

# JavaScript syntax

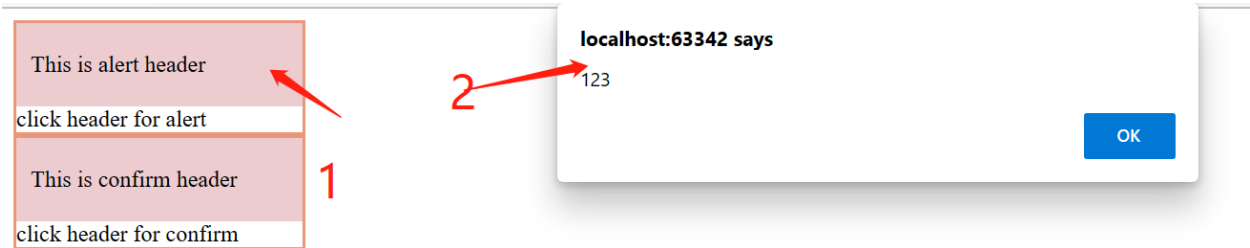
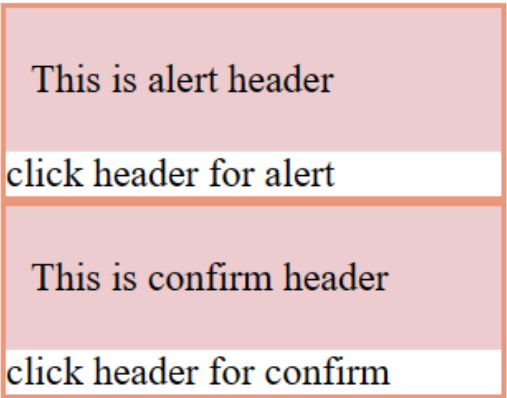
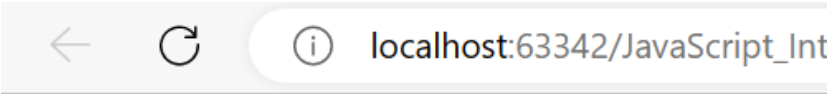
## 1. function

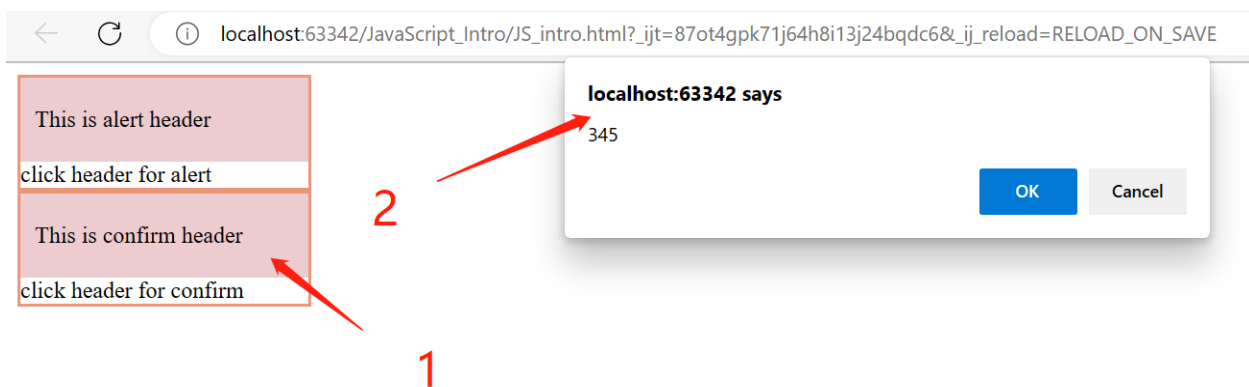
```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Title</title>
  <style>
    .menus {
      width: 200px;
      border: 2px solid darksalmon;
    }
    .menus .header {
      background-color: #eccccf;
      padding: 20px 10px;
    }
  </style>
</head>
<body>
  <div class="menus">
    <div class="header" onclick="myFunc1()"> This is alert header</div>
    <div class="item"> click header for alert </div>
  </div>

  <div class="menus">
    <div class="header" onclick="myFunc2()"> This is confirm header</div>
    <div class="item"> click header for confirm </div>
  </div>

  <script type="text/javascript">
    function myFunc1() {
      alert("123");
    };

    function myFunc2() {
      confirm("345");
    }
  </script>
</body>
</html>
```

