

In JavaScript, a regular expression is simply a type of object that is used to match character combinations in strings

Two ways to create:

1. use slashes: `var regLiteral = /cat/`
2. constructor: `regCon = new RegExp("cat");`

```
^: caret  
{ }: curly braces  
[]: square braces  
(): Parentheses
```

We want to allow the username to contain letters, numbers, underscores and hyphens. We also want to limit the number of characters in username so it does not look ugly.

`^[a-z0-9_-]{3,15}$`

`^` : Matches the beginning of the string.

`$` : Matches the end of string

<https://regex101.com/r/o0Jx8x/1>

```
[] : specify character sets. Use a hyphen inside a character set to specify the characters' range.  
{ } : how long
```

<https://regex101.com/r/eNXrzV/1>

`^` use in `[]` means except

<https://regex101.com/r/glbfxv/1>

() : character group

<https://regex101.com/r/xC2VnS/1>

Following meta characters +, * or ? are used to specify how many times a subpattern can occur.

```
*// Matches the preceding expression 0 or more times.  
+//Matches the preceding expression 1 or more times.  
*: star  
+: plus  
//
```

<https://regex101.com/r/fE72vT/1>

optional ? : question mark

<https://regex101.com/r/nUobs9/1>

Flags:

There are five optional flags. They can be used separately or together and are placed after the closing slash. Example: /[A-Z]/g I'll only be introducing 2 here.

g—Global search

i—case insensitive search

<https://regex101.com/r/dWBOUv/2>

```

```

Date (MM/DD/YYYY)/(MM-DD-YYYY)/(MM.DD.YYYY)/(MM DD YYYY)

```
/^(0?[1-9]|1[012])[- /.](0?[1-9]|12)[0-9]|3[01])[- /.](19|20)?[0-9]{2}$/
```

Email Address

```
/^[a-zA-Z0-9._%~]+@[a-zA-Z0-9.-]+.[a-zA-Z]{2,4}$/
```

Password

The password must contain one lowercase letter, one uppercase letter, one number, one unique character such as !@#\$%^&? and be at least 6 characters long.

```
/^(?=.*{6,})(?=.*d)(?=.*[A-Z])(?=.*[a-z])(?=.*[!@#$%^&*? ]).*$/
```

US Phone Numbers

```
/^(?([0-9]{3}))?[-. ]?(?([0-9]{3})[-. ]?(?([0-9]{4}))$/
```

cheat sheet:

<https://www.debuggex.com/cheatsheet/regex/javascript>