

# Software Project Planning

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# [ Project Planning ]

- Project planning is one of the most important jobs of a project manager
  - A software plan has to be created in the beginning of the project
- Project planning takes place in three stages in the project life cycle
  - Proposal stage
  - Startup stage
  - Update stage

# [ Proposal Stage ]

- It occurs when you are bidding for a contract to develop a system
- You have to decide if you have resources to complete the project
- Estimate the price, based on your effort, and negotiate with your customer

# [ Startup and Update Stages ]

## ■ Startup stage

- This stage is when you have to plan your project and who will work on it
- You also need to define the increments, allocate resources, etc.

## ■ Update stage

- In this stage, you periodically update your plan to reflect new information, for instance, to include new requirements

# [ Plan-driven Development ]

- An approach where the process is planned in details
- A project plan usually includes
  - Introduction
  - **Project organization**
  - Risk analysis
  - Hardware and software requirements
  - **Work breakdown and schedule**
  - Monitoring mechanisms

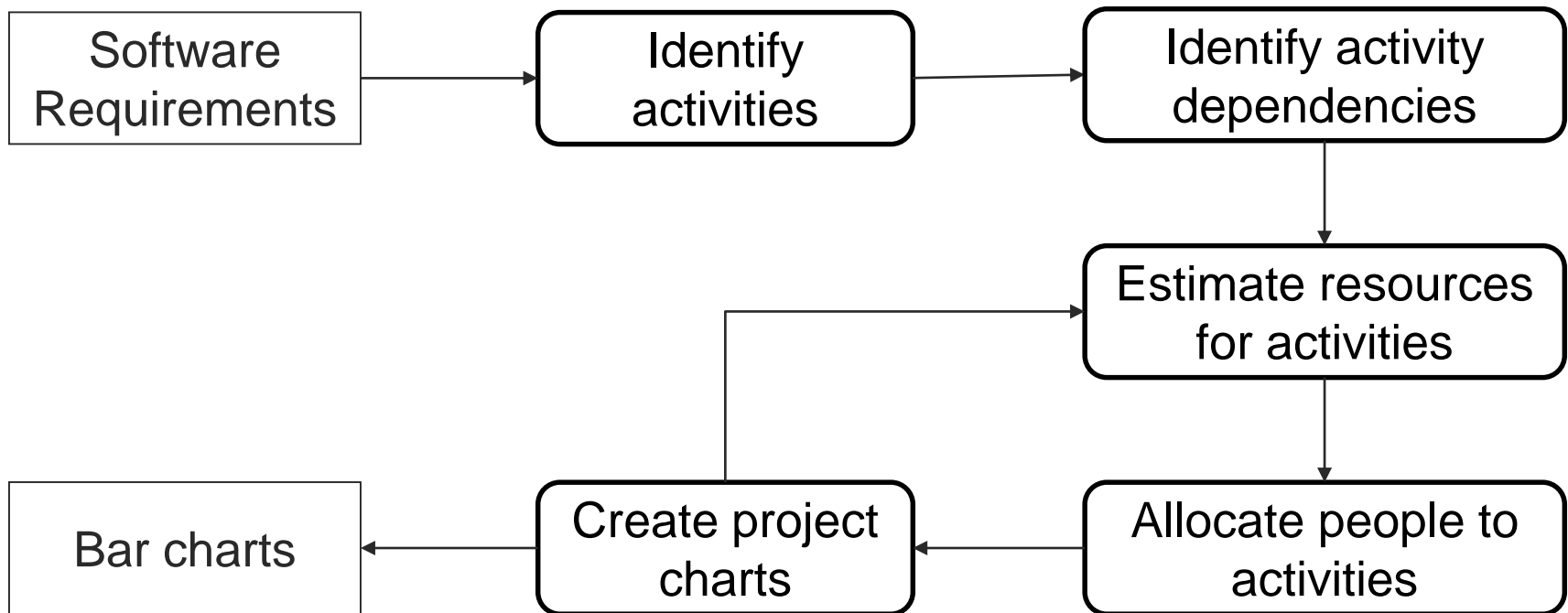
# [ Organization and Breakdown ]

- Project organization defines
  - How teams are organized
  - People involved and their roles
- Work breakdown defines
  - Development activities
  - Inputs and output of each activity

