Assignment 6

(Functions in JavaScript)

(Total: 100 points)

Learning Objectives

- Hands-on practice on how define and call a function in JavaScript.
- Hands-on practice on how to return multiple-values from a function by using an array.

Complete your assignment

Download the zip file named "**CS381_A6.zip**" and then unzip the zip file. In the unzipped folder (by default with name "CS381_A6"), you will find two files: **find_primeV2.html**, **find_primeV2.js**, and **prime.css**. Add JavaScript code in the "**find_primeV2.js**" to allow users to enter a number, and then based on the number of user enters, to find out how many prime numbers there are up to and including the user inputted number and then display them on the web page. The following are the detailed steps to complete this assignment:

Step 1. [30 points] In "**find_primeV2.js**", complete **isPrime()** function by

(1) Adding one parameter in function header. That parameter is used to accept a number as the argument. This function is used to find out whether a number passed into this function is prime or not.
(2) Adding a ***for*** or ***while*** loop to check whether that number is only divisible by itself and 1. If not, then return false;
(3) After the loop, return true, indicates the number is a prime.

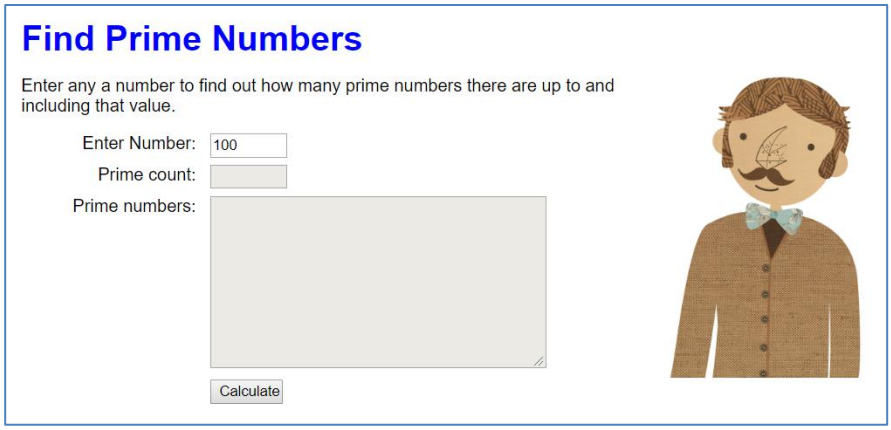
Step 2. [30 points] In "**find_primeV2.js**", complete **getPrimes()** function by

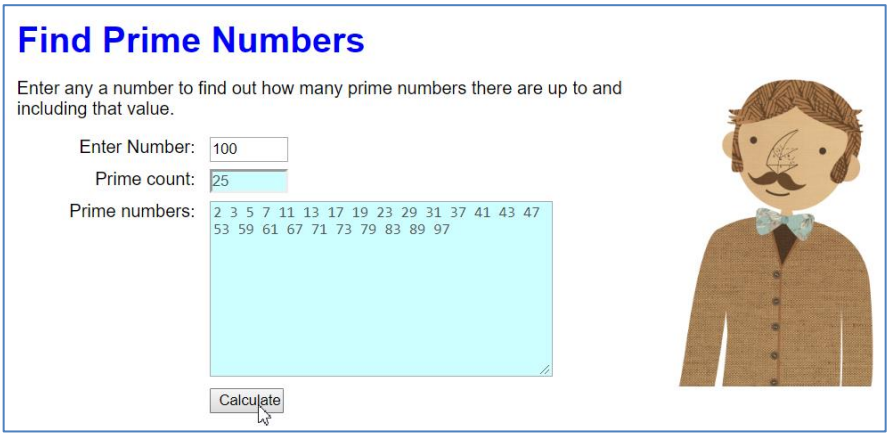
(4) Adding one parameter in function header. That parameter is used to accept user inputted number as the argument. This function is used to find all primes between 2 and the number that user enters.
(5) Adding a ***for*** or ***while*** loop to check each integer between 2 and the number that user enters. In each loop iteration, call ***isPrime()*** function to determine whether the integer is a prime or not. If the integer is a prime number, then add that integer to ***primes*** string, and increase ***count*** by 1.
(6) After the loop, at the end of the function, return an array that holds both **primes** and **count**.

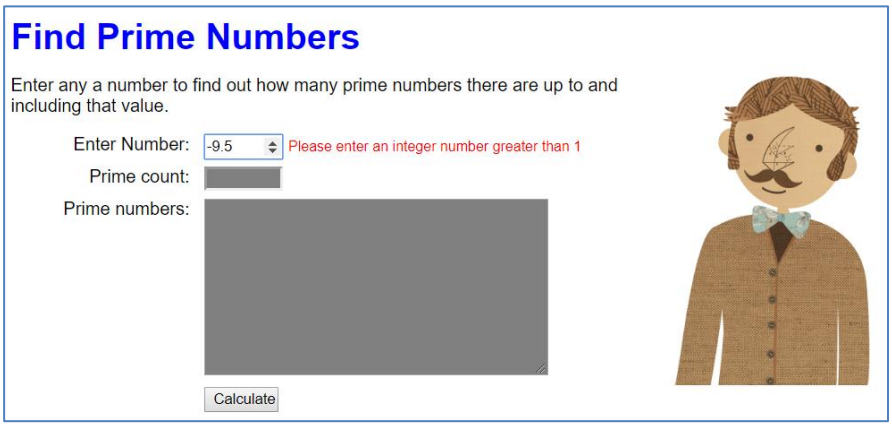
Step 3. [20 points] In "**find_primeV2.js**", complete **processEntries()** function by adding js statements:

(1) In the ***if*** statement block, display a message says: "*Please enter an integer number greater than 1.*" in the element next to the number input box.
(2) In the ***else*** statement block, remove error message if have any.
(3) Add js code to call ***getPrimes()*** function to get the number of primes found in the range of 2 to the inputted number and display that result in the input box with id="count" in the web page.
(4) Add js code to call ***getPrimes()*** function to get the list of primes found in the range of 2 to the inputted number and display those primes in the text area with id = "primes".

(See in Lecture 5.1 and sample code for references on how to define and call functions)







Step 4. [15 points] Test and debug your program (you may use the developer tool in browsers help you) to make sure there is no syntax and logical errors. If there are some errors that you cannot figure out, please write a notes in your program or leave a message in your dropbox.

The data files (CS381_A6.zip) needed for this assignment can be found in the Assignment-6 dropbox on Canvas Course Site..

Submit your assignment [5 points]

- After you complete, please **save and zip** the "CS381_A6" folder that including all the files, and then rename and submit the zipped file "**A6_yourLastNameFirstName.zip**", to the assignment drop box named **Assignment-6**.

Note: If your computer does not have the ability to "zip" (i.e., compress or uncompress) files, download and use a free zip program such as 7-Zip (http://www.7-zip.org/)