Software Engineering Lab (CS3074) SPRING 2021-22

Lab Sheet-2 (SDLC)

For the given two case studies, answer the following

1. Explain which software process model will be suitable with justification.
2. Describes briefly the activities going to take place in each phase of the process model with respect to the given task.
3. Mentioned the function and non-functional requirements, as performed in the Lab-1.

Case Study 1. Assume that a software development company is already experienced in developing payroll software and has developed similar software for several customers (organizations). Assume that the software development company has received a request from a certain customer (organization), which was still using manually processing of its pay rolls. For developing a payroll software for this organization, which life cycle model should be used?

Case study 2. Galaxy Inc. undertook the development of a satellite-based communication between mobile handsets that can be anywhere on the earth. In contrast to the traditional cell phones, by using a satellite-based mobile phone a call can be established as long as both the source and destination phones are in the coverage areas of some base stations. The system would function through about six dozens of satellites orbiting the earth. The satellites would directly pick up the signals from a handset and beam signal to the destination handset. Since the foot prints of the revolving satellites would cover the entire earth, communication between any two points on the earth, even between remote places such as those in the Arctic ocean and Antarctica, would also be possible. However, the risks in the project are many, including determining how the calls among the satellites can be handed-off when they are themselves revolving at a very high speed. In the absence of any published material and availability of staff with experience in development of similar products, many of the risks cannot be identified at the start of the project and are likely to crop up as the project progresses. The software would require several million lines of code to be written. Galaxy Inc. decided to deploy the spiral model for software development after hiring highly qualified staff. To speed up the software development, independent parts of the software were developed through parallel cycles on the spiral. The cost and delivery schedule were refined many times, as the project progressed. The project was successfully completed after five years from start date