SOFTWARE ENGINEERING-I

BY

SAID UL ABRAR

LECTURER IN ICS/IT
THE UNIVERSITY OF AGRICULTURE PESHAWAR.

Week 2 part 2

Software Development Generic Process Model

Process flow

- **Linear process flow**
- **Iterative process flow**
- **Evolutionary process flow**
- **Parallel process flow**

Software Process

- It is a set of activities, methods, practices, and transformations that people use to develop and maintain software and the associated products. As a Software Organization, the software process becomes better defined and more consistently implemented throughout the organization.
  Example: Project plans, Design-Documents, Code, Test cases, and User-manuals

Generic Process Mode

- The Generic process model is an abstraction of the software development process. It specifies the stages and order of a process. Generic Process Model will define the following.   OR

- A software process is a collection of various activities.

- **There are five generic process framework activities:**

  1. Communication:
  The software development starts with the communication between customer and developer.

  2. Planning:
  It consists of complete estimation, scheduling for project development and tracking.

  3. Modeling: Modeling consists of complete requirement analysis and the design of the project like algorithm, flowchart etc.

- The algorithm is the step-by-step solution of the problem and the flow chart shows a complete flow diagram of a program.

- **4. Construction:** Construction consists of code generation and the testing part.

- Coding part implements the design details using an appropriate programming language.

- Testing is to check whether the flow of coding is correct or not.

- Testing also check that the program provides desired output.

- **5. Deployment:** Deployment step consists of delivering the product to the customer and take feedback from them.

- If the customer wants some corrections or demands for the additional capabilities, then the change is required for improvement in the quality of the software.
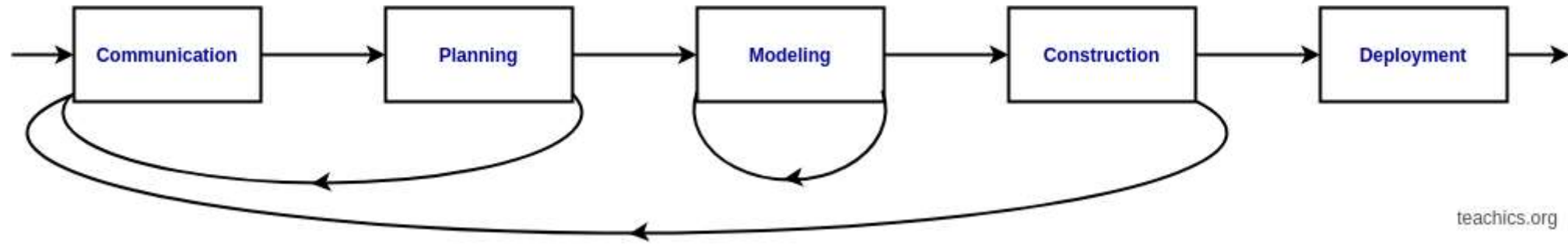
Process flow

- Process flow determines how activities, actions and tasks are arranged with respect to sequence and time.

- **Linear process flow**

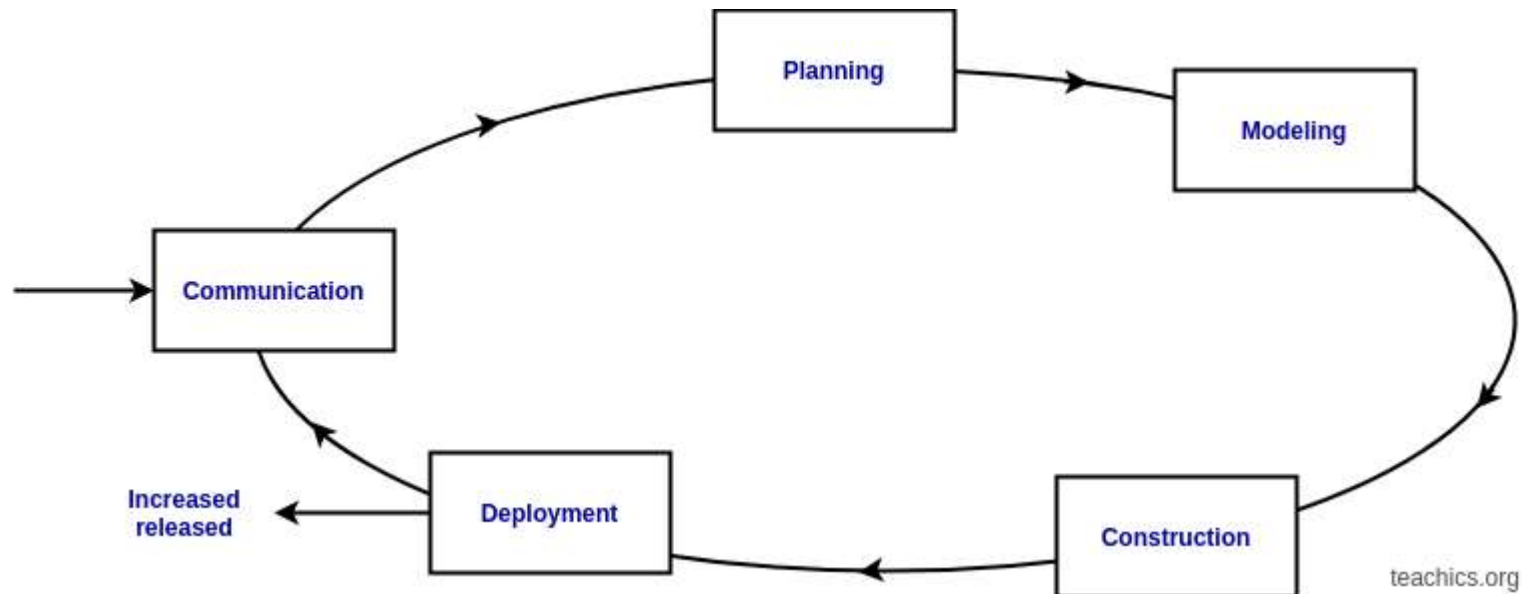- Linear process flow executes each activity in sequence.

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→ [ Communication ] → [ Planning ] → [ Modeling ] → [ Construction ] → [ Deployment ] →
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Iterative process flow

- Iterative process flow repeats one or more activities before starting next.

Communication → Planning → Modeling → Construction → Deployment

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Evolutionary process flow

- Evolutionary process flow carry out activities in a circular way.

Parallel process flow

- Parallel process flow execute one or more activities in parallel with each other.