

Java Script

5c Conditional Statements

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Dr. Jefferson Fong



Remarks

- We don't teach you every HTML, CSS and JS attributes and methods
 - There are too much stuff.
- You can **look things up** in **JavaScript Reference**
www.w3schools.com/jsref/default.asp

JS Reference
JS by Category
JS by Alphabet
JavaScript
JS Array
JS Boolean
JS Classes
JS Date

JavaScript Reference

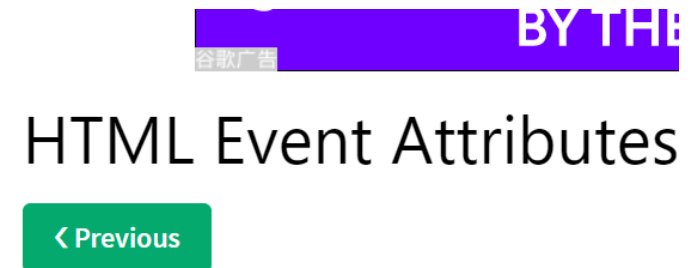
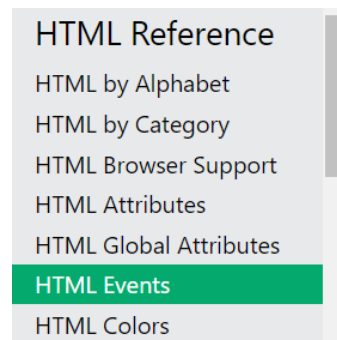
Properties and Methods of all JavaScript Objects, with Examples:

Array	String	Number	Math
Date	Global	RegExp	Object



Looks Things Up!

- For example, we've learned the event **onfocus**, when you click on a text input box.
- What happens if we type in something or leave the input box?
 - **onblur()**
- To find out, go to HTML references in w3schools.com (or search in Bing or Baidu for "W3Schools html onfocus")
 - You would find **onfocus** under HTML Events.
 - onfocus is listed under form events.
 - You can checkout other events.





Conditional Statements

Just like C

- The if-statement, else-statement and else-if-statement
 - https://www.w3schools.com/js/js_if_else.asp
- Switch Statement
 - https://www.w3schools.com/js/js_switch.asp
 - break Keyword
 - default Keyword
 - Code Blocks



If Statement

Just like C

The if Statement

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

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

- Example

```
if (hour < 18) {  
    greeting = "Good day";  
}
```





If Statement

```
<p>Display "Good day!" if the hour is less than 18:00:</p>
```

```
<p id="demo">Good Evening!</p>
```

```
<script>
```

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

```
</script>
```

Display "Good day!" if the hour is less than 18:00:
Good day!

- JS Booleans
- JS Comparisons
- JS If Else
- JS Switch
- JS Loop For
- JS Loop For In
- JS Loop For Of
- JS Loop While

The if Statement

Use the `if` statement to specify a block of JavaScript code if a condition is true.

Syntax

https://www.w3schools.com/js/js_if_else.asp



The else Statement

Just like C

- The else Statement
- Use the else statement to specify a block of code to be executed if the condition is false.
- If the hour is less than 18, create a "Good day" greeting, otherwise "Good evening":
 - Note the algorithm is wrong between midnight and dawn.



```
if (hour < 18) {  
    greeting = "Good day";  
} else  
    greeting = "Good evening";  
}
```

Sample code
5c1_Else.html



The else Statement


`<p>Click the button to display a time-based greeting:</p>`

`<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;  
}  
</script>
```



https://www.w3schools.com/js/tryit.asp?filename=tryjs_ifthenelse
Sample code 5c1_Else.html



The else if Statement

Just like C,

- Use the else if statement to specify a new condition if the first condition is false.

- Syntax

→

```
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  
}
```



The else if Statement

<p>Click the button to get a time-based greeting:</p>

<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>

https://www.w3schools.com/js/tryit.asp?filename=tryjs_elseif

Sample code 5c2_Elself.html



Class Exercise 1: Age Exercise

- Get the name and age from input text boxes.
- Output the following depending on the age entered:
 - Dear **username**, you are at least 21 years old. You can drink and drive in the US – but not at the same time!
 - Dear **username**, you are at least 18, but less than 21 years old. You cannot drink but you can drive in the US.
 - Dear **username**, you are under 18 years of age. You cannot drink or drive in many US states.



Switch Statement

https://www.w3schools.com/js/js_switch.asp

Just like C.

- The switch statement performs a different action based on different condition.

```
switch(expression) {  
  case m:  
    code block  
    break;  
  case n:  
    code block  
    break;  
  default:  
    code block  
}
```



Switch Statement

Just like C

- The switch expression is evaluated first.
 - *switch (expression)*
- The value of the expression is compared with the values of each case.
 - *case n:*
code block
break;
- If there is a match, the associated block is executed.
- Otherwise the default is executed
 - *default:*
code block



Switch Statement

The `getDay()` method returns the day of the week as a number between 0 and 6.
(Sunday=0, Monday=1, Tuesday=2 ..)

This example uses this number to calculate the day of the week name.

https://www.w3schools.com/js/tryit.asp?filename=tryjs_switch

Sample code 5c3_Switch.html

```
switch (new Date().getDay()) {  
  case 0:  
    day = "Sunday";  
    break;  
  case 1:  
    day = "Monday";  
    break;  
  case 2:  
    day = "Tuesday";  
    break;  
  case 3:  
    day = "Wednesday";  
    break;  
  case 4:  
    day = "Thursday";  
    break;  
  case 5:  
    day = "Friday";  
    break;  
  case 6:  
    day = "Saturday";  
}
```



The default Keyword

- If none of the cases match the switch value, the code block for **default** is executed.
- The **default** case is usually placed as the last case.

```
default:  
    text = "Looking forward to the Weekend";
```



The default Keyword

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

```
<script>
```

```
var text;
```

```
switch (new Date().getDay()) {
```

```
    case 6:
```

```
        text = "Today is Saturday";
```

```
        break;
```

```
    case 0:
```

```
        text = "Today is Sunday";
```

```
        break;
```

```
    default:
```

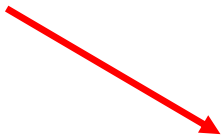
```
        text = "Looking forward to the Weekend";
```

```
}
```

```
document.getElementById("demo").innerHTML = text;
```

```
</script>
```

https://www.w3schools.com/js/tryit.asp?filename=tryjs_switch2





Common Code Blocks

- Sometimes we have different switch cases using the same code block.
- E.g., case 4 and 5 share the same code block, and 0 and 6 share another code block.

```
var text;  
switch (new Date().getDay()) {  
    case 4:  
    case 5:  
        text = "It's almost the Weekend";  
        break;  
    case 0:  
    case 6:  
        text = "It is Weekend";  
        break;  
    default:  
        text = "Looking forward to the  
                Weekend";  
}
```



Class Exercise 2: SwitchCar Exercise

- Download the file: **5c_SwitchCarExercise.html**
- Finish the switch statement. Add the following cases: BMW, Ford and Toyota.
- Set the value of the variable text to: "German car" for BMW. "American car" for Ford. "Japanese car" for Toyota.
- Also add a default case where the text value is "Unknown car name".

<input type="text" value="BMW"/>	<input type="button" value="Check Car"/>

<input type="text" value="BMW"/>	<input type="button" value="Check Car"/>
German car	