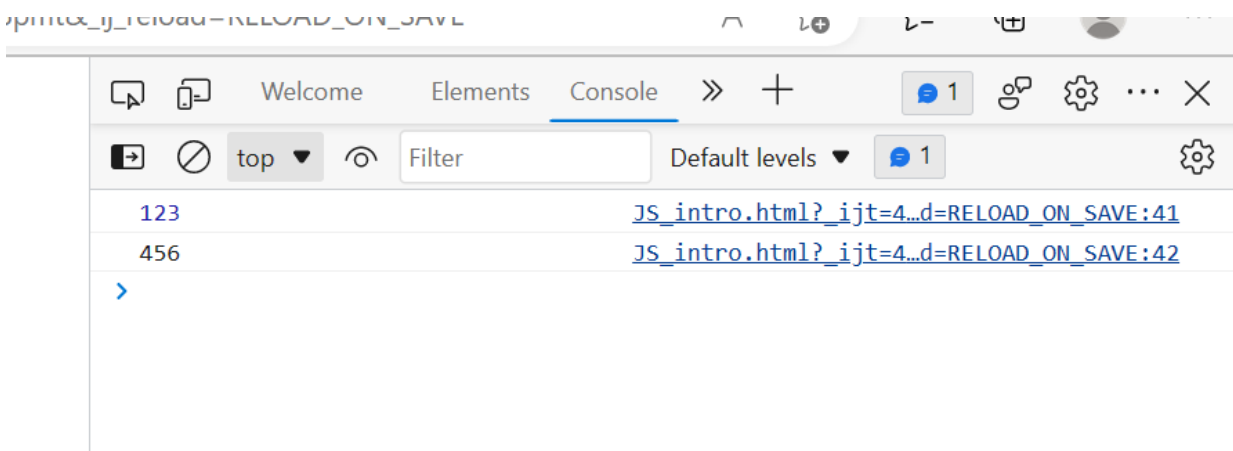




## 2. print

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Title</title>

</head>
<body>
  <script>
    var num1 = 123
    var str1 = '456'
    console.log(num1)
    console.log(str1)
  </script>
</body>
</html>
```



## 3. string

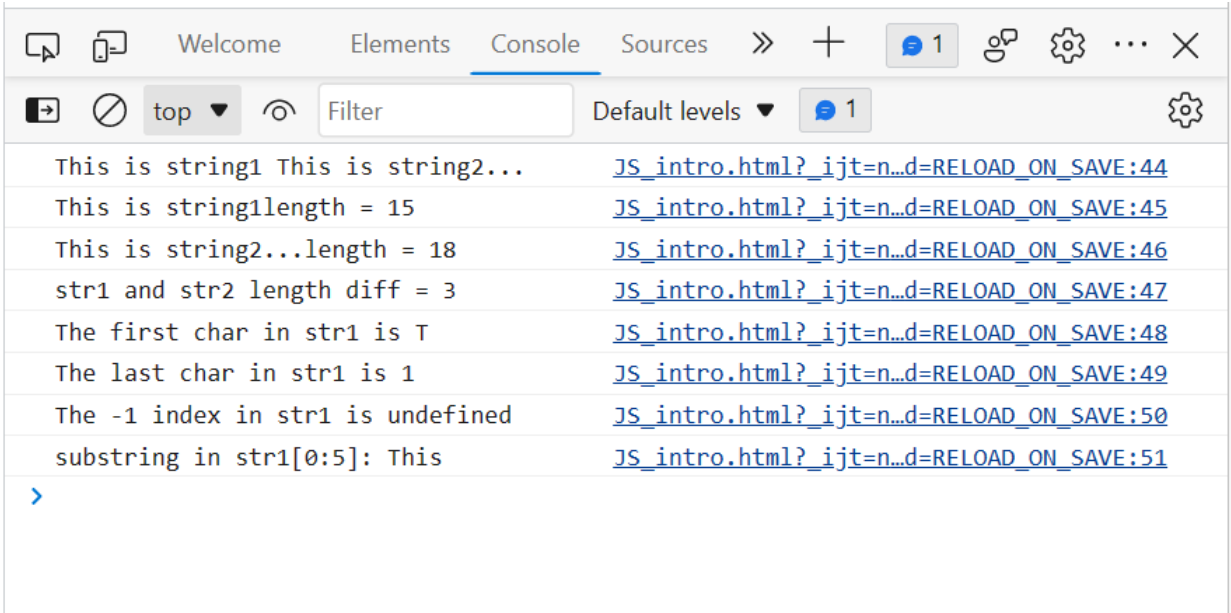
```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Title</title>

</head>
<body>

  <script>
    var str1 = "This is string1";
    var str2 = String("This is string2...");
    var str1Len = str1.length;
    var str2Len = str2.length;

    console.log(str1, str2)
    console.log(str1 + "length = " + String(str1Len))
    console.log(str2 + "length = " + String(str2Len))
    console.log("str1 and str2 length diff = " + String(str2Len-str1Len))
    console.log("The first char in str1 is " + str1[0])
    console.log("The last char in str1 is " + str1[str1Len-1])
    console.log("The -1 index in str1 is " + str1[-1])
    console.log("substring in str1[0:5]: " + str1.substr(0,5))
```

