

UNIVERSITY *of* GUAM

Computer Science Department

Project 4: Introduction to JavaScript Programming

Objective:

You will gain experience with the design and implementation of several JavaScript programs that utilize variables, operators, input, output, and selection processing.

Internet Explorer can be utilized as a JavaScript debugging tool after you enable Script debugging and notification of every script error. These features are enabled in Internet Explorer by going to the Tools | Internet Options | Advanced menu. Uncheck Disable script debugging and check Display notification for every script error. Another excellent debugging tool is the periodic inclusion of window.alert methods that are used to display the contents of variables. These can easily be commented out or removed as the JavaScript program is debugged.

Requirements:

This Project consists of four parts. You should complete each part in sequential order because they become progressively more difficult. The program specifications presented are considered minimal efforts requirements. Please be creative about adding more features to each program.

Part A: *Square and Cube*

Create a JavaScript program that will prompt for an integer number and display in browser window:

1. Entered number with color black and 18 pt font size
2. Square of the number in green and font size 14
3. Cube of the number in blue and font size 14
4. Also display your name in the browser window

Part B: *Arithmetic Operations*

Create a JavaScript program that prompts the user to enter two numbers and displays the sum, product, difference, quotient, and modulus (remainder) for the two numbers in the browser window.

Part C: *Rectangle Properties*

Create a JavaScript program that prompts the user to enter the height and width of a rectangle. Display the height, width, circumference, and area of the rectangle in the browser window.

Part D: *Temperature Conversion*

Create a JavaScript program that will convert temperatures between the Fahrenheit and Celsius systems:

- a. Prompt for which Conversion
- b. Prompt for the temperature (any real number)
- c. Display in the browser window:
 1. The original temperature and unit
 2. The final temperature and unit
 3. Format the output as you wish
- d. Display your name in the browser window

Due Date and Grading:

Project 4 is due October 25, at the beginning of the first class. Turn in a cover page that includes your name, course, and project number. Include all problem solving phase analysis for Part D. Attach the XHTML code and final browser display for all parts. Write a conclusion section that summarizes your experience with project. Late projects will be reduced 25% of the total point value for each class period late.