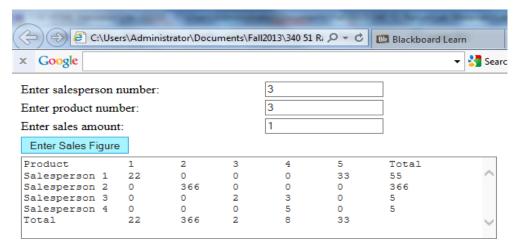**Start Date: 20.02.2020**   **Complete Date: 05.03.2020**

1. Write a script that prompts the user for the radius of a circle, uses a function *circleArea* to calculate the area of the circle, and prints the area of the circle.

2. Write function distance that calculates the distance between two points (x1, y1) and (x2, y2). All numbers and return values should be floating-point values. Incorporate this function into a script that enables the user to enter the coordinates of the points through an HTML form.

3. Write a script that inputs integers (one at a time) and passes them one at a time to function *isEven*, which uses the modulus operator to determine whether an integer is even. The function should take an integer argument and return *true* if the integer is even and *false* otherwise. Use sentinel-controlled looping and a prompt dialog.

4. Write a function that takes an integer value and returns the number with its digits reversed. For example, given the number 7631, the function should return 1367. Incorporate the function into a script that reads a value from the user. Display the result of the function in the status bar.

5. Write a JavaScript function that generates all combinations of a string.

6. 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.

7. A parking garage charges a $2.00 minimum fee to park for up to three hours. The garage charges an additional $0.50 per hour for each hour or part thereof in excess of three hours. The maximum charge for any given 24-hour period is $10.00. Assume that no car parks for longer than 24 hours at a time. Write a script that calculates and displays the parking charges for each customer who parked a car in this garage yesterday. You should input from the user the hours parked for each customer. The program should display the charge for the current customer and should calculate and display the running total of yesterday's receipts. The program should use the function *calculateCharges* to determine the charge for each customer. Use a text input field to obtain the input from the user.

8. Write a JavaScript function that accepts two arguments, a string and a letter and the function will count the number of occurrences of the specified letter within the string.

9. Write a JavaScript function to check whether a given value represents a domain or not.

10. Write a JavaScript program to check a credit card number is valid or not.

11. Use a two-dimensional array to solve the following problem: A company has four salespeople (1 to 4) who sell five different products (1 to 5). Once a day, each salesperson passes in a slip for each different type of product actually sold. Each slip contains:

a) the salesperson number,

b) the product number, and

c) the total dollar value of the product sold that day.

Thus, each salesperson passes in between zero and five sales slips per day. Assume that the information from all of the slips for last month is available. Write a script that will read all this information for last month's sales and summarize the total sales by salesperson by product. All totals should be stored in the two-dimensional array sales. After processing all the information for last month, display the results in an HTML5 table format, with each of the columns representing a different salesperson and each of the rows representing a different product. Cross-total each row to get the total sales of each product for last month; cross-total each column to get the total sales by salesperson for last month. Your tabular printout should include these cross-totals to the right of the totaled rows and to the bottom of the totaled columns.

12. We have the following arrays :

color = ["Blue ", "Green", "Red", "Orange", "Violet", "Indigo", "Yellow "];

o = ["th","st","nd","rd"]

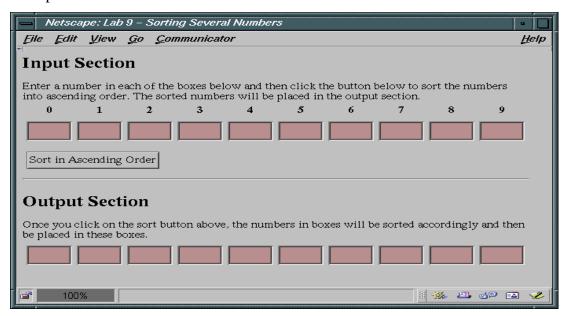Write a JavaScript program to display the colors in the following way:

"1st choice is Blue ."

"2nd choice is Green."

"3rd choice is Red."

13. There are two arrays with individual values, write a JavaScript program to compute the sum of each individual index value from the given arrays.

14. Create a small portion in the web page (use table) and using the mousemove event enable the drawing feature with different colors. Also add a button to erase the entire drawing window.

15. Write a function that responds to a click anywhere on the page by displaying an alert dialog. Display the event name if the user held Shift during the mouse click. Display the element name that triggered the event if the user held Ctrl during the mouse click.

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

17. You have to create a web page that sorts ten numbers entered by a user. The user initiates the sorting by clicking on a button labeled "Sort in Ascending Order". Your program will need to use JavaScript to sort the numbers and sorted numbers will then be placed into a set of output boxes.

18. Write a JavaScript function to sort the following array of objects by title value.

Sample object :

var library = [

   { author: 'Bill Gates', title: 'The Road Ahead', libraryID: 1254},

   { author: 'Steve Jobs', title: 'Walter Isaacson', libraryID: 4264},

   { author: 'Suzanne Collins', title: 'Mockingjay: The Final Book of The Hunger Games',

     libraryID: 3245}];

19. Write a Javascript program to display the digital clock in a web page. The clock should show Hours, Minutes, Seconds and AM/PM. Also place the buttons to "Start", "Stop" and "Reset" the digital clock.

20. Design a Registration Form as shown below. Use JavaScript to validate the form. Get the confirmation from the user before submitting the form. The list countries should be added through JavaScript function using onload( ) event.

Registration Form

User id:	Required and must be of length 5 to 12.
Password:	Required and must be of length 7 to 12.
Name:	Required and alphabates only.
Address:	Optional.
Country:	(Please select a country) Required. Must select a country.
ZIP Code:	Required. Must be numeric only.
Email:	Required. Must be a valid email.
Sex:	○ Male ○ Female Required.
Language:	☑ English ☐ Non English Required.
About:	Optional.

Submit

Text Books:

1. *P.J. Deitel and H.M.Deitel, "Internet & WWW How to Program", 2016*

2. *Thomas Powell and Fritz Schneider, "JavaScript 2.0 – The Complete Reference", 2010*

Web Resources:

1. *https://www.geeksforgeeks.org/javascript-tutorial/*

2. *http://www.htmldog.com/guides/javascript/*

3. *https://www.tutorialspoint.com/javascript/index.htm*

4. *https://www.javatpoint.com/javascript-tutorial*