```
</script>
</body>
</html>
```



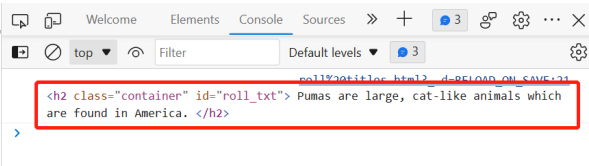
Ex: rolling title

1. get string from html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Roll Title</title>
  <style>
    .container {
      width: 638px;
      margin: 0 auto;
    }
  </style>
</head>
<body>
<h2 class="container" id="roll_txt">
  Pumas are large, cat-like animals which are found in America.
</h2>

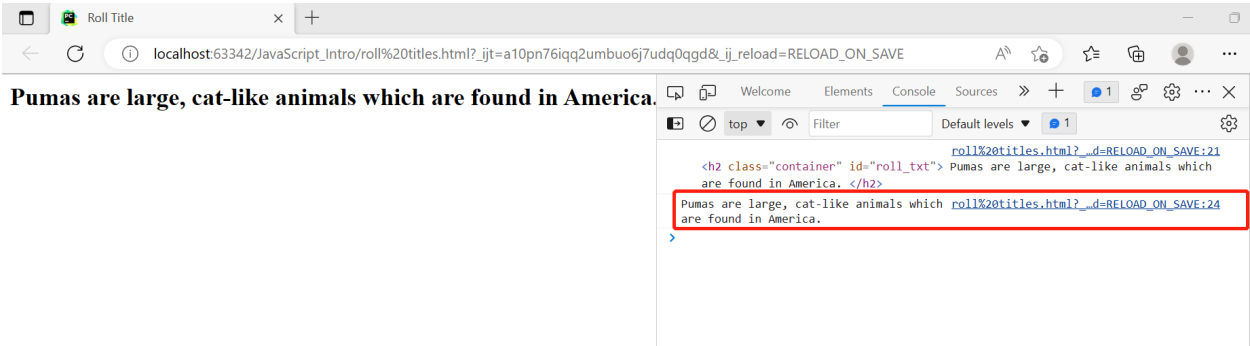
<script type="text/javascript">
  // get string (all element even h2 label) by id in html
  var tag = document.getElementById("roll_txt")
  console.log(tag)
</script>
</body>
</html>
```

Pumas are large, cat-like animals which are found in America.



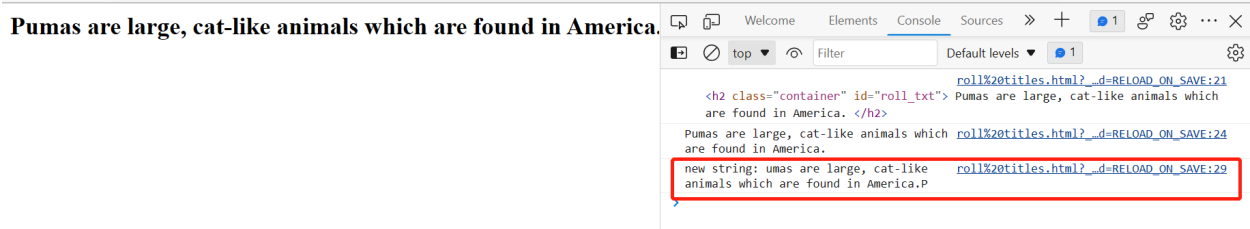
2. only get text in sting

```
<script type="text/javascript">
  // get string (all element even h2 label) by id in html
  var tag = document.getElementById("roll_txt")
  console.log(tag)
  // get text in the string
  var dataString = tag.innerText
  console.log(dataString)
</script>
```



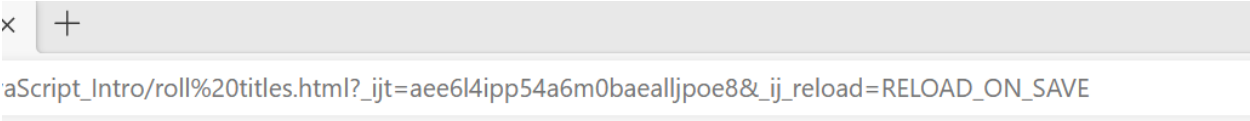
### 3. concat new string

```
<script type="text/javascript">
  // get string (all element even h2 label) by id in html
  var tag = document.getElementById("roll_txt")
  console.log(tag)
  // get text in the string
  var dataString = tag.innerText
  console.log(dataString)
  // put the first char in the string to the end of the string
  var firstChar = dataString[0];
  var leftString = dataString.substr(1, dataString.length);
  var dataString = leftString + firstChar
  console.log("new string: "+dataString)
</script>
```



