what if we don’t know the exact value but we know the pattern

use like operator

to design the pattern we use 2 characters

% ------ matches with any number of characters

_ ------ matches with one character

To list all employees with name starts with J

```
select *
from emp
where ename like ‘J%’
```

To list all employees with name ends with N

```
select *
from emp
where ename like ‘%n’
```

To list all employees with name starts with A and ends with n

```
select *
from emp
where ename like ‘A%N’;
```

To find all employees with 2nd character is I

```
select *
from emp
where ename like ‘_I%’
```

To find all employees with E at 2nd last position

```
select *
from emp
where ename like ‘%E_’
```

to find all employees with name contains E in between

select *

from emp

where ename like ‘%E%’

‘___E___’

To find all employee which has ER somewhere in ename

select * from emp

where ename like ‘%E%R%;

To find all Employees with job starts with C and ends with k

select *

from emp

where job like ‘C%K’

To find all Employees with job starts with either C or S

select *

from emp

where job like ‘C%’ or job like ‘S%’

REGEXP

Find all employees with name starts with either A or starts with M and ends with R or starts with S and ends with H

select *

from emp

where ename like ‘A%’ or ename like ‘M%R’ or ename like ‘S%h’

Instead of Like operator you may use REGEXP

^	Checks the pattern at the beginning	
$	Checks the pattern at the end	
.	Match with single	
[a-z]	Any character given in the range	
[^ABC]	Anything except A or B or C	
*	Matches with o or more occurrences preceding pattern	

?	Matches with 0 or 1 occurrences preceding pattern	
+	Matches with 1 or more occurrences preceding pattern	
{m}	Exactly m occurance	
{m,n}	Minimum m occurrences and maximum n occurances	
{m,}	Minimum m occurrences and maximum any number of occurances	
abc|pqr|xyz	Either abc or pqr or xyz	

To fins all employees with name starts with any character between range s-z

select *

from emp

where ename REGEXP '^[S-Z]';

Sanjay, Tushar, Zinat

To find all employees whose name not starting with S-Z

select *

from emp

where ename REGEXP '^[^S-Z]';

To find all employees whose name not ending with S-Z

select *

from emp

where ename REGEXP ' [^S-Z]$';

To find all employees with name ends with E or R

select *

from emp

where ename REGEXP '[ER]$'

To find all ename ending with an

select * from emp

where ename REGEXP 'an$'

or

select * from emp

where ename like ‘%an’

To find all names which has d at 2 nd position and ends with an

select *

from emp

where ename REGEXP ‘^.d .*an$’ ----→ between d and a o or more characters can be there

Adan, Mdan, Xdjs jsdhfjshdjhan

select *

from emp

where ename like ‘_d%an’

To find all names which has d at 2 nd position and ends with an and length of name should be 10

select *

from emp

where ename REGEXP ‘^.d .{6} an$’

where ename REGEXP ‘^.d a{4,10} an$’

adwertdan

adaaaaaan

adaaaan ---no

adaaaaaaaaaaaaan ----no

[^a-zA-Z0-1]

^A.*N$ ------ ALLEN, AN, AXXXN

^A.+N$--→ALLEN,A1N, A#N

^A.?N$ --→ AN , AsN

To find all name which starts with a ends with n in between 1 or more alphabets should be there

^A[a-zA-Z]+N$ A.+N

----- to find all enames that starts with J and ends with either ne or es

select * from emp

where ename REGEXP 'j.*ne$|^J.*es$'

To find all employees with name starts with either A or M and vowel at 2nd position

Select *

from emp

where ename REGEXP '^[AM][aeiou]'

To find all employees with name starts with either A or M and vowel at 2nd position and ends with e or N

Select *

from emp

where ename REGEXP '^[AM][aeiou].*[en]$'

agg?[ar]+[wv]al

aggrawal

Agrawal

Agarwal

to list distinct salaries are there in our table

select distinct sal

from emp

to list distinct job are there in our table

select distinct job

from emp

to display data arranged in ascending order of salary

order by clause is used for arranging the data in sorted order

```
select *
from emp
order by sal
```

to display data arranged in ascending order of salary if salary is same then on job and if job is also same then on name

```
select *
from emp
order by sal, job, ename;
```

to display data arranged in descending order of salary if salary is same then on job and if job is also same then on name

```
select *
from emp
order by sal desc, job desc, ename;
```

```
select
from
where
order by
```

to list all employee with salary >1500 and display them arranged in ascending order of name

```
select *
from emp
where sal >1500
order by ename
```

to list all employees who joined between 19 January 1981 to 19 July 1982 and display data in descending order of sal if salary is same then arrange in descending order of name

```
select *
from emp
```

where hiredate between ‘1981-01-19’ and ‘1982-07-19’

order by sal desc, ename desc;

display all employees whose manager is either 7902 or 7789 or 7788 arrange the data based on name

select *

from emp

where mgr in (7902,7788,7789)

order by ename

to list all employees who don’t have manager

select *

from emp

where mgr is null;

----limit clause is used to find first n rows

for limit clause values should be >=0 either 0 or some +ve number

in limit clause you may specify 2 values

limit [offset],row_count

display first 5 employees who earn highest salary

select *

from emp

order by sal desc

limit 5

select *

from emp

order by sal desc

limit 3,5

or

select *

-> from emp

```
   -> order by sal desc
   -> limit 5 offset 3;
```

----- to list 2 employees whose job is clerk

```
select *
from emp
where job='CLERK'
limit 2;
```

-----to display 2 employees who are highly paid but with name has 5 or 6 character and sal > 1500

```
select *
from emp
where ename REGEXP '^.{5,6}$' and sal>1500
order by sal desc
limit 2;
```

---- to display second highest paid employee

```
select *
from emp
order by sal desc
limit 1,1
```

-----to find derived columns and assign alias name

```
select ename "Employee Name",sal salary ,job,sal+sal*0.10 "Increased salary"
   -> from emp;
```

to calculate net salary by formula sal+comm

```
mysql> select ename,job,sal,comm,sal+comm
   -> from emp;
```

calculate net salary by formula sal+comm and if comm is null then replace by 0

```
mysql> select ename,job,sal,comm,sal+ifnull(comm,0)from emp
mysql> select ename,job,sal,comm,sal+ifnull(comm,200) from emp;
```

Functions in MySQL

functions are of 2 types

1. Single row functions
2. aggregate functions

Numbers, Strings, dates

Number related functions

```
select ename,sal,round(sal+sal*0.10,2)
   -> from emp;


mysql> select round(34567.7823,2);
+---------------------+
| round(34567.7823,2) |
+---------------------+
|           34567.78 |
+---------------------+
1 row in set (0.00 sec)


mysql> select truncate(3456.45667,2);
+------------------------+
| truncate(3456.45667,2) |
+------------------------+
|                3456.45 |
+------------------------+
1 row in set (0.00 sec)


mysql> select truncate(3456.45267,2);
+------------------------+
| truncate(3456.45267,2) |
+------------------------+
|                3456.45 |
+------------------------+
1 row in set (0.00 sec)
```

```
mysql> select ceil(12345.234);
+-----------------+
| ceil(12345.234) |
+-----------------+
|           12346 |
+-----------------+
1 row in set (0.00 sec)

mysql> select floor(123456.567)
    -> ;
+-------------------+
| floor(123456.567) |
+-------------------+
|            123456 |
+-------------------+
1 row in set (0.00 sec)

mysql>
```