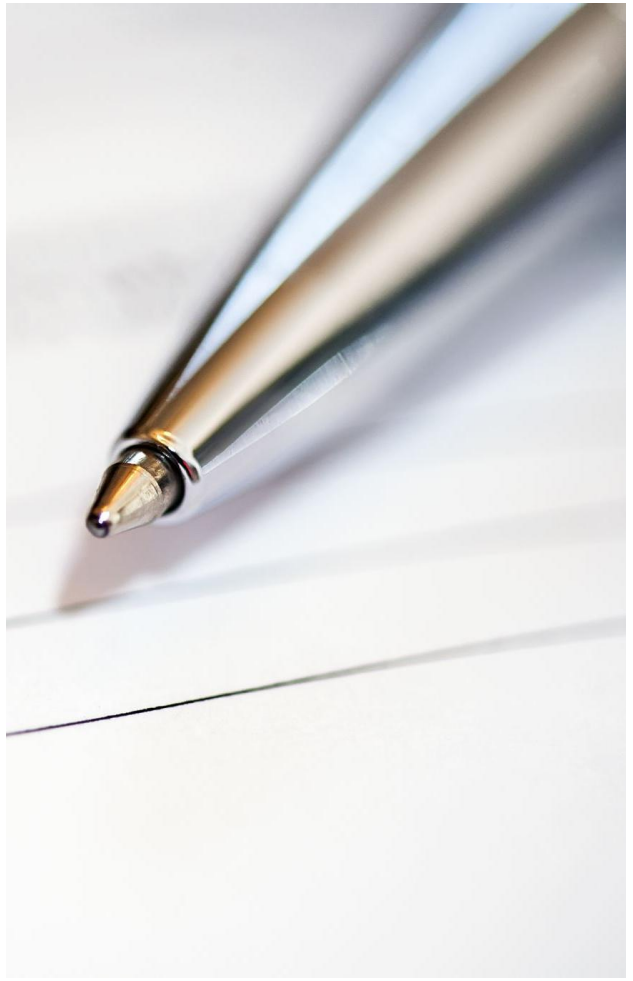

SELECT

BASIC SELECT STATEMENT

- A basic and a very simple select statement shall include the columns that you would like to see and from which table.
- You need to mention two things mandate in a select statement.
  - From which table you would like to see the data.
  - And do you want to see all the columns or you would like to see only limited columns as per your requirement.

•While writing a select statement couple of things that you need to keep in mind:

- Select Statements will not make any changes to the database. It is just a query language and it will just help you to retrieve the data from the database depending on your requirement.
- SQL statements are not case- sensitive so you can write in any case you want.
- SQL statements are not sensitive to spaces so you can write your query in one line or for readability purpose in multiple lines it will not make any difference.
- The only thing that we need to keep in mind is that the keyword like SELECT or other keywords in SQL you cannot split the keywords.
- Every SQL statement needs to end with a semicolon(;)



•Consider the Products Table on the right which has three columns and six rows.

•Let's suppose I want to see the complete data on my screen so I will write the below query.

```
SELECT * from Products;
```

- Now, in another scenario I would like to see only two columns i.e. product_id and name but still want to see all the rows, so I will write the below query

```
SELECT product_id, name from Products;
```

product id	name	PRICE
a	tv	500
b	phone	600
c	ac	700
d	refrigrator	900
e	LED	1100
f	Micorwave	1200

SELECT WITH WHERE CLAUSE

•WHERE Clause is used to restrict the number of rows in the report as only those rows will be shown which matches the condition.

•Consider the Products Table on the right which has three columns and six rows.

product id	name	PRICE
a	tv	500
b	phone	600
c	ac	700
d	refrigrator	900
e	LED	1100
f	Micorwave	1200

- Let's suppose I want to see the data only for those Products where the price of the products is more than 1000, so I will write the below query

```
SELECT * from products
where price > 1000;
```

- Let's suppose I want to see the data only for those Products where the price of the products is more than 1000 and less than 1200, so I will write the below query

```
SELECT * from products
where price > 1000 and price < 1200;
```

NOTE: Whenever you write multiple conditions you need to make use of AND | Or operator.

AND : Both the conditions needs to be satisfied.

OR : Any one condition satisfied it will do the job.

SELECT WITH BETWEEN OPERATOR

•Whenever you are giving a condition on one numerical column where you would like to find the data between a range can make use of BETWEEN operator.

