Conditionals

- Used when a decision must be made between one or more possibilities (conditions)
- Basic conditional
  ```javascript
  if (<T/F Statement>) { // tests for one condition: true
    <code statements>;
  }
  ```
- General conditional
  ```javascript
  if (<T/F Statement>) { // tests for one condition, allows 2 outcomes. One for True,
    <code statements>;
  }
  else { // the other for False (or otherwise)
    <code statements>;
  }
  ```

Conditionals

- Multiple conditions to check….
  ```javascript
  if (<T/F Statement>) { // tests for multiple conditions
    <code statements>;
  } else if (<T/F Statement>) { 
    <code statements>;
  } else if (<T/F Statement>) { 
    <code statements>;
  } else { // if none of previous are true, do
    <code statements>; // otherwise
  }
  ```

What writes to the screen?

```javascript
var number = 4;
if (number > 0) {
    document.write("Number is a positive integer");
} else if (number < 0) {
    document.write("Number is a negative integer");
} else {
    document.write("Number is 0");
}
```

But, what if….?

- What does this print?
  ```javascript
  var x ;
x=10;
  if (x > 1) {
    document.write("Wassup!");
  } else if (x > 2) {
    document.write("Dude");
  } else {
    document.write("Mariners");
  } 
  document.write("The End");
  ```
Let's Move From Theory to Practice!

- We want to write a program that takes an integer as input and outputs whether or not the result is a positive number or negative number
  - How should we get the user's input?
  - How do we tell if the input is positive or negative?
  - How should we output the "positive" or "negative" evaluation to the user?
    - Be Creative!

Design on Paper!

How well do you understand the idea of conditionals?

Working Away from the Computer

- Form teams of 8-10
- You are creating a program using HTML and JavaScript.
- There are 2 parts to the design:
  - Part I: Create a program that will allow a user to enter in the outside temperature. The computer will respond with an opinion about it. There will be 3 opinions:
    - Too cold!
    - Just right!
    - Too damned hot!
  - Part II (if there is time): Add statements that will convert the Fahrenheit temperature give to Celsius and display the result

Working Away from the Computer

- Start by drawing a simple interface that will:
  - Give instructions
  - Take user input
  - Allow the input to be used when the user clicks or submits to the program
  - Give a response to the user
- Name all objects used in your form!!!
Working Away from the Computer

- Where is the most logical place to add code statements that will:
  - Take the user input and compare it to see if it is over 80, under 60, or somewhere in-between?
  - Convert the temperature the user enters into Celsius and display it?
    - The formula to convert Fahrenheit to Celsius is: \[ C = \frac{5}{9}(F - 32) \]
  - Reset the form?