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CLASS :- BTECH 4<sup>TH</sup> YEAR

SEMESTER :- 7

DIVISION :- B

## Software Engineering Tutorial 2

Ans 1: A feasibility study is an analysis that considers all of a project's relevant factors - including economic, technical, legal and scheduling considerations - to ascertain the likelihood of completing the project successfully.

- It assesses the practicality of proposed plan or project.
- A feasibility study contains many factors, including economic, technical, legal and scheduling to determine whether a project can succeed.
- It's a good idea to have contingency plan in case of unforeseeable circumstances or if the original project is not feasible.

Ans 2: A waterfall model is unsuitable for software development because of the following possible scenarios:-

- Once an application is in testing stage, it is very difficult to go back and change something that wasn't well thought out.
- No working software is produced until late during the lifecycle.
- High amounts of risk and uncertainty.
- Not a good model for complex and object oriented projects.
- Poor model for long and ongoing projects.
- Cannot accommodate projects that are dynamic and requires frequent changes.



Ans 3: The essence of prototyping model lies in the fact that "instead of freezing the requirements before a design or coding can proceed, a throwaway prototype is built to understand the requirements."

Prototyping is an attractive idea for complicated and large systems for which there is no manual process or existing system to help determine the requirements.

Ans 4: Rapid Application Development is a type of Increment model.

- In RAD model, the components or functions are developed in parallel as if they were mini projects.
- They can quickly give the customer something to see and use and to provide feedback regarding the delivery and their requirements.

• Phases:

- Business modelling
- Data Modelling
- Process Modelling
- Application Generation
- Testing and turnover

Advantages:

- Reduced Development time
- Increases reusability of components
- Quick initial reviews
- Encourages customer feedback



### Disadvantages:

- Depends on a strong and highly competent team
- Only system that can be modularized can be developed.
- High dependency on modelling skills.

Ans 5:

### Increment Model

### Waterfall Model

- Need of detailed documentation is necessary but not as much as compared to that in Waterfall model.
- In ~~Waterfall~~<sup>incremental</sup> model early stage planning is highly necessary.
- Low risk
- Short waiting time for software running
- Can ~~not~~ handle large projects.
- Flexibility to change is more.
- Cost is low.
- Testing is done after every iteration.
- Large team is not required.
- Phases can be overlapped.

- Need to detailed documentation is highly necessary.
- In waterfall model, early stage planning is highly necessary as well.
- High risk
- Long time for ~~time~~ software running.
- Cannot handle large projects.
- Flexibility to change is less.
- Cost is low.
- Testing is done after completion of coding.
- Large team is required.
- Phases cannot be overlapped.