•Consider the Products Table on the right which has three columns and six rows.

product id	name	PRICE
a	tv	500
b	phone	600
c	ac	700
d	refrigrator	900
e	LED	1100
f	Micorwave	1200

- Let's suppose I want to see the data only for those Products where the price of the products is more than 1000 and less than 1200, so I will write the below query

```
SELECT * from products
where price between  1000 and 1200;
```

NOTE: Between Operator the upper and the lower limit is included.

SELECT WITH LIMIT CLAUSE

•Whenever you want to LIMIT the number of rows you want to see in the report or you want to extract from database you can make use of LIMIT statement.

•The LIMIT statement will just limit the rows in your output it will not restrict the rows based on any condition.

- Let's suppose I want to see only first three rows, so I will write the below query

```
SELECT * from products
LIMIT 3;
```

product id	name	PRICE
a	tv	500
b	phone	600
c	ac	700
d	refrigrator	900
e	LED	1100
f	Micorwave	1200

The above query will just show three rows from the top in the output.

SELECT WITH ORDER BY CLAUSE

•Whenever you want to arrange the data in ascending or descending order we make use of the order by clause

•The default property of order by clause is that it sorts the data in ascending order.

product id	name	PRICE
a	tv	500
b	phone	600
c	ac	700
d	refrigrator	900
e	LED	1100
f	Micorwave	1200

- ASCENDING ORDER query

```
SELECT * from products
order by price;
```

- DESCENDING ORDER query

```
SELECT * from products
order by price DESC;
```

SELECT WITH IS NULL AND IS NOT NULL

•Whenever you want to arrange extract the data based on null values in a column or non-null values in a column you can make use of IS NULL or ISNULL Operator..

- Extracting rows where price is NULL

```
SELECT * from products
 where price is null;
```

(Will get last three rows only)

- Extracting rows where price is NOT NULL

```
SELECT * from products
 where price is not null;
```

(Will get first three rows only)

product id	name	PRICE
a	tv	500
b	phone	600
c	ac	700
d	refrigrator	null
e	LED	null
f	Micorwave	null

SELECT WITH DISTINCT CLAUSE

•Whenever you want to extract only unique rows or data from a column you can make use of DISTINCT clause.

- Extracting unique rows from product id.

  SELECT distinct product_id from products

  (Will get first six rows only)

NOTE: Distinct keyword will always be next to SELECT keyword.

product id	name	PRICE
a	tv	500
b	phone	600
c	ac	700
d	refrigrator	null
e	LED	null
f	Micorwave	null
f	Micorwave	null

SELECT WITH LIKE OPERATOR (WILDCARD SEARCH)

•Whenever we want to extract data based on a pattern we make use of LIKE operator which is also known was WILDCARD SEARCH.

product id	name	PRICE
a	tv	500
b	phone	600
c	ac	700
d	refrigrator	null
e	LED	null
f	Micorwave	null
f	Micorwave	null

- The LIKE operator is used with WHERE clause to search for a specified pattern in a column.
- Wildcard search makes use of symbol

Symbol	Description	Example
%	Represents zero or more characters	bl% finds bl, black, blue, and blob
_	Represents a single character	h_t finds hot, hat, and hit

- Some examples of WILDCARD search is mentioned below in the screenshot.

LIKE Operator	Description
WHERE CustomerName LIKE 'a%'	Finds any values that starts with "a"
WHERE CustomerName LIKE '%a'	Finds any values that ends with "a"
WHERE CustomerName LIKE '%or%'	Finds any values that have "or" in any position
WHERE CustomerName LIKE '_r%'	Finds any values that have "r" in the second position
WHERE CustomerName LIKE 'a_%_%'	Finds any values that starts with "a" and are at least 3 characters in length
WHERE ContactName LIKE 'a%o'	Finds any values that starts with "a" and ends with "o"

SELECT WITH IN AND NOT IN

•Whenever you want to extract a list of data or everything else apart from a particular list we make use of IN and NOT IN operator.

- Want to see only products like tv, ac and refrigerator

```
SELECT * from products
 where name in ('tv','ac','refrigerator');
```

- Extracting every other product but not tv, ac and refrigerator

```
SELECT * from products
where name not in ('tv','ac','refrigerator');
```

product id	name	PRICE
a	tv	500
b	phone	600
c	ac	700
d	refrigrator	null
e	LED	null
f	Micorwave	null