IT-314 Software Enginering

LAB 1

Name:-Patel Shubham Rohitkumar

Student ID:- 202101464

Lab Group:- 5

Choosing Software Process Models :-

1. A simple data processing project

   - Water Fall :- As given in the problem statement The problem is simple so it has limited Complexity so a waterfall model will be the most suitable model for this development.

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

   - Prototyping model :- As given in the problem statement the problem requires more user friendly and less complex user interface so Prototyping model will be best.

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

   - Incremental :- As given in the problem statement this project already has some features and we want to add new features on the base of the basic features so the most suitable model.

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:- Agile model requires great flexibility and rapid update which are required by the current client hence this will be the best approach

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.

   - Incremental :- As given in the problem statement, we shall need to add new features frequently. Hence to keep the update cost low, we can use an Incremental model.

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

   - Spiral :- As given in the problem statement this problem involves human life so we have to focus on minimizing failures so in this case the spiral model fits best because it is a model that works on iterative development with risk management.

7. A virtual reality system to support software maintenance

   - Prototyping :- As given in the problem statement VR technology is an evolving tech so it doesn't have a clear instruction set or clear requirements so Prototyping model fits best here.

8. A university accounting system that replaces an existing system

   - WaterFall :- As given in problem statement here university accounting system is already deployed so its instruction set is clear and defined so waterfall model is most appropriate.

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

   - Evolutionary Prototyping :- As given in problem the users may not very comfortable with the UI so UI should be very understandable and self explainatory so the probability of making them error become less and the system has to be tested based on multiple user trials on a prototype for each of its functionality hence we can use Evolutionary Prototyping model.

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

    - Spiral :- this problem statement contains high preciseness, safety, high risk so here the spiral model fits perfectly well.

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.

    - Agile :- This system requires frequent modifications to be made, agile model have an advantage of being consistent with the frequent changes, hence we can implement the same.

12. Software for ECG machine.

    - Spiral :- This problem contains high accuracy and in some cases it can become fatal. It requires great expertise and near zero chance of error hence we should use Sprial model where each step is rechecked.

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

- WaterFall :- As given in problem statement this is small and well understood problem so its beneficial to use waterfall model here.