

“Heaven’s Light is Our Guide”

Rajshahi University of Engineering & Technology, Rajshahi



Department of Electrical & Computer Engineering

Lab Report

Course Code : ECE 2216

Course Title : Data base systems sessional

Experiment No. : 01

Submission Date : 17-09-24

Submitted To-

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Submitted By-

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Roll: 2110006

Experiment No. : 01

Name of the experiment : Learning and implementation of DDL and DML queries in database

Objectives:

1. Learning DDL Operations:

To understand how to create and manage the structure of a database. This includes actions like creating tables, changing their structure, renaming them, deleting them, or clearing all data from a table without deleting the structure.

2. Learning DML Operations:

To practice how to add, update, and delete data in the database tables. These operations are focused on handling the actual information stored in the tables.

3. Practicing SQL Commands:

To become skilled at writing and using SQL queries for both DDL and DML operations, ensuring we understand how these commands work and what they do to the database.

4. Seeing the Impact of Each Operation:

To observe what happens when we use different commands—like how creating a table changes the database structure or how updating a record changes the stored data.

5. Building a Full Database System:

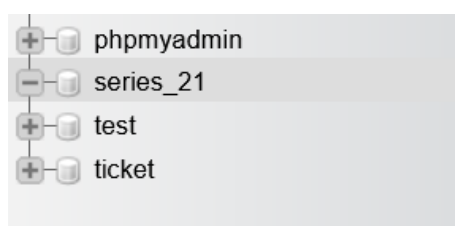
To put everything together by creating, managing, and modifying a complete database, using DDL and DML commands to handle both the structure and the data efficiently.

Queries and Output:

- **Creating Database**

```
1 create database series_21
```

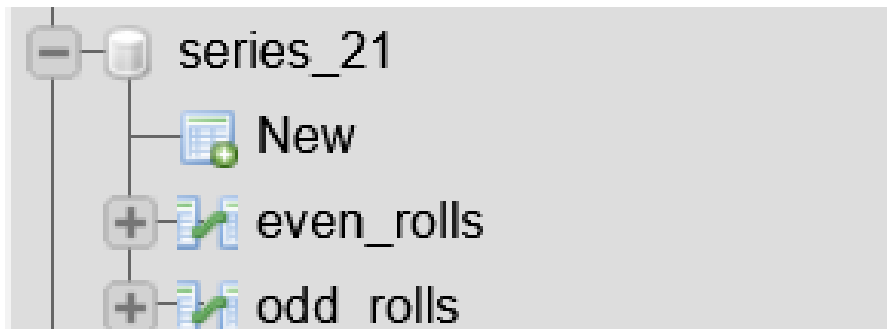
Output:



- Creating tables in database

```
1 create table odd_rolls (  
2     id int primary key,  
3     name varchar(255),  
4     contact varchar(255),  
5     blood_group varchar(255),  
6     major_sub varchar(255),  
7     obtained_marks int  
8 );  
9 create table even_rolls (  
10    id int primary key,  
11    name varchar(255),  
12    contact varchar(255),  
13    blood_group varchar(255),  
14    major_sub varchar(255),  
15    obtained_marks int  
16 );
```

Output:



- Insert Data in table

```
1 insert into odd_rolls (id, name, contact, blood_group, major_sub, obtained_marks) values  
2 (2110001, 'Sadik', '1234567890', 'A+', 'data structures', 85),  
3 (2110003, 'Samia', '1234567891', 'B+', 'operating systems', 78),  
4 (2110005, 'Hridoy', '1234567892', 'O+', 'database systems', 92),  
5 (2110007, 'Himel', '1234567893', 'AB-', 'computer networks', 88),  
6 (2110009, 'Prithu', '1234567894', 'A-', 'artificial intelligence', 95);  
7  
8 insert into even_rolls (id, name, contact, blood_group, major_sub, obtained_marks) values  
9 (2110002, 'Nahid', '1234567895', 'B-', 'data structures', 80),  
10 (2110004, 'Radia', '1234567896', 'A+', 'operating systems', 76),  
11 (2110006, 'Jahin', '1234567897', 'O+', 'database systems', 90),  
12 (2110008, 'Unknown', '1234567898', 'AB+', 'computer networks', 85),  
13 (2110010, 'Rubaid', '1234567899', 'B+', 'artificial intelligence', 89);  
14
```

Output:

Extra options

| | | | | id | name | contact | blood_group | major_sub | obtained_marks |
|--------------------------|--|--|--|---------|---------|------------|-------------|-------------------------|----------------|
| <input type="checkbox"/> | | | | 2110002 | Nahid | 1234567895 | B- | data structures | 80 |
| <input type="checkbox"/> | | | | 2110004 | Radia | 1234567896 | A+ | operating systems | 76 |
| <input type="checkbox"/> | | | | 2110006 | Jahin | 1234567897 | O+ | database systems | 90 |
| <input type="checkbox"/> | | | | 2110008 | Unknown | 1234567898 | AB+ | computer networks | 85 |
| <input type="checkbox"/> | | | | 2110010 | Rubaid | 1234567899 | B+ | artificial intelligence | 89 |

