JavaScript Location

Summary: in this tutorial, you will learn about the JavaScript `Location` object and how to manipulate the location effectively.

The `Location` object represents the current location (URL) of a document. You can access the `Location` object by referencing the `location` property of the `window` or `document` object.

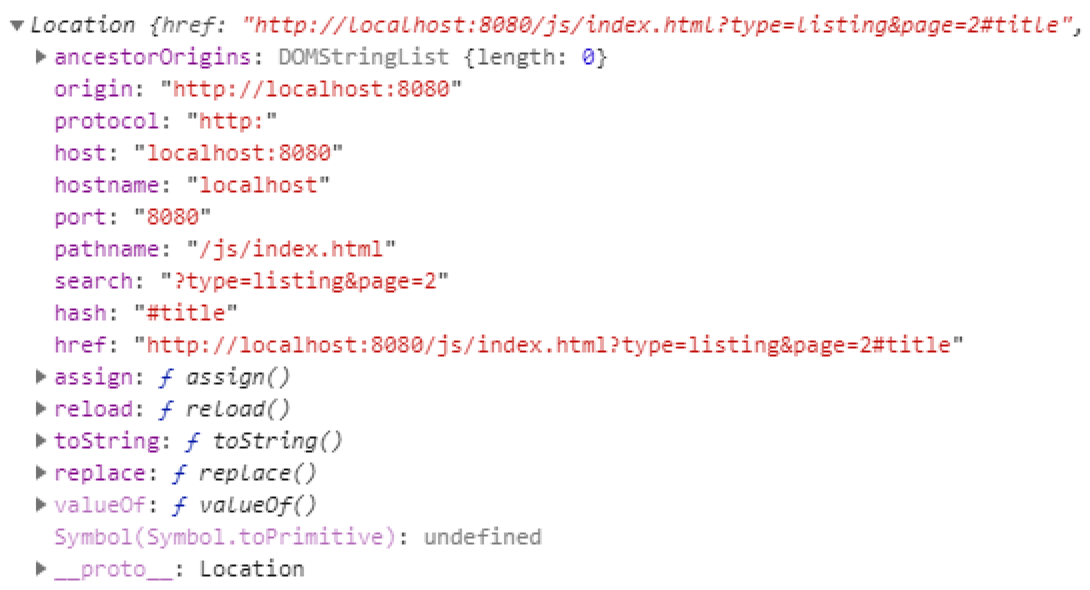
Both `window.location` and `document.location` link to the same `Location` object.

JavaScript Location properties

Suppose that the current URL is:

```
http://localhost:8080/js/index.html?type=listing&page=2#title
```

The following picture illustrates the properties of the `Location` object:



```
▼Location {href: "http://localhost:8080/js/index.html?type=listing&page=2#title",
  ▶ancestorOrigins: DOMStringList {length: 0}
   origin: "http://localhost:8080"
   protocol: "http:"
   host: "localhost:8080"
   hostname: "localhost"
   port: "8080"
   pathname: "/js/index.html"
   search: "?type=listing&page=2"
   hash: "#title"
   href: "http://localhost:8080/js/index.html?type=listing&page=2#title"
  ▶assign: ƒ assign()
  ▶reload: ƒ reload()
  ▶toString: ƒ toString()
  ▶replace: ƒ replace()
  ▶valueOf: ƒ valueOf()
   Symbol(Symbol.toPrimitive): undefined
  ▶__proto__: Location
```

Location.href

The `location.href` is a string that contains the entire URL.

```
"http://localhost:8080/js/index.html?type=listing&page=2#title"
```

Location.protocol

The `location.protocol` represents the protocol scheme of the URL including the final colon (`:`).

```
'http:'
```

Location.host

The `location.host` represents the hostname:

```
"localhost:8080"
```

Location.port

The `location.port` represents the port number of the URL.

```
"8080"
```

Location.pathname

The `location.pathname` contains an initial `'/'` followed by the path of the URL.

```
"/js/index.html"
```

Location.search

The `location.search` is a string that represents the query string of the URL:

```
"?type=listing&page=2"
```

Location.hash

The `location.hash` returns a string that contains a '#' followed by the fragment identifier of the URL.

```
"#title"
```

Location.origin

The `location.origin` is a string that contains the canonical form of the origin of the specific location.

```
"http://localhost:8080"
```

Location.username

The `location.username` is a string that contains the username before the domain name.

Location.password

THe `location.password` is a string that represents the password specified before the domain name.

Manipulating the location

The `Location` object has a number of useful methods: `assign()` , `reload()` , and `replace()` .

assign()

The `assign()` method accepts an URL, navigate to the URL immediately, and make an entry in the browser's history stack.

```
location.assign('https://www.javascripttutorial.net');
```

When the `window.location` or `location.href` is set to a URL, the `assign()` method is called implicitly:

```
window.location = 'https://www.javascripttutorial.net';
location.href = 'https://www.javascripttutorial.net';
```

If you change `hostname` , `pathname` , or `port` property, the page reloads with the new value. Note that changing `hash` property doesn't reload the page but does record a new entry in the browser's history stack.

When a new entry is created in the browser’s history stack, you can click the back button of the browser to navigate to the previous page.

replace()

The `replace()` method is similar to the `assign()` method except it doesn’t create a new entry in the browser’s history stack. Therefore, you cannot click the back button to go to the previous page.

The following code uses the `replace()` method to navigate to the URL `https://www.javascripttutorial.net` after 3 seconds:

```
setTimeout(() => {
    location.replace('https://www.javascripttutorial.net');
}, 3000);
```

reload()

The `reload()` method reloads the currently displayed page. When you call the `reload()` method with no argument, the browser will reload the page in the most efficient way e.g., it loads the page resources from the browser’s cache if they haven’t changed since the last request.

```
reload();
```

To force a reload from the server, you pass true to the `reload()` method:

```
reload(true);
```

Note that the code after the `reload()` may or may not execute, depending on many factors like network latency and system resources. Therefore, it is a good practice to place the `reload()` as the last line in the code.

Summary

- The `Location` object represents the current URL of a page. It can be accessed via `window.location` or `document.location`.
- The `Location` object has a number of properties that represent the URL such as `protocol`, `host`, `pathname`, and `search`.
- To manipulate the location, you set its properties new values or use `assign()`, `replace()`, and `reload()` methods.