
```
















```
SET Contact = '9988776655', Obtained_Marks = 95
```

```
WHERE ID = 2;
```

**Before Updating**

<div><div>←T→</div><div>▼</div></div>				ID	Name	Contact	Blood_Group	Major_Subject	Obtained_Marks
<input type="checkbox"/>	 Edit	 Copy	 Delete	2	Nahid	1122334455	O+	ECE 1203	89
<input type="checkbox"/>	 Edit	 Copy	 Delete	4	Radia	2233445566	A-	ECE 1203	74
<input type="checkbox"/>	 Edit	 Copy	 Delete	6	Jahin	3344556677	B+	ECE 1203	80
<input type="checkbox"/>	 Edit	 Copy	 Delete	8	Zanifa	4455667788	AB-	ECE 1203	82
<input type="checkbox"/>	 Edit	 Copy	 Delete	10	Rubaid	5566778899	O+	ECE 1203	90

### After Updating

<div><div>←T→</div><div>▼</div></div>					ID	Name	Contact	Blood_Group	Major_Subject	Obtained_Marks
<input type="checkbox"/>	 Edit	 Copy	 Delete	2	Nahid	9988776655	O+	ECE 1203	95	
<input type="checkbox"/>	 Edit	 Copy	 Delete	4	Radia	2233445566	A-	ECE 1203	74	
<input type="checkbox"/>	 Edit	 Copy	 Delete	6	Jahin	3344556677	B+	ECE 1203	80	
<input type="checkbox"/>	 Edit	 Copy	 Delete	8	Zanifa	4455667788	AB-	ECE 1203	82	
<input type="checkbox"/>	 Edit	 Copy	 Delete	10	Rubaid	5566778899	O+	ECE 1203	90	

### 6. ALTER Operation: Add a new column Email to the odd\_batch table.

ALTER TABLE odd\_batch

ADD Email VARCHAR(50);

### Before Alteration:

<div>←T→</div>			ID	Name	Contact	Blood_Group	Major_Subject	Obtained_Marks
<input type="checkbox"/>	<div><div><div></div></div><div>Edit</div><div><div><div></div></div><div>Copy</div></div><div><div><div></div></div><div>Delete</div></div></div>	1	Sadik	1234567890	A+	ECE 1203	85	
<input type="checkbox"/>	<div><div><div></div></div><div>Edit</div><div><div><div></div></div><div>Copy</div></div><div><div><div></div></div><div>Delete</div></div></div>	3	Samia	0987654321	B+	ECE 1203	84	
<input type="checkbox"/>	<div><div><div></div></div><div>Edit</div><div><div><div></div></div><div>Copy</div></div><div><div><div></div></div><div>Delete</div></div></div>	7	Himel	5678901234	AB+	ECE 1203	95	
<input type="checkbox"/>	<div><div><div></div></div><div>Edit</div><div><div><div></div></div><div>Copy</div></div><div><div><div></div></div><div>Delete</div></div></div>	9	Prithu	6789012345	A-	ECE 1203	75	

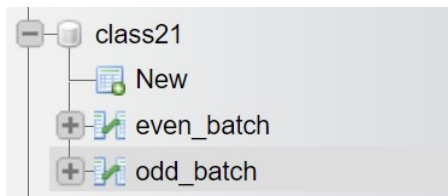
### After Alteration:

			ID	Name	Contact	Blood_Group	Major_Subject	Obtained_Marks	Email
<input type="checkbox"/>	Edit	Copy	Delete	1	Sadik	1234567890	A+	ECE 1203	85 <i>NULL</i>
<input type="checkbox"/>	Edit	Copy	Delete	3	Samia	0987654321	B+	ECE 1203	84 <i>NULL</i>
<input type="checkbox"/>	Edit	Copy	Delete	7	Himel	5678901234	AB+	ECE 1203	95 <i>NULL</i>
<input type="checkbox"/>	Edit	Copy	Delete	9	Prithu	6789012345	A-	ECE 1203	75 <i>NULL</i>

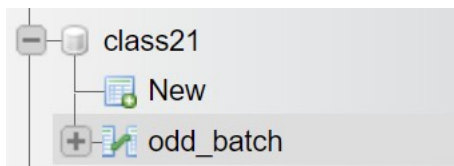
**7. DROP Operation:** Drop the even\_batch table completely from the database.

```
DROP TABLE even_batch;
```

**Before Dropping :**



**After Dropping :**



**8. TRUNCATE Operation:** Remove all data from the odd\_batch table without deleting the table structure.

```
TRUNCATE TABLE odd_batch;
```

**Before Truncating :**

			ID	Name	Contact	Blood_Group	Major_Subject	Obtained_Marks	Email
<input type="checkbox"/>	Edit	Copy	Delete	1	Sadik	1234567890	A+	ECE 1203	85 NULL
<input type="checkbox"/>	Edit	Copy	Delete	3	Samia	0987654321	B+	ECE 1203	84 NULL
<input type="checkbox"/>	Edit	Copy	Delete	7	Himel	5678901234	AB+	ECE 1203	95 NULL
<input type="checkbox"/>	Edit	Copy	Delete	9	Prithu	6789012345	A-	ECE 1203	75 NULL

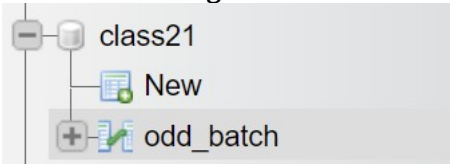
**After Truncating :**

ID	Name	Contact	Blood_Group	Major_Subject	Obtained_Marks	Email
Query results operations						

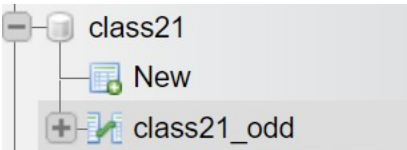
**9. RENAME Operation:** Rename the odd\_batch table to class21\_odd.

```
RENAME TABLE odd_batch TO class21_odd;
```

**Before Renaming :**



**After Renaming :**



**Discussion:**

In this lab, a database system was successfully designed and implemented for Class 21, segregating the students into odd and even batches. The database tables were created with fields such as ID, Name, Contact, Blood Group, Major Subject, and Obtained Marks. Fundamental SQL operations including inserting, updating, deleting, altering, truncating, and renaming were applied effectively to manage the data.

**References**

[1] "MySQL Introduction," W3Schools, [Online]. Available:  
[https://www.w3schools.com/mysql/mysql\\_intro.asp](https://www.w3schools.com/mysql/mysql_intro.asp).