SOFTWARE ENGINEERING

Lab Assignment: 1

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Question:

a) A simple data processing project.
-> Waterfall Model.
->Reason: It is a simple project and we have clear requirements with no changes. so, waterfall model suits 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.
-> Prototyping Model.
->Reason: The users are novice and user interface is extremely important and prototyping is for helping them. So, we need to use prototyping Model.

c) A spreadsheet system that has some basic features and many other desirable features that use these basic features.
-> Incremental Prototyping Model
->Reason: Here we using basic features repeatedly. So, the incremental model will be helpful. In prototyping model, it will be useful to new users in introducing new feature.

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.
->Spiral Model.
->Reason: Changes requires at any time, model progresses as per requirements and a team is also available. Technical expertise are also required.
->Synchronize and stabilize:
->Reason: In synchronised model the changes can be made and the build of changes can find easily.

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.
-> Incremental Model.

->Reason: The requirement is supreme and the team work will be made it easy to build the website. Changes are made frequently. Also, new feature can be added frequently. So, for that evolutionary prototyping in useful.

f) A system to control anti-lock braking in a car.
-> Spiral Model.
->Reason: The requirements and the code will be changed accordingly and the security is very high. So, risk is high and Spiral model is getting used.

g) A virtual reality system to support software maintenance
-> Incremental Synchronise Model.
->Reason: We can divide the task into various parts and then do code accordingly. It is easy to maintain.

h) A university accounting system that replaces an existing system.
-> Incremental (Synchronize and Stabilize) Model.
->Reason: We can divide the task into various builds and then do code accordingly. so, it is easy to maintain.
-> Waterfall Model.
->Reason: The requirements are clear and the code will be made with no or minimal changes.

i) An interactive system that allows railway passenger to find train times from terminals installed in stations.
-> Prototyping Model and Incremental Model.
->reason: Here, user interface is very important. In prototyping model, it will be useful to new users in introducing new feature.

j) Company has asked you to develop software for missile guidance system that can identify a target accurately.
-> Incremental Spiral Model.
->Reason: The requirements are clear and the code will be made with no or minimal changes. There is high risk of life and property is involved and technical expertise are prioritized.

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.
->Incremental Spiral Model.
->reason: There is no scope in going backward and changing requirements. Necessary requirements after short interval of time are getting repeats before finalizing the software. The system software has to be modified before changes to the requirements. So, in this case the spiral model will be useful.

l) Software for ECG machine.
-> Incremental Spiral Model.

->Reason: There is high risk factor. So, we need to use Spiral model.

m) A small scale well understood project (no changes in requirement will be there once decided).
-> Waterfall Model.
->Reason: The requirements are clear and well understood. The code will be made with no or minimal changes.