IT314 – Software Engineering [Lab Session I]
Lab 1: Choosing Software Process Models

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a) The Water-Fall model is ideal for a straightforward data processing project due to its linear and simple nature.

b) The Throw-away prototyping model is recommended for a data entry system for inexperienced computer users. It allows for iterative improvements based on user feedback, ensuring ease of use.

c) The Incremental or Time Boxing model is suited for a spreadsheet system. This approach allows the system to start with basic functions and gradually add more.

d) Agile or SCRUM models are suitable for a new business with a web-based system that has rapidly changing needs. These models provide the needed adaptability.

e) For an online store website requiring frequent updates, the Synchronize & Stabilize model is beneficial. It allows features to be developed, tested, refined, and then released.

f) The Water-Fall or Incremental Water-Fall model is advisable for a car's anti-lock braking system. These models ensure thorough validation at each step due to their sequential nature, which is crucial for safety.

g) For a complex virtual reality system used in software maintenance, the Spiral model is effective. It provides a framework for risk assessment at each phase.

h) For replacing a university accounting system, the RUP model is appropriate. It allows for systematic progression through defined stages.

i) Evolutionary Prototyping is apt for a system providing train times to passengers. This model allows continual refinement based on user feedback.

j) For a missile guidance system, the Water-Fall model is proposed. This model's step-by-step approach ensures thoroughness, which is critical for such precise systems.

k) Agile or Spiral models are fitting in situations requiring emergency changes to systems. They allow for rapid adjustments and continuous validation to maintain consistency.

l) For an ECG machine's software, the Water-Fall or Incremental Water-Fall model is suggested due to their methodical nature, ensuring meticulousness needed in healthcare applications.

m) For a small project with well-defined requirements, the Water-Fall model is the best fit. This model's straightforward approach simplifies the development process.