

CITS4401/3301 Software Requirements and Design

Week 2: Eliciting requirements

Date: 15 March 2023

Reading: Pressman Chapter 5 (Understanding Requirements)

Q1. Core concepts: In your own words give a short explanation of each of the following concepts. Also, provide an example for each concept.

- (a) Functional requirement
- (b) Non-functional requirement
- (c) Project scope
- (d) Software scope
- (e) Requirements elicitation

Q2. Consider the following requirements for a mobile phone app for storing and managing photos.

R1: The system must be useable

R2: The system must provide visual feedback to the user within one second of issuing a command

R3: The availability of the system must be above 95 percent

R4: The user interface to the new system should be similar enough to the old system that users familiar with the old system can be easily trained to use the new system.

Answer the following questions about these requirements:

- (a) Using the classifications for requirements from the lectures, assign a category to each of these requirements.
- (b) Which of these requirements are verifiable? If not, suggest how it could be rewritten to be verifiable.
- (c) Suggest at least one (new) requirement for this system which would conflict with the requirements above.
- (d) Suggest a way to resolve that conflict.

Q3. The remaining questions relate to a project for the University of Titipu. The University have decided to develop a web-based maintenance tracking and repair system (TUTRS). [Source: based on Pressman Ch 8 Question 8.3]

“Staff and students can log onto a website and report the location and severity of broken equipment or other maintenance issues. As issues are reported they are logged within a University maintenance database and assigned an identifying number, location, problem description and photograph, and repair urgency. Work order data are associated with each reported issue and include the problem, repair crew, number of people, equipment assigned, hours applied, status of repair, material used in the repair, and repair cost (computed from hours, number of people, material and equipment). Finally a damaged file is created to hold information about the reported damage from the maintenance problem, including the reporting person, their contact details, type of damage and the dollar amount of damage. TUTRS is an online system. All queries are to be made interactively.”

Stakeholders Identify three or four stakeholders for the TUTRS system. For each stakeholder you identify, explain their role in the system.

Requirements Elicitation Methods Identify at least two different ways that you could elicit requirements for the TUTRS system. Justify why you have chosen that method and explain how you would carry out the elicitation process.

Requirements Elicitation In your groups, use role play to practice requirements elicitation for the TUTRS system. Use each of the elicitation approaches you identified in the previous question. For each requirement give a rationale: why is it needed and maybe its priority: how important it is.