Introduction to JS

- JS is a programming/coding language used make web pages or a website more dynamic or functional in nature.

- It makes the web pages dynamic or functional through its inbuilt (already written and stored) methods, also called inbuilt JS functions.

- JavaScript is designed on a simple object-based paradigm. An object is a collection of properties, and a property is an association between a name (or key) and a value.
  E.g. var person = {firstName:"John", lastName:"Doe", age:50, eyeColor:"blue"};

- You can objects in two ways:
  1. objectName.propertyName E.g. person.lastName;
  2. objectName["propertyName"] E.g. person["lastName"];

- Most of the inbuilt JS methods are objects in nature containing a huge list of key-value properties to manipulate web page. One Such JS object to manipulate a web page is style object. This style object has many keys like border, minWidth, padding, margin, position, color, width, height, textTransform, overflowm overflowX, overflowY, marginBottom, marginTop, etc.
  Now, the values to these keys are nothing but the ones given by a developer through css property-value set code like color:red is defined in the css style, this piece of css code will embed the value 'red' to the key 'color' in JS pre-defined style object; which can then be modified dynamically through JS functions and conditions.

- This entire feature of JS is segregated as JS-DOM

- JS DOM takes help of event-handlers as HTML attributes like onclick, onerror, onresize, onload etc. to execute the script written inside a JS file.

- JS much alike CSS may vary in types:
  When an external JS file is maintained to write a code with an extension .js, it is called an external js type and is called in the head section of HTML through a script tag as shown here script src="myscripts.js"
  Another way is to declare the script functions and methods inside the script tag either in the head section or the bottom of body section on a web page. Preferred is to place the script tag always on the bottom of the body tag because while a script loads it tends to hinder the rendering of CSS which leaves a web page without any visual effects to appear as plain distorted text until entire script loads, and if placed in head section it will prevent all the css files called in the head section to not load until script is fully loaded.

- Another type of JS object is 'document' as it contains keys like 'write', getElementById(), getElementsByClassName etc. These keys are a function or a method in nature which further contain a piece of code pre-defined to carry out some task, some of them may further act as object to wrap some keys and values.

- E.g. function changeTheme(){
  if(document.getElementById('bodyWrapper').style.backgroundColor ==
  "black"){
  document.getElementById('bodyWrapper').style.backgroundColor = "white";
  }
  else{
  document.getElementById('bodyWrapper').style.backgroundColor = "black";
  }

- Reference link to study JS-DOM from:
  https://www.w3schools.com/js/js_htmldom.asp