

### 3. DML Queries

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#### Data Manipulation Language (DDL)

- includes SQL commands that manipulate the data stored in the database.
- DML works to add / alter / delete the data
- E.g. INSERT, UPDATE and DELETE statements.

Operator	Description
=	Equal
<>	Not equal. <b>Note:</b> In some versions of SQL this operator may be written as !=
>	Greater than
<	Less than
>=	Greater than or equal
<=	Less than or equal
BETWEEN	Between an inclusive range
LIKE	Search for a pattern
IN	To specify multiple possible values for a column

## 1. INSERT

**Syntax 1:** INSERT into [table\_name] values (val1, val2, val3, ...)

```
INSERT INTO students VALUES  
(1, 'Tom', '061444333', 'first', 'CSIT');
```

```
INSERT INTO students VALUES  
(NULL, 'Pratyush', '061444333', 'first', 'CSIT');
```

**Syntax 2:** INSERT into [table\_name] (col1, col2, col3, ...) values  
(val1, val2, val3, ...)

```
INSERT INTO students (roll,name,phone,sem,department) VALUES  
(2,'Mary', '01445566','2nd','CSIT');
```

**Multi column insert:**

```
INSERT INTO students (roll,name,phone,sem,department) VALUES  
(2,'Manoj', '01665566','2nd','BE-Software'),(4,'Sandesh',  
'01445777','2nd','BE-Civil'),(3,'Bijay', '01445566','third','CSIT');
```

## 2. SELECT- retrieve the records.

**Syntax:**

```
SELECT [column_name(s)] from [table_name] where [condition]
```

**Example:**

```
select name,roll from students;
```

```
select * from students;
```

```
select name,roll,sem from students WHERE name = 'Tom' ;
```

```
select name,roll,sem from students WHERE name != 'Tom' ;
```

```
SELECT sem FROM students;
```

```
SELECT DISTINCT sem FROM students;
```

```
select * from students WHERE name = "Tom" OR sem!="first";
```

```
SELECT * FROM students WHERE roll BETWEEN 2 AND 5;
```

```
SELECT * FROM students WHERE roll IN (1,4);
```

```
SELECT * FROM students WHERE department LIKE 'c%';  
SELECT * FROM students LIMIT 2;
```

```
SELECT * FROM students WHERE roll IS NULL;
```

```
select * from students where sem LIKE 'firs_';
```

[Try the combinations of differnt operators:](#)

### 3. DELETE

Remove table contents.

**Syntax 1:**

DELETE from [table\_name] where [condition to be specified]

```
DELETE FROM students WHERE roll=3;
```

**Syntax 2:** delete all table

DELETE from [table\_name]

```
DELETE FROM students;
```

**TRUNCATE** - to delete all data in a table.

**Syntax:**

TRUNCATE [TABLE] table\_name;

```
TRUNCATE table students;
```

### 4. UPDATE

**Syntax:** UPDATE [table\_name] SET [col1 = val1, col2 = val2,...]  
where [condition to be specified]

```
UPDATE students SET name = 'Ravi' where roll =1;
```

```
UPDATE students SET name = 'Binod', sem = 'IV' where roll = 3;
```

**Task:**

1. Complete the above examples.

Instead of the table name **student** create new table with name **`your-name\_roll`**.

For e.g. if your name is Ram and your roll number is **100** then you have to create table named **`ram-100`**.

**Submission:**

1. Title: 3. DML Queries.
2. Theory: Explain about the related queries( syntax, Descriptions)
3. Observations: **Queries** you run and their **screenshot**.
4. Conclusion

**Note:**

1. Submit a file with name **<3\_DML\_Queries\_ROLL\_NAME.pdf>**  
For example student '**Ram**' with roll number '**100**' should send a file named:  
**3\_DML\_Queries\_100\_Ram.pdf**
2. Copying will be marked ZERO.
3. Send as email attachment to [bidur.devkota@infomaxcollege.edu.np](mailto:bidur.devkota@infomaxcollege.edu.np)
4. Email Subject: 3. **DML Queries**