IT-314-SOFTWARE ENGINEERING

LAB-1

NAME: KRISHA MEHTA

STUDENT ID: 202101262

GROUP: 4

DATE: 2/8/2023

QUESTIONS:

a) A simple data processing project.

Model: Waterfall Model

Reason: Since the waterfall model is the most basic model and we have a simple data processing model, we can use the waterfall model as we have very minimal requirements. And in the waterfall model, we go in a single direction so it is the most suitable model.

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

Model: Prototyping Model

Reason: Here user interface is extremely important and the prototyping model is best for UI and user-friendliness.

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

Model: Incremental Prototyping Model

Reason: The system already has some basic features and we use these features for developing other desirable features. As incremental prototyping helps in developing something new based on some already available features it will suit best here.

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.

Model: Spiral Model

Reason: In the spiral model it is easy to work on a system where requirements are changing. Also, technical expertise is needed so the whole team can be available for all aspects of the 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.

Model: Spiral Model or Synchronize and Stabilize

Reason: Here we need to update the system frequently. Also, as it is a website for on-line store user requirements are important as well.

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

Model: Spiral Model

Reason: Here risk is involved and the spiral model is best for analyzing risks and also has technical experts.

g) A virtual reality system to support software maintenance

Model: Synchronize and stabilize

Reason: Here as work is divided into teams of 3-4, maintenance of the system can be easily done.

h) A university accounting system that replaces an existing system

Model: Waterfall model

Reason: As an already existing system exists, the requirements are well known beforehand.

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

Model: Prototype Model

Reason: As railway passengers are common people, the UI becomes extremely necessary here and the prototype model handles it very nicely.

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

Model: Spiral Model

Reason: Since there is a high risk involved, the spiral model is the best applied here. Also, much technical expertise is needed in missile guidance systems, spiral model suits the best.

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.

Model: Agile Model

Reason: In an agile model the work is done in the time period of 2 to 3 weeks and it is checked whether new requirements are introduced or not. Based on this further some addition or changes are made in the software and this process keeps repeating a few times before finalizing the product.

l) Software for ECG machine.

Model: Spiral Model

Reason: Since there is a high risk involved in the development of this model, we should use the spiral model.

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

Model: Waterfall Model

Reason: Since no changes will be made in the requirement once decided, we can use the waterfall model here as there is a one-sided flow in the waterfall model.