

Assignment: 01

Title: Software Development Process Models and Applications

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Submitted to-

**Md. Humayun Kabir
& Dr. Md Musfiq Anwar**

*Professor Department of Computer Science and Engineering Jahangirnagar
University Savar, Dhaka-1342*

| SI | Class Roll | Exam Roll | Name |
|----|------------|-----------|-----------------------|
| 01 | 383 | 210903 | Abdullah Nazmus-Sakib |

Software Development Model:

- i) Waterfall Model
- ii) Iterative Development Model
- iii) Spiral Model
- iv) Incremental Model
- v) Prototyping Model
- vi) Unified Model
- vii) Agile Model/Approach

① Iterative Models:-

- ⊗ It is more flexible
- ⊗ The system is developed using the following steps
 - 1) Analyzing
 - 2) Designing
 - 3) Implementing
 - 4) Delivering working code
- ⊗ Then grow the scope of the developmental system by adding properties and behaviour to existing objects as well as adding new

Kinds of objects

- Multiple iteration are preferred as the system evolves to the final deliverable

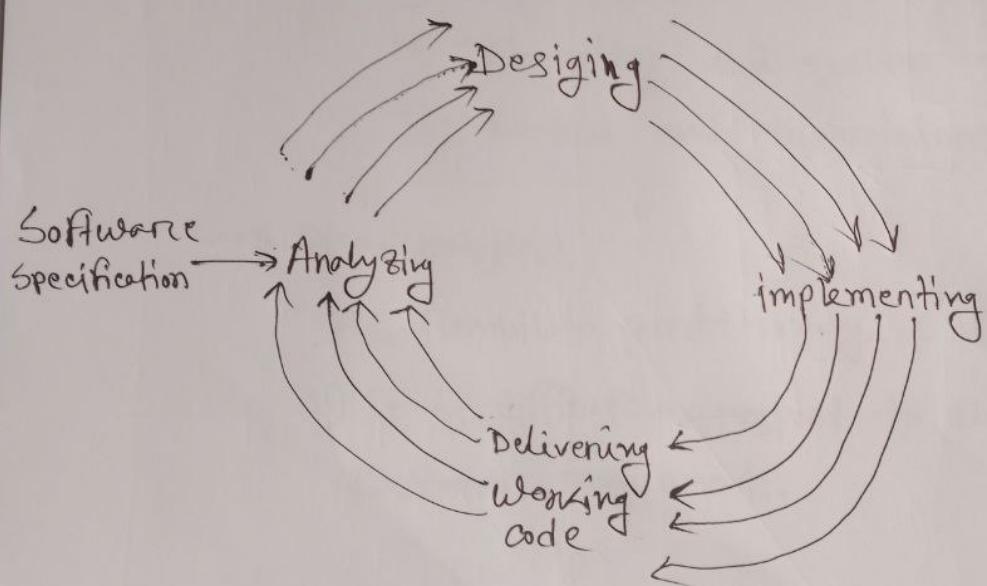


fig - Iterative Development Model

② Waterfall Model :-

→ First published Model of the Software development process

→ Stages:

- 1) Requirement analysis and definition
- 2) System and softer design
- 3) Implementation and unit testing
- 4) Integrating and system testing
- 5) Operation and maintenance

→ Disadvantages:

- 1) Inflexibility partitioning of the project.
- 2) It is difficult to respond to changing customer requirements.

Kinds of objects.

- ④ Multiple iteration are preferred as the system evolves to the final deliverable

