JS JavaScript TUTORIAL

Regular Expression: Anchors

Summary: in this tutorial, you'll learn how to use regular expression anchors to match a position before or after characters.

Anchors have special meaning in regular expressions. They do not match any character. Instead, they match **a position** before or after characters:

- `^` – The caret anchor matches the beginning of the text.
- `$` – The dollar anchor matches the end of the text.

See the following example:

```
let str = 'JavaScript';
console.log(/^J/.test(str));
```

Output:

```
true
```

The `/^J/` match any text that starts with the letter `J`. It returns `true`.

The following example returns `false` because the string `JavaScript` doesn't start with the letter `S`:

```
let str = 'JavaScript';
console.log(/^S/.test(str));
```

Output:

```
false
```

Similarly, the following example returns `true` because the string `JavaScript` ends with the letter `t`:

```
let str = 'JavaScript';
console.log(/t$/.test(str));
```

Output:

```
true
```

You will often need to use anchors `^` and `$` to check if a string fully matches a pattern. The following example checks if an input string matches a time format `hh:mm` like `12:05`:

```
let isValid = /^\d\d:\d\d$/.test('12:05');
console.log(isValid);
```

Output:

```
true
```

The following example returns `false`:

```
let valid = /^\d\d:\d\d$/.test('12:105');
console.log(valid);
```

Output:

```
false
```

Multiline mode of anchors ^ and $: the m flag

The default of the anchor `^` or `$` is the single-line mode. In the single-line mode, the anchor `^` and `$` matches the beginning and the end of a string.

To enable the multiline mode, you use `m` flag. In the multiline mode, the `^` or `$` anchor matches the beginning or end of the string, or the beginning or end of lines.

The following example returns only the first digit of the multiline string:

```js
let str = `1st line
2nd line
3rd line`;

let re = /^\d/g;
let matches = str.match(re);

console.log(matches);
```

Output:

```
['1']
```

If you add the flag `m`, the anchor `^` will also match the digit at the beginning of the line, like this:

```js
let str = `1st line
2nd line
3rd line`;

let re = /^\d/gm;
let matches = str.match(re);

console.log(matches);
```

Output:

```
['1', '2', '3']
```

Summary

- Use the `^` anchor to match the beginning of the text.

- Use the `$` anchor to match the end of the text.

- Use the `m` flag to enable the multiline mode that instructs the `^` and `$` anchors to match the beginning and end of the text as well as the beginning and end of the line.