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* Between Operator:

→ It is used for specifying the range of value.

```
select *
from table_name
where column between x and y;
```

→ It select all value >= x and <= y.

Q) WAQ to fetch all employee all details who are getting salary within the range of 1000 to 3000.

Ans:-
```
select * from emp
where sal between 1000 and 3000;
```

OR
```
select * from emp
where sal >= 1000 and sal <= 3000;
```

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Q) WAQ to fetch all the employee who are getting salary more than 2000 but not equal to 5000.

Ans: select * from emp
where sal > 2000 and sal != 5000;

Q) WAQ to fetch all the employees who are getting salary more than or equal to 2000 and getting comission as well.

Ans: select * from emp
where sal >= 2000 and comm > 0 (comm != 0);

Q) WAQ to select all the employee who are getting comission

COMM
null
null
345
null
null

Ans: select * from emp
where mgr is not null;

* Not:

Q) WAQ to fetch all the employee who has manage

Ans: select * from emp
where mgr is not null;

Q) WAQ to fetch all the employee other than department 20, 30.

Ans: select * from emp
where deptno != 20 and deptno != 30;

OR

select * from emp
where deptno not in (20, 30);

classmate

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* Between Operator

→ It is used for up

select *
from table_na
where column

→ It select all val

Q) WAQ to fetch all
getting salary w

Ans: select * from em
where sal betw

OR select * from
where sal >= 1

classmate

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Q.) WAQ to fetch the city name which contains character 'Y' in the middle position

Ans:- select loc
from dept
where loc like '%Y%';

Q.) WAQ to fetch the job designation detail which has 'A' in the second position and in the second from the last.

Ans:- select job
from emp
where job like '_A%A_';

Q.) WAQ to fetch name of those employee who have five letter in his name.

Ans:- select ename
from emp
where ename like '_____';

* is :-

→ It is a special comparison operator used to compare the null values.

Q.) WAQ to fetch all the employee who is not getting comission.

Ans:- select * from
emp
where mgr is null;

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* Like:

→ It is used to match the pattern.
→ It selects all the rows which have a match on the condition.
→ Here we make use of '_' and '%' to indicate missing characters.
→ '_' underscroll is used to indicate/represent a single character.
→ '%' is used to indicate multiple character.

Q.) WAQ to select all the names starting 'S' character.

Ans:- select ename
from emp
where ename like 'S%';

Q.) WAQ to fetch all the details of employee whose name starts with 'M' letter and ends with the letter 'N'.

Ans:- select *
from emp
where ename like 'M'%.N';

Q.) WAQ to fetch the job designation details which has second letter as 'A' character.

Ans:- select job
from emp
where job like '_A%';

classmate

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Q.) WAQ to fetch the
'Y' in the mid

Ans:- select loc
from dept
where loc

Q.) WAQ to fetch th
'A' in the secon
the last

Ans:- select job
from emp
where job

Q.) WAQ to fetch
five letter in

Ans:- select ename
from emp
where ename

* is:-

→ It is a special
compare the n

Q.) WAQ to fetch a
comission.

Ans:- select * from
emp
where mgr is

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Ans: select * from emp
where job='MANAGER' or job='CLERK' or job='ANALYST';

→ Whenever we need to select multiple value from same column then we can use 'in' operator.

Ans: select * from emp
where job in ('MANAGER', 'CLERK', 'ANALYST');

Q.) WAQ to select all the employee working in department number from 20, 30.

Ans: select * from emp
where deptno in (20, 30);

Q.) WAQ to select all manager, salesman and working in department number 10, 20, 30.

Ans: select * from emp
where job in ('MANAGER', 'SALESMAN') and
deptno in (10, 20, 30);

Q.) WAQ to show all information of clerk, salesman who are getting salary less than 3000 and greater than 1000.

Ans: select * from emp
where job in ('CLERK', 'SALESMAN') and
~~sal < 3000 and sal > 1000;~~
(sal >= 3000 and sal <= 1000);
(sal <= 3000 and sal >= 1000);

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Q:) WAQ to fetch the department name which is present in NEW YORK city.

Ans:- select dname
from dept
where loc = 'NEW YORK';

Q:) WAQ to display employee id, his name and job details who are working as CLERK, ANALYST and getting salary more than 1500 and less than 3000.

Ans:- select empid, empname, job
from emp
where (job = 'CLERK' or job = 'ANALYST') and
(sal > 1500 ~~and or~~ and sal < 3000);

Q:) WAQ to fetch the department no. of departments working in Boston, Chicago.

Ans:- select deptno
from emp
where loc = 'BOSTON' or loc = 'CHICAGO';

Special Operators

* in:

→ It is a special kind of comparison operator.
→ 'in' operator act like 'or' operator in the same column.

