



Conditional Statements And Loops in JavaScript

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Conditional Statements

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- ▶ Conditional statements are used to perform different actions based on different conditions.
- ▶ Very often when you write code, you want to perform different actions for different decisions. You can use conditional statements in your code to do this.

Conditional Statements

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In JavaScript we have the following conditional statements:

- ▶ if statement - use this statement to execute some code only if a specified condition is true
- ▶ if...else statement - use this statement to execute some code if the condition is true and another code if the condition is false
- ▶ if...else if....else statement - use this statement to select one of many blocks of code to be executed
- ▶ switch statement - use this statement to select one of many blocks of code to be executed

Conditional Statements

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if statement:

- ▶ Use the if statement to execute some code only if a specified condition is true.

Syntax:

```
if (condition)
{
  code to be executed if condition is true
}
```

- ▶ Note that if is written in lowercase letters. Using uppercase letters (IF) will generate a JavaScript error!
- ▶ Notice that there is no *..else..* in this syntax. You tell the browser to execute some code only if the specified condition is true.

Conditional Statements

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if statement:

Example:

```
<html><head><title></title></head><body>  
<script type="text/javascript">  
var Number=10;  
document.write("Number is="+Number);  
if ((Number%2)==0)  
{  
    document.write("Number "+Number+" is even");  
}  
</script> </body> </html>
```

Conditional Statements

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if.. else statement:

Syntax:

```
if (expression)
{
    statement(s) to be executed if expression is true
}

else
{
    statement(s) to be executed if expression is false
}
```

Conditional Statements

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if.. else statement:

Example:

```
<script type="text/javascript">  
  
var total = prompt("Enter your total", "50");  
  
if (total >=50)  
    {alert("PASSED")}  
else  
    {alert("FAILED")}  
  
</script>
```


Conditional Statements

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if.. else if statement:

Syntax:

```
if (expression 1)
{ statement(s) to be executed if expression 1 is true }
else if (expression 2)
{ statement(s) to be executed if expression 2 is true }
else if (expression 3)
{ statement(s) to be executed if expression 3 is true }
else
{ statement(s) to be executed if no expression is true }
```

Conditional Statements

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if.. else if statement:

Example:

```
<script type="text/javascript">

var age = prompt("Enter your age", "25");
if (age > 0 && age <= 3)
    {alert("WOW Baby")}
else if (age >= 4 && age < 13)
    {alert("You are child")}
else if (age >= 13 && age < 31)
    {alert("You are young ;')}')}
else if (age >= 31 && age < 46)
    {alert("Middle Age :/'")}
else if (age >= 46 && age < 71)
    {alert("You are old :('")}
else if (age >= 71 && age < 101)
    {alert("Get ready for a new world!!!")}
else
    {alert("Ageless")}

</script>
```

Conditional Statements

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switch case statement:

Syntax:

```
switch (expression)
{
    case condition 1: statement(s)
    break;
    case condition 2: statement(s)
    break;
    ...
    case condition n: statement(s)
    break;
    default: statement(s)
}
```

Conditional Statements

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switch case statement:

```
<body> <script type="text/javascript">
var flower=prompt("Which flower would you like to buy?","rose");
switch (flower) {
  case "rose":
    alert(flower + " costs 10TL");
    break;
  case "daisy":
    alert(flower + " costs 3TL");
    break;
  case "orchild":
    alert(flower + " costs 25TL");
    break;
  default:
    alert("SORRY =( there is no such flower in our shop");
    break; }
</script>
</body>
```

Loops

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For Loop:

For loop is the most compact form of looping and includes the following three important parts:

- ▶ the loop initialization where we initialize our counter to a starting value.
- ▶ The initialization statement is executed before the loop begins.
- ▶ The test statement which will test if the given condition is true or not. If condition is true then code given inside the loop will be executed otherwise loop will come out.
- ▶ The iteration statement where you can increase or decrease your counter.

Loops

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For Loop:

- ❖ You can put all the three parts in a single line separated by a semicolon.

Syntax:

```
for (initialization; test condition; iteration statement)
{
```

statement(s) to be executed if test condition is true

```
}
```

Loops

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For Loop:

Example:

```
<script type="text/javascript">
document.write("<h2>Multiplication table from (1 to 10)</h2>");
document.write("<table border=2 width=50%");

for (var i = 1; i <= 10; i++ )
{ //this is the outer loop
    document.write("<tr>");
    document.write("<td>" + i + "</td>");

    for ( var j = 2; j <= 10; j++ )
    { // inner loop
        document.write("<td>" + i * j + "</td>");
    }
    document.write("</tr>");
}
document.write("</table>");
</script>
```

Loops

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For Loop:

Example Output:

Multiplication table from (1 to 10)

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

Loops

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The while Loop:

- ❖ loops through a block of code as long as a specified condition is true.

Syntax:

```
while (condition)
{
```

statement(s) to be executed if expression is true

```
}
```

Loops

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The while Loop:

Example:

```
<script type="text/javascript">  
  var i=0;  
  while (i<= 10)  
  {  
    document.write("i = " +i );  
    i++;  
  }  
</script>
```

Loops

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The do..while Loop:

- ❖ similar to the while loop except that the condition check happens at the end of the loop.
- ❖ this means that the loop will always be executed at least once, even if the condition is false.

Syntax:

```
do
{
    statement(s) to be executed;
}
```

```
while (condition);
```

Loops

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The do..while Loop:

Example:

```
<script type="text/javascript">

var num = 0;

do{
  num = num + 5;
  document.write(num + "<br />");
}

while (num < 25);

</script>
```

Output:

5
10
15
20
25

Thank You !

