KENNESAW STATE UNIVERSITY

SWE 3313 Introduction to Software Engineering
(Fall 2017)

TEAM PROJECT DESCRIPTION

Cover page

SUBMISSION: Due before the end of the course via D2L (presentation needed)

WEIGHTAGE: 50%

- This is a group project.
- Complete this cover sheet and attach it to your final report – this should be your first page!

Students declaration:			
I declare that: ▪ ***I understand what is meant by plagiarism.*** ▪ ***The implications of plagiarism have been explained to me by our instructor.*** ***This project is our own work.***			
Name	**ID**	**Email address**	**Signature**

Project objective

In this final project, You'll apply the skills you learned by designing, building, and testing a software system (either desktop, Web-based, or mobile apps), producing a unique final project suitable for showcasing to future employers. This means, you will establish a good understanding and knowledge of all software engineering topics (mainly SDLC including, planning, requirements, design, implementation, testing and support etc.), as well as good teamwork through collaboration.

Your mindset for doing this project

The proposed project is expected to be brand new, start-up operation, suitable for showcasing to future employers/investors with an entrepreneurial spirit. So, if you ever had any ideas wanting to be tech entrepreneurs, participate in competitions, but as such did not have time to begin this journey, perhaps it's the time. You should communicate with your teammates early and begin working on the project. Make sure you break up the project so that each member of the team has a responsibility. The project is due before the end of the course and must include a presentation showing the finished application.

The project is graded at the team level. This means that each team member usually receives the same grade for each such element. However, if a student does not perform at the team level for a given element, that student should NOT expect the same grade as the other team members. This includes both students who choose not to participate to an appropriate degree and those who choose to be "team hero".

Instructions:

(i) Select a specific topic concerning any domain/industry/filed that interests you. Examples of domains may include, but not limited to: medical/healthcare; Internet of Things, Energy, Sport, Cyber Crime and Security, Modern Learning and Education, Innovative Game, Brain/thought Recongiction etc. While you have all freedom to choose your own topic, the preferences go to those proposed projects that provide innovative and interesting SOLUTIONS to existing problem(s) in any aspect of our lives or society.

(ii) Once you have decided on the project title, email me (parizi1@kennesaw.edu) a description of your chosen project to get an OK beforehand or drop by my office during office hours if you'd like to discuss things further or get any suggestions.

* It is also very important to know that a proposed project must be authentic and **has not been designed or implemented elsewhere.**

Project deliverables

A. Give a presentation (around 25 minutes)

- A brief oral presentation of each project will be made in the class to give the project description as well as the **demo** of your system
- Each member of the team presenting a different section of the project and each individual member will be assessed based on her/his presentation skills

- Participate in other students' presentations to actively engage in the Q&A session.

B. Project artifacts (mainly source code/ prototype)

C. A report/documentation (10–30 pages)

The following represents the physical documentation you must submit to support your system.

I. **Project Plan**: The project plan must at least consist of the following components:
1. Scope
2. Schedule (including work/task breakdown structure, milestones and/or deliverables, and a Gantt chart)
3. Team organization (including resumes of the team members if available)
4. Technical description of the system
5. Data management plan
6. Test plan
7. Deployment plan

II. Requirements: The requirements part must at least consist of the following components:
1. Requirements processing
    a. Preparation
    b. Planning
2. Requirements elicitation and gathering (including defining high-level and detailed requirements)
    a. English text (created in any Requirements Management tool)
    b. Paper prototype (drawn by hand or via a drawing tool like Visio or Word)
    c. Interview, video recording of session(s) with stakeholder (s) to ensure that you have met the right people to come up with a realistic set of requirements.
3. Requirements analysis
    a. Business flow of events
    b. UML Use case diagrams (created by automated drawing tools)
    c. Prioritization
    d. Requirements traceability
4. Requirements specification
    a. Functional requirements
    b. Non- functional requirements

III. System Design: The system design part must at least consist of the following components:
1. Conceptual system design
    a. Architectural design
    b. Technical design (high-level)
2. Detailed design
    a. UML Class diagrams with all methods, attributes and relationships identified (created by automated drawing tools)
    b. Database design
        i. Technology specification
        ii. Entity relationship diagram (s) (created by automated drawing tools or DB tools)
        iii. Table descriptions
    c. UI design

IV. Implementation/prototyping: You have two choices (the first is preferred):

1. Use any programming languages to code a working version of your system. This includes both back-end parts and UI development (i.e. front-end part)
2. Or, use any prototyping tool to create a façade prototype that presents user interfaces for each of the system views. The prototype (either in the form of desktop, Web-based or in Mobile apps) MUST possess the following properties:
    - Evolutionary
    - High-fidelity interactive and of quality *look and feel*[*]
    - Clickable
    - Designed using CASE tools (there is no requirement on the choice of the tool you will use. As such, it is your responsibility to select one tool that fits your needs)

    look and feel is a term used in respect of a graphical user interface and comprises aspects of its design, including elements such as colors, shapes, layout (the "look"), as well as the behavior of dynamic elements such as buttons, boxes, and menus (the "feel").

3. Either way, include screen layouts/ shots (screen captures from your application embedded in a text document guiding the user through the application, with the requirements and use cases being addressed by each screen clearly identified on the bottom of the page – underneath the screenshot)

V. System Testing: The system testing part must at least consist of the following components:

1. Functional testing (unit testing)
2. Integration testing
3. Usability testing
4. Test report
5. Personal reflection of each team members (an evaluation of the strengths and weaknesses of submitted project or any other remarks)

Additional requirements:

1. Each group must take minutes of each meeting (those IN CLASS as well as OUTSIDE OF CLASS), including attendance. These minutes must be included in the appendix of your report.

2. Each group must prepare weekly status reports that document the status of all activities your group is currently working on. Include what each person has contributed that week as well as an assessment of the percentage completed for each activity. These reports must be included in the appendix of the report as well and I may ask to see them at any point in the term, so keep them up-to-date.

3. ***Each team member must keep track of the time they spend working on the project.*** Include all time spent on a weekly time sheet, and identify which activities you were working on. (This information will be summarized for each team member on the weekly status report.) These individual time sheets must be included in the appendix and I may ask to see them at any point in the term, so keep them up-to-date.

4. Your final report must look professional; must include all clean, final pieces, and have all marked-up documents placed in a section of the report (or in a sleeve); must have an appropriate cover sheet/page (you can use the first page of this document) and must include a table-of-contents.