Top-Down JavaScript
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Objective:

Give a comprehensive introduction to JavaScript to a complete non-programmer.

Approach:

This course is a top-down approach and is based on HTML templates which provide a good platform to learn JavaScript.

Goals:

By the end of this course the student should be able to:

1. Write functions in JavaScript
2. Define different variables
3. Perform mathematical and comparative operations on variables
4. Use control structures (if-else, for loop)
5. Read data from HTML form elements and write to textboxes.

How to use the Templates:

There are two HTML files which provide a front end for writing JavaScript functions. Each exercise is completed by writing a function for the button associated with the task for that particular exercise.

All JavaScript functions are written in the "myjs.js" file in the "js" folder.

Some exercises have multiple variations to keep students of all learning levels occupied.

Templates:

The HTML templates cover the following topics as individual exercises. Each topic, a brief description of the exercise and the JavaScript elements used are listed below:

1. Display "Hello World" - Click button – alert box

2. Display the text on the prompt box - Click button – prompt + alert box
3. Display the textbox value- One text box – alert box
4. Performing Mathematical Operations - Two text box – math with the two number + alert box
    a. Variation 1 – Use variables, check difference between string and numbers
5. Mathematical Operations - Two text boxes , different buttons for math function – write different functions
    a. Variation 1 – output in alert box
    b. Variation 2 – output on the console
6. Mathematical Operations - Two text boxes, different buttons for math function – write different functions: All Answers are displayed on the third textbox.
7. Same text boxes as previous exercise, but the functions to be written have if then, to check which is larger for subtraction.
8. Guess the Number game – The computer thinks of the number, user must guess the number using the prompt boxes – Prompt boxes + Global Variables + Random number functions.
9. More If then
    a. Using a textbox and checkbox for M/F – greeting guests depending on male / female.
    b. Additional checkboxes to check marital status and adding a prefix

    Alert boxes + Variables

10. Nesting If – Else: Playing a rock paper Scissors game – 3 prompt boxes + Nesting Rock paper Scissors rules using If – Else.
11. Exercise with loops, displaying odd and even numbers.