

# LAB -1

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ROLL NO: 202101022

GROUP NO: 1

SUBJECT: IT-314

**a) A simple data processing project.**

- Model: Waterfall model
- Reason: This model is simple and requirements are clear so we can use the above model.

**b) A data entry system for office staff who have never used computers before.**

**The user interface and user-friendliness are extremely important.**

- Model: Prototype model
- Reason: The user wants user interface and user-friendliness and also the users don't have knowledge of computers so this model is perfect for the above statement.

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

- Model: Incremental model
- Reason: a spreadsheet system that includes both necessary and desirable functionality. The incremental model is suitable for this job. It enables the development team to expand upon the fundamental capabilities and gradually include the desired features into the system.

**d) A spreadsheet system that has some basic features and many other desirable**

**features that use these basic features.**

- Model: Agile model
- Reason: Since user needs are changing too quickly and agile models are better suited for these kinds of functions, I'll utilise one for this project. Agile development methods involve users at every stage of the process to create high-quality software.

**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.**

- Model: Agile-scrum model
- Reason: Since user needs are changing too quickly and agile models are better suited for these kinds of functions, I'll utilize one for this project. Agile development methods involve users at every stage of the process to create high-quality software.

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

- Model: Spiral model
- Reason: The issue statement states that this difficulty affects human life, so we must focus on limiting failures. The spiral model, which emphasizes iterative development with risk management, works effectively in this case.

**g) A virtual reality system to support software maintenance.**

- Model: Evolutionary model
- Reason: Virtual reality systems need to be continuously improved and adapted to changing maintenance requirements; for this project, the evolutionary approach will work well.

**h) A university accounting system that replaces an existing system**

- Model: waterfall model
- Reason: I will use the Waterflow model in this project because we must develop an existing system and are already aware of its features and requirements. Since we are already aware of the requirements and

there won't be any changes to the current model or criteria, we can use the waterfall model. Therefore, the model that best fits this kind of system is the waterfall one.

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

- Model: evolutionary model
- Reason: As indicated in the challenge, we can utilise the evolutionary model because people could not be entirely at ease with the user interface. We may use an evolutionary model to assess the system based on several user trials on a prototype for each of its features and lower the possibility of making mistakes.

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

- Model: Spiral model
- Reason: The issue statement's high degree of precision, safety, and danger fits along nicely with the spiral model.

**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.**

- Model: Agile model
- Reason: This system requires frequent modifications to be made, agile model have an advantage of being consistent with the frequent changes, hence we can implement the same.

**l) Software for ECG machine.**

- Model: Spiral model

- Reason: This problem contains high accuracy and in some cases it can become fatal. It requires great expertise and near zero chance of error hence we should use Spiral model where each step is rechecked.

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

- Model: Waterfall model
- Reason: We can utilize the Waterfall approach for this project since there won't be any modifications to the requirements, and it is ideal for projects with clear needs and few potential changes