Q:) WAQ to display all manager, analyst, clerk every information.

classmate

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Ans: select * from
where job =

→ Whenever we ne
column then u

Ans:- select *
where jo

Q:) WAQ to select
department n

Ans:- select *
where d

Q:) WAQ to select
in departme

Ans:- select *
where

Q:) WAQ to show
who are get
greater than

Ans:- select
where
~~sal~~
(sal
(sal

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Q.) WAQ to get all the employees who's salary greater than 2000.

Ans:- select * from emp
where sal > 2000;

Q.) WAQ to display all salesman all the details

Ans:- select * from emp
where job = 'SALESMAN' ; → data are case-sensitive
↳ Using in ' ' ; It should be in uppercase and also in a string as we use ' ' ;

Q.) WAQ to fetch all the employee who is working in department 20.

Ans:- select * from emp
where deptno = 20;

4) Logical Operator :-

Not case-sensitive
- AND → It is used when every condition need to satisfy.
- OR → It is used when anyone of the condition need to satisfy
- NOT → Inversion

Q.) WAQ to fetch all managers who are getting salary more than 2000.

Ans:- select * from emp
where job = 'MANAGER' and sal => 2000;

Q.) WAQ to fetch all clerk, analyst details.

Ans- select * from emp
where job = 'ANALYST' or job = 'CLERK' ;

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To be in proper fashion:

Ans- select ename || 'is working as' || job as "job details" from emp;

Q) WAQ to display employee joining details in the below format:

Ans: SMITH joined on 17-DEC-80

Ans:- select ename || 'joined on' || hiredate as "joining details" from emp;

Q) WAQ to display details of employee in the following format

SMITH having an Id 7369 joined on 17-DEC-80 getting a salary of 800.

Ans- select ename || 'having an id' || empno || 'joined on' || hiredate || 'getting a salary of' || sal as "employee details" from emp;

3) Comparison operator:-

= → equal to
< → less than
> → greater than
<= → less than or equal
>= → greater than or equal
!=, ^=, <> (angular braces) → not equal

* Special Operators:- → in, as, between, like, is, all, some, any.

classmate

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Q.) WAQ to g
than 200

Ans- select
where

Q.) WAQ to d

Ans- select
where

Q.) WAQ to
departm

Ans- select
where

4) Logical

Not case sensitive { AND –
OR –
NOT –

Q.) WAQ to f
more tha

Ans- select *
where y

Q.) WAQ to f

Ans- select
where y

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Q) WAQ to get name and salary details of every employee display their annual salary.

Ans:- select ename, sal * 12 (this not good as it looks like formula)
from emp;

select ename, sal * 12 as "annual salary"
from emp;

Q) WAQ to get the employee name and their salary details after a deduction of 500 for charity.

Ans- select ename, name, sal-500 as "deducted salary" (or remaining)
from emp;

Q) WAQ to get total salary details of employees with their name after a hike of 10% in their salary.

Ans- select ename name, sal+(sal*10/100) as "revised salary"
from emp;

2) Character operator:-

→ There is only one character operator available
→ Concatenation operator (||).

Q) WAQ to display all employees job details as in below format.

SMITH IS working as CLERK

Ans:- select ename || 'is working as' || job
from emp;
↳ String are written as or within ' '.

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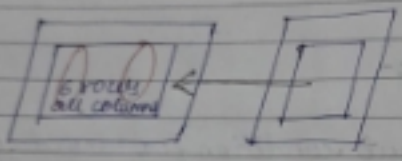
NOTE:-

→ When we are giving alias name 'as' keyword not mandatory.

→ When we are giving an alias name which contains space in it then we need to make use of " ".

Ex:- → select ename, name, sal salary
→ from emp
where sal > 2000;



Operators:-

→ These are symbols used to perform some operations.
→ In SQL we have:

Arithmetic
Logical
Character
Comparision
Set

1) Arithmetic operator :-

→ These operators used for Arithmatic operations such as sum, subtraction etc.
+, −, *, /.

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Q.) WAQ to ge
display

Ans:- select
from

select
from

Q.) WAQ to
details

Ans- select
from e

Q.) WAQ to g
after a

Ans:- select
from

2) Charact

→ There is
→ Concate

Q.) WAQ to
format.

A SMI

Ans:- select
from e

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Q) WAQ to fetch employee id, name and comission details of the all the employee use appropriate alias name

Ans: select empno as id, ename as name, comm as comission from emp;

Q) WAQ to display Employee name and job description of all employee use alias name, for employee name use name and for jobdescription use job details

Ans- select
from emp;

where clause :-

It is used to put condition for records, only those records will be selected which satisfy the condition.

Syntax :-

select
from Table_name
where condition;

Q) WAQ to select employees name and salary detail and display only those employee details who are getting salary more than 2000.

Ans:- select ename, sal
from emp;
where sal > 2000;

Q:) WAQ to fetch all employee name.

Ans:- select ename from emp;

Q:) WAQ to fetch employee name and his salary details

Ans:- select ename, salary
from emp;

Q:) WAQ to get all employee name and their job description along with salary.

