Lab Practical - Javascript Basics (25 marks)

In this lab you are supposed to complete these different tasks pertaining to the basics of javascript. Some of these tasks might be related and other might not be. For this lab you are **not** developing a web page like your previous tutorials, rather the aim is to practice these tasks and learn the concepts. This lab work does not need to be uploaded to the hosting server, please just show it to the lecturer(s) in the lab on your local machine.

Note: that whenever a task asks you to create a page, you can either create new pages for each task or put all of them in one page. Though putting all tasks in one page would need careful code writing so that the tasks work without interfering with each other, so creating a new page per task can be easier.

Note: unless specified you are free to choose where you want to write the java script code, external file or in the html code.

Task 1- Create a page that uses document.write()

[2 mark]

1. Create a tiny web page that includes some elements
    a. You can create any random web page with one heading and some paragraphs, no need to add CSS
2. Then add a <script> block to include some additional content using document.write()

Task 2 - Calling Javascript functions [4 marks]

1. Create a page that contains two buttons
2. Write code for the button to call a javascript function popup() that you've written.
3. The function popup(x) is really simple - it just displays the parameter *x* in an alert box.
    a. Write this in two ways:
        i. with the function inside a <script> … </script> block
        ii. with the function code inside an external java script file.

Task 3 - Getting content from a text box [3 marks]

1. Create a page with a text box, and a submit button
    a. the text box has an id='reply' tag
2. When the submit button is pressed, display the content of the text box in an 'alert()' popup.

Hint: To get the value from the text box, you'll need to use the *getElementById(id-Tag)* function. Once you've got access to the right element, you can extract content:

e.g.

```
v = document.getElementById('reply').value
```

Or update the contents of an existing element:

```
document.getElementById('idTag').innerHTML = 'new value'
```

where 'idTag' is the id of some element (e.g. a <p>)

Task 4 – using if statements [6 marks]

Create a new page using the code from the above task and do the following:

1. only display a popup if the textbox value contains 'fred' (*don't worry about the case of the text*)
2. use a counter so that it counts the number of times the popup occurs and display that along with the textbox value (*test by entering a text that contains the name 'fred' more than once*)
3. use a conditional expression rather than an *if-statement* to convert *fred* to *FRED*
    a. Hint: condition ? exprIfTrue : exprIfFalse

Task 5 – using for loops [6 marks]

Create a page and the do the following -

1. Add a paragraph heading with the id of 'output' and display all the numbers from 1 to 10 using a for loop.
2. Create a text box for the user to enter an upper limit and then display values from 1 to this limit

    a) use the function **parseInt(s)** to convert the string from the textbox

    b) Checking the Numeric Conversion

        1. Only run the for loop if the result from *parseInt()* is a number.
        2. If parseInt() returns **NaN**, display an alert box with "Not a valid number: " and then the textbox contents.

Task 6 - Arrays [4 marks]

1. Make a page that has a textbox and a two buttons:
    a) *Add* - which adds the textbox contents to the array

b) *Show* - which output all of the stored items in the array into a <h3> tag.

2. Then add these buttons:
    a) *Clear* - which deletes all the elements from the array
    b) *Delete-Last* - which deletes the most recently added element

Marking Schedule	
Component	**Marks**
Task 1	2
Task 2	4
Task 3	3
Task 4	6
Task 5	6
Task 6	4