

to arrange the data in sorted order of job and display rows from 3<sup>rd</sup> row to 4<sup>th</sup> row

```
select *  
from emp  
order by job  
limit 2,2
```

to display all employees with job starts with S or A and name starts with A or M and ends with e or r

A%e

A%r

M%e

M%r

```
select *
```

```
from emp
```

```
where (job Like 'S%' or job like 'A%') and ename like 'A%e' or ename like 'A%r' or ename like 'M%e'  
or ename like 'M%r';
```

```
Select * from emp
```

```
where job REGEXP '^[SA]' and ename REGEXP '^[AM].*[er]$';
```

Functions are of 2 types

1. single row function----- the function which can be executed on single row is called as single row functions  
example lower(), upper(),round(),truncate(),ceil, floor
2. multirow function ----- aggregate  
The functions which we execute on multiple rows, it is called as multi row function  
avg(),sum(),min(),max(), count()

String functions

1. ASCII(str) ---→ it will print the ascii value of first character
2. lower() --→ it will convert the string in lower case
3. upper()--→ it will convert the string into uppercase
4. concat(str1,str2,str3,.....) ----- concatenate all the strings and will display the o/p  
select concat(ename," ",job) Data  
-> from emp;  
select concat("Welcome ",ename)  
from emp;

to generate email

```
concat(ename,'.',job,'@mycompany.com')
```

5. FORMAT(X,D) ----- formats the number, add thousand separator and display d number of digits after decimal point

```
format(sal,2)
```

```
345.00
```

```
4567.00
```

```
12,345,677.00
```

6. INSTR(str, substr) – finds the position of first occurrence of substring in a string

```
select instr("this is two wheeler","two wheeler")
```

```
-> ;
```

```
+-----+
```

```
| instr("this is two wheeler","two wheeler") |
```

```
+-----+
```

```
|                9 |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

```
mysql> select instr("this is two wheeler","two wheeler1234")
```

```
-> ;
```

```
+-----+
```

```
| instr("this is two wheeler","two wheeler1234") |
```

```
+-----+
```

```
|                0 |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

assume that we have one product table which has(prodid,pname,qty,price,pdesc)

```
select prodid,pname,qty,price
```

```
from product
```

```
where instr(pdesc,"two wheeler") > 0;
```

7. substr(str,pos,len)----- it will retrieve len number of characters from the given string starting from the position

len is optional

```
substr('Hello how are you!!',3,5)
```

```
llo h
```

```
substr('Hello how are you!!',3)
```

```
llo how are you!!
```

```
substr('Hello how are you!!',-5)
```

```
you!!
```

8. TRIM(str) ---→ it will remove all leading and trailing spaces

```
trim(' hello ') --→ hello
```

To remove only spaces from left side then use ltrim

To remove only spaces from right side of the string use rtrim

9. LPAD----- which pads a string on left side

10. Rpad ---- which pads a string on the right side

11. length(str) ----- it will count how many characters are there in a string

date related functions

1. now() ---- to display current date and time  
default date format in mysql is yyyy-mm-dd
2. curdate() ---- to display today's date only and not time
3. date\_format(date,format)----→select date\_format(curdate(),'%d/%m/%Y')  
Y ---- for 4 digit year  
y----for 2 digit year  
m ---- for month in number  
d--- for date  
D to add th in date

```
select date_format(curdate(),'%d/%m/%Y');
+-----+
| date_format(curdate(),'%d/%m/%Y') |
+-----+
| 21/03/2022 |
+-----+
select ename,hiredate,date_format(hiredate,'%M')
-> from emp;
+-----+-----+-----+
| ename | hiredate | date_format(hiredate,'%M') |
+-----+-----+-----+
| SMITH | 1980-12-17 | December |
| ALLEN | 1981-02-20 | February |
| WARD | 1981-02-22 | February |
| JONES | 1981-04-02 | April |
```

4. datediff(date1,date2)----- difference between 2 dates  
select datediff('2015-11-23',2014-11-23') days  
365 days

suppose we have medicine table (name,id,expdate)

```
select id,name,expdate
from medicine
where datediff(expdate,curdate()) between 10 to 90
```

5. date\_add(date, interval 1 week)--→ will display date one week after  
date\_add(date, interval 1 month)  
date\_add(date, interval 1 year)  
date\_add(date, interval 1 day)
6. date\_sub(date, interval 1 week)--→ will display date one week after  
date\_sub(date, interval 1 month)  
date\_sub(date, interval 1 year)  
date\_sub(date, interval 1 day)
7. day----- to find day part of date
8. month----- to find day part of date

9. year----- to find year part of date
10. quarter----- to find day quarter of date
11. extract----- will retrieve part of date  
 extract(day from curdate())----→only date  
 extract(month from curdate())---only month  
 extract(year from curdate())----→only date
12. dayname(curdate())  
 Will show you name of the day like Monday, Tuesday
13. monthname(curdate())  
 Will show you name of the month like March, January,.....

list all employees who join 3 months before current month

```
select *
from emp
where month(date_sub(curdate(),interval 3 month))=month(hiredate)
```

To list all employees who join last year  
 year(curdate())-1  
 year(date\_sub(curdate(),interval 1 year))

```
select *
from emp
where year(hiredate)= year('1981-12-1')-1
```

To find all employees whose number of years of experience is 40  
 floor(date\_diff(curdate(),hiredate)/365)=40

```
select empno,ename,hiredate, floor(datediff(curdate(),hiredate)/365) experience
from emp
where floor(datediff(curdate(),hiredate)/365)=40;
```

list all employees empno,ename,hiredate and display only joining year of a employee

```
select empno, ename, hiredate, year(hiredate)
from emp
```

to generate the code ----- 1<sup>st</sup> 3 characters of job, 1<sup>st</sup> 3 characters of ename

```
select ename,job,concat(substr(ename,1,3),substr(job,1,3))
from emp
```

