Introduction to Programming

Class 9, 21 September 2016

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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 {}
<
>
!=
<=
>=
```

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Partners

- Naz & Alaa
- Izzy & Kendall
- Matthew & Lorenzo
- Thomas C & Michael
- Nic & Lindsay
- Jack & Dom
- Chloe & Vikram
- Jake & Lauren & Reece
- Thomas B & Max

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

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What is a block of code?

What is a block of code?

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

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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.

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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,

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Practice Task

```
<script>
// This program adds three non-negative prices together.
And displays the total.

// get the prices
var price1String = prompt("Enter the first price.");
var price2String = prompt("Enter the first price.");
var price3String = prompt("Enter the first price.");

// convert to numbers
var price1 = parseFloat(price1String);
var price2 = parseFloat(price2String);
var price3 = parseFloat(price3String);

// check if prices are negative
if(price1 < 0) {
    price1 = 0;
}
if(price2 < 0) {
    price2 = 0;
}
if(price3 < 0) {
    price3 = 0;
}

// calculate total
var total = price1 + price2 + price3;
var message = "Total is " + total;

// display message
alert(message);
</script>
```

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Practice Task

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

== != < <= > >=

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Practice Task

```
<script>
// This program determines if a number is even or odd.

// Prompt for and convert a number
var numString = prompt("Enter an integer");
var num = parseInt(numString);

var message = "";

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

alert(message)

</script>
```

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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!"

== != < <= > >=

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>
```

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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";
}
```

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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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