### 4. show new sting

```
<script type="text/javascript">
  // get string (all element even h2 label) by id in html
  var tag = document.getElementById("roll_txt")
  console.log(tag)
  // get text in the string
  var dataString = tag.innerText
  console.log(dataString)
  // put the first char in the string to the end of the string
  var firstChar = dataString[0];
  var leftString = dataString.substr(1, dataString.length);
  var dataString = leftString + firstChar
  console.log("new string: "+dataString)
  // show new string
  tag.innerText = dataString;
</script>
```



umas are large, cat-like animals which are found in America.P

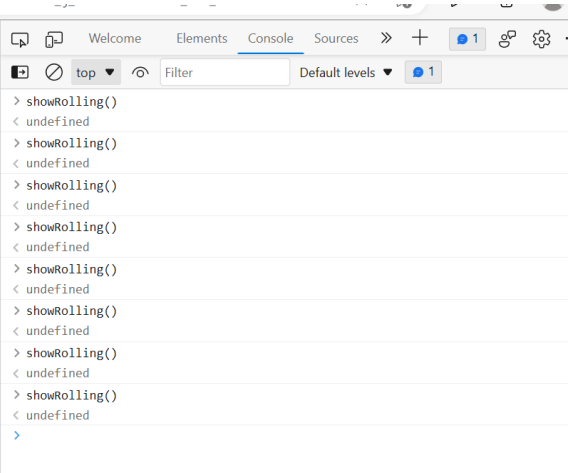
### 5. function

```
<script type="text/javascript">
  function showRolling() {
    // get string (all element even h2 label) by id in html
    var tag = document.getElementById("roll_txt")
    // console.log(tag)
    // get text in the string
    var dataString = tag.innerText
    // console.log(dataString)
```

```
        // put the first char in the string to the end of the string
        var firstChar = dataString[0];
        var leftString = dataString.substr(1, dataString.length);
        var dataString = leftString + firstChar
        // console.log("new string: "+dataString)
        // show new string
        tag.innerText = dataString;
    }

</script>
```

e large, cat-like animals which are found in America.Pumas a



## 6. timer

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Roll Title</title>
  <style>
    .container {
      width: 650px;
      margin: 0 auto;
    }
  </style>
</head>
<body>
<h2 class="container" id="roll_txt">
  Pumas&nbsp;pare&nbsp;&nbsp;large,&nbsp;&nbsp;cat-like&nbsp;animals&nbsp;which&nbsp;pare&nbsp;found&nbsp;in&nbsp;America.
</h2>

<script type="text/javascript">
  function showRolling() {
    // get string (all element even h2 label) by id in html
    var tag = document.getElementById("roll_txt")
    // console.log(tag)
    // get text in the string
    var dataString = tag.innerText
    // console.log(dataString)
    // put the first char in the string to the end of the string
    var firstChar = dataString[0];
    var leftString = dataString.substr(1, dataString.length);
    var dataString = leftString + firstChar
    // console.log("new string: "+dataString)
    // show new string
    tag.innerText = dataString;
  }
  setInterval(showRolling, 1000);
</script>
</body>
</html>
```

## 4. array

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Title</title>
</head>
<body>
```

```
<script>
  var arr1 = [1, 2, 3, 4, 5]
  var arr2 = Array([6, 7, 8])
  var arr3 = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
  console.log(arr1)
  console.log(arr2)
  console.log(arr3)
  console.log(arr1.length)
  console.log(arr3.length)
  console.log(arr3[0].length)
</script>

</body>
</html>
```

array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE

Welcome Elements Console Sources » + 1 1

top Filter Default levels 1

▼ Array(5) [array\\_intro.html?\\_ij...d=RELOAD\\_ON\\_SAVE:12](#)

- 0: 1
- 1: 2
- 2: 3
- 3: 4
- 4: 5
- length: 5
- [[Prototype]]: Array(0)

▼ Array(1) [array\\_intro.html?\\_ij...d=RELOAD\\_ON\\_SAVE:13](#)

- 0: (3) [6, 7, 8]
- length: 1
- [[Prototype]]: Array(0)

▼ Array(3) [array\\_intro.html?\\_ij...d=RELOAD\\_ON\\_SAVE:14](#)

- 0: (3) [1, 2, 3]
- 1: (3) [4, 5, 6]
- 2: (3) [7, 8, 9]
- length: 3
- [[Prototype]]: Array(0)

5 [array\\_intro.html?\\_ij...d=RELOAD\\_ON\\_SAVE:15](#)

3 [array\\_intro.html?\\_ij...d=RELOAD\\_ON\\_SAVE:16](#)

