Lab assignment-1

(1) **A simple data preprocessing project** : we can classify it into a **simple waterfall model** as it is cost efficient , requires a small size team , simple , there is no risk factor involved and quick to find errors.

(2) **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 **prototyping** models as it is clearly specified that user-interface is very important. Also prototyping allows flexibility and refining of product according to user needs.

(3) **A spreadsheet system that has some basic features and many other desirable features that use these basic features :** We can use **incremental and waterfall models** because it is clearly mentioned that other additional features are dependent on basic features which indicate waterfall patterns and since all basic features are independent of each other we can divide it into multiple team units which makes it fast.

(4) **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 :** As our requirements change quickly, it is a type of ambiguous requirements, and thus new functionality may be introduced on every iteration by analysing the risk and specific experience, the web-based system for new business is a **spiral incremental** model. A good project is accessible for the new business and can advise the requirements based on the needs.

(5) **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 :** since it is the website of an online retailer, a good user interface with a broad list of desirable features is required. The **incremental** methodology allows us to simply add new functionality. As a result, the **Prototype** Model may provide consumer user experience while the Incremental Model can achieve frequent adjustments.

(6) **A system to control anti-lock braking in a car :** The **Waterfall** Model is the most common generic software process model used to control anti-lock braking systems in cars. Anti-lock braking is one of the most important safety features in a car. In a waterfall model, if you want your anti-lock braking system to work properly, you need to make sure your design requirements are met without any issues before you put the system into action.

(7) **A virtual reality system to support software maintenance:** The **Incremental** Model is the best way to manage software maintenance for VR systems. The system needs are constantly evolving and can't be predicted ahead of time, and even requires a lot of coding for the software**.**

(8) **A university accounting system that replaces an existing system:** The **Waterfall** Model is used to create a new accounting system for the university. It's based on an existing system, so the requirements are predictable and can be used again and again.

(9) **An interactive system that allows railway passenger to find train times from terminals installed in stations:** If you're looking for a software model for your interactive travel planning system, the **prototype** model is the way to go. People's needs can change and you need to be able to deliver quickly. Using the prototype model will save you time and let you focus on the important stuff first.

(10) **Company has asked you to develop software for missile guidance system that can identify a target accurately :** The **Waterfall** Model can be used to create a missile guidance system that accurately identifies a target. It's a government and defense program with pre-defined needs. In this case, you need to meet all the requirements on time.

(11) **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 :** In the event of urgent modifications to systems, it may be necessary to modify the system software prior to approving changes to requirements. **Incremental** model guarantees consistency between requirements documents and system implementation.

(12) **Software for ECG machine :** The **waterfall model** is the way to go if you want to develop ECG machines. Since these machines are so important for safety, you need to make sure you have the right requirements for analysis and design so you don't have any issues with measurement.

(13) **A small scale well understood project (no changes in requirement will be there once decided) :** This type of project is characterized by a well-defined, well-defined set of requirements that have been established and cannot be altered. The **Waterfall** Model can be employed to execute this type of project, as it is a small-scale project that does not necessitate the involvement of a large team.