Ans:- select ename, job, sal
from emp;

Alias Name:-

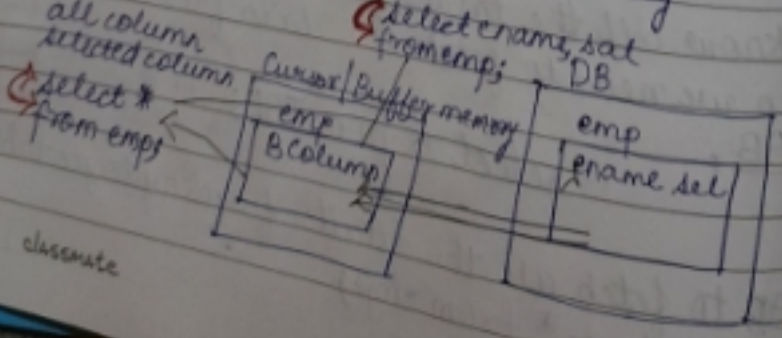
Alias name is a temporary name while displaying the result.

By the alias name table will get not get affected

By using 'as' keyword we can give alias name for columns as well as for table.

Q:) WAQ to get employee name and salary details

Ans:- select ename as names sal as salary
from emp;



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Q:) WAQ to fe
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Ans:- select en
from en

Q:) WAQ to d
all emplo
use name

Ans:- select
from en

where cla

It is used
records w

Syntax:-

select
from Tab
where co

Q:) WAQ to sele
display on
salary mor

Ans:- select en
from emp
where sa

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DQL:-

→ It stands for Data Query Language
→ It is used to fetch the data from the tables.

SELECT Clause:

It is used to fetch the data from the table.

Syntax:

SELECT * from TABLE; → this query used to fetch all the record and fields from the table.

or

SELECT columnName1, columnName2 ..... from TABLE;

NOTE:-

SQL queries are not case-sensitive, but tables ~~are~~ data are case sensitive.

Page set up queries : set pages 20;
set lines 200;

SCOTT - person who has an account in oracle
HR -

To know all the tables name present in an account then we need to fetch the data from a table called TAB,

select * from TAB;

Q) WAQ to fetch all the details from employee table
→ select * from emp;

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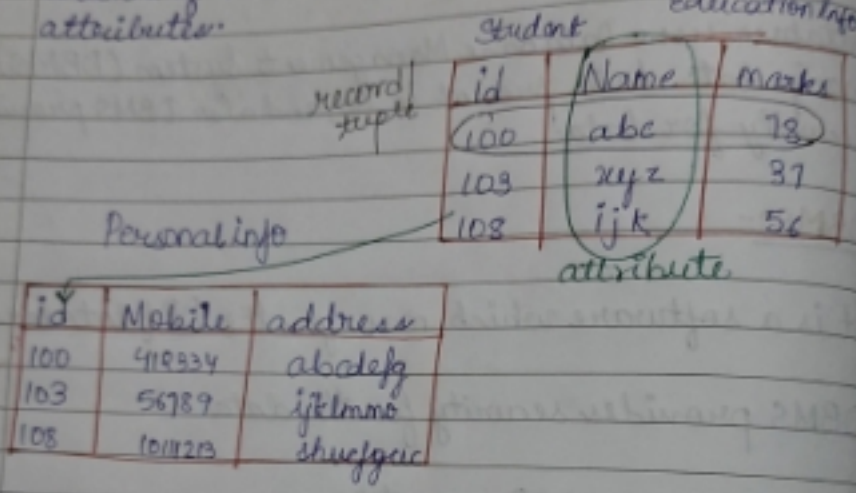
(i) RDBMS

→ Relational Database management System.
→ RDBMS is most widely used RDBMS.
→ Here data are stored in the form of Tables.
→ Tables consists of rows and columns.
→ Rows of the table are known as records/tuple.
→ Columns of the table are known as fields/attributes.



SQL

→ SQL stands for Structured Query Language.
→ It is used to communicate with DATABASE.
→ In SQL we write queries (request).
→ Types of SQL Queries:-

→ DML (Data Manipulation language)
→ DDL (Data Definition language)
→ DQL (Data Query Language)
→ TCL (Transaction Control Language)
→ DCL (Data Control Language)

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SQL (Pronounced as CQL or Segl)

Database:

It is a collection of data, stored and electronically in computer system.

It stores the data is organized manner.

Database uses DataBase Management System (DBMS) to manipulate data present in DB, and also DBMS provides security for data.

DBMS:-

It is a software which manages the DB (database).

DBMS provides security for the data.

It manages CRUD operation.

C - Create
R - Retrieve
U - Update
D - Destroy/Delete

Types of DBMS:-

→ Relational DBMS
→ Object-Oriented DBMS
→ Hierarchical DBMS
→ Network DBMS