

# CEN 4010 Principles of Software Engineering

## Project High-level Description—Themes

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### 1 Introduction

This document describes at a very high-level of the term project—*Campus Snapshots*—which students will develop for the course. Use this description as the “theme” of your project. Detailed functionalities and approaches are to be determined by your team.

Note: If your team would like to propose your own themes, please come to talk to me to get approval before you start.

### 2 Overview Description

University campus is an important part of students’ life. Students reside and visit daily different parts of campus, for example, dormitories, cafeterias, libraries, classrooms, recreation center, office buildings, landscaping, physical facilities, parking garages, etc. A good living and study environment is a desirable feature of campus life.

In this project you will create a web system, ***Campus Snapshots***. By using the system, people on campus can report instantaneously issues that need to be fix and need attention. For example, leaking in classrooms, broken AC in library, dumpsters overflowing on Breeze Way, broken lamp pole on side walk, wild animals need to be rescue etc.

Your system is intended to provide real time *Snapshots* of campus status to university administration. They will check your website periodically to see how well campus is operating, and to provide help as needed.

Besides campus problems report, you can also consider to report some good things happening on campus, for example, exciting games, open air concerts, and students’ activities.

Your web site is supposed to be attractive, motivate users to upload and report problems and events, and be very easy to use.

Examples of functional requirements are below (your team decides on specific functionalities that are uniquely yours):

- 1) Information about events and problems with text and photos
- 2) Possibility to add and read comments of existing post
- 3) Upload pictures and create a report thread

- 4) Status report of a reported instance (reported, in process, resolved etc)

### **3 Development approach**

Your team will develop the system in an agile way using Scrum as development practice. Your team should organize yourself as a Scrum team that has a Product Owner and a Scrum Master and a project team. (Consider you will assign different roles within the project team, i.e. for data model/database, UI design etc.)

### **4 Functional specifications (describe what functions the application should have)**

Functional specifications are to be developed by students based on their own design ideas, review of similar systems based on the use case scenarios they develop and review with professor.

Students are also strongly encouraged to make their application unique and attractive by developing some innovative and unique “market differentiation” functions.

High-level non-functional specifications include (but not limited to):

- 1) The application should run on two latest versions of all major web browsers: Mozilla, Safari, Chrome, IE, Firefox etc.
- 2) Data shall be stored in the database on the server
- 3) Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users
- 4) The language used shall be English
- 5) Site shall be very easy to use, intuitive (e.g. no prior training required)
- 6) Site shall be attractive and media rich in appearance
- 7) Security of the site shall require users to register and login (students to decide what functions require registration and login)
- 8) Effort shall be made to make the site easily searchable by major search engines

### **5 Deliverables**

Incrementally delivery of the project (Scrum-based)

- 1) Delivery 1: Project proposal
- 2) Delivery 2: Use Case description
- 3) Delivery 3: UI mockup and high level architecture
- 4) Delivery 4: Midway demo, feedback from instructor
- 5) Delivery 5: Final project demo