



**SASTRA**  
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THINK MERIT | THINK TRANSPARENCY | THINK SASTRA

# Unit-I

## Framework activities

# Generic Process Model

## Software process model

Software process

Process framework

Umbrella activities

framework activity # 1

software engineering action #1.1

Task sets

work tasks  
work products  
quality assurance points  
project milestones

⋮

software engineering action #1.k

Task sets

work tasks  
work products  
quality assurance points  
project milestones

⋮

framework activity # n

software engineering action #n.1

Task sets

work tasks  
work products  
quality assurance points  
project milestones

⋮

software engineering action #n.m

Task sets

work tasks  
work products  
quality assurance points  
project milestones

# Five Activities of a Generic Process framework

- **Communication:** communicate with customer to understand objectives and gather requirements
- **Planning:** creates a “map” defines the work by describing the tasks, risks and resources, work products and work schedule.
- **Modeling:** Create a “sketch”, what it looks like architecturally, how the constituent parts fit together and other characteristics.
- **Construction:** code generation and the testing.
- **Deployment:** Delivered to the customer who evaluates the products and provides feedback based on the evaluation.
- These five framework activities can be used to all software development regardless of the application domain, size of the project, complexity of the efforts etc, though the details will be different in each case.
- For many software projects, these framework activities are applied **iteratively** as a project progresses. Each iteration produces a software increment that provides a subset of overall software features and functionality.

# Umbrella Activities

Complement the five process framework activities and help team **manage and control** progress, quality, change, and risk.

- **Software project tracking and control:** assess progress against the plan and take actions to maintain the schedule.
- **Risk management:** assesses risks that may affect the outcome and quality.
- **Software quality assurance:** defines and conduct activities to ensure quality.
- **Technical reviews:** assesses work products to uncover and remove errors before going to the next activity.
- **Measurement:** define and collects process, project, and product measures to ensure stakeholder's needs are met.
- **Software configuration management:** manage the effects of change throughout the software process.
- **Reusability management:** defines criteria for work product reuse and establishes mechanism to achieve reusable components.
- **Work product preparation and production:** create work products such as models, documents, logs, forms and lists.