JavaScript Concepts Cont.

- 1. JavaScript always assigns variables by value. But this part is very important:
 - a. when the assigned value is one of JavaScript's five primitive type (i.e., Boolean, null, undefined, String, and Number) the actual value is assigned.
 - b. When the assigned value is an Array, Function, or Object a reference to the object in memory is assigned

In the following snippet, var2 is set as equal to var1.

Since var1 is a primitive type (String), var2 is set as equal to var1's String value and can be thought of as completely **distinct** from var1 at this point.

Accordingly, reassigning var2 has not effect on var1.

```
<!DOCTYPE html>
<html>
<head>
<script>
//function definition
function myFunction() {
let var1 = 'My string';
let var2 = var1;
var2 = 'My new string';
 document.getElementById("demo1").innerHTML = var1; //output statement to html
 document.getElementById("demo2").innerHTML = var2; //output statement to html
</script>
</head>
<body>
<h1>Week 4 exercises</h1>
First Variable:Second Variable:
<button type="button" onclick="myFunction()">Run it
</body></html>
```

Week 4 exercises

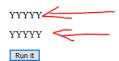
My string
My new string
Run it

2. Object Oriented Concept: Object assignment

When the assigned value is an Array, Function, or Object a reference to the object in memory is assigned

```
<!DOCTYPE html>
<html>
<head>
<script>
//function definition
function myFunction() {
let var1 = {name: 'XXXXXX'}
let var2 = var1; //var2 gets the same memory location as var1
var2.name = 'YYYYY';//assignment to a memory location for var1 and var2
 document.getElementById("demo1").innerHTML = var1.name; //output statement to html
 document.getElementById("demo2").innerHTML = var2.name;    //output statement to html
</script>
</head>
<body>
<h1>Week 4 exercises</h1>
demo1">First Variable:id="demo2">Second Variable:
<button type="button" onclick="myFunction()">Run it</button>
</body>
</html>
```

Week 4 exercises



3. Simple Conditionals

```
<!DOCTYPE html>
<h+m1>
<head>
<script>
//variable declaration and initialization
//function definition
function myFunction() {
var now = new Date // build-in Date class.
var thisYear = now.getYear()
var YOB = 2000
 document.getElementById("demo0").innerHTML = thisYear; //output statement to html
 if (thisYear < 1900) { thisYear += 1900} //need to adjust the date value
 document.getElementById("demo1").innerHTML = thisYear; //output statement to html
 document.getElementById("demo2").innerHTML = YOB;    //output statement to html
  document.qetElementById("demo3").innerHTML = thisYear-YOB; //output statement to html
</script>
</head>
```

```
<body>
<h1>Week 4 exercises</h1>

 id="demo0">CurrentYear without adjustment:
 id="demo1">CurrentYear:
 id="demo2">Your YOB:
 id="demo3">Your Age:
<button type="button" onclick="myFunction()">Run it</button>
</body>
</html>
```

Week 4 exercises

120

2020

2000

20

Run it

4. Conditionals with

If else if

```
<!DOCTYPE html>
<html>
 <head>
   <meta charset="utf-8">
   <title>Simple else if example</title>
 </head>
  <body>
   <label for="weather">Select the weather type today: </label>
   <select id="weather">
     <option value="">--Make a choice--</option>
     <option value="sunny">Sunny</option>
     <option value="rainy">Rainy</option>
     <option value="snowing">Snowing</option>
     <option value="overcast">Overcast</option>
   </select>
<script>
</script>
   const select = document.querySelector('select');
     const para = document.querySelector('p');
         select.onchange = setWeather;
        function setWeather() {
       const choice = select.value;
       if(choice === 'sunny') {
         para.textContent = 'It is nice and sunny.';
        } else if(choice === 'rainy') {
```

```
para.textContent = 'Rain is falling outside;';
} else if(choice === 'snowing') {
    para.textContent = 'The snow is coming down.';
} else if(choice === 'overcast') {
    para.textContent = 'It isn\'t raining, but the sky is grey and gloomy;';
} else {
    para.textContent = '';
}

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