

IT314 : Software Engineering

Lab 1

Choosing Software Process Model.

Submitted by

Smeet Agrawal

Student ID - 202101237

5th Semester, B.Tech

Submitted to

Dr. Saurabh Tiwari



**Dhirubhai Ambani Institute of Information and
Communication Technology**
Gandhinagar , Gujarat

Question 1 : A simple data processing project:**WaterFall**

Reason: Requirements are very well documented, clear and fixed. Product definition is stable and short. All the requirements are known before implementation of software so waterfall model is a suitable choice for this

Question 2: A data entry system for office staff who have never used computers before. The user interface and user-friendliness are extremely important.**Throw-Away Prototype Model**

Reason : Here the users requirements are not clear. So we can make a prototype of the system and then feedback will be taken from user and once the requirements are clear , final software will be created.

Question 3: A spreadsheet system that has some basic features and many other desirable features that use these basic features..**Increment Model**

Reason: Here, initially we create a system with some well-defined features and then based on increasing requirements we will add the features and this is the characteristic of increment model so here we will use that.

Question 4: A web-based system for a new business where requirements are changing fast and where an in-house development team is available for all aspects of the project.**Agile Model**

Reason: Here the requirements are changing fast and we also have development team for all aspects of project so we require advanced model so agile will be the best choice for this situation

Question 5: A Web-site for an on-line store which has a long list of desired features it wants to add, and it wants a new release with new features to be done very frequently.

Agile Model

Reason: Here features should be updated frequently. So we must use agile here

Question 6: A system to control anti-lock braking in a car.

Waterfall Model

Reason: In the waterfall model for the proper functioning of anti lock braking system ,the analysis and system requirements must be scheduled before the system implementation

Question 7: A virtual reality system to support software maintenance.

Incremental Model

Reason: Here we require system adaptability and the requirements are not fixed for a virtual system so we must add some features after feedback. Therefore Incremental Model will be the one model for this situation

Question 8: A university accounting system that replaces an existing system

Waterfall Model

Reason: The Waterfall Model is suitable for replacing an existing university accounting system due to its well-defined phases, sequential approach, and emphasis on documentation and planning. It provides stability and predictability in the development process, which is important when transitioning from an old system to a new one.

Question 9: An interactive system that allows railway passenger to find train times from terminals installed in stations.

Incremental Model

Reason: Here the system keeps on changing so we cannot predict it before implementation so a basic model can first be made then follow on for a perfect model. In this situation Incremental Model is suitable.

Question 10: Company has asked you to develop software for missile guidance system that can identify a target accurately..

Spiral model

Reason: Here the Risk analysis is centralised , we cannot release it without analysing the risk . Here the result cannot be predicted before implementation and we cannot increment the updates so spiral model is best choice here.

Question 11: When emergency changes have to be made to systems, the system software may have to be modified before changes to the requirements have been approved. Choose a process model for making these modifications that ensures that the requirements documents and the system implementation do not become inconsistent..

Spiral Model

Reason: This software is used in emergency situation so we need to analysis all the risk before implementing our software .So spiral model will be used here.

Question 12: Software for ECG machine.

Spiral Model

Reason: This model is used for medical purpose where risk analysis is the key point to keep in mind so it must be spiral model here.

Question 13: A small scale well understood project (no changes in requirement will be there once decided).

Waterfall Model

Reason: Here the requirements are cleared and fixed and it is a small scale project. So due to rigid nature of waterfall model it is best suitable choice for the condition