

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>
<p id="demo1">First Variable:</p><p id="demo2">Second Variable:</p>
<button type="button" onclick="myFunction()">Run it</button>
</body></html>
```

Week 4 exercises

My string 
My new string 


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>
<p id="demo1">First Variable:</p><p id="demo2">Second Variable:</p>
<button type="button" onclick="myFunction()">Run it</button>

</body>
</html>
```

Week 4 exercises

YYYYY ←

YYYYY ←

3. Simple Conditionals

```
<!DOCTYPE html>
<html>
<head>
<script>
//variable declaration and initialization
//function definition
function myFunction() {

  var now = new Date // build-in Date class.
  var thisYear = now.getFullYear()
  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.getElementById("demo3").innerHTML = thisYear-YOB; //output statement to html
}
</script>
</head>
```

```

<body>

<h1>Week 4 exercises</h1>
<p id="demo0">CurrentYear without adjustment:</p>
<p id="demo1">CurrentYear:</p>
<p id="demo2">Your YOB:</p>
<p id="demo3">Your Age:</p>

<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>

    <p></p>

    <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>
```