3 [array\\_intro.html?\\_ij...d=RELOAD\\_ON\\_SAVE:17](#)

>

WelcomeElementsConsoleSources>>+3

topFilterDefault levels3

▼ [Array(3)] ⓘ  
▶ 0: (3) [6, 7, 8]  
1: 12  
▶ 2: [23]  
3: "asdf"  
length: 4  
▶ [[Prototype]]: Array(0)

▶ (3) [Array(3), Array(3), Array(3)]

array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE:13

array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE:14

array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE:15

array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE:16

array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE:17

> arr2.push(12)  
< 2

> arr2.push([23])  
< 3

> arr2.push('asdf')  
< 4

> arr2[1] = 34  
< 34

> arr2  
< ▼ (4) [Array(3), 34, Array(1), 'asdf'] ⓘ  
▶ 0: (3) [6, 7, 8]  
1: 34  
▶ 2: [23]  
3: "asdf"  
length: 4  
▶ [[Prototype]]: Array(0)

>

ConsoleIssues+

WelcomeElementsConsoleSources>>+1

topFilterDefault levels1

▶ Array(5)

▼ Array(1) ⓘ  
0: "asdffdsa"  
▶ 1: (3) [6, 7, 8]  
length: 2  
▶ [[Prototype]]: Array(0)

▶ Array(3)

array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE:12

array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE:13

array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE:14

array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE:15

array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE:16

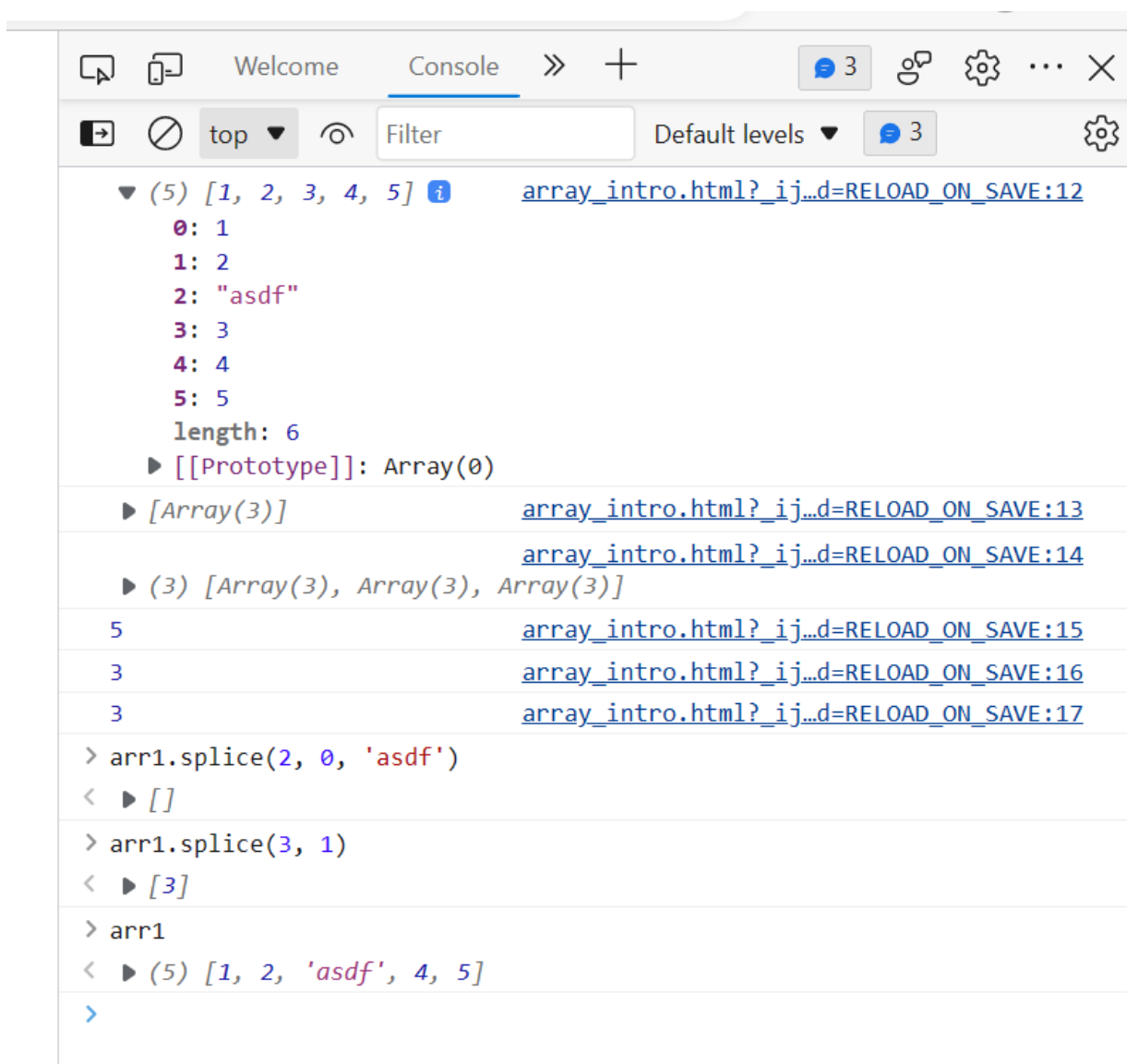
array\_intro.html?\_ij...d=RELOAD\_ON\_SAVE:17

