Programming for Social Impact

School of International and Public Affairs

Spring 2022

Final Project

<mark>Due:</mark> April 20, 2022 11:59pm (Wed)

Most of the backend coding for Final Project can/should be based on HW2 code. If you had HW2 working, your main task will be adding code that stores and retrieves userid/password from database, improving frontend design (HTML/CSS) + setting up DNS so that your application can be accessed from yourdomain.com and getting feedback on your web application from a couple of target users.

What to Turn In?

- **Short Report (30 points)**
  o A very short report as described below

- **Code (70 points)**
  o Add all your code in 1 folder or (subfolders) and upload the folder into canvas

Summary of the Final Project:

For the final project, you should think of a technology solution that you want to build that can solve a real problem that has been a challenge for a community you know or aware of. The technology solution you want to build should have a significant web component to it. You need to build the web application part of the technology solution.

Part 1.   Write a short report (30 points)

- Describe the web application you are building and describe why it is useful for the community and what kind of impact you expect the applications to have. Describe how the end-users in the community will use the application (10 points)
Get 3 people to use your application and get feedback on the value proposition of your web application (9 points)

Provide in the report

- userid/password for admin login (3 points)
- userid/password for regular user login (3 points)
- yourdomain.com where we can access your web application (5 points)

Part 2. **Build a Web Application (Coding part – 70 points)**

The final project is building a web application for the problem you described in Part 1. Usually, you interview many end-users before you start coding anything; but this class is particularly focused on honing your programming skills. Hence, the final project is coding the dream web application you have always wanted to build that solves a real problem.

1. You can build your web application on top of HW2 code. Your web application needs to have at least 4 html pages. These 4 pages should be accessible by clicking on 4 menu items at the top. For example, these 4 menu items can be following – i) Home ii) Problem iii) Solution iv) About Us or it could be 4 main sections that are suitable for your application. When you click on each of the menu item it should load a separate page. (12 points)

2. Backend - functionality requirement (30 points)
   a. Signup – that allows anyone to signup and their userid and password should be stored in the database (10 points)
   b. Login – that allows login only when the matching userid and password is in the database (10 points)
   c. Admin - that can list of users in the database (provide admin userid and password) (10 points)

3. Frontend – HTML/CSS requirement (15 points) (It's important that you spend decent amount of time on front end code to learn how to make well designed web applications. You need to use bootstrap.css that we used in the class)
   a. Frontend Code
      i. You should write HTML/CSS for landing page and other pages in the web application such that visual design is appealing for all pages. Each page should use at least one bootstrap elements. (12 points)
      ii. Understand how the login form is styled in Homework2.html using bootstrap elements and style the

button to look different by either changing the color of the button or changing the class of the button. (Hint: look at code in http://www.tutorialrepublic.com/twitter-bootstrap-tutorial/bootstrap-buttons.php) (3 points)

4. The final project needs to be running on the web (AWS server or any other server vendor of your choice) (5 points)

5. DNS for your web project need to be set so that we can access the web application using - www.yourdomain.com (8 points)

You will lose points if you fail to follow the submission instructions.

You must compress the following files into a single ZIP file. The name of the zip archive must include "FINAL" and all UNI's (example: FINAL_abc1234.zip). This file should be submitted to courseworks.

● A PDF document for your report (must include the web address (AWS IP address) that has the above dynamic site up and running)

● All the relevant HTML, CSS & PHP code

Appendix:

Creating a zip file:

windows: http://windows.microsoft.com/en-us/windows-8/zip-unzip-files

mac: http://macs.about.com/od/faq1/f/How-To-Zip-And-Unzip-Files-And-Folders-On-A-Mac.htm