To sort the data in mysql or in oracle use order by clause

- In order by clause by default the sorting will be done in ascending order
- To sort it in descending order you have to explicitly specify desc keyword
- Order by clause is added after where clause or from clause.
- Ordering is possible on derived columns.
- In order by, if the order is ascending then
    - Null values will at the top
    - Then numeric values
    - String values

11. List the details of the employee , whose names start with 'A' and end with 'S' or whose names contains N as the second or third character, and ending with either 'N' or 'S'

Select *

From emp

Where ename like 'A%S' or ename like '_N%N' or ename like '__N%N' or ename like '_N%S' or ename like '__N%S'

Or

Select *

From emp

Where ename REGEXP '^A.*S$|^..?N.*[NS]$'

..?N ----→AN, ANN

Is null | is not null

To find all employees who earned commission

select * from emp

-> where comm is not null and comm >0;

List the empno, name, and department number of the emp who have experience of 18 or more years and sort them based on their experience.

Select empno,ename,deptno,hiredate,floor(datediff(curdate(),hiredate)/365) experience

From emp

Where floor(datediff(curdate(),hiredate)/365) >=41

Order by experience;

To find month and year in mysql/oracle

select extract(month from curdate()),extract(year from curdate());

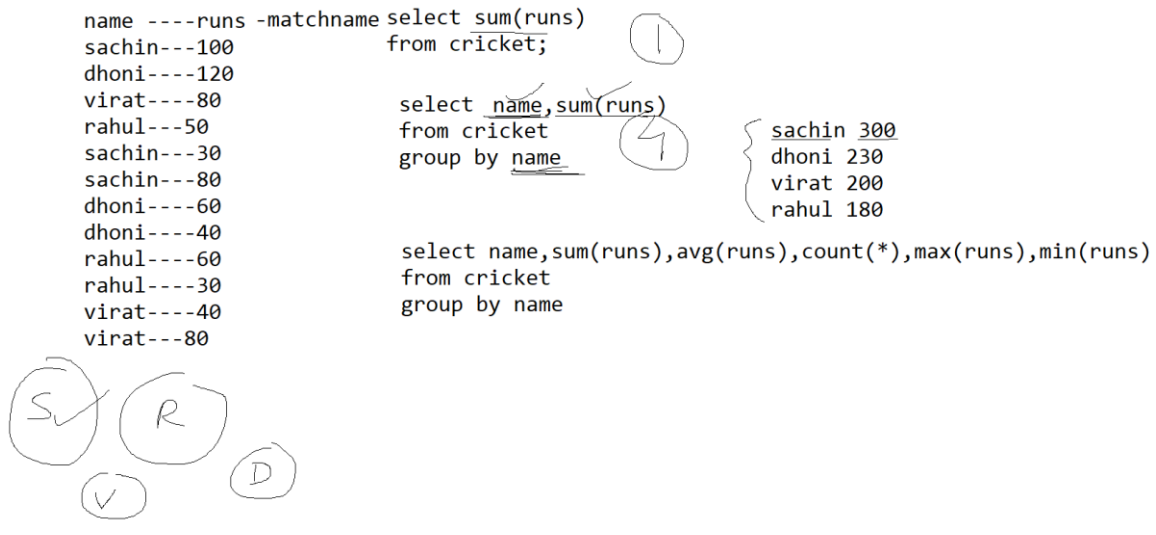
Date function

Datediff()	Find difference between 2 dates in terms of days
Date_add()	To find date after some interval
Date_sub()	To find the date before some interval
Date_format()	To display date in user understandable format
Now()	To get current date and time
Curdate()	To get only date
Day() Extract(day from curdate())	Will retrieve only date
month() Extract(month from curdate())	Will retrieve only month
year() Extract(year from curdate())	Will retrieve only year
Dayname()	Will display name of day (ex: Sunday, Monday etc)
Monthname()	Will display month name (ex: 'January, February , …etc
Week or weekofyear	To find week number
Str_to_date	Will convert user format into sql format

Aggregate function ----- avg, sum, count, min, max

We use group by clause and having clause

- In group by clause count(*) will count number of rows
  And count(column name) ex. Count(comm) will count not null values
  Null values will be ignored.



