Department of Computer Science and Engineering

College of Engineering, University of Nevada, Reno

CS 425 Software Engineering

November 1, 2013

Project Part III: Design

Due: Thursday, November 14, at 8:00 pm, by email (single PDF file, named P3_T##)
Points: 100
Weight: 10% of the course grade

A Deliverables of Part III of the Project

Note: In the following **<T3>** denotes a team of three students and **<T4>** denotes a team of four. Also, the notation **<X/Y>** means **X** applies to a **<T3>** and **Y** to a **<T4>**.

For this part of the project you should provide a *Design Document (DD)* with the following structure:

0 *Table of contents*

1 *Abstract:* a revised version of your project's abstract (100 to 150 words).

2 *Introduction:* a shorter general description (between 300 to 500 words) that briefly re-states the goals of your project and gives a concise account of progress made since the previous report (specification). Indicate also significant changes/updates made to your project's requirements.

3 *High-level and medium-level design*: present the project in terms of high level architecture, subsystems, and program units (modules). Given the diversity of projects, there is significant flexibility here. In any case, you should include, with accompanying textual descriptions, the following:

- At least *one system-level diagram*, e.g., your system's context model (see Chapter 5 of the CS 425 textbook) or your system's architectural pattern (see Chapter 6);

- The structuring of your software in *program units*:

  In the case of object-oriented solutions, the classes are examples of such program units, hence a design class diagram with details of attributes, operations, relationships, and multiplicity constraints should be provided (at least 8 classes are expected). Briefly describe the role of each class as well as the methods included in the classes (in total, at least <18/24> methods should be described).

  In non-object oriented solutions, program units can be modules, functions, procedures, subroutines, etc. Show the organization (hierarchical or not) of these units (at least <15/20> units are expected) and provide for each of them: name, description, the higher level unit (e.g., subsystem) to which the program unit belongs, its input, its output, program units called by this unit, its exceptions or interrupts, and any additional comments that could enhance the description of the unit.

- If database tables are used, for each table indicate its fields (columns) and its primary key(s). For instance, a table containing information on employees may look like the following one (note that the primary key, shown in bold, is SSN):

SSN	Last Name	First Name	Position	Department	Office	Telephone	Email

4 *Detailed design*

- At least three <**T3**> or at least four <**T4**> statecharts, flowcharts and/or sequence diagrams describing in details non-trivial components of your system's behavior (operations/functions).

5 *Initial hardware design – if applicable*.

- A high-level diagram showing the organization of the hardware components of your system (main components and their interconnections).

- A list of potential components with brief descriptions of their roles. Include at least snapshots (photos, figures, or diagrams) of components likely to be used. Indicate the sources used for snapshots/figures.

Note: if all you'll use is a regular, standalone PC, laptop, or mobile device (smart phone or tablet) without connections to other hardware equipment or devices, then you do not have to complete this section (but make a statement here to indicate this is the case with your project).

6 *User interface design*: provide at least eight (<**T3**>) or at least twelve (<**T4**>) snapshots of the user interface, with accompanying descriptions. In these snapshots, the main user interface components with details (e.g., panels, toolbars, menus, menu items, buttons, textboxes, etc.) should be presented, and the format used in output results, reports and/or statistics should be shown.

7 *Annotated references:* describe how the project references (**<4/6>** reference articles) relate to your project. The description for each article should be between 70 and 100 words.

8 *Contributions of team members.*

9 *Glossary updates:* include here new additions to the project glossary that you wrote for the second part of the project (SRS).

B Grading of Project Part III: Analysis & Design

1.	Overall presentation, Sections 1, 2 & 9	15 points
2.	Section 3	30 points
3.	Section 6	30 points
4.	Sections 4, 5, 7 & 8	25 points
	Total	100 points

Note that both the technical content and the presentation style (including quality of writing and document formatting) of your design document will be graded.