Lecture # 6

JavaScript Lecture - 6

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Three basic types of operators

- Unary
- Binary
- Ternary

JavaScript String Operators

text1 = "Good ", text2 = "Morning", and text3 = ""

Operator	Example	text1	text2	text3
+	text3 = text1 + text2	"Good "	"Morning"	"Good Morning"
+=	text1 += text2	"Good Morning"	"Morning"	""

Comparison Operators (x=5)

Operator	Description	Comparing	Returns
==	equal to	x == 8	false
		x == 5	true
===	equal value and equal type	x === "5"	false
		x === 5	true
!=	not equal	x != 8	true
!==	not equal value or not equal type	x !== "5"	true
		x !== 5	false
>	greater than	x > 8	false
<	less than	x < 8	true
>=	greater than or equal to	x >= 8	false
<=	less than or equal to	x <= 8	true

Conditional (Ternary) Operator

- `<p>Input your age and click the button:</p>`
- `<input id="age" value="18">`
- `<button onclick="myFunction()">Try it</button>`
- `<p id="demo"></p>`
- `<script>`
- function myFunction() {
-     var age, voteable;
-     age = document.getElementById("age").value;
-     voteable = (age < 18) ? "Too young":"Old enough";
-     document.getElementById("demo").innerHTML = voteable + " to vote.";
- }
- `</script>`

The typeof Operator

document.getElementById("demo").innerHTML =
    typeof "John" + "<br>" +
    typeof 3.14 + "<br>" +
    typeof NaN + "<br>" +
    typeof false + "<br>" +
    typeof [1, 2, 3, 4] + "<br>" +
    typeof {name:'John', age:34} + "<br>" +
    typeof new Date() + "<br>" +
    typeof function () {} + "<br>" +
    typeof myCar + "<br>" +
    typeof null;

The delete Operator

```javascript
var person = {firstName:"John", lastName:"Doe", age:50, eyeColor:"blue"};
delete person.age;   // or delete person["age"];
```

- `<p id="demo"></p>`
- `<script>`
- var person = {
-     firstname:"John",
-     lastname:"Doe",
-     age:50,
-     eyecolor:"blue"
- };
- delete person.age;
- document.getElementById("demo").innerHTML =
- person.firstname + " is " + person.age + " years old.";
- `</script>`

The in Operator

- The **in** operator returns true if **the specified property** is in the specified object, otherwise false:

- <script>

- var person = {firstName:"John", lastName:"Doe", age:50};

- document.getElementById("demo").innerHTML =

-     ("Saab" in cars) + "<br>" +

-     (0 in cars) + "<br>" +

-     (1 in cars) + "<br>" +

-     (4 in cars) + "<br>" +

-     ("length" in cars) + "<br>" +

-     ("firstName" in person) + "<br>" +

-     ("age" in person) + "<br>" +

-     // Predefined objects

-     ("PI" in Math) + "<br>" +

-     ("NaN" in Number) + "<br>" +

-     ("length" in String);

- </script>

Conditional Statements

▶ In JavaScript we have the following conditional statements:

▶ Use **if** to specify a block of code to be executed, if a specified condition is true

▶ Use **else** to specify a block of code to be executed, if the same condition is false

▶ Use **else if** to specify a new condition to test, if the first condition is false

▶ Use **switch** to specify many alternative blocks of code to be executed

The if Statement

- If(condition)
  - Statement

- <script>
- if (new Date().getHours() < 18) {
-     document.getElementById("demo").innerHTML = "Good day!";
- }
- </script>

The else Statement

▶ if (*condition*) {
    block of code to be executed if the condition is true
} else {
    block of code to be executed if the condition is false
}

Example

```
<button onclick="myFunction()">Try it</button>

<p id="demo"></p>

<script>

function myFunction() {

    var hour = new Date().getHours();

    var greeting;

    if (hour < 18) {

        greeting = "Good day";

    } else {

        greeting = "Good evening";

    }

    document.getElementById("demo").innerHTML = greeting;

}
```

The else if Statement

- if (*condition1*) {
    block of code to be executed if condition1 is true
} else if (*condition2*) {
    block of code to be executed if the condition1 is false and condition2 is true
} else {
    block of code to be executed if the condition1 is false and condition2 is false
}

Example

```
<button onclick="myFunction()">Try it</button>
<p id="demo"></p>
<script>
function myFunction() {
    var greeting;
    var time = new Date().getHours();
    if (time < 10) {
        greeting = "Good morning";
    } else if (time < 20) {
        greeting = "Good day";
    } else {
        greeting = "Good evening";
    }
document.getElementById("demo").innerHTML = greeting;
}
</script>
```

JavaScript
End Of Lecture 6

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