

Code Challenge for the Technical Student Position in TE-EPC-CCS

Problem Description: Factor App

The Factor application is composed of three files. The factor.html (provided by us), the factor.js (client-side Javascript), and the factor.cgi (server-side Perl).

The factorial application reads a positive integer number of unknown length from the input text, sends the number to the server using an AJAX request, and once the reply is received from the HTTP server, it displays the list of prime number factors for the number sent.

Notice that the program is not completely specified. We expect the program to try its best to process the data, and then return a result. We do not expect programming time to be spend on the look-and-feel of the application, however we expect the errors to be handled in a graceful manner.

Evaluation Criteria

The following criteria will be used to evaluate the solution:

1. The solution is written in the HTML, JavaScript, and jQuery. The application should work in Firefox browsers on any host platform (i.e. Windows, Linux, OSX). The client side javascript program only requires the provided version of jQuery (2.1.1).
2. The server side cgi program requires a minimal number of Perl modules, and it will run on a Linux platform.
3. The program input-output behavior is correct.
4. The program footprint is small, and the memory and time consumed are efficient.
5. The program is easy to read and commented when considered necessary.
6. The program provides appropriate error messages (without being too redundant).
7. The client side program is responsive, and handles errors gracefully.
8. The server side program handles errors gracefully.