JavaScript Assignments for Practice

1. Write a JavaScript program to display the current day and time in the following format.   
   Sample Output : Today is : Friday.   
   Current time is : 4 PM : 50 : 22
2. Write a JavaScript program to print the contents of the current window.
3. Write a JavaScript program to get the current date.   
   *Expected Output* :   
   mm-dd-yyyy, mm/dd/yyyy or dd-mm-yyyy, dd/mm/yyyy
4. Write a JavaScript program to find the area of a triangle where lengths of the three of its sides are 5, 6, 7.
5. Write a JavaScript program to rotate the string 'w3resource' in right direction by periodically removing one letter from the end of the string and attaching it to the front.
6. Write a JavaScript program to determine whether a given year is a leap year in the Gregorian calendar.
7. Write a JavaScript program to calculate multiplication and division of two numbers (input from user).
8. Write a JavaScript program to convert temperatures to and from celsius, fahrenheit.
9. Write a JavaScript program to get the website URL (loading page).
10. Write a JavaScript function that reverse a number.
11. Write a JavaScript function that generates all combinations of a string.

Example string : 'dog'   
Expected Output : d,do,dog,o,og,g

1. Write a JavaScript function that returns a passed string with letters in alphabetical order.Example string : 'webmaster'   
   Expected Output : 'abeemrstw'
2. Write a JavaScript function that accepts a string as a parameter and converts the first letter of each word of the string in upper case.   
   Example string : 'the quick brown fox'   
   Expected Output : 'The Quick Brown Fox '
3. Write a JavaScript function that accepts a string as a parameter and find the longest word within the string.   
   Example string : 'Web Development Tutorial'   
   Expected Output : 'Development'
4. Write a JavaScript function that accepts a string as a parameter and counts the number of vowels within the string.   
   Note : As the letter 'y' can be regarded as both a vowel and a consonant, we do not count 'y' as vowel here.   
   Example string : 'The quick brown fox'   
   Expected Output : 5
5. Write a JavaScript function that accepts a number as a parameter and check the number is prime or not.   
   Note : A prime number (or a prime) is a natural number greater than 1 that has no positive divisors other than 1 and itself.
6. Write a JavaScript function which accepts an argument and returns the type.

Note : There are six possible values that typeof returns: object, boolean, function, number, string, and undefined.

1. Write a JavaScript function which will take an array of numbers stored and find the second lowest and second greatest numbers, respectively.

*Sample array :* [1,2,3,4,5]  
Expected Output : 2,4

1. Write a JavaScript function to extract unique characters from a string.
2. Write a JavaScript function to  get the number of occurrences of each letter in specified string.

Math:

1. Write a JavaScript program to calculate the factorial of a number.

In mathematics, the factorial of a non-negative integer n, denoted by n!, is the product of all positive integers less than or equal to n. For example, 5! = 5 x 4 x 3 x 2 x 1 = 120

1. Write a JavaScript program to find the greatest common divisor (gcd) of two positive numbers.
2. Write a JavaScript program to compute the sum of an array of integers.   
   Example : var array = [1, 2, 3, 4, 5, 6]  
   Expected Output : 21
3. Write a JavaScript program to compute the exponent of a number.   
   Note : The exponent of a number says how many times the base number is used as a factor.  
   82 = 8 x 8 = 64. Here 8 is the base and 2 is the exponent.
4. Write a JavaScript program to check whether a number is even or not.
5. Write a JavaScript program for binary search.   
   Sample array : [0,1,2,3,4,5,6]  
   console.log(l.br\_search(5)) will return '5'
6. Write a merge sort program in JavaScript.   
   Sample array : [34,7,23,32,5,62]  
   Sample output : [5, 7, 23, 32, 34, 62]
7. Write a JavaScript program to construct the following pattern, using a nested for loop.



DOM

1. Here is a sample html file with a submit button. Now modify the style of the paragraph text through javascript code.   
   Sample HTML file :

<!DOCTYPE html**>**

**<html><br><head>**

**<meta** charset=utf-8 **/>**

**<title>**JS DOM paragraph style**</title>**

**</head>**

**<body>**

**<p** id ='text'**>**JavaScript Exercises **</p>**

**<div>**

**<button** id="jsstyle"

onclick="js\_style()"**>**Style**</button>**

**</div>**

**</body>**

**</html>**

Clicking on the button the font, font size, and color of the paragraph text will be changed.

1. Here is a sample html file with a submit button. Write a JavaScript function to get the value of the href, hreflang, rel, target, and type attributes of the specified link.

