Notes 6

Wildcards and brace expansion are powerful tools in the terminal (like Bash) for matching and generating filenames or text patterns.

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* Wildcard

Matches any number of characters, including none.

Examples:

1. `ls *.txt` ---> Matches all files ending in .txt
2. `ls a*` ---> Matches all files starting with 'a'
3. `ls *log*` ---> Matches all files containing 'log' anywhere

? Wildcard

Matches exactly one character.

Examples:

1. `ls ?.txt` ---> Matches a.txt, b.txt (only character before .txt)
2. `ls file?.log` ---> Matches file1.log, fileA.log but not file12.log.
3. `ls data_??.md` ---> Matches data_01.md, data_ab.md but not data_001.md

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[] Wildcard

Matches one character from a set or range inside the brackets

Examples:

1. `ls file[123].txt` ---> Matches file1.txt, file2.txt, file3.txt
2. `ls files[ab].md` ---> Matches filesa.md, filesb.md
3. `ls file[0-9].md` ---> Matches file0.md through file9.md

Brace Expansion {}

Brace expansion generates multiple strings from a single pattern. It is not used for matching, only for creating text.

Examples:

1. `echo file{1,2,3}.txt` ---> Output: file.1.txt file2.txt file3.txt
2. `mkdir dir_{A,B,C}` ---> Creates directories: dir_A, dir_B, dir_C
3. `touch log_{01..03}.txt` ---> Creates files: log_01.txt, log_02.txt, log_03.txt