

# Note 6

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Wildcard	Description
*	Matches zero or more characters in a filename
?	Matches any one character in a filename
[acf]	Matches one of multiple characters in a filename; in this example, a, c, or f
[a-f]	Matches one of a range of characters in a filename; in this example, any character from a through f
[!a-f]	Matches filenames that don't contain a specified range of characters; in this example, filenames that don't contain a through f

## \* Wildcard

- A star alone matches anything and nothing and matches any number of charecters.

Example:

- list all filles with a particular file extension
  - `ls *.txt`
- move all the .sh (shell scripts) files
  - `mv wildcard_extra_practice/*.sh wildcard_extra_practice/scripts/`
- list and then move all the image files in the wildcard\_extra\_practice directory. You will need to create a directory first.
  - ``ls wildcard_extra_practice/img-`

## ? wildcard

- The ? wildcard metacharacter matches precisely one character.

Example:

- List all the files that contain a 4 letter file extension.
  - `ls -lX wildcard_extra_practice/*.????`
- List all th files Microsoft Office 365 files.
  - `ls -lX wildcard_extra_practice/*.???x`
- List all th files Microsoft Office 365 files.
  - `ls -lX wildcard_extra_practice/*.???x`

## [] wildcard

- The brackets wildcard match a single character in a range.

Example:

- List all the files that start with a capital letter

- `ls wildcard_extra_practice/[A-Z]*`
- List all the files that contain a number in their name
  - `ls wildcard_extra_practice/[0-9]*`
- List files with alphabetic characters
  - `ls *[[A-Za-z]]*`

## Brace {} Expansion

- Brace expansion is not a wildcard but another feature of bash that allows you to generate arbitrary strings to use with commands.

### Example:

- To create a whole directory structure in a single command:
  - `mkdir -p music/{jazz,rock}/new{1..3}`
- To create a N number of file use:
  - `touch website{1..5}.html`
- Remove multiple file in a single directory
  - `rm -r {dir1,file.txt,file,py}`