Department of Computer Science and Engineering
College of Engineering, University of Nevada, Reno

CS 425/CS 625 Software Engineering

November 4, 2008

Project Part III: Analysis & Design

Due: Tuesday, November 18, at 4:00 pm, by email (single PDF file named P3_T#)
Points: 100
Weight: 9% 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. The notation **<X/Y>** means **X** applies to a **<T3>** and **Y** to a **<T4>**.

For this part of the project you should provide an *Analysis and Design Document (ADD)* 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) of your project that briefly re-states the project's goals and gives a concise account of progress made since the previous report (Project Part II). Indicate also any changes/updates made to your project's requirements,

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

- One *system-level diagram*, e.g., a context model such as the one shown in Chapter 8 or the block diagram shown in Chapter 11 of the CS 425/625 textbook;

- The structuring of your software in *modules*. In the case of object-oriented solutions, the classes are examples of such modules, hence an analysis class diagram indicating attributes, operations, relationships, and multiplicity constraints should be provided (at least 8 classes are expected in the diagram). Briefly describe the role of each class as well as of the methods included in the classes (in total, at least <15/20> methods should be described). In non-object oriented solutions, program modules can be functions, procedures, subroutines, or similar. Show the organization (hierarchical or not) of these modules (at least <12/16> modules are expected) and provide for each of them: name, description, the higher level module(s) that call this module, inputs, outputs, modules called by this module, exceptions or interrupts, and any additional comments that could enhance the description of the module.

- 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 *System-level statechart, flowchart,* or *data flow diagram:* this diagram should show the main operation/functionality of the system at a high-level. At least 6 (processing) states or activities should be included in this diagram. A textual description of the diagram should also be provided.

5 *Initial hardware design* [*only for teams that include CIE majors*]:

- A high-level diagram showing the organization of the hardware components of your system (main components and their interconnections).
- An initial list of potential components with brief descriptions of their roles. Include at least 3 snapshots (photos, or figures) of components likely to be used, Note that later you can use different, but similar components to those considered at this time. Indicate the sources used for snapshots/figures.

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

7 *Annotated references:* describe how the project references (**<4/6>** reference articles) relate to your project. The description for each article should be between 100 and 150 words.

8 *Contributions of team members.*

9 [Optional, but highly recommended] *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	25 points - CS / 20 points - CIE
2.	Section 3 [and 5 where applicable]	25 points - CS / 35 points - CIE
3.	Sections 6	25 points - CS / 25 points - CIE
4.	Sections 4, 7 & 8	25 points - CS / 20 points - CIE
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	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 taken into consideration when grading the project.