

Department of Computer Science and Engineering

College of Engineering

University of Nevada, Reno

CS 709

Advanced Topics in Computer Science [Software Engineering]

Project Part I: Concept and Specification

October 10, 2017

Due: Friday, October 27, 2017 @ 11:59 pm (by email, PDF file named P1_Team#.pdf)

Points: 100

Weight in course grade: 10%

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

Table of Contents

Abstract (between 100 and 150 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 2017, 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 14 <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 5 <T1> or 10 <T2> references for your project (journal articles, conference papers, books, web-based reports or papers).