1. To find sum of sal, sum of netsal, count all emp, count number who earned comm, for each department

```
select deptno,sum(sal),sum(sal+ifnull(comm,0)),count(*),count(comm)
   -> from emp
   -> group by deptno;
```

2. To find min, max sal in our company

```
Select min(sal) minsal ,max(sal) maxsal
From emp;
```

3. Count number of employees, min sal,max sal, sum of sal, for every job

```
Select job,sum(sal),min(sal),max(sal),count(*)
From emp
Group by job;
```

4. To find sum, max min of sal department wise and job wise

```
select deptno,job,sum(sal),count(*),min(sal),max(sal)
   -> from emp
   -> group by deptno,job
```

5. To find sum, max min of sal department wise and job wise, only if the sum(sal)>2000

```
select deptno,job,sum(sal),count(*),min(sal),max(sal)
from emp
group by deptno,job
Having sum(sal)>2000;.
```

6. To find sum of sal of all employees departmentwise for all clerks

```
Select deptno,sum(sal)
From emp
Where job='CLERK'
Group by deptno
```

7. To find sum of sal of all employees departmentwise for all analyst only if the department has 2 or more analyst

```
Select deptno,sum(sal)
From emp
Where job='ANALYST'
Group by deptno
Having count(*)>=2;
```

1. To find sum of sal of all employees departmentwise for all CLERKs only if the department has 2 or more CLERK

Select deptno,sum(sal)

From emp

Where job='ANALYST'

Group by deptno

Having count(*)>=2;

Select deptno,job,count(*)

From emp

Where sal>2000

Group by deptno;

a. Deptwise, jobwise count
b. Only deptwise count
c. Only jobwise count
d. Error

Select count(*)

From emp

Where sal>2000

Group by deptno;

a. Deptwise, jobwise count
b. Only deptwise count
c. Only jobwise count
d. Error

What is the sequence in which statements will get executed

```
Select count(*)   1
From emp          2
Where sal>2000    3
Group by deptno   4
having count(*)>2   5
order by count(*)     6
```

a. 1, 2,3, 4,5,6

b. 2,3,4,5,6,1
c. 3,1,2,4,5,6
d. None of the above

Which of the following statement(s) are true

a. Derived column can be used in order by clause
b. Derived column can not be used in order by clause
c. Derived column alias name can be used in order by clause
d. Both A and C
e. None of the above

Which of the following statement(s) are false

a. Conditions with aggregate functions can be used with having clause
b. Conditions with aggregate functions can be used with where clause
c. Conditions with column names in tables can be used in where clause
d. None of the above

DML(insert, update , delete)

1. To add record in a table

Insert into emp values(101,'Ashutosh','CLERK',7902,'2000-10-11',3456,345,10)

2. To add a record in the table with few values, then add list of columns after table name

Insert into emp(ename,empno,sal) values('Tanaya',103,5555);

3. Insert many records in the table

Insert into emp(empno,ename,sal,comm,job)

-> Values (12,'Rajani',3456,456,'Analyst'),

-> (13,'Meenal',4444,567,'Manager'),

-> (14,'Monica',3333,333,'Astmgr');

To delete the record

1. To delete all the rows

Delete from emp; --→ it is available in mysql and oracle

Delete emp-→ available in oracle

2. To delete all rows who are working as CLERK
   Delete from emp where job='CLERK';

Drop table	delete
Drop will delete data and table both	Delete will delete only data from table

To update data from all the rows
To update salary of all employees by 10%,comm=2% of sal
Update emp
Set sal=sal*1.1,comm=0.02*sal,deptid=20

To update salary by 2000 of SMITH
Update emp
Set sal=sal+2000
Where ename='SMITH'

Nesting of query

1. To find all employees who are working in dept 20
   Select * from emp
   Where deptno=20

2. To find all employees who are working in smith's dept
   Select deptno
   From emp
   Where ename='SMITH'

   Select * from emp
   Where deptno=20

   Select * from emp
   Where deptno=(Select deptno
   From emp
   Where ename='SMITH'
)
3. To find all employees whose sal > jones sal
   Select * from emp
   Whare sal>(select sal from emp where ename='JONES')

4. To find all employees who are working in either smith's dept or JONES dept

   Select * from emp

   Where deptno in (select deptno

   From emp

   Where ename in ('SMITH','JONES'))

5. To find all employees with sal > either jones salary or Miller's salary
   Select * from emp
   Whare sal > any (select sal from emp where ename in ('JONES','Miller))

6. Find all employees with sal > average salary of dept 10
   Select *
   From emp
   Where sal>(
   Select avg(sal)
   From emp
   Where deptno=10)

7. Find all employees with sal > avg(sal) of dept 10 ,
   and ename starts with either “K” or “A”

Select *

From emp

Where sal>(Select avg(sal) From emp Where deptno=10) and ename like ‘J%’

Or
Select *
-> From emp
-> Where ename REGEXP '^[KA]' and sal >(select avg(sal) from emp where deptno=10)

8. To find all employee with sal > smith’s sal and sal< jones salary
   Select sal from emp where ename=’SMITH’ 800
   Select sal from emp where ename=’JONES’ 2500

   Select *
   From emp
   Where sal between (Select sal from emp where ename=’SMITH’) and (Select sal from emp where ename=’JONES’
)