SED substitutions

WE'LL COVER THE FOLLOWING

- Some important SED options

The format for the substitute command is as follows:

```
[address1[ ,address2]]s/pattern/replacement/[flags]
```

The flags can be any of the following:

- `n` replace `n`th instance of pattern with replacement
- `g` replace all instances of pattern with replacement
- `p` write pattern space to STDOUT if a successful substitution takes place
- `w file` Write the pattern space to file if a successful substitution takes place
- `i` match REGEXP in a case-insensitive manner.

We can use different delimiters (one of `@ % ; :`) instead of `/`. If no flags are specified the first match on the line is replaced. note that we will almost always use the `s` command with either the `g` flag or no flag at all.

If one address is given, then the substitution is applied to lines containing that address. An address can be either a regular expression enclosed by forward slashes `/regex/` , or a line number . The `$` symbol can be used in place of a line number to denote the last line. If two addresses are given separated by a comma, then the substitution is applied to all lines between the two lines that match the pattern.

Example 1: substitute only third occurrence of a word `sed s//3`

```
$ sed 's/Data/Big-Data/3' datafile
```

Example 2: print and write to a file `sed s//gpw`

```
$ sed -n 's/Data/Big-Data/gpw output' datafile
```

Some important SED options

Option: `-n`, `--quiet` or `--silent`

The `"-n"` option will not print anything unless an explicit request to print is found:

```
sed -n 's/PATTERN/&/p' file
```

Option: `-e`

Combines multiple commands:

```
sed -e 's/a/A/' -e 's/b/B/' file
```

Option: `-f`

If you have a large number of sed commands, you can put them into a file and use

```
sed -f sedscript file
```

Option: `-r`

Extended regular expressions (ERE) have more power, but SED them normal characters. Therefore you must explicitly enable this extension with a command line option.

```
% echo "123 abc" | sed -r 's/[0-9]+/& &/'
123 123 abc
```

Option: `-i`

Substitutions a re performed in-place, on the file which was fed to SED:

```
sed -i 's/^/\t/' *.txt
```