

## Pattern matching

Pattern matching in the shell against filenames has metacharacters defined differently from the rest of unix pattern matching programs.

### wild card (\*)

wild cards allows us to specify succinctly a pattern that matches a set of filenames

eg: \*.abc to get a list of all the abc files

It is often referred to as glob patterns

\* - matches zeros or more characters

eg: Create few files

```
$ touch a.12 b.12 c.12 d.ab
```

```
$ ls *.12
```

Output: a.12 b.12 c.12

### meta character (?)

Question mark (?), it represents or matches a single occurrence of any character

Purpose: file name substitution

eg: ls ??

It lists all two-character files.

## Character class

These are the special characters that are first interpreted by the shell before passing the same to command. They are also known as shell command wildcard

> - used for output redirection

>> - used for output redirection to append

< - input redirection

<< - used for input redirection and also known as here document

\* - match any number of characters

[ ] - match range of characters

## > Syntax

```
echo "hello" > text.txt
```

## Syntax: >>

```
echo "Hello, welcome" >> text.txt
```

This will append the line to the existing file

## \* Syntax

```
ls m*
```

⇒ mod 1 mod 2 mod 3

## ? Syntax :

```
ls ?.txt
```

eg: 1.txt 2.txt 3.txt

## [ ] Syntax

```
ls mod [1-3]
```

mod 1 mod 2 mod 3

25 mod [1, 3]  
mod 4 mod 5 mod 6

eg;  
\$touch mod 1 mod 2  
mod 3 mod 4 mod 5

## Filters

Filters are programs that take plain text as standard input, transform it into a meaningful format

⇒ cat

cat [path]

eg: cat mod.txt

Hello RVCE

⇒ head:

head [path]

eg: head mod.txt

Hello

RVCE

head -n 5 mod.txt

Hello

RVCE

MCA

⇒ tail: It is same as head, but instead of printing from top, it print from the reverse order (bottom to up)

tail [file-name]

eg: tail mod.txt

MCA

RVCE

Hello

⇒ wc: It gives the number of lines, words and characters in file.

Syntax: wc [file-name]

eg: cat mod.txt

Hello

RVCE

MCA

wc mod.txt

5 4 3

⇒ grep: It is used to search a particular word or information in text file

Syntax: \$grep name [file-name]

eg: \$ cat mod.txt

RVCE is good for MCA

I'm in Bangalore

\$ grep blr.txt

I'm in Bangalore

\$ cat mod.txt | grep RVCE

RVCE is good for MCA

⇒ nl: It is used display number of lines

Syntax: \$nl file-name

eg: \$cat mod.txt

RVCE is best

MCA is good

\$nl mod.txt

RVCE is best

MCA is good