Lab-01
Choosing Software Process Models

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a) A simple data processing project.

● Since the data processing project is simple in nature, the requirements of the project can be finalized initially. So we can use the waterfall model of software development.

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

● We can use the prototyping model of software development because we need to create a software in which user-interface and user-friendliness are very important. In the prototyping model , users can give feedback on the prototype and we can make improvements in the software accordingly.

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

● Since the spreadsheet system also has some desirable features that use some basic features , We should use the incremental model of software development. It will be able to tackle the need of new desirable features.

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.
- Since the requirements are changing fast , we should use the incremental model of software development as mentioned above.

e) A Web-site for an online 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.
- Since the website of an online store has a long list of features, the requirements of the software will be changing frequently. So the incremental model of software development should be used to tackle the changing requirements.

f) A system to control anti-lock braking in a car.
- The system of anti-lock braking in a car has so much risk involved. Therefore the spiral model of software development should be used. This model uses prototyping and simulations in order to reduce risk.

g) A virtual reality system to support software maintenance.
- The virtual reality system which supports software maintenance will have constantly changing requirements according to particular software. Therefore we should use incremental model of software development

h) A university accounting system that replaces an existing system.
- Since the university accounting system has specific requirements , we should use the waterfall model of software development.

i) An interactive system that allows railway passengers to find train times from terminals installed in stations.
- The needed system should be interactive and user friendly in nature therefore we should use the prototyping model of software development which ensures user-friendliness.

j) Company has asked you to develop software for a missile guidance system that can identify a target accurately.
- The missile guidance system has so much risk involved. So the spiral model of software development should be used. We can reduce the risk by prototyping and simulation.

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.
- We can use incremental model in order to insure changes in requirements.

l) **Software for ECG machines.**

- The software requirements of the ECG machines are fixed. So we can use the waterfall model of software development.

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

- SInce the there will not be any change in the requirements after deciding , we can use the waterfall model of software development.