IT314 – Software Engineering

Name : Vixita Bhalodiya

ID : 202101232

Group : 4

Lab : 1

Choosing Software Process Models :

a) A simple data processing project.

- I would recommend the **Waterfall Model** for this project because it is simple and easy to implement. It seems that requirements are clear, stable and unlikely to change. In the Waterfall Model, the development process flows in one direction, and we cannot go previous phase once it is completed. Therefore, the Waterfall model would be suitable for this project.

b) A data entry system for office staff who have never used computers before. The user interface and user-friendliness are extremely important.

- I would recommend the **Prototyping Model** because it seems like the user requirements are not specified. This model involves building partial software, testing of it, and making further changes based on customer feedback. Since, in this project, user interface and user-friendliness are extremely important, the requirements of customer should be clear before starting of implementation. So, the Prototyping Model would be suitable for this project.

c) A spreadsheet system that has some basic features and many other desirable features that use these basic features.

- I would recommend the **Prototyping Model** as spreadsheet system has already some basic features and prototyping model helps us to introduce desirable features using basic features.

d) 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.

- I would recommend **Agile Model** as requirements are changing fast. So this model is user centric and helps to changing fast and also the capable team is available for development so Agile model would be suitable for this project.

e) 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.

- I would recommend the **Incremental Model** as there is a long list of desired features so we can divide it into modules and each module adds function to previous release module.

f) A system to control anti-lock braking in a car.

- I would recommend the **Spiral Model** for this project. Since it involves human life, there is need of effective risk management. The Spiral Model is particularly useful for projects with high uncertainty and safety-critical aspects.

g) A virtual reality system to support software maintenance

- I would recommend **Synchronize and stabilize Model** because task is divided in 3-4 groups and hence it is easy to maintain.

h) A university accounting system that replaces an existing system

- I would recommend the **Waterfall Model** for this project as here a university accounting is already existing and we have to only replace it with current data. So, all the requirements are fixed and clear, therefore we can use the Waterfall Model.

i) An interactive system that allows railway passenger to find train times from terminals installed in stations.

- I would recommend the **Prototype Model** for this project as user interface is very important and users can be novice prototype helps them in understanding the working of the software.

j) Company has asked you to develop software for missile guidance system that can identify a target accurately.

- I would recommend the **Spiral model** for this project as any wrong target identification can have severe consequences. Therefor we can use the Spiral Model as there is high risk of life and property.

k) 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.

- I would recommend the **Agile Model** for this project as frequent changes are required. So changes can updated very frequently, therefore we can use Agile Model for this project.

l) Software for ECG machine.

- I would recommend the **Spiral Model** for this project as ECG machine is use for monitor the condition of heart, it involves high risk.

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

- I would recommend the **Waterfall Model** for this project because it is a small-scale, well understood problem and there are no changes in requirements. Therefore , the requirements are clear and fixed. Since the Waterfall Model is sequential and linear approach and there are no further changes, so we do not have to go back to previous phase.