The following command prints lines containing the word 'hello':

```
sed -n '/hello/p'
```

The above example is equivalent to this grep command:

```
grep 'hello'
```

The power of regular expressions comes from the ability to include alternatives and repetitions in the pattern. These are encoded in the pattern by the use of *special characters*, which do not stand for themselves but instead are interpreted in some special way.

The character ^ (caret) in a regular expression matches the beginning of the line. The character . (dot) matches any single character. The following sed command matches and prints lines which start with the letter 'b', followed by any single character, followed by the letter 'd':

```
$ printf "%s\n" abode bad bed bit bid byte body | sed -n '/^b.d/p'
bad
bed
bid
body
```

The following sections explain the meaning and usage of special characters in regular expressions.

5.2 Basic (BRE) and extended (ERE) regular expression

Basic and extended regular expressions are two variations on the syntax of the specified pattern. Basic Regular Expression (BRE) is the default in sed (and similarly in grep). Extended Regular Expression syntax (ERE) is activated by using the -r or -E options (and similarly, grep -E).

In GNU sed the only difference between basic and extended regular expressions is in the behavior of a few special characters: '?', '+', parentheses, braces ('{}'), and '|'.

With basic (BRE) syntax, these characters do not have special meaning unless prefixed backslash ('\'); While with extended (ERE) syntax it is reversed: these characters are special unless they are prefixed with backslash ('\').

Desired pattern	Basic (BRE) Syntax	Extended (ERE) Syntax
literal '+' (plus sign)	``` $ echo "a+b=c" > foo $ sed -n '/a+b/p' < foo a+b=c ```	``` $ echo "a+b=c" > foo $ sed -E -n '/a\+b/p' < foo a+b=c ```
One or more 'a' characters followed by 'b' (plus sign as special metacharacter)	``` $ echo "aab" > foo $ sed -n '/a\+b/p' < foo aab ```	``` $ echo "aab" > foo $ sed -E -n '/a+b/p' < foo aab ```