

## Selecting HTML Elements with JavaScript

**Hello**

- Google
- Second
- Third

```

document.getElementById('li'). //Get list
➤ HTMLCollection(3) [li,li,li,li,li]
  0: li
  1: li
  2: li
  length: 3
  __proto__: HTMLCollection

//Element means all the elements of particular name like that's far list
➤ undefined
document.getElementById('li').style.color = 'red';
➤ Uncaught TypeError: Cannot set properties of undefined (setting 'color')
  at <anonymous>:1:45
  (anonymous) @ V068:1

➤ Uncaught SyntaxError: Invalid or unexpected token
  (anonymous) @ V068:1
document.getElementById('li')[2].style.color = 'Purple';
➤ 'Purple'
document.getElementById('li').length;
➤ 3
document.getElementsByClassName('btn'); //by class like button class is btn
➤ HTMLCollection(1) [button,btn]
document.getElementsByClassName('btn').style.color = 'red';
➤ Uncaught TypeError: Cannot set properties of undefined (setting 'color')
  at <anonymous>:1:12
  (anonymous) @ V068:1

//The error is because we have to select class and particular class item like btn was only one item. let's see
document.getElementsByClassName('btn')[0].style.color = 'red';
➤ 'red'

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> document.getElementsByTagName("li"); //Get List
< ▼HTMLCollection(3) [li.list, li.list, li.list] 0
  ▶ 0: li.list
  ▶ 1: li.list
  ▶ 2: li.list
  length: 3
  ▶ [[Prototype]]: HTMLCollection
> //Element means all the elements of particular name like li that's for list
< undefined
> document.getElementsByTagName("li").style.color = "red";
✖ ▶Uncaught TypeError: Cannot set properties of undefined (setting 'color')
  at <anonymous>:1:49
>
  (anonymous) @ VM368:1
✖ Uncaught SyntaxError: Invalid or unexpected token
> document.getElementsByTagName("li")[2].style.color = "Purple";
< 'Purple'
> document.getElementsByTagName("li").length;
< 3
> document.getElementsByClassName("btn"); //by class like button class is btn
< ▶HTMLCollection [button.btn]
> document.getElementsByClassName("btn").style.color = 'red';
✖ ▶Uncaught TypeError: Cannot set properties of undefined (setting 'color')
  at <anonymous>:1:52
> //The error is because we have to select class and particular class item like btn has only one item. Let's see
  document.getElementsByClassName("btn")[0].style.color = 'red';
< 'red'
>

> //By id
  document.getElementById("title");
< <h1 id="title">Hello</h1>
> //By id
  document.getElementById("title").innerHTML = "Good Bye!";
< 'Good Bye!'
> document.querySelector("#title");
< <h1 id="title">Good Bye!</h1>
> document.querySelector(".btn");
< <button class="btn" style=":active: color:red;">Click Me</button>
> document.querySelector("li a");
< <a href="http://www.google.com">Google</a>
> document.querySelector("a");
< <a href="http://www.google.com">Google</a>
> document.querySelector("li.item");
< null
> document.querySelector(".item");
< null
> //Change class name to item to get result instead of null
< undefined

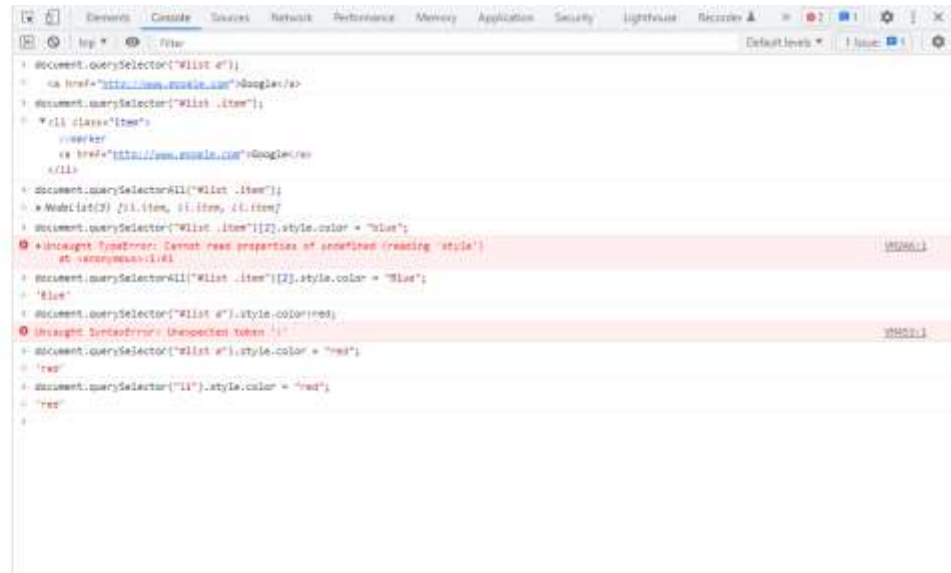
```

Above code is now improved. So don't try to change anything.

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The screenshot shows a web browser's developer console with the following JavaScript code and errors:

```
document.querySelector("#list a");
<a href="http://www.google.com">Google</a>
document.querySelector("#list .item");
<div class="item">
  <div>
    <a href="http://www.google.com">Google</a>
  </div>
</div>
document.querySelectorAll("#list .item");
// WebList(3) [li.item, li.item, li.item]
document.querySelector("#list .item")[2].style.color = "blue";
Uncaught TypeError: Cannot read properties of undefined (reading 'style') at <anonymous>:1:81
document.querySelectorAll("#list .item")[2].style.color = "blue";
// blue
document.querySelector("#list a").style.color = "red";
Uncaught SyntaxError: Unexpected token ';' at <anonymous>:1:81
document.querySelector("#list a").style.color = "red";
// red
document.querySelector("#li").style.color = "red";
// red
```

The errors are:

- `Uncaught TypeError: Cannot read properties of undefined (reading 'style') at <anonymous>:1:81`
- `Uncaught SyntaxError: Unexpected token ';' at <anonymous>:1:81`

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```

> document.querySelector("#list a");
< <a href="http://www.google.com">Google</a>
> document.querySelector("#list .item");
< ▼<li class="item">
    ::marker
    <a href="http://www.google.com">Google</a>
  </li>
> document.querySelectorAll("#list .item");
< ▶NodeList(3) [li.item, li.item, li.item]
> document.querySelector("#list .item")[2].style.color = "blue";
✖ ▶Uncaught TypeError: Cannot read properties of undefined (reading 'style')
  at <anonymous>:1:41
> document.querySelectorAll("#list .item")[2].style.color = "Blue";
< 'Blue'
> document.querySelector("#list a").style.color:red;
✖ Uncaught SyntaxError: Unexpected token ':'
> document.querySelector("#list a").style.color = "red";
< 'red'
> document.querySelector("li").style.color = "red";
< 'red'
>

```

## Code:

```

<!DOCTYPE html>

<html lang="en" dir="ltr">

  <head>

    <meta charset="utf-8">

    <title>My Website</title>

    <link rel="stylesheet" href="css/styles3.css">

  </head>

  <body>

    <h1 id="title">Hello</h1>


    <input type="checkbox">


    <button class="btn" style=":active: color:red;" >Click Me</button>

```

```
<!-- Add list -->
```

```
<ul id = "list">
```

```
  <li class="item">
```

```
    <a href="http://www.google.com">Google</a>
```

```
  </li>
```

```
  <li class="item">Second</li>
```

```
  <li class="item">Third</li>
```

```
</ul>
```

```
<script src="index3.js" charset="utf-8"></script>
```

```
</body>
```

```
</html>
```