> arr2.unshift('asdffdsa')  
< 2

<

JavaScript syntax

7



```

<script>
  var arr1 = [1, 2, 3, 4, 5]
  var arr2 = Array([6, 7, 8])
  var arr3 = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]

  for(var idx in arr1){
    console.log(idx, arr1[idx])
  }
  console.log(arr1)

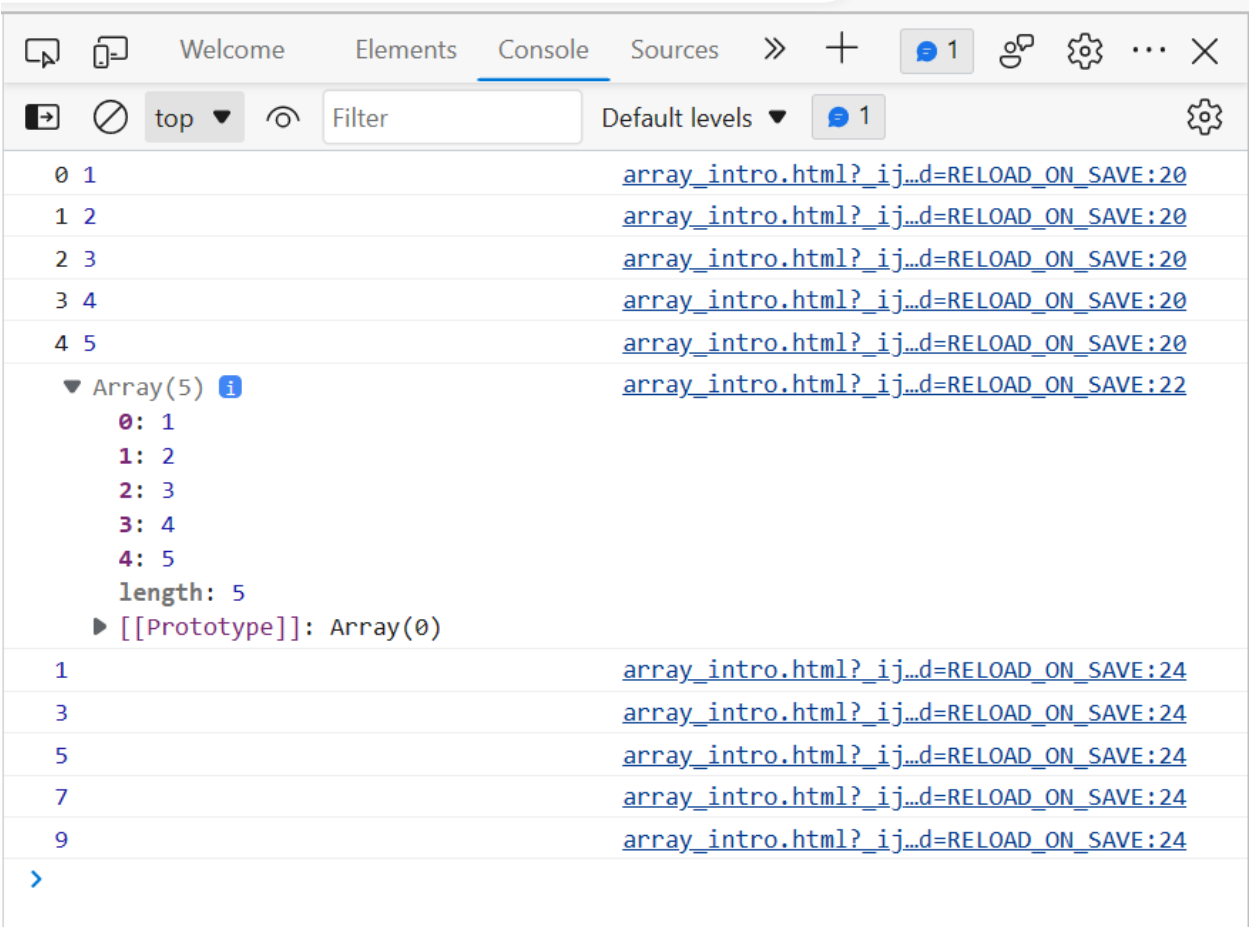
```



```

    for(var i=0; i<arr1.length; i++){
        console.log(i+arr1[i])
    }
</script>

