

Introduction to Programming

Class 8, 25 January 2017

Goals

Goal 1: You will understand how computers make decisions.

Goal 2: You will know how to implement an if-else statement in JavaScript.

Vocabulary

If-else statement

Code

```
if () {  
} else {}  
  
<  
>  
  
!=  
  
<=  
>=
```

Getting to know you

- **Randomize Groups**
- **What is one goal you'd like to accomplish during your lifetime?**

What is a **block** of code?

What is a **block** of code?

- A **code block** is a section of code that is **grouped together**.

How can you recognize a
block of code?

How can you recognize a block of code?

- A code block is denoted by curly braces {}.
- The first curly brace is in-line.
- All lines in a code block are indented by 2, 4, or 8 spaces.

Comparison Operators

==

!=

<

<=

>

>=

If statement practice

Translate the following into if statements:

If a person's name is "Angelina", then display "I want out of this marriage."

```
if (name == "Angelina") {  
    alert("I want out of this marriage.");  
}
```

==

!=

<

<=

>

>=

If statement practice

Translate the following into if statements:

If a person's age is at least 35, then display "You can be President of the US."

```
if (age >= 35) {  
    alert("You can be President of the  
US.");  
}
```

==

!=

<

<=

>

>=

If statement practice

Translate the following into if statements:

If a person's status is not "Present", then add 1 to the absenceTotal variable and save the new value.

```
if (status != "Present") {  
    absenceTotal = absenceTotal + 1;  
}
```

==

!=

<

<=

>

>=

Practice Task

- Create a program that asks for three prices and adds those prices together.
- Check to make sure that the entered prices are not negative.
- If an entered price is negative, replace it with 0.
- Display the total at the end of your program,

==

!=

<

<=

>

>=

Practice Task

```
1 <script>
2 // This program adds three non-negative prices together.
  And displays the total.
3
4 // get the prices
5 var price1String = prompt("Enter the first price.");
6 var price2String = prompt("Enter the first price.");
7 var price3String = prompt("Enter the first price.");
8
9 // convert to numbers
10 var price1 = parseFloat(price1String);
11 var price2 = parseFloat(price2String);
12 var price3 = parseFloat(price3String);
13
14 // check if prices are negative
15 if(price1 < 0) {
16     price1 = 0;
17 }
18 if(price2 < 0) {
19     price2 = 0;
20 }
21 if(price3 < 0) {
22     price3 = 0;
23 }
24
25 // calculate total
26 var total = price1 + price2 + price3;
27 var message = "Total is " + total;
28
29 // display message
30 alert(message);
31 </script>
```

==

!=

<

<=

>

>=

Practice Task

Create a program that asks for an integer.
If the integer is even, display "It's even!"

==

!=

<

<=

>

>=

Practice Task

```
1  <script>
2  // This program determines if a number is even or odd.
3
4  // Prompt for and convert a number
5  var numString = prompt("Enter an integer");
6  var num = parseInt(numString);
7
8  var message = "";
9
10 if (num % 2 == 0) {
11     message = "It's even.";
12 }
13
14 alert(message)
15
16 </script>
```

==

!=

<

<=

>

>=

Practice Task

Create a program that asks for an integer.
If the integer is even, display "It's even!"
If the integer is odd, display "It's odd!"

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

==
!=
<
<=
>
>=

Practice Task

```
1  <script>
2  // This program determines if a number is even or odd.
3
4  // Prompt for and convert a number
5  var numString = prompt("Enter an integer");
6  var num = parseInt(numString);
7
8  var message = "";
9
10 if (num % 2 == 0) {
11     message = "It's even.";
12 } else {
13     message = "It's odd.";
14 }
15
16 alert(message)
17
18 </script>
```

==

!=

<

<=

>

>=

Practice Task

if-else-statement



```
if ( num % 2 == 0 ) {  
    message = "It's even";  
} else {  
    message = "It's odd";  
}
```

==
!=
<
<=
>
>=

Practice Task

Will only execute the if



```
if ( num % 2 == 0 ) {  
    message = "It's even";  
} else {  
    message = "It's odd";  
}
```

==
!=
<
<=
>
>=

Practice Task

==
!=
<
<=
>
>=

```
if ( num % 2 == 0 ) {  
    message = "It's even";  
} else {  
    message = "It's odd";  
}
```




OR the else, but not both

Practice Task

Executed if condition is TRUE

==
!=
<
<=
>
>=




```
if ( num % 2 == 0 ) {  
    message = "It's even";  
} else {  
    message = "It's odd";  
}
```

Practice Task

==
!=
<
<=
>
>=

Executed if condition is FALSE

```
if ( num % 2 == 0 ) {  
    message = "It's even";  
} else {  
    message = "It's odd";  
}
```



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