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Lab1: Choosing Software Models

A) A simple data processing project.
Waterfall model
- It's a simple data processing project hence requirements will be given in advance.

B) A data entry system for office staff who have never used computers before.
Evolutionary Prototyping Model
- Since the users are inexperienced and UI is important, projects can be revised and extended based on how users react to the UI and changes can be made accordingly.

C) A spreadsheet system that has some basic features and many other desirable features that use these basic features.
Incremental waterfall Model
- First the basic requirements can be done and then other features can be released in the next batch.

D) A web-based system for a new business where requirements are changing fast
Spiral Model
- There are new requirements for each new release so spiral models should be used.

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

Incremental Model
- Since it's an online store, base requirements are first decided and then new features are to be added with each release.

F) A system to control anti-lock braking in a car.
Waterfall model
- Initially requirements and design are given how an anti lock braking in a car works.

G) A virtual reality system to support software maintenance

Incremental Model

- Software maintenance techniques can be updated with time in new releases but requirement of the model remains same..

H) A university accounting system that replaces an existing system

Waterfall model

- Requirements are given well in advance which will be similar to previous system.

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

Evolutionary Prototype

- Because new stations will be added with time and prototype because of to make a simple UI.

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

Spiral Model

- There is a need to assess risk each time because human life can be at risk if the target isn't accurate.

K) Making these modifications ensures that the requirements documents and the system implementation do not become inconsistent.

Spiral model/Synchronize & Stabilize Model

- Since modifications are to be made such that the system doesn't become inconsistent, we will use parallel development as in the Synchronize & Stabilize Model.

L) Software for ECG machine.

Waterfall model

- Requirements of how an ECG machine should work are given well in advance.

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

Waterfall model

- Since no change in requirement once it's released.