SOFTENG 754: SOFTWARE REQUIREMENTS ENGINEERING

PART 1 - ASSIGNMENT DESCRIPTIONS

University of Auckland
Semester 1, 2018

1 ASSIGNMENT DEADLINES

Assignment 1 (15%): Requirements documentation

7 March before lecture: Project groups formed with group name
7 March in lecture: signed agreements due
13 March before lecture: Interview questions due (upload on Canvas)
14 March during lecture: Customer meeting – requirements elicitation
21 March during lecture: Customer meeting – follow-up elicitation
23 March 11:59PM: deliverables due

Assignment 2 (20%): Prototype

24 April 11:59PM: deliverables due
27 April during lecture: Group presentations – prototype demo (5 of the 20%)

2 LEARNING OUTCOMES

By completing these assignments, you should demonstrate your ability to:

- elicit requirements from customers, perform requirements analysis and prioritization, and write requirement specifications. Focus on the problem, not solution (Assignment 1)
- validate and estimate requirements while focusing on user experience (Assignment 2)

3 SUBMISSION

You should submit all documents before 11:59PM on the required date. All documents should have a title page which has on it the course number and name, the title of your project; the name of your group, a list of members indicating who was responsible for which parts, and the date. A single pdf file should be submitted and should named A#_groupname.pdf. All submissions should be done via Canvas. Only one submission is required per group.

4 PEER EVALUATION

For all group assignments, you will receive a peer evaluation form from TeamMates. Individual marks may vary based on contribution level as percieved by your peers. Submission of peer evaluation for each assignment will have the same deadline as its associated assignment. Individuals who do not submit the peer evaluation forms for an assignment will lose marks for that assignment.

5 ASSIGNMENT DETAILS

Group formation: This is a group project. Each student must complete this project in a team of 3-4 students. Students should self-organise into teams. Each team should choose a group name (keep them classroom appropriate please – these will be shared with our customer). Once you have formed a team, you should add the team members to one of the Project Groups on Canvas on the People page. New groups should not be created. All students must be allocated to one of the lecturer-created groups. Groups must be formed and team names submitted by the deadline list above. Students not assigned to groups by this time will be automatically assigned. Group names should be submitted at https://goo.gl/forms/O51DtTTTOF52I2892 (one person per team to complete this form).

Overview: Your team will collaborate with a customer and develop requirements documentation for a new software product. You will analyze and specify the requirements for the system desired by the customer, through an iterative process of prototype design and evaluation in collaboration with the customer. Oral presentations will be required in lecture.

Assignment 1: You will submit requirements documentation that responds to the customer's needs. You should explain what you are going to do for your project as opposed to how you will accomplish it. When writing this, do not assume that your customer has any deep knowledge of software engineering. Required documention includes:

- Project overview (1 page max). This should provide a brief description of the project, describe the overall goals of the software, and describe the project stakeholders.
- Story map (1 page). This should be well laid out and easy to understand. Stories should be grouped into logical high-level activities and the activities should be displayed in chronological order. Highest priority stories should be at the top.
- User story "cards". For each user story on the story map, a user story card should be created with additional details for each user story. Each user story must have an ID Number, Title, User story statement (As a …), Acceptance criteria (checklist style), and priority. Stories should be prioritized using MoSCoW. Acceptance criteria should be specific and detailed for high priority requirements.
- Non-functional requirements. A separate list of non-functional requirements should also be included. Consider (and ask your customer) about each of the different types of non-functional requirements discussed in lectures. These can be written in user story format or the more traditional "shall" format.
- Appendix: lastly, an appendix should include all of the interview and follow-up interview

questions that your team prepared prior to the customer meetings. The initial set of prepared interview questions must also be uploaded to the Canvas assignment on the due date listed above.

Assignment 2: You will submit updated requirements documentation that incorporates feedback from Assignment 1. In addition to improving the requirements, the documentation should now include estimates for each requirement, and it should include prototype screenshots. Prototypes should be developed using a wireframe tool like Balsamiq or Pencil (many free online tools available). Required documention includes:

- All required documention from Assignment 1 that has been updated based on feedback received from teaching team or customer. Changes made from Assignment 1 content should be clearly described in an appendix.
- Identify user stories for first release. Indicate (by drawing a horizontal line on the story map) which user stories should be included in the first release
- Estimates for all user stories using story points (relative units). You can choose your preferred estimation technique. In an appendix, you must explain which estimation technique you selected, what scale is being used, and why you believe this is appropriate for your project.
- Low-fi prototypes. At least one prototype for each high-level user activity on your story map. All version 1 features should be prototyped in detail.

Your team will be required to present a demo of your prototype in class. The demonstration should explain why you think your prototypes satisfy the customer needs. Each group will present for 5 minutes, and all team members must take part in the presentation. On the day of the presentation, slides should be uploaded to the lectern computer prior to the start of the lecture to minimize transition time between groups.

6 MARKING CRITERIA

Assignment 1 (15%)

- All required information provided in sufficient detail
- The purpose of the system is explained correctly
- Stakeholders are identified and described
- Story map clear and accurate
- Requirements are clear and complete
- Requirements are consistent
- Requirements have reasonable priorities
- Acceptance criteria well thought out, specific and detailed as appropriate

Assignment 2 (20%)

- Documentation has been updated per feedback
- Requirements have reasonable estimates
- Protoypes created for all major functionality in sufficient detail and quality

- Prototypes show sufficient consideration for customer needs and user experience
- Presentation demonstrates strong understanding of customer needs

7 DESCRIPTION OF PROJECT

Client: Applied Imagination

Description: The project is to develop a market validation web application. The app will have a combined set of algorithms that give instant market validation, feasibility and predictive market analysis to entrepreneurs and investors, allowing them to more confidently embark on new businesses and innovations. The analytics will give our users the big picture of where their idea is in relation to the existing market so they can make decisions quickly and more accurately on how to proceed with their vision.

8 LATE SUBMISSIONS

Late submissions will incur the following penalties:

- 15% penalty for 1 to 24 hours late,
- 30% penalty for 24 to 48 hours late, and
- 100% penalty for over 48 hours late (Canvas assignment automatically closes).

If you have a legitimate reason for submitting late, discuss this with the lecturer well in advance of the assignment due date.

9 AGREEMENT: STUDENT PROJECT WITH AN INDUSTRY CLIENT

All groups will be required to sign an agreement with our industry client. The agreement will be posted on Canvas and an annoucement will be made when it is available. You are free to seek legal advice on this agreement if you wish. All members of the team must sign the same agreement page. Signed agreements should be submitted in the lecture on the date listed above. They need to be good quality prints (e.g. photos of contract pages not acceptable.) You can either print them two-sided or staple the two pages if printing single sided. They will then be passed on to our HOD for signing. Any delays in returning the signed contracts will result in a delay to the start of your project so make sure these are done promptly.