The **GLOBIGNORE** shell variable may be used to restrict the set of file names matching a *pattern*. If **GLOBIGNORE** is set, each matching file name that also matches one of the patterns in **GLOBIGNORE** is removed from the list of matches. If the **nocaseglob** option is set, the matching against the patterns in **GLOBIGNORE** is performed without regard to case. The filenames ``.'' and ``..'' are always ignored when **GLOBIGNORE** is set and not null. However, setting **GLOBIGNORE** to a non-null value has the effect of enabling the **dotglob** shell option, so all other filenames beginning with a ``.'' will match. To get the old behavior of ignoring filenames beginning with a ``.'', make ``.*'' one of the patterns in **GLOBIGNORE**. The **dotglob** option is disabled when **GLOBIGNORE** is unset. The **pattern matching** honors the setting of the **extglob** shell option.

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 pathname 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. The sorting order of characters in range expressions is determined by the current locale and the values of the **LC_COLLATE** or **LC_ALL** shell variables, if set. To obtain the traditional interpretation of range expressions, where **[a-d]** is equivalent to **[abcd]**, set value of the **LC_ALL** shell variable to **C**, or enable the **globasciiranges** shell option. 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.

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*.

If the **extglob** shell option is enabled using the **shopt** builtin, 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

Complicated extended **pattern matching** against long strings is slow, especially when the patterns contain alternations and the strings contain multiple matches. Using separate matches against shorter strings, or using arrays of strings instead of a single long string, may be faster.

Quote Removal

After the preceding expansions, all unquoted occurrences of the characters ****, **'**, and **"** that did not result from one of the above expansions are removed.

REDIRECTION top

Before a command is executed, its input and output may be *redirected* using a special notation interpreted by the shell. Redirection allows commands' file handles to be duplicated, opened, closed, made to refer to different files, and can change the files the command reads from and writes to. Redirection may also be used to modify file handles in the current shell execution environment. The following redirection operators may precede or appear anywhere within a *simple command* or may follow a *command*. Redirections are processed in the order they appear, from left to right.

Each redirection that may be preceded by a file descriptor number may instead be preceded by a word of the form {*varname*}. In this case, for each redirection operator except >&- and <&-, the shell will allocate a file descriptor greater than or equal to 10 and assign it