CS708 – Software Requirement Engineering

Due Date: 21st May, 2012

Assignment 1

Instructions to Solve Assignments

The purpose of assignments is to give you hands on practice. It is expected that students will solve the assignments themselves. Following rules will apply during the evaluation of assignment.

- Cheating from any source will result in zero marks in the assignment.
- Any student found cheating in any two of the assignments submitted will be awarded "F" grade in the course.
- No assignment after due date will be accepted.

Question 1: Total Points (20)

Incomplete and ambiguous requirements are open to multiple interpretations and assumptions which can lead to the development of poor quality or faulty software products. Consider the following set of requirements for a ticket issuing system and discover incomplete and ambiguous requirements.
An automated ticket issuing system sells rail tickets. Users select their destination and input a credit card and a personal identification number. The rail ticket is issued and their credit card account charged with its cost. When the user presses the start button, a menu display of potential destinations is activated, along with a message to the user to select a destination. Once a destination has been selected, users are requested to input their credit card. Its validity is checked and the user is then requested to input a personal identifier. When the credit transaction has been validated, the ticket is issued.

Question 2: Total Points (20)

The paper "**A Structured Approach for Extracting Functional Requirements from Unclear Customers**" describes a new approach to extract requirements specification in a systematic way. Your task is to find out the weaknesses in the previous approach and how this new structured approach overcomes these weaknesses to produce a well documented specification.

Question 3: Total Points (20)

The paper "**On Non-Functional Requirements in Software Engineering**" describes different methods to represent non-functional requirements. You task is to elaborate how non-functional requirements can be represented using KAOS and NFR Framework methods? Which one is better and why?

Question 4: Total Points (40)

To understand customer needs properly, it is important to be in touch with the customer. But there are situations where it is not possible. For example, in market-driven development, software is developed for a vast number of unknown customers. Another example is the tender process, where customer provides Request For Proposal (RFP) with big number of requirements of varying detail. Now the software companies have to provide the solution proposal in a very tight time frame and typically there is no direct communication between customers and the software companies which is needed to clarify the requirements.
The paper "**Answering a Request for Proposal -Challenges and Proposed Solutions**" describes the challenges of Requirements Engineering during the tender process and also provides guidelines to overcome these challenges. Your task is to read this paper thoroughly and write down these challenges and their solutions in your own words.