IT-314

(SOFTWARE ENGINEERING)

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Lab Group: 1

Lab Assignment 1

a) A simple data processing project.
   Ans: Waterfall Model - It is because the requirements for a simple data processing project are well defined and clear and would have minimal or no changes, hence Waterfall model will be the most appropriate software model process that might be used as a basis for managing the development of the project.

b) A data entry system for office staff who have never used computers before. The user interface and user friendliness are extremely important.
   Ans: Prototype Model - It will be suitable the most over here because it can be more flexible than the waterfall model and helps to grasp the requirements in a better way.

c) A spreadsheet system that has some basic features and many other desirable features that use these basic features.
   Ans: Incremental Model - We can use the incremental model since we need numerous features that can be implemented utilizing fundamental characteristics. We can add extra features that rely on top of implementing of the fundamental 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.
   Ans: Agile Model - It is mostly important and suitable for the projects where time is of a great importance and where requirements change very fast.

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: Agile Model - It is because this model can be modified easily when new features are needed and can made available more quickly.

f) A system to control anti-lock braking in car.
   Ans: Waterfall Model - It is most suitable over here because the software requirements over here are well defined and will not change in the future.

g) A virtual reality system to support software.
   Ans: Evolutionary Model - Virtual reality systems require continuous improvement and adaptation to evolving maintenance needs, the Evolutionary model will be the best fit for this project.

h) A university accounting system that replaces an existing system.
   Ans: Waterfall Model - Since the requirements are well defined, so waterfall model best suites over here.

i) An interactive system that allows railway passenger to find train times from terminals installed in stations.
   Ans: Incremental Model – Since an interactive system is required over here, so using the incremental model will be a good idea as it accommodates regular feedback from stakeholders.

j) Company has asked you to develop software for missile guidance system that can identify a target accurately.
   Ans: Spiral Model – Since customer feedback and accuracy is required over here, so spiral model is most suitable for missile guidance system. And since it is a huge project, so spiral model suits the most.

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: Spiral Model - The Spiral Model is best suited for this project since each cycle of the spiral model includes thorough documentation

of the requirements and allows for the incorporation of last-minute changes into the program.

l) Software for ECG machine.
Ans: Iterative Model - It will be the best option because the fundamental functions can be introduced right away, and further features may be added later, following risk analysis and user feedback. Consequently, offering a trustworthy and efficient medical service.

m) A small scale well-understood project (no changes in requirement will be there once decided).
Ans: Waterfall Model - The Waterfall model would be suitable for a small-scale, well-understood project with predictable requirements. It takes a linear approach, and when the requirements are explicit, it may help in effectively controlling the development process