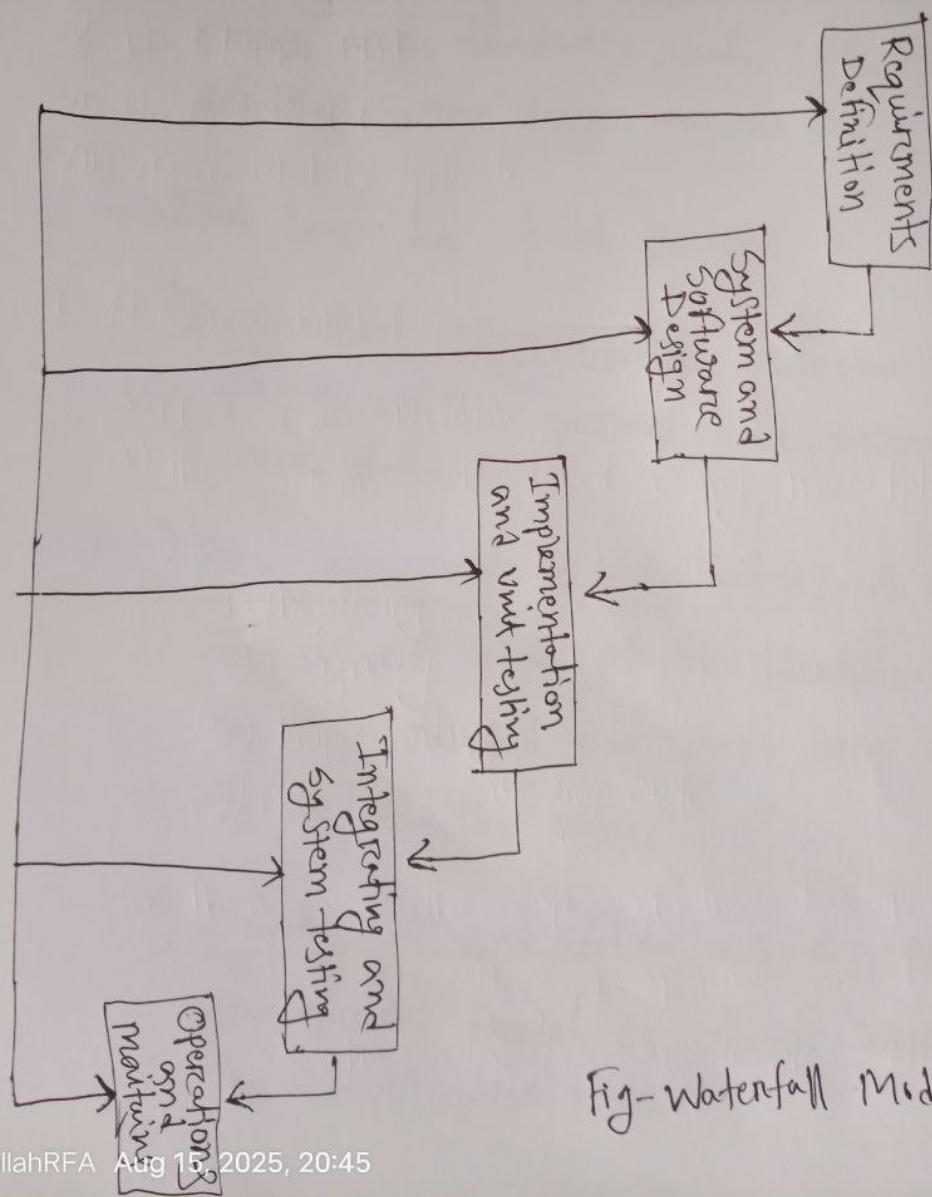


Fig-Waterfall Model

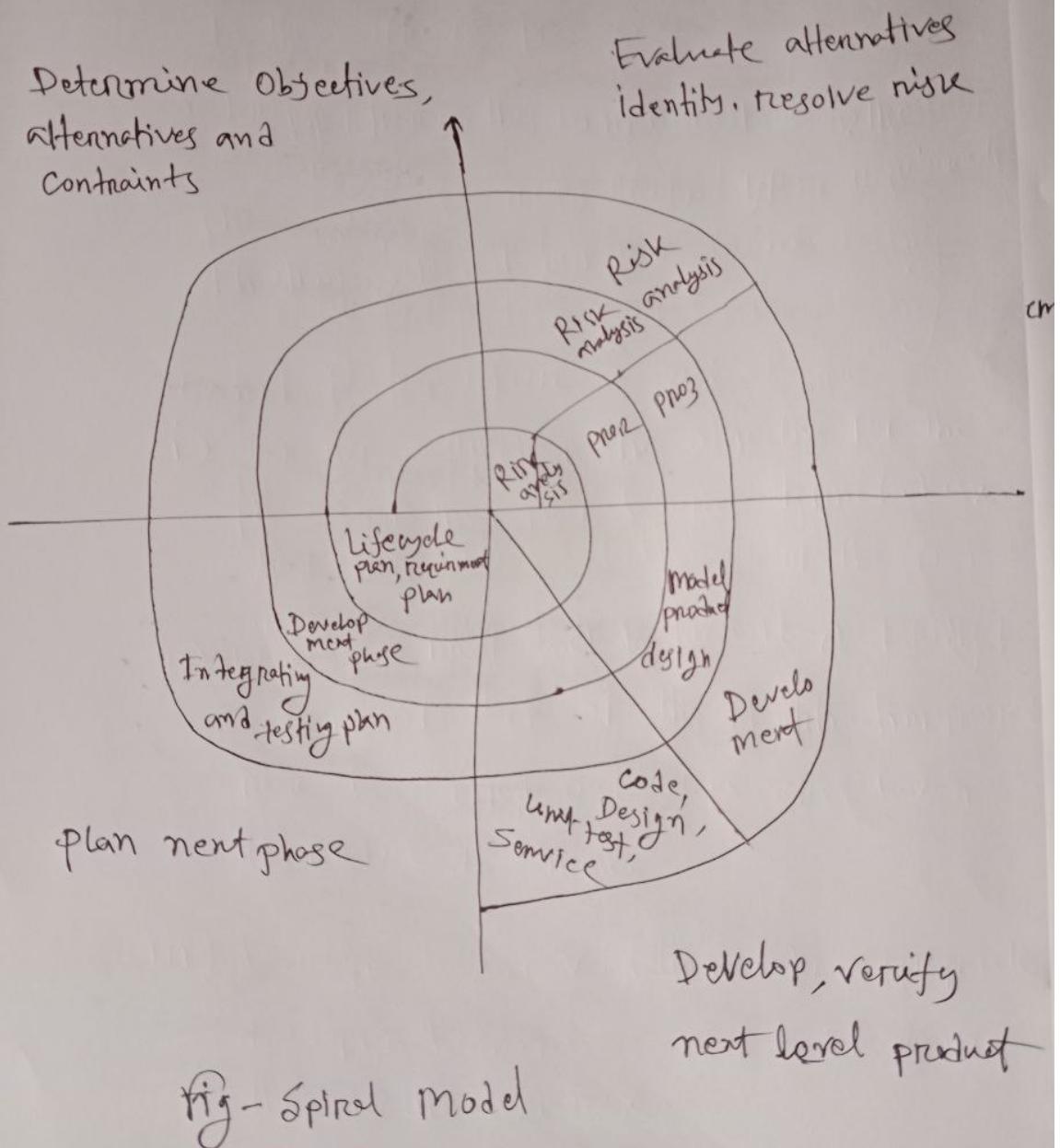
3) Spiral Model:

