



Assignment #1

Q1: (10 Marks)

- a) Giving reasons for your answer based on the type of system being developed, suggest the most appropriate generic software process model that might be used as a basis for managing the development of the following systems:
 - I. A system to control anti-lock braking in a car
 - II. A virtual reality system to support software maintenance
 - III. A university accounting system that replaces an existing system
 - IV. An interactive travel planning system that helps users plan journey with the lowest environment impact
- b) Develop a sequence diagram showing the interactions involved when a student registers a course in a university. Courses may have limited enrolment, so the registration process must include checks that places are available. Assume that the student accesses an electronic course catalog to find out about available courses.
- c) Suggest who might be stakeholders in a university student records system. Explain why it is almost inevitable that the requirements of different stakeholders will conflict in some way.
- d) When is it appropriate not to recommend agile method for developing a software system?
- e) Explain the Software Testing Process. Include the appropriate diagram.
- f) What do you understand by Form-based specification and Tabular specification?
- g) What is the difference between testing and debugging? Summarize the structure of a software test plan. Explain each step in brief.
- h) Differentiate between White Box and Black Box Testing
- i) Explain why it is not necessary for a program to be completely free of defects before it is delivered to its customers. To what extent can testing be used to validate that the program is fit for its purpose?