```



## Ex: Dynamic creation

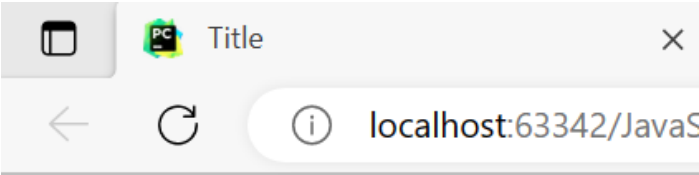
```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Title</title>
</head>
<body>
  <h2> City list </h2>
  <ul id="city">

  </ul>

  <script type="text/javascript">
    var cityList = ['Houston', 'Austin', 'Dallas'];
    for(var idx in cityList){
      var text = cityList[idx];
      // create label <li></li>
      var tag = document.createElement("li");
      // add text to label
      tag.innerText = text
      //find parent label by id
      var parentTag = document.getElementById("city")
      // append city to parent label
      parentTag.appendChild(tag)
    }
  </script>
</body>
</html>

```



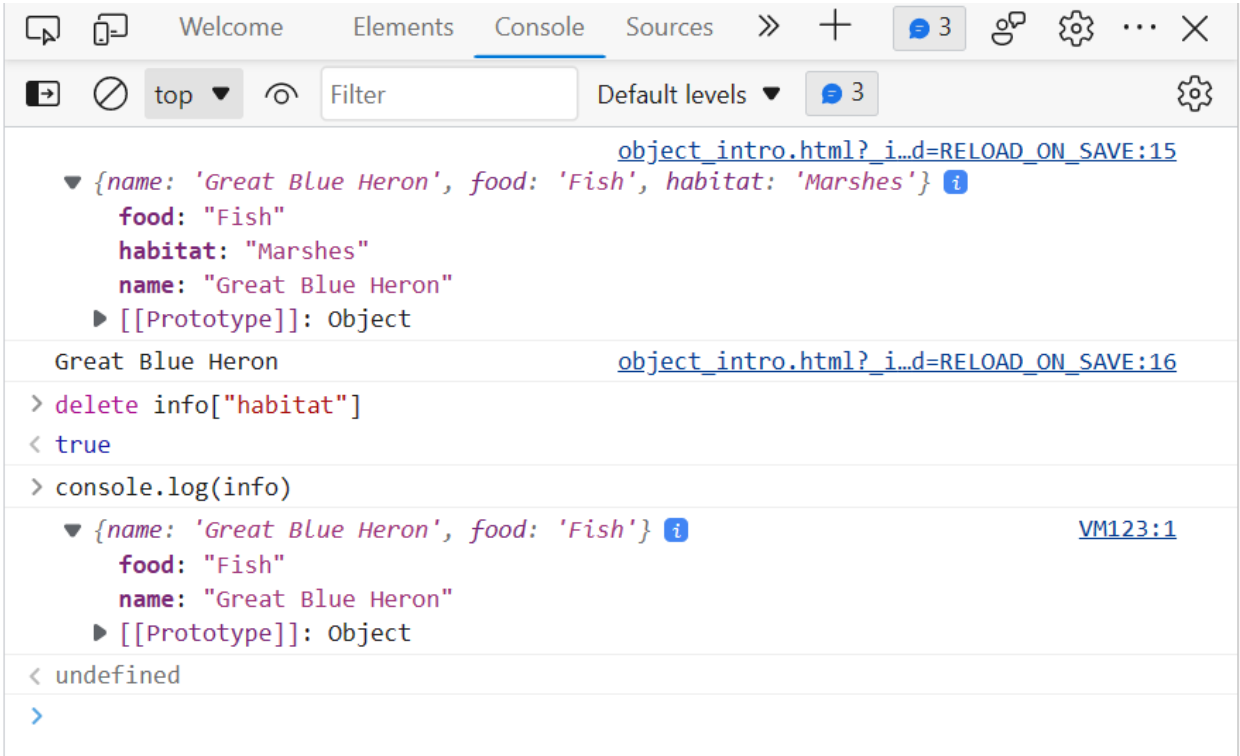
# City list

- Houston
- Austin
- Dallas

## 5. Objects

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Title</title>
</head>
<body>