- The Software process is represented as spiral
- Each Loop in Software represents a phase to the software process.
- Starting from the innermost loop, the phases are feasibility study, system requirements definition, System design and so on.

→ Each loop has four sectors:

- i) Objective Setting: Specific objective for the phase of the project are defined. Risk are defined.
- ii) Risk assessment and Reduction:- A detailed analysis of each of the identification project risk is carried out. Steps are taken to reduce the risk.
- iii) Development and Validation:- An appropriate development model is chosen based on the identification risk.

iv) planning: The project is reviewed and a plan model whether to continue with a further loop of the spiral-

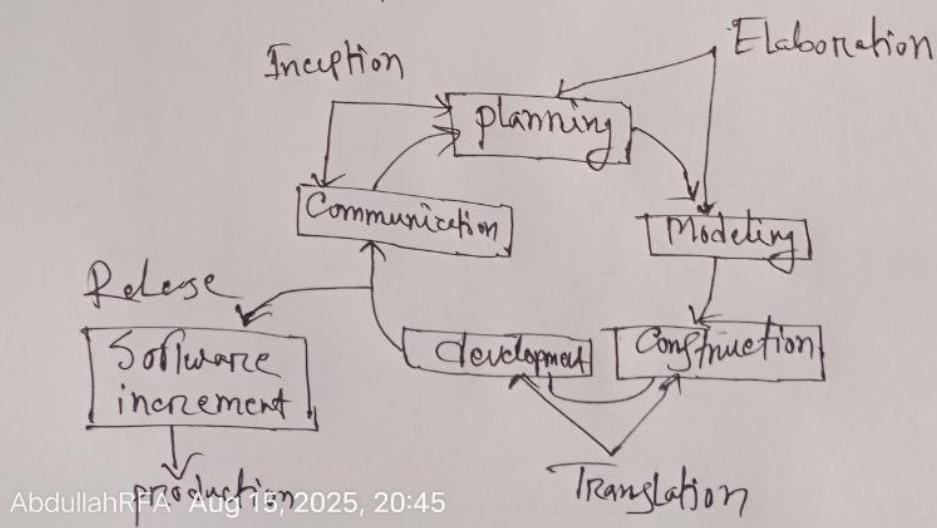


4) Unified process:-

- The Unified process is an attempt to draw on the best features and characteristics of conventional software process model-
- It recognizes the importance of customer communication and streamlined methods for decreasing the customer's view of a system.

→ phases:

- 1) inception phases
- 2) Elaboration phases
- 3) construction phases
- 4) transition phases
- 5) production phases



5) Incremental process Model:-

→ Combine elements of the waterfall model applied in an iterative fashion.

→ process phase:

- 1) Communication: Gather and refine requirements for the current increment.
- 2) Planning: Estimate effort, schedule and resources for the increment
- 3) Modeling: Analysing and design the increment functionality and architecture
- 4) Construction: Code and test the increment to ensure quality
- 5) Development: Deliver the increment to users and collect feedback.