<!DOCTYPE html**>**

**<html><head>**

**<meta** charset=utf-8 **/>**

**</head>**

**<body>**

**<p><a** id="msft" type="text/html" hreflang="enus" rel="nofollow" target="\_self" href="http://www.microsoft.com/"**>**Microsoft**</a></p>**

**<button** onclick="getAttributes()"**>**Click here to get  attributes value**</button>**

**</body></html>**

1. Write a JavaScript function to add rows to a table.  
   Sample HTML file :

<!DOCTYPE html**>**

**<html><head><br><meta** charset=utf-8 **/>**

**<title>**Insert row in a table **</title>**

**</head><body>**

**<table** id="sampleTable" border="1"**>**

**<tr><td>**Row1 cell1**</td>**

**<td>**Row1 cell2**</td></tr>**

**<tr><td>**Row2 cell1**</td>**

**<td>**Row2 cell2**</td></tr>**

**</table><br>**

**<input** type="button" onclick="insert\_Row()" value="Insert row"**>**

**</body></html>**

1. Write a JavaScript function that accept row, column, (to identify a particular cell) and a string to update the content of that cell.

<!DOCTYPE html**>**

**<html><head><br><meta** charset=utf-8 **/>**

**<title>**Change the content of a cell**</title>**

**</head><body>**

**<table** id="myTable" border="1"**>**

**<tr><td>**Row1 cell1**</td>**

**<td>**Row1 cell2**</td></tr>**

**<tr><td>**Row2 cell1**</td>**

**<td>**Row2 cell2**</td></tr>**

**<tr><td>**Row3 cell1**</td>**

**<td>**Row3 cell2**</td></tr>**

**</table><form>**

**<input** type="button" onclick="changeContent()" value="Change content"**>**

**</form></body></html>**

1. Write a JavaScript function that creates a table, accept row, column numbers from the user, and input row-column number as content (e.g. Row-0 Column-0) of a cell.

<!DOCTYPE html**>**

**<html>**

**<head>**

**<meta** charset=utf-8 **/>**

**<title>**Change the content of a cell**</title>**

**<style** type="text/css"**>**

body {margin: 30px;}

**</style>**

**</head><body>**

**<table** id="myTable" border="1"**>**

**</table><form>**

**<input** type="button" onclick="createTable()" value="Create the table"**>**

**</form></body></html>**

1. Write a JavaScript program to remove items from a dropdown list.

Sample HTML file :

<!DOCTYPE html**>**

**<html><head>**

**<meta** charset=utf-8 **/>**

**<title>**Remove items from a dropdown list**</title>**

**</head><body><form>**

**<select** id="colorSelect"**>**

**<option>**Red**</option>**

**<option>**Green**</option>**

**<option>**White**</option>**

**<option>**Black**</option>**

**</select>**

**<input** type="button" onclick="removecolor()" value="Select and Remove"**><br></form></body></html>**

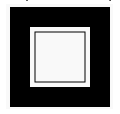
1. Write a JavaScript program to highlight the bold words of the following paragraph, on mouse over a certain link.

**We** have just started **this** section for the users (**beginner** to intermediate) who **want** to work “with **various** JavaScript **problems** and write scripts online to **test** their JavaScript **skill**.”

1. Sdf
2. Sdf
3. Sdf

Drawing:

1. Write a JavaScript program to get the width and height of the window (any time the window is resized).
2. Write a JavaScript program to draw the following rectangular shape.



1. Write a JavaScript program to draw two intersecting rectangles, one of which has alpha transparency.



DOM:

**Exercise 1: Traversing the DOM**

Knowing how to traverse the DOM using JavaScript provides a foundation to altering an HTML page in real time. Using the HTML markup in Listing 1, perform these tasks:

1. Use the firstChild property to access an element.
2. Use the lastChild property to access an element.
3. Use the nextSibling property to access an element.
4. Use the previousSibling property to access an element.
5. Use the parentNode property to access an element.
6. Use the childNodes property to access a group of child elements.

**Listing 1. HTML markup for the traversing the DOM exercise**

<html>

<head>

<title>JavaScript and the Document Object Model</title>

</head>

<body>

<div id="page">

<div id="header"><h1 id="title">Page title</h1></div>

<div id="content">

<h2>Content title</h2>

<p>Some copy goes here</p>

<p>More copy goes here</p>

</div>

</div>

</body>

</html>

**Exercise 2: Targeting nodes**

In exercise 1, you learned how to target nodes in several ways. Continuing to use the markup in Listing 1, perform the following tasks:

1. Retrieve the value of a node using nodeValue.
2. Change the value of a node using nodeValue.
3. Retrieve the value of a node attribute.
4. Change the value of a node attribute.

**Exercise 3: Manipulating the DOM**

Now that you know how to traverse the DOM and alter node values, the next logical step is to learn how to add, remove, and replace nodes. Perform the following tasks:

1. Use the appendChild method to add a node.
2. Use the insertBefore method to add a node.
3. Use the removeChild method to remove a node.
4. Use the replaceChild method to replace a node.

Validations:

1. Write JavaScript to validate the inputs of the following registration form:

