Lab 01

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a) A simple data processing project.

Ans : Here project requirements are clear and fix at initial. So, waterfall model is useful because it is simple whenever requirements are fix.

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

Ans : Here user engagement is very important and requirements also very after the feedback. Therefore some incremental development with focus on process adaptability is used. Hence agile process is appropriate for this.

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

Ans: Spiral model is useful. It is more flexible and incorporates the advantages of both waterfall and prototyping and here there are some features which uses basic feature so, it is necessary to
Test the basic features first. So, the Spiral model is good match.

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.

Ans: IterativeModelsincerequirementsarechangingveryquicklyand need to be reiterated upon

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.

Ans: Since the new features are to be implemented so system needs to be flexible hence Agile model is suitable.

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

Ans:WaterfallModelsinceitissafety system and requires upfront analysis with a proper plan.

g) A virtual reality system to support software maintenance

Ans:PrototypeModelsince complete requirements are not known

h) A university accounting system that replaces an existing system

Ans:WaterfallModelsincetheproblemiswellunderstoodandtheprojectcan beshortduration

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

Ans: System with a complex user interface but which must be stable and reliable. An incremental development approach is the most appropriate as the system requirements will change as real user experience with the system is gained.

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

Ans:WaterFallModelsincerequirementsneedto be frozen early and proper upfront analysis is needed

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.

Ans:IterativeModelsincerequirementscanbechanged and be made consistent

l) Software for ECG machine.

Ans : This is a safety-critical system so requires a lot of up-front analysis before implementation. It certainly needs a plan-driven approach to development with the requirements carefully analysed. A waterfall model is therefore the most appropriate approach to use, perhaps with formal transformations between the different development stages.

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

Ans:Waterfallmodelsincetherequirementsarenotchanging and the project can be done in a short duration of time