Homework 2 — JavaScript Basics

Dr. Charley Sheaffer

February 2, 2015

Introduction

This homework is to give you practice writing basic JavaScript programs. The solutions will require the use of basic control structures (if, for, while, etc.). Various of them will also require the use of arrays and strings.

The Problems

Write JavaScript programs to solve each of the following problems.

1. Problem0001: If we list all the natural numbers below 10 that are multiples of 3 or 5, we get 3, 5, 6 and 9. The sum of these multiples is 23. Find the sum of all the multiples of 3 or 5 below 1000.

2. Problem0005: 2520 is the smallest number that can be divided by each of the numbers from 1 to 10 without any remainder. What is the smallest positive number that is evenly divisible by all of the numbers from 1 to 20?

3. Problem0022: Using the provided file `names.txt`, begin by sorting it into alphabetical order. Then working out the alphabetical value for each name, multiply this value by its alphabetical position in the list to obtain a name score. For example, suppose, when the list is sorted into alphabetical order, COLIN, which is worth $3 + 15 + 12 + 9 + 14 = 53$, is the 93rd name in the list. So, COLIN would obtain a score of $93 \times 53 = 4929$.

   What is the total of all the name scores in the file?

Submission

Place the solution to each problem in a separate file. Name each file for the problem number it contains. For example, your solution to Problem0001 should be in a file named `Problem0001.js`. Place all files in a folder, zip the folder, and submit on Moodle.