

Learning JavaScript

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JavaScript Condition Statements

Condition Statements

If statements

loop statements

switch statement

JavaScript Condition Statements

IF... THEN... ELSE...

If something is true, take a specified action. If false, take some other action (including doing nothing).

INCREMENT (DECREMENT)

A special type of assignment statement, such as $x=x+1$.

INITIALIZE

A special kind of assignment statement used to set initial values in a program.

LOOP (conditions)... END LOOP

Execute instructions repeatedly until (or as long as) certain conditions are met.

JavaScript Condition Statements

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

JavaScript Condition Statements

```
<html><head><title>My Page</title></head>
<script type="text/javascript">
var d = new Date()
var time = d.getHours()
if (time < 12)
{
  document.write("<b>Good morning</b>")
}
</script>
<p>This example demonstrates the If statement.</p>
<p>If the time on your browser is less than 12, you
  will get a "Good morning" greeting.</p>
</body>
</html>
```

JavaScript Condition Statements

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

JavaScript Condition Statements

```
<html><head><title>My Page</title></head>
<body>
<script type="text/javascript">
var d = new Date()
var time = d.getHours()
if (time < 12)  {
    document.write("<b>Good Morning</b>")
}
else  {
    document.write("<b>Good Day</b>")
}
</script>
<p>This example demonstrates the If...Else statement.</p>
<p>If the time on your browser is less than 12,you will get a
    "Good Morning" greeting. Otherwise you will get a "Good Day"
    greeting.</p>
</body>
</html>
```

JavaScript Condition Statements

```
<html><head><title>My Page</title>
<script type="text/javascript">
function ifClosed(){document.write("myWindow has been closed!");}
function ifNotClosed(){document.write("myWindow has not been closed!");}
function checkWin()
{
    if (myWindow.closed) {    ifClosed(); }
    else                    {    ifNotClosed();}
}
</script>
</head>
<body>
<script type="text/javascript">
myWindow = window.open('', '', 'width=200,height=100');
myWindow.document.write("This is 'myWindow'");
</script>
<input type="button" value="Has 'myWindow' been closed?" onclick="checkWin()"
/>
</body>
</html>
```


JavaScript Condition Statements

```
if (condition1)
  {
  code to be executed if condition1 is true
  }
Else if (condition2)
  {
  code to be executed if condition2 is true
  }
Else
  {
  code to be executed if all condition are false
  }
```

JavaScript Condition Statements

```
<html><head><title>My Page</title>
<script language="javascript">
function FindGrade() {
var valmarks = parseInt(document.getElementById("marks").value);
if (valmarks>70){      gradevalue = "A" }

????????????????????
????????????????
document.getElementById("grade").value = gradevalue;
}
</script>
</head>
<body>
<form>
  <input type="text" name="marks" id="marks" value = " " >
  <input type="button" value="Sub"  onClick=" FindGrade();">
  <input type="text" name=" grade " id="grade" value = " " >
</form>
</body>
</html>
```

JavaScript Condition Statements

```
<html><head><title>My Page</title>
<script language="javascript">
function FindGrade() {
var valmarks = parseInt(document.getElementById("marks").value);
if (valmarks>70){      gradevalue = "A" }
else if(valmarks>60){ gradevalue = "B" }
else if(valmarks>50){ gradevalue = "C" }
else if(valmarks>40){ gradevalue = "D" }
else if(valmarks>30){ gradevalue = "E" }
else{ gradevalue = "F" }
document.getElementById("grade").value = gradevalue;
}
</script>
</head>
<body>
<form>
  <input type="text" name="marks" id="marks" value = " " >
  <input type="button" value="Sub"  onClick=" FindGrade();" >
  <input type="text" name=" grade " id="grade" value = " " >
</form>
</body>
</html>
```

JavaScript comparators

- There are several *operators* used for making comparisons between variables
- The main arithmetic comparators are:
 - == equal
 - < less than
 - <= less than or equal to
 - > greater than
 - >= greater than or equal to
 - != not equal to

JavaScript Logic

- When making comparison you can also use logic functions
 - && and
 - || or (that's two 'pipes'; shift backslash)
 - ! not

Eg:

```
if (age > 18 && age < 60)
    {
    status = "Adults";
    }
else {
    status = "Young or very old";
    }
```

JavaScript Logic

```
<html><head><title>My Page</title>
<script type="text/javascript">
function Findage() {
var age = parseInt(document.getElementById("myage").value);
if (age > 18 && age < 60)
    {           document.write("<b> Adults!</b>");           }
else { document.write("<b> Young or very old!</b>"); }
}
</script>
</head>
<body><form>
<input type="text" name="myage" id="myage" value = " " >
  <input type="button" value="Sub"  onClick=" Findage();">
</form>
</body>
</html>
```

JavaScript Condition Statements

```
<html><head><title>My Page</title></head>
<body>
<script type="text/javascript">
var now = new Date();
var hour = now.getHours();

if (hour > 5 && hour <= 12) { document.write("<b>Good Morning!</b>");}

else if (hour > 12 && hour <= 17) { document.write("<b>Good Afternoon!</b>");}

else { document.write("<b>Good Evening!</b>");}

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

JavaScript – Form Validation

```
<html><head><title>My Page</title>
<script type="text/javascript">
function validateForm() {
if(document.getElementById("username").value == '') {
    alert('Please enter Username');
    document.getElementById("username").focus();
    return(false);
}
if(document.getElementById("password").value == '') {
    alert('Please enter Password');
    document.getElementById("password").focus();
    return(false);
}
return(true);
}
</script>
<body>
```


JavaScript – Form Validation

```
<body>
<form action="" onSubmit="return validateForm()">
<table width="400" border="0" cellspacing="0" cellpadding="0">
  <tr>
    <td>User Name</td>
    <td> <input name="username" type="text" id="username" class="" > </td>
  </tr>
  <tr>
    <td>Password</td>
    <td> <input name="password" type="text" id="password" class="" > </td>
  </tr>
  <tr>
    <td>&nbsp;</td>
    <td> <input type="submit" name="sub" value="Submit" id="sub" > </td>
  </tr>
</table>
</form>
</body>
</html>
```

The JavaScript Switch Statement

Use the switch statement to select one of many blocks of code to be executed.

```
<html><head><title>My Page</title></head>
<body>
<script type="text/javascript">
var d=new Date();
var theDay=d.getDay();
switch (theDay)
{
case 4:
    document.write("<b> Thursday </b>");
    break;
case 6:
    document.write("<b>Super Saturday</b>");
    break;
case 0:
    document.write("<b>Sleepy Sunday</b>");
    break;
default:
    document.write("<b>I'm really looking forward to this weekend!</b>");
}</script>
<p>This JavaScript will generate a different greeting based on what day it is.
    Note that Sunday=0, Monday=1, Tuesday=2, etc.</p>
</body></html>
```