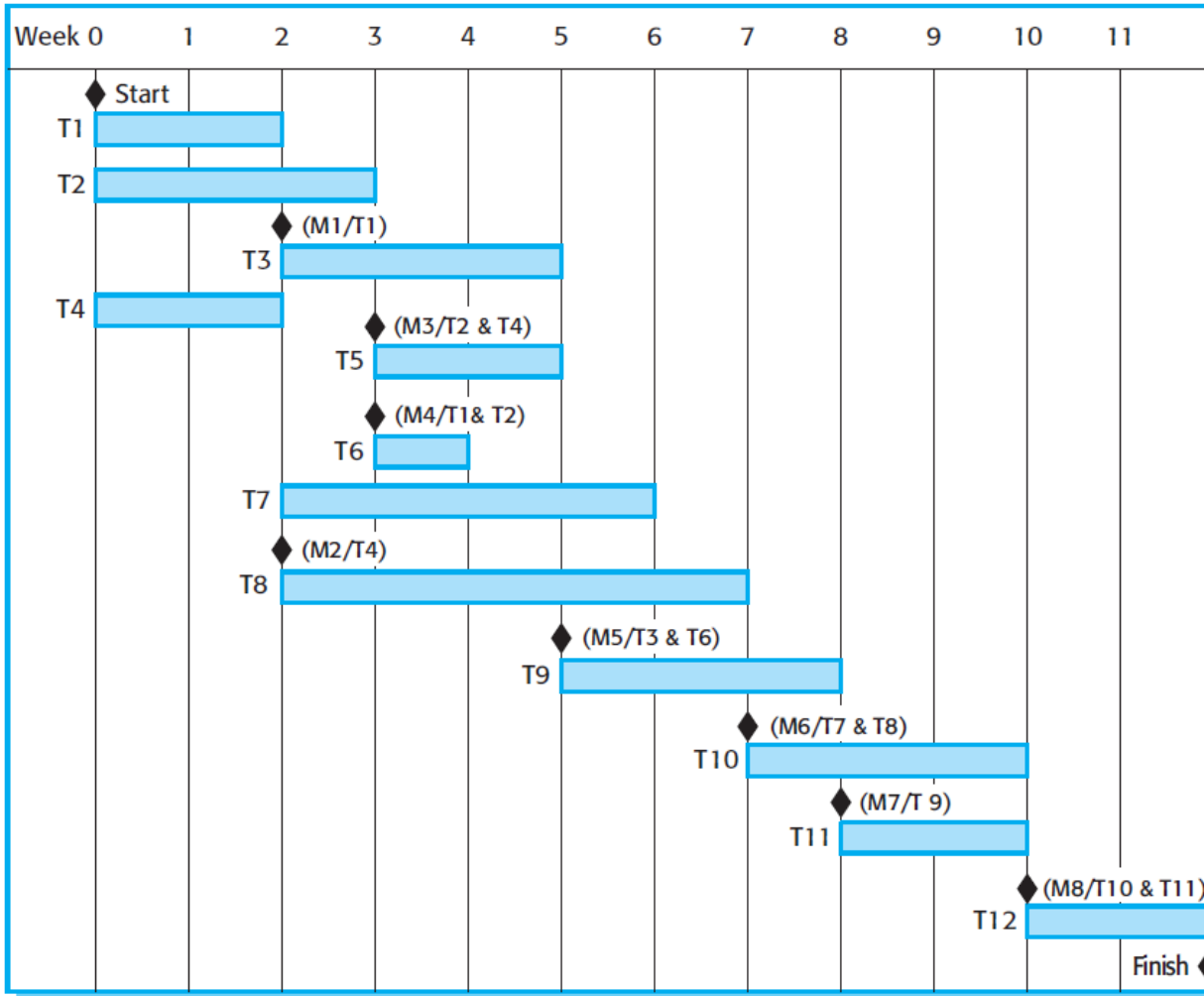
# [ Project Scheduling ]

- Project scheduling is the process of deciding how the work in a project will be organized as separate tasks
- It includes
  - When and how tasks will be executed
  - An estimated time
  - People allocation

# [ Project Scheduling Process ]



# Activity Bar Chart (Gantt)



**Tasks:**  
T1, T2, T3, ...

**Milestones:**  
M1, M2, M3, ...

**Task Dependences:**  
T3 requires M1 (T1)

# [ Bibliography ]

- Ian Sommerville. **Software Engineering**, 10th Edition. Pearson Education, 2016.
  - Chapter 22: Project Management (Sections 23.2 and 23.3)