- Update Data in table

```
1 update even_rolls
2 set obtained_marks =100
3 where id=2110004;
```

Output:

Extra options

| | | | | id | name | contact | blood_group | major_sub | obtained_marks |
|--------------------------|--|--|--|---------|---------|------------|-------------|-------------------------|----------------|
| <input type="checkbox"/> | | | | 2110002 | Nahid | 1234567895 | B- | data structures | 80 |
| <input type="checkbox"/> | | | | 2110004 | Radia | 1234567896 | A+ | operating systems | 100 |
| <input type="checkbox"/> | | | | 2110006 | Jahin | 1234567897 | O+ | database systems | 90 |
| <input type="checkbox"/> | | | | 2110008 | Unknown | 1234567898 | AB+ | computer networks | 85 |
| <input type="checkbox"/> | | | | 2110010 | Rubaid | 1234567899 | B+ | artificial intelligence | 89 |

- Delete data in table

```
1 delete from even_rolls
2 where id= 2110008
```

Output:

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

| | | | | id | name | contact | blood_group | major_sub | obtained_marks |
|--------------------------|------|------|--------|---------|--------|------------|-------------|-------------------------|----------------|
| <input type="checkbox"/> | Edit | Copy | Delete | 2110002 | Nahid | 1234567895 | B- | data structures | 80 |
| <input type="checkbox"/> | Edit | Copy | Delete | 2110004 | Radia | 1234567896 | A+ | operating systems | 100 |
| <input type="checkbox"/> | Edit | Copy | Delete | 2110006 | Jahin | 1234567897 | O+ | database systems | 90 |
| <input type="checkbox"/> | Edit | Copy | Delete | 2110010 | Rubaid | 1234567899 | B+ | artificial intelligence | 89 |

- Alter table

```
1 alter table even_rolls add photo longblob ;
```

output:

| | | | | id | name | contact | blood_group | major_sub | obtained_marks | photo |
|--------------------------|------|------|--------|---------|--------|------------|-------------|-------------------------|----------------|-------|
| <input type="checkbox"/> | Edit | Copy | Delete | 2110002 | Nahid | 1234567895 | B- | data structures | 80 | NULL |
| <input type="checkbox"/> | Edit | Copy | Delete | 2110004 | Radia | 1234567896 | A+ | operating systems | 100 | NULL |
| <input type="checkbox"/> | Edit | Copy | Delete | 2110006 | Jahin | 1234567897 | O+ | database systems | 90 | NULL |
| <input type="checkbox"/> | Edit | Copy | Delete | 2110010 | Rubaid | 1234567899 | B+ | artificial intelligence | 89 | NULL |

- Drop column

```
1 alter table even_rolls drop column photo
```

Output:

| | | | | id | name | contact | blood_group | major_sub | obtained_marks |
|--------------------------|------|------|--------|---------|--------|------------|-------------|-------------------------|----------------|
| <input type="checkbox"/> | Edit | Copy | Delete | 2110002 | Nahid | 1234567895 | B- | data structures | 80 |
| <input type="checkbox"/> | Edit | Copy | Delete | 2110004 | Radia | 1234567896 | A+ | operating systems | 100 |
| <input type="checkbox"/> | Edit | Copy | Delete | 2110006 | Jahin | 1234567897 | O+ | database systems | 90 |
| <input type="checkbox"/> | Edit | Copy | Delete | 2110010 | Rubaid | 1234567899 | B+ | artificial intelligence | 89 |

- truncate table

```
1 truncate table odd_rolls|
```

Output:

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

| id | name | contact | blood_group | major_sub | obtained_marks |
|----|------|---------|-------------|-----------|----------------|
|----|------|---------|-------------|-----------|----------------|

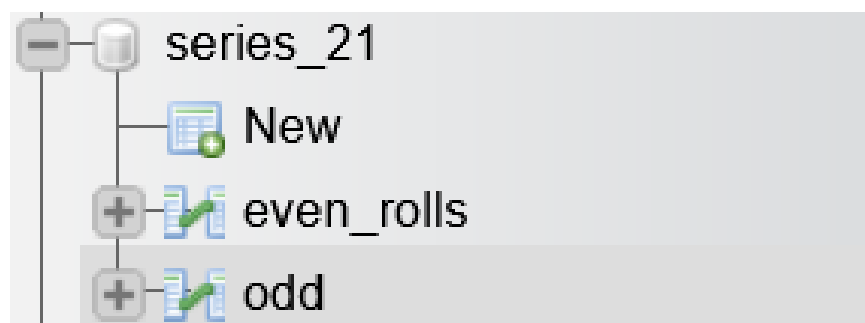
Query results operations

- Rename Table

```
1 rename table odd_rolls to odd
```

odd_rolls

Output:



- Drop table

```
1 drop table odd
```

odd

Output:

