Assignment #6

CS106E Spring 2018, Young

In this assignment we will go more in depth with Client-Side Programming. This assignment is due before the start of class Wednesday May 23rd – submit it on Canvas before 1:30pm. Additional Administrative Details can be found at the end of this document.

Honor Code Reminder

For the purposes of this class, if someone (other than your partner, a TA, or the instructor) looks at your HTML, CSS, or JavaScript code, or if you look at another student’s HTML, CSS or JavaScript code, you have received too much assistance.

If in doubt, or if you’re concerned you have received too much assistance, explicitly document the help that you received. If you have specified in writing the help which you’ve received on an assignment, you will never be considered as having violated the CS106E honor code policy (although we may reduce the number of points you receive on the assignment).

Restaurant

After learning about client-side programming, you realize that you can implement the same tip-calculator that you implemented last week using just vanilla JavaScript. You’ve also realized that you can run the entire tip calculator on a single page.

Create a single page app that calculates the tip, total bill, and cost-per-person based on the inputs. Below are screenshots of how the program should look, both on page load and after a calculation. Name this file restaurant.html.

**Tip Calculator**

Amount:  
Number in Party:  
Calculate Tip

**Tip Calculator**

Amount: 100  
Number in Party: 5  
Calculate Tip

**Tip Result**

Tip on 100 is 15.  
Your total bill is 115.  
This comes to 23 per person.
Software Failures

In this problem, we’ll be looking at some high profile software failures. First, you should read this article, which provides a nice overview on software failure.

https://spectrum.ieee.org/computing/software/why-software-fails

We’ve included links to a number of articles below, each of them detailing a major software failure and some of the consequences. If any of the failed projects listed in the IEEE spectrum article above piques your interest, you’re welcome to analyze those instead of the choices we’ve provided.

Please select (2) different software failures, and write a short summary and reflection on each. Reflections can explore why the software failure happened, what could have been done to prevent the failure, and what practices or safeguards can be put in place to keep such failures from happening in the future. Each response should be ~250 words, or one page double spaced.

HealthCare.gov
https://www.washingtonpost.com/national/health-science/hhs-failed-to-heed-many-warnings-that-healthcaregov-was-in-trouble/2016/02/22/dd344e7c-d67e-11e5-9823-02b905009f99_story.html

Romney Campaign Failure:

Obama Campaign Failure:

Denver Airport Baggage Handling:

Patriot Missile Defense System:

Therac-25:

Administrative Details

You will need to turn in the following files for this assignment:

- restaurant.html
- A PDF with your reflections (and your partner’s name, if you have one)