PROJECT

Computer Science 423
Spring Semester, 2020

Your software project for this semester, completing your capstone project started in Computer Science 421 by performing the later phases of development of an application for an institutional or industrial client, is due at the end of the semester. At the time scheduled for your team, you should turn in your project notebook and demonstrate operation of your application. Your project notebook should contain the eight sections listed below, including updated versions of the project plan, prototype, and requirements specification your team developed for Computer Science 421.

1. Project Plan

   The scope of the software project should be described to a level of detail sufficient for planning, and the overall software engineering approach should be specified. An estimate of the time required to perform the entire software development effort should be included, along with an estimated schedule for completion of the project by the team over the two semester sequence.

2. Prototype

   Sample user interface screens for the application developed with the client should be provided. The user interface should be used in determining and understanding the requirements for the application.

3. Requirements Specification

   The requirements for the application agreed upon with the client should be provided. This includes a detailed description of what the application is expected to accomplish and the context within which it will operate.

4. Design

   To show the architecture of the application using object-oriented design, a class diagram should be provided along with a data dictionary. The design of user interface screens for the application should also be provided.

5. Implementation

   Source code in one or more programming languages should be provided for each module in the application. In addition to a description of the contents, documentation in a source file should include the module, file, application, language, computer, operating system, course, team, author, and date. For each function, documentation should include the name, purpose, and operation if it is not apparent from the purpose. Source code should be separated into pages and organized by module for reference in the notebook.

6. Testing

   The testing performed on the application to ensure that it meets its specification should be described in detail. Each test case should be included, along with the expected results of the test. Actual results, whether successful or unsuccessful, should be provided.

7. User's Guide

   General information on the application domain and functionality should be provided as an introduction to users. Instructions on how to install the application should be included, and a tutorial should be provided to allow a user to become familiar with its operation. Reference information describing in detail each function performed by the application should also be included.

8. Project Summary

   The actual schedule followed by the team in performing project planning, prototyping, requirements specification, design, implementation, testing, and documentation of the application should be given. The role of each team member should be provided, along with a summary of the work accomplished by that individual on the various activities of software engineering during the two semester sequence.

Grading of your project will be based on the correctness of your requirements specification, how well your application meets the specification, and the quality of your documentation. Under ordinary circumstances, you will receive the same grade for the semester as the other members of your team.