

Globbering

Globbering is a concept of creating patterns with special characters to match some specific filenames. In bash it is called *pattern matching*, in zsh it is called *filename generation*. Both names are right, we are *matching patterns* so we can *generate filenames*. For this pattern matching we will use some special characters. ***** (asterisk) character represents zero or more characters. So if I type **ls H***, this command will list all of the files which start with the letter *H* and have zero or more characters after it.

The wildcards will expand to all of the matched filenames before they get sent to the command.

There is also a **?** character, which represents one and only one character. It has to be there.

If there are no matches, bash will just print out the pattern. Z shell will print out an error message. To have the same behaviour in zsh, you can enable the **no_nomatch** option.

However, we will most likely want to expand the patterns that can be expanded and ignore the ones that can't. To do this, enable the **csH_null_glob** option in zsh.

To match one of the characters from a set, we can use square brackets. **[abc]** will match any of these characters inside of the brackets. These can also be ranges, you just need to add a hyphen character. For example, to match all of the uppercase letters, we can use **[A-Z]**.

In zsh, you can create a set of alternative strings inside of the parantheses, like this **(png|jpg)**. This will either match the *png* or the *jpg* string. You can also do this in bash, but you need to enable the **extglob** option first. Then you can use it in the same way as in zsh, but you need to add the **@** character before the parantheses **@(png|jpg)**.

ZSH also has so called *glob qualifiers*. These are special filters that can restrict the filename generation based on some specific option, like the file type, file size, file permissions and other. For example, if you add the **(.)** at the end of the pattern, you will only get regular files. On the other hand, you can use **(/)** to see

only the directories.

To filter by file size, add the **L** inside of the parantheses. **(Lk+2)** will only expand filenames of the files bigger then 2 kilobytes.

Of course, there are more of these, like for example, filtering by file permissions, but we will get to that in the later module.

You can scroll down on this website to see some more glob qualifiers, if you are interested.

<http://zsh.sourceforge.net/Doc/Release/Expansion.html>