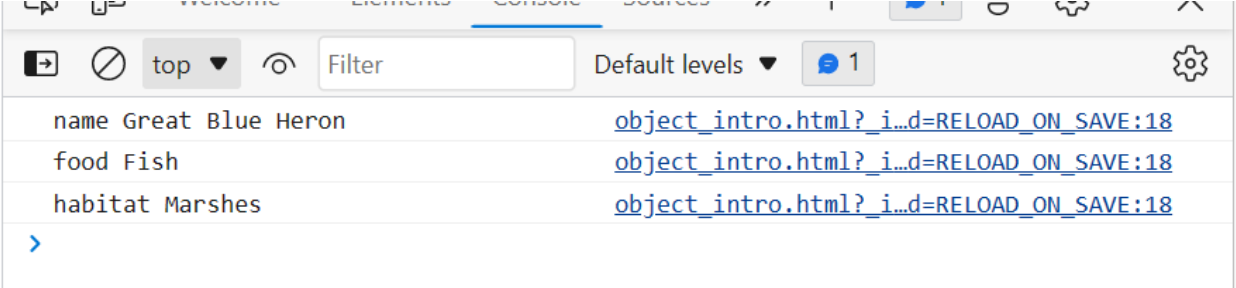
<script type="text/javascript">
  var info = {
    name: "Great Blue Heron",
    food: "Fish",
    habitat: "Marshes"
  }
  console.log(info)
  console.log(info["name"])
</script>
</body>
</html>
```



```
<script type="text/javascript">
  var info = {
    name: "Great Blue Heron",
    food: "Fish",
```

```
        habitat: "Marshes"
    }

    for(var key in info){
        console.log(key, info[key])
    }
</script>
```



The screenshot shows a web browser's developer console with the 'Console' tab selected. It displays a table with three rows of data. The first row is 'name Great Blue Heron', the second is 'food Fish', and the third is 'habitat Marshes'. Each row has a corresponding URL: 'object\_intro.html?\_id=RELOAD\_ON\_SAVE:18'. The table is styled with a blue border and a blue header. The console also shows a 'Filter' input and 'Default levels' dropdown.

name Great Blue Heron	<a href="object_intro.html?_id=RELOAD_ON_SAVE:18">object_intro.html?_id=RELOAD_ON_SAVE:18</a>
food Fish	<a href="object_intro.html?_id=RELOAD_ON_SAVE:18">object_intro.html?_id=RELOAD_ON_SAVE:18</a>
habitat Marshes	<a href="object_intro.html?_id=RELOAD_ON_SAVE:18">object_intro.html?_id=RELOAD_ON_SAVE:18</a>

Ex: Dynamic table

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Title</title>
</head>
<body>
<div style="margin: 0 auto; width: 1000px">
  <h2 style="color: #1b6d85; font-weight: bold">Table</h2>
  <table border="1" style="border: 2px dodgerblue">
    <thead>
      <tr>
        <th>ID</th>
        <th>Name</th>
        <th>Habitat</th>
        <th>Food</th>
        <th>Nesting</th>
      </tr>
    </thead>
    <tbody id="body">

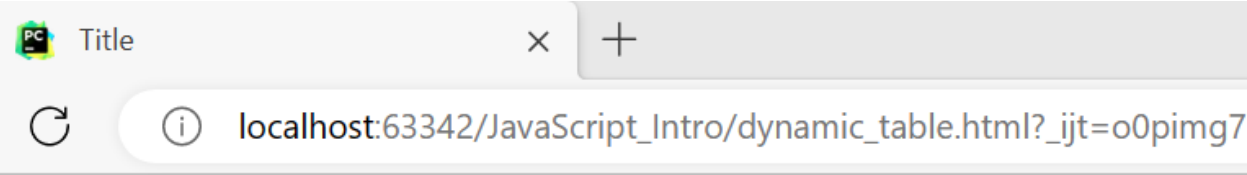
    </tbody>
  </table>
</div>

<script type="text/javascript">
  var info_list = [
    {id: 1, name: "Great Blue Heron", habitat: "Marshes", food: "Fish", nesting: "Tree"},
    {id: 2, name: "Laughing Gull", habitat: "Shorelines", food: "Aquatic invertebrates", nesting: "Ground"},
    {id: 3, name: "Sandwich Tern", habitat: "Shorelines", food: "Fish", nesting: "Ground"}
  ]
  for (var idx in info_list) {
    var info = info_list[idx];
    // var info = {id: 1, name: "Great Blue Heron", habitat: "Marshes", food: "Fish", nesting: "Tree"};

    var tr = document.createElement("tr");
    for (var key in info) {
      var text = info[key];
      var td = document.createElement("td");
      td.innerText = text;
      tr.appendChild(td);
    };
    var bodyTag = document.getElementById("body");
    bodyTag.appendChild(tr);
  }

</script>

</body>
</html>
```



## Table

ID	Name	Habitat	Food	Nesting
1	Great Blue Heron	Marshes	Fish	Tree
2	Laughing Gull	Shorelines	Aquatic invertebrates	Ground
3	Sandwich Tern	Shorelines	Fish	Ground

### 6. if ... else if ... else