If you want to display value of aggregate function, without using group by, then use partition by

partition by clause allows you to display columns which are not involved in group by.

1. to display empno,ename,deptno,sum(sal) for each department.

   Select ename,deptno,sum(sal) over (partition by deptno order by deptno)

   From emp

Find all ename which has _ in it

```
select ename
  -> from emp
  -> where ename like '%\_%';
select ename
  -> from emp
  -> where ename REGEXP '_';
```

functions used for numeric columns.

abs(num)	to convert -ve value into +ve	select abs(-3) 3
pow(num,raiseto)	power of the number	select pow(3,2) 9
floor(num)	It will remove all the digits after the decimal point, and gives the maximum lowest number	select floor(312.1567) 312 select floor(312.61567) 312
ceil(num)	It will always give the next minimum number	select ceil(312.1567) 313 select ceil(312.61567) 313
round(num,precision)	round will round the number upto given precision	select round(312.1567,2) 312.16 select round(312.61267,2) 312.61
truncate(num,precesion)	truncate will truncate the number upto given precision	select truncate(312.1567,2) 312.15 select truncate(312.61267,2) 312.61
sqrt(num)	it will display square root of given number	select sqrt(4) 2

Functions used with strings

upper(ename)	convert all characters in uppercase	select upper('asdf') ASDF
lower(ename)	convert all the characters in small case	select lower('ASDF') asdf
concat(s1,s2,s3)	concatenate the strings	concate('xxx','.','yyy') xxx.yyy
concat_ws(":",ename,job,sal)	concatenate all the values with separator	concat_ws(":",'xxx','yyyy',1234) xxx:yyy:1234
format(sal,precision)	It will display number in formatted manner, it will display 1000 seperator in the number, and the number of digits after decimal point	format(312,2) 312.00 format(314356452,2) 31,43,56,452.00
substr(string,startpos,number of character)	it will display number of characters from the starting position, counting starts with 1	substr('testing',3,4) stin
left(s,num of characters)	it will display number of characters from left side	left('welcome',3) wel
right(s,num of characters)	it will display number of characters from right side	right('welcome',3) ome
length(str)	it will display number of characters in the string	length('xxxx') 4
lpad(str,length,character)	it will add characters on the left side of the string so that the total characters will be = length	lpad('welcome',12,'-') -----welcome
rpad(str,length,character)	it will add characters on the right side of the string so that the total characters will be = length	rpad('welcome',12,'-') welcome-----
rtrim(str)	it will remove trailing spaces, i.e the space on the right side	select rtrim(' hello ') hello
trim(str)	it will remove leading and trailing spaces	select trim(' hello ') hello
ltrim(str)	it will remove leading spaces, i.e the spaces on the left side	select ltrim(' hello ') hello
instr(str,s1)	it will find the position of the first occurrence in the given string	instr('welcome','el') 2
reverse(str)	reverse the string	reverse("hello") olleh
replace(str,searchstr,newstr)	it replace all occurrence of the searchstr with newstr	replace('testing string','ing','aaaa') testaaa straaa
insert(str,pos,length,newstr)	it overigths the 4 th character onward length characters by new str	select insert("welcome",2,3,"test") wtestome select insert("welcome",2,0,"test")

		wtestelcome
repeate(string,count)	it will print the string count times	repeate(“aaa”,5) aaaaaaaaaaaaaa

1. find email of the employee by concatenating first 3 letters of ename, followed by . and last 3 characters of job
   select empno,ename,concat(left(ename,3),’.’,right(job,3)) email
   from emp;

2. display 3,4,5,6 character of job as a jobcode
   select empno,ename,job,substr(job,3,4) jobcode
   from emp;

3. display ename, every ename length should be 12, add extra required number of * on the right side
   select empno,ename,rpad(ename,12,’*’)
   from emp;

   date related functions

now()	it display today’s date and time
curdate()	it display today’s date
datediff(date1,date2)	it displays difference between 2 dates in terms of days
date_format(date1,format)	It will display the date in user required format Y --- will display 4 digit year y----will display 2 digit year M- month name in character m-month in number d- date in number D- display th or st after date b--- display months in 3 letter (jan, feb,....) r ---- to print time in 12 hrs (hh:mm:ss AM/PM) h--- to display hour i----to display minutes p—to display AM/PM
date_add(date, interval n unit)	it will find the date after given interval to find the date after 2 months date_add(curdate(),interval 2 month)
date_sub(date, interval n unit)	it will find the date before given interval
day(date)	to find day from the given date
month(date)	to find month from the given date
year(date)	to find year from the given date
quarter(date)	to find the quarter
week(date)	to find the week of the date
extract(day from date)	to retrieve portion of the date, this is available in oracle also select extract(day from curdate());

	select extract(month from curdate());
	---------- to retrieve month
	select extract(year from curdate());

monthname(curdate)	will display month name in characters
dayname(curdate)	it prints days, like Monday, Tuesday,….
last_day(curdate())	to find last day of the give month
Str_to_date('22/11/1982','%d/%m/%y') #####1982-11-22	convert given date in mysql format

1. to find portion of the date
   select
   year(curdate()),month(curdate()),day(curdate()),quarter(curdate()),week(curdate()));

if we have medicine table
(medid,mname,mfgdate,expdate)

1. to find all medicines which are manufactured 3 months before.
   select medid,mname,mfgdate
   from medicine
   where date_sub(curdate(),interval 3 months)<=mfgdate

2. display expiry date of medicines if it is after 6 months 7 days from mfg date
   select medid,mname,mfgdate,date_add(date_add(mfgdate,interval 6 month),interval 7 day)
   from medicine
3. find all employees joined in dec 1981
   select empno,ename,hiredate,extract(month from hiredate)
   -> from emp
   -> where extract(month from hiredate)=12 and extract(year from hiredate)=1981;
4. find date which is after 2 years, 7 months 10 days
   select date_add(date_add(date_add(curdate(),interval 2 year),interval 7 month),interval 10 day)

5. find all medicines which will expire after 3 months.
   select medid,mname,mfgdate,expdate
   from medicine
   where datediff(expdate,curdate())>=90

6. to find all employees with experience >41 years
   select *, floor(datediff(curdate,hierdate)/365)
   from emp
   where floor(datediff(curdate,hierdate)/365)>=41

7. Write a query to get the distinct Thursday from hiredate in emp tables.
   select distinct hiredate,dayname(hiredate)

```
-> from emp
-> where dayname(hiredate)='Thursday';
```

8. find a particular string occurs how many times in the given string
   “saaavaaadaaa” find aaa appears how many times in the given string

```
select floor((length("saaataaayaaa")-
length(replace("saaataaayaaa","aaa","")))/length("aaa"));
```

case statement
When you want to display some data, based on condition, then we use case statement
in case statement all the values that you are displaying should be of same type
case when condition then o/p
when condition then o/p
else o/p end alias_name

case columnname when val1 then o/p
when val1 then o/p
when val1 then o/p
else o/p end alias_name
example
1. if deptno=10 then display accounts, if it 20 then display sales
otherwise display purchase

```
select empno,ename,deptno, case deptno when 10 then "accounts"
-> when 20 then "sales"
-> else "purchase" end dname
-> from emp;
```

2. if comm is null or 0 then display “poor performance”
if comm>=300 and <500 then display “ok performance”
if comm>=500 and <1000 then display good performance
otherwise display “excellent performance”

```
select empno,ename,sal,comm,case when comm is null or comm=0 then "poor
performance"
-> when comm>=300 and comm<450 then "ok performance"
-> when comm>=450 and comm<1000 then "good performance"
-> else "excellent performance" end comment
-> from emp;
```