SOFTWARE ENGINEERING - LAB01

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a. A simple data processing project

➔ Waterfall Model

For the given system model, Waterfall model suits the most. As the project is

- Well-understood and requirements are clear.
- There will hardly be any changes in requirements.
- Simple and easy to explain to customers.

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

➔ Prototyping Model

For the given system model, Throw-away Prototyping model suits the most. As the project is

- Not well- understood and requirements are not clear
- User Interface is important
- System with novice users

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

➔ Evolutionary Prototyping

For the given system model, Evolutionary Prototyping model suits the most. As

- The model can be expanded upon and revised
- Model doesn't have to be discarded and rewritten to go to market
- Project can be done in incremental fashion such that the older version do not become inconsistent.

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.

➔ Incremental Model

For the given system model, Incremental model suits the most. As

- Requirements are not clear

- New product development
- Time to market is critical
- There will be changes in requirements

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.

➔ Agile SCRUM

For the given system model, Agile SCRUM model suits the most. As

- The model could build web-site with basic features in first sprint followed by all the desired features in different sprints.
- Project can be released in form of new versions quite frequently
- Agile uses the sprints of duration 1 to 3 weeks
- Agile SCRUM Accommodate changes

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

➔ Waterfall Model.

For the given system model, Waterfall model suits the most. As the project is

- Well-understood and requirements are clear
- Simple and easy to explain to customers.
- No changes would be arisen

g. A virtual reality system to support software maintenance.

➔ Incremental Model

For the given system model, Incremental model suits the most. As

- Requirements are not clear.
- New product development.
- Incremental model accommodates changes.

h. A university accounting system that replaces an existing system.

➔ Waterfall Model

For the given system model, Waterfall model suits the most. As,

- The project is to be implemented in existing system.
- Requirements are clear.
- No changes would be arisen in near time.

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

➔ Prototyping Model

For the given system model, Prototyping model suits the most. As the project is

- User Interface is important
- System with novice users
- Changes would be arisen time-to-time

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

➔ Spiral Model

For the given system model, Spiral model suits the most. As,

- Risks are involved
- Changes will be arisen during the project development
- Requirements are not clear

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.

➔ Spiral Model

For the given system model, Spiral model suits the most. As the project is,

- Need changes during the development of project without making the system implementation inconsistent.
- Requirements are not clear
- Risks are involved

l. Software for ECG machine.

➔ Incremental Model

For the given system model, Incremental model suits the most. As,

- Project can be built in incremental fashion. Basic requirements followed by backend modifications and advancements afterwards.
- New releases could be launch without harming the previous version.
- Requirements are not clear

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

➔ Waterfall Model

For the given system model, Waterfall model suits the most. As the project is

- Well-understood
- There will hardly be any changes in requirements
- Simple and easy to explain to customers.
- Small scale project