Department of Computer Science and Engineering

College of Engineering

University of Nevada, Reno

CS 791Graduate Topics in Computer Science [Software Engineering]

Project Part I: Concept and Specification

October 21, 2019

Due: Thursday, November 7, 2019 @ 11:59 pm (by email to the instructor, PDF file named P1_YourLastName.pdf)

Points: 100

Weight in course grade: 8%

Note: In the following **<T1>** denotes a single-student individual project, while **<T2>** denotes a 2-student team project.

For this project part write a project concept and specification document with the following structure:

Cover page

- Department, University
- Project title
- Your name(s)
- Instructor
- Date

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Abstract (between 100 and 130 words). Concisely and clearly indicate what your project is about, what is its significance, and what exactly you plan to design and implement.

1 Concept (between 500 and 700 words). Briefly describe the following:

- Main goals of the project (what is your project about)
- Main functionality and characteristics of the software that you will develop
- Intended technology (platform, languages, libraries, tools)
- Intended users and key usability goals (i.e., how users will benefit from your project)
- Notes on similar/related products (provide references)
- Novelty of your solution (innovative characteristics)
- A note on how this project can help you professionally
- Brief bio(s): photo and brief professional info (degrees, research interests, main accomplishments) of the author(s), as you would provide as author(s) of a scientific journal article

2   Requirements

2.1   **Requirements elicitation: Interview findings.** Include at least 10 **\<T1\>** or 14 **\<T2\>** project-related questions and _summaries of the answers_ you received to them during interviews with at least two **\<T1\>** or three **\<T2\>** project stakeholders (end users, domain experts, developers).

2.2   **Software requirements**. Functional and non-functional requirements, prioritized on 3 levels, as complete as possible. Level 1 should be software requirements that your team will certainly implement by mid December 2019, Level 2 should be requirements that you will try to implement by then, and Level 3 requirements that would be good for your project, but will likely not be implemented by the end of the semester. Both functional and non-functional requirements should be as complete as possible.

3   Use Case Modeling

3.1   **Use case diagram.** At least 8 **\<T1\>** or 12 **\<T2\>** use cases should be included in this diagram.

3.2   **Detailed use cases**. Provide concise text descriptions (two to four lines each) for all the above use cases as well as detailed templates for 2 **\<T1\>** or 3 **\<T2\>** use cases.

3.3   **Requirement traceability matrix**. Provide a table with detailed mapping between use cases and functional requirements.

4   Glossary of terms

Include definitions for at least 12 **\<T1\>** or 20 **\<T2\>** terms related to the problem domain.

5   References

Provide at least 6 **\<T1\>** or 10 **\<T2\>** references for your project (journal articles, conference papers, books, web-based reports or papers).