

Regular Expression (Character set)

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→ Sets:

→ For instance, $[aeio]$ means any of the 4 characters: 'a', 'e', 'i' or 'o'. That is called a set. Sets can be used in a regular expressions along with regular characters:

→ Ranges:

→ Square brackets may also contain character ranges. For instance, $[a-z]$ is a character in range from a to z, and $[0-9]$ is a digit from 0 to 9.

→ Excluding Ranges:

→ Besides normal ranges, there are "excluding" ranges that look like $[^...]$. They are denoted by caret character $^$ at the start and match any character except the given ones.

Ex:

- $[^aeiou]$ → any character except 'a', 'e', 'i', 'o' or 'u'.
- $[^0-5]$ → any character except a digit, the same as $\backslash D$.
- $[^\backslash S]$ → any non-space character, same as $\backslash S$.

Example

1) This expression will find any character b/w the brackets. Do a global search for the characters "D" and "O" in a string:

```
LET REG = /[Do]/gi;
LET STR = "Do I know you?";
```

2) This expression will find any character NOT between the brackets. Do a global search for characters that are NOT inside the brackets [abc]:

```
LET STR = "IS THIS ALL THERE IS?";
LET REG = /^[^abc]/g;
```

3) This expression will find any character b/w the brackets (any digit). Do a global search for the number 1, 2, 3, 4 and 5 in a string:

```
LET STR = "123456789";
LET REG = /[1-5]/g;
```

4) This expression will find any of the alternatives specified. Do a global search to find any of the specified alternatives (0|3|2):

```
LET STR = "01234567890123456789";
LET REG = /(0|3|2)/g;
```

→ Quantifier :
 → Quantifier matches a number of instances of a character, group, or character class in a string. It is appended to a character and specifies how many characters we need.

<u>Quantifiers</u>	<u>Description</u>
→ *	→ It matches zero or more times.
→ +	→ It matches one or more times.
→ ?	→ It matches zero or one time.
→ {x}	→ It matches exactly x times.
→ {x,}	→ It matches at least x times.
→ {x, y}	→ It matches from x to y times.