ITMD 465/565

Project 2

Introduction

This project is an open ended project which allows you to decide on the technology you want to investigate further and expand on your learning from the class. It will be up to you, as the student, to decide on what you would like to do for this project but I have included some suggestions below. Graduate students are expected to go beyond what we discussed in class and investigate something on their own using API documentation.

Objective

Create an application or other advanced web based technology project. One primary requirement is that this must use JavaScript as the basis for the project. If you are a graduate student you will be expected to submit a project that has more complexity, visually well styled, and includes topics we didn't directly demonstrate in class. Please email me and ask if you have any question if your project idea is appropriate.

Basic Requirements

- Any HTML tags and page structure you use should be **HTML5** compliant
- Apply CSS styling to your pages where appropriate so they do not appear as default styled by the browser. I expect projects to look like finished professional projects.
- You may use any CSS framework like bootstrap if you like just note what you use in the readme.
- You may use JavaScript libraries like jQuery if you like just note what you use in the readme.
- You must include a readme file in PDF format as described in the readme section.
- You project must include some type of significant JavaScript code and not just be basic web pages with simple DOM manipulation.
- If you decide to host your application on your own server or some cloud provider so you can use other services, like databases, include your URL in your readme, any instructions I need, and submit all your source code to blackboard in the zip with your readme.

Graduate Additional Requirements

If you are involved in **any section of 565 you are registered in the class as a graduate student and** you need to do additional work on this project. More will be expected of your project and it will be graded for a higher level of quality. I expect you to explore technologies we may have discussed but didn't completely demo in depth in class or take those technologies that we did demonstrate to a higher or more complex level. Graduate students should also take more care in protecting from any Script injection and handling errors gracefully.

Undergraduate Examples

- Interactive Canvas scene with pure canvas or one of the many canvas libraries. (mouse, keyboard, or form data field interaction)
- Investigate using processing language port processing.js to make the interactive canvas.
- Full NodeJS Express CRUD application (2 Data models minimum, Data persistence stored in JSON files on the filesystem, RESTful url paths)
- Angular JS one page CRUD application with in memory data storage. (no data persistence between loads)
- Angular JS one page CRUD application with localStorage data storage.
- Use the D3 (d3js.org) JavaScript library to do simple data visualization/graphing. Find a data set to use on https://data.cityofchicago.org/
- Use react JS to build a CRUD application with in memory data storage or localStorage.
- Use another front-end JavaScript framework to build a CRUD application with in memory or localStorage data storage (ie Backbone, Ember, etc.)

Graduate Examples

- Interactive WebGL scene with three.js (mouse, keyboard, or form data field interaction)
- Basic Canvas Interactive game (some type of game logic with user interaction)
- Investigate using processing language port processing.js to make a complex interactive canvas visualization or game.
- Full NodeJS Express CRUD application with JSON API (2 Data models minimum, Data persistence stored in JSON files on the filesystem, RESTful url paths)
- NodeJS Express CRUD application with data stored in MongoDB (Data persistence stored in MongoDB, You must host this on your own server account or some other MongoDB provider, mlab.com provides free sandbox mongodb for development use, I will not install MongoDB on my laptop to test your application.)
- NodeJS Express CRUD application with data stored in any Database (Data persistence stored in a database, You must host this on your own server account or some other provider, you can use any database that express supports. I will not be installing a database locally to test your application.)
- Angular JS one page CRUD application using Angular 1.5 with data persistence with Indexed DB.
- Angular JS one page CRUD application using Angular 2.0 beta with in memory data storage. (no data persistence between loads)
- Use the D3 (d3js.org) JavaScript library to do complex/interactive data visualization/graphing. Find a data set to use on https://data.cityofchicago.org/
- Use react JS to build a CRUD application with data persistence in localStorage or indexed DB.
- Use another front-end JavaScript framework to build a CRUD application with localStorage or indexed DB (ie Backbone, Ember, etc.)

README File

You must submit a **PDF version** of a readme file with your project. This readme should describe your project, what it does, how it works, and any issues you faced during development. The first section should describe the application, discuss how it functions, what features it has. Please include screenshots showing the working application. It should also have a section describing the technologies you used (languages, libraries, frameworks, tools, including version numbers, your computer environment and OS). There should also be a section that describes steps required to run the application and any other instructions. The final section should include and insights, issues your ran into, and things you learned working on this project. I expect this readme to have some substance to it and not be just a single simple page.

Due Date / Late Policy

This assignment is due **Saturday April 30, 2016 11:59 PM Chicago Time**. This is the last day of classes for the semester. I will not accept projects turned in after this time. **No Extensions and No late projects accepted**.

Submission Guidelines

You must upload your submission, to the blackboard assignment **by the due date**. The submission must be in the following format and structure. If you do not submit your assignment exactly as specified, you will receive an immediate 5% deduction.

Submission Format Specification:

YourUsername_YourIdA#_Project2.zip

Your zip should include:
Any and all files needed to run your project. When the folder is unzipped everything should be there and all I have to do is open your project. Your zip should also include your readme file that describes your project and any steps or commands to run the project. If you decide to host your project on a server on the Internet provide that URL here in the readme but also include all source code in the zip you turn in to blackboard. If you create a node app I will run npm install to install dependences if you say to in your readme but I am not going to go manually download other libraries, include them in your project folder.