ASSIGNMENT

__Question: 1__ Explain pattern matching in Linux with its types.

__Ans:__ Any character that appears in a pattern, other than the special pattern characters described below, matches itself. The NUL character may occur in a pattern

· A backslash escapes the following character, the escaping backslash is discarded when matched.

⇒ Wildcards:

· Wildcards allow you to specify a pattern that matches a set of filenames (for example *.pdf to get all the PDF files present in that directory).

Pattern	About
*	Match zero or more characters.
?	Match any single character.
[...]	Match any of the character in a set.
? (pattern)	Match zero or occurrence of the pattern
* (pattern)	Match zero or occurrence of the pattern.
+ (pattern)	Match one or more occurrence of the pattern.
@ (pattern)	Match one pattern
! (pattern)	Match anything other than the given pattern.

__EX:__ ls *.jpg

All the jpg files will be listed

② ls ?. pdf

pdf file with one character as a name will be listed.

Ex: 1. pdf.

③ ls [ab]*

a. pdf
b. pdf

④ ls ! (*. jpg | *. pdf)

one. txt
two. png

⇒) Metacharacters of Linux: (Regular expression):

- Regular expression is a pattern for matching string that follows some pattern.

. – Replaces any character.

∧ – Matches start of string and represents character not in string.

$ – Matches end of a string.

\ – Represent group of characters.

() – Group of regular expressions.

? – Matches one character.

⇒ Character class:

A expression in a list of characters enclosed by [and]. It matches any single character in list. If the first character of the list is the caret ∧. then it matches any character not in the list and not in the list.

and it is unspecified whether it matches an encoding error. Also

• Within bracket, a range expression consists of two characters sperated by a hyphen. It matches any single character that sorts between the two characters inclusive.

Ex: `[: alnum:]` : Alphanumeric characters.

`[: alpha:]` : Alphabetic characters.

`[: blank:]` : Blank characters : space or tab.

`[: cntrl:]` : Control characters in As css.

`[: digit:]` : Digit.

`[: Graph:]` : Graphical characters.