# 1.Pattern Matching

## 1.1. Normal glob

|  |
| --- |
| Pattern Matching Any character that appears in a pattern, other than the special pattern characters described below, matches itself.  The NUL character may not occur in a pattern.  A backslash escapes the following character; the escaping backslash is discarded when matching.  The special pattern characters must be quoted if they are to be matched literally.  The special pattern characters have the following meanings:  **\***  Matches any string, including the null string. When the globstar shell option is enabled, and ‘\*’ is used in a filename expansion context, two adjacent ‘\*’s used as a single pattern will match all files and zero or more directories and subdirectories. If followed by a ‘/’, two adjacent ‘\*’s will match only directories and subdirectories.  **?**  Matches any single character.  **[…]**  Matches any one of the enclosed characters. A pair of characters separated by a hyphen denotes a *range expression*; any character that falls between those two characters, inclusive, using the current locale’s collating sequence and character set, is matched. If the first character following the ‘[’ is a ‘!’ or a ‘^’ then any character not enclosed is matched. A ‘-’ may be matched by including it as the first or last character in the set. A ‘]’ may be matched by including it as the first character in the set. The sorting order of characters in range expressions is determined by the current locale and the values of the LC\_COLLATE and LC\_ALL shell variables, if set.  For example, in the default C locale, ‘[a-dx-z]’ is equivalent to ‘[abcdxyz]’. Many locales sort characters in dictionary order, and in these locales ‘[a-dx-z]’ is typically not equivalent to ‘[abcdxyz]’; it might be equivalent to ‘[aBbCcDdxXyYz]’, for example. To obtain the traditional interpretation of ranges in bracket expressions, you can force the use of the C locale by setting the LC\_COLLATE or LC\_ALL environment variable to the value ‘C’, or enable the globasciiranges shell option.  Within ‘[’ and ‘]’, *character classes* can be specified using the syntax [:*class*:], where *class* is one of the following classes defined in the POSIX standard:  alnum alpha ascii blank cntrl digit graph lower  print punct space upper word xdigit  A character class matches any character belonging to that class. The word character class matches letters, digits, and the character ‘\_’.  Within ‘[’ and ‘]’, an *equivalence class* can be specified using the syntax [=*c*=], which matches all characters with the same collation weight (as defined by the current locale) as the character *c*.  Within ‘[’ and ‘]’, the syntax [.*symbol*.] matches the collating symbol *symbol*. |

## 1.2. Ext glob

|  |
| --- |
| If the extglob shell option is enabled using the shopt builtin,  **root# shopt –s extglob**  **-s**  Enable (set) each *optname*.  several extended pattern matching operators are recognized. In the following description, a *pattern-list* is a list of one or more patterns separated by a ‘|’. Composite patterns may be formed using one or more of the following sub-patterns:  **?(*pattern-list*)**  Matches zero or one occurrence of the given patterns.  **\*(*pattern-list*)**  Matches zero or more occurrences of the given patterns.  **+(*pattern-list*)**  Matches one or more occurrences of the given patterns.  **@(*pattern-list*)**  Matches one of the given patterns.  **!(*pattern-list*)**  Matches anything except one of the given patterns. |