INFO6007
Project Management in IT

Lecture 3
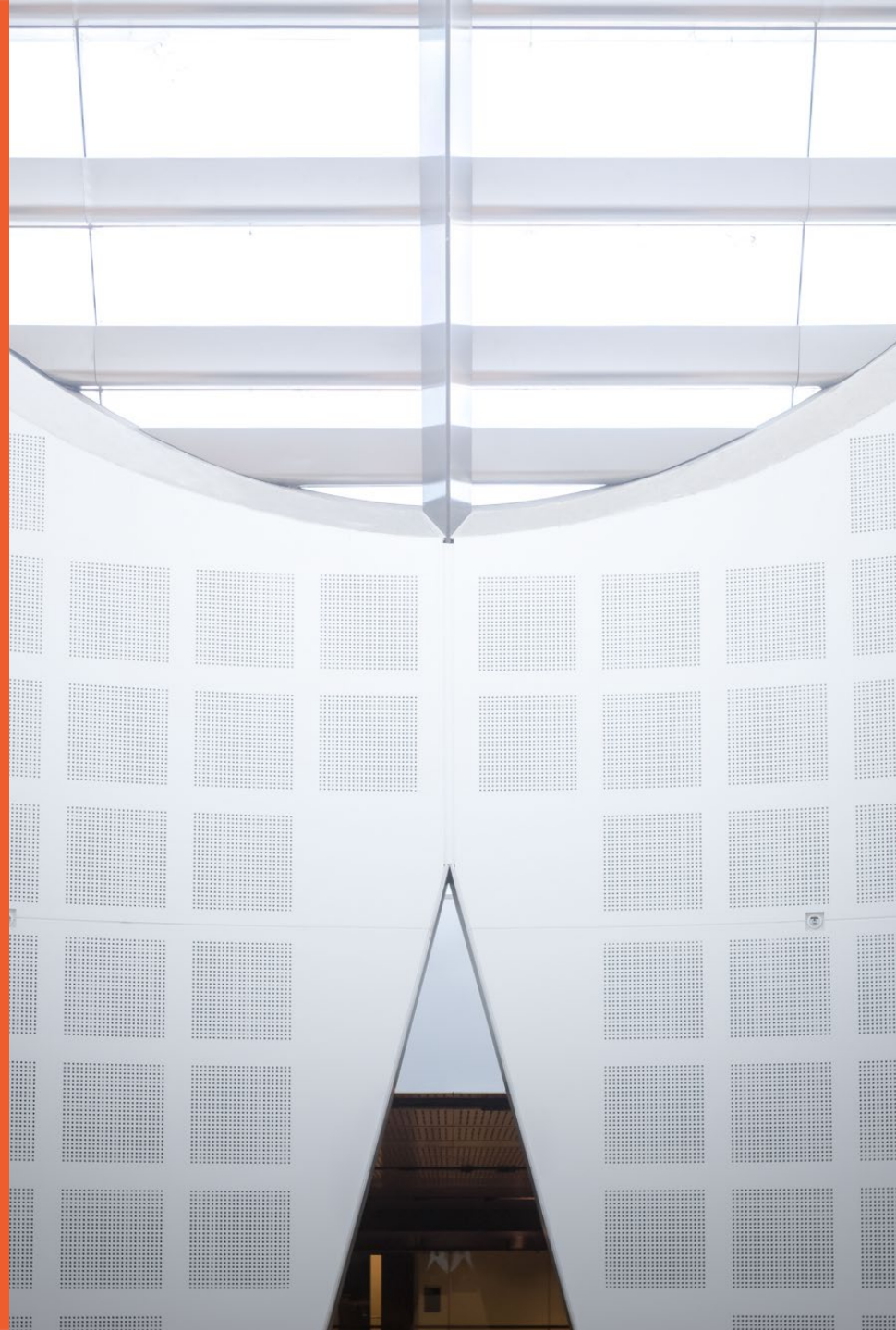## Managing Project Time

Semester 2, 2020

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THE UNIVERSITY OF
SYDNEY

Recapture From Lecture 2

We discussed about **Managing Project Scope**:

- Goal, objectives, deliverables, and scope
- Processes of project scope management
- Collecting requirements
- Creating WBS
- Validating and controlling project scope

Tutorial Time Extended

- Tutorial time has been extended: <u>8 to 9:15 pm </u>(if needed)

Additional Tutorial Sessions

If needed, open for all groups

Thursday 4-5 pm, conducted by Ajit:
https://uni-sydney.zoom.us/j/98828359206

Friday 4-5 pm, conducted by Rabiul:
https://uni-sydney.zoom.us/j/93364764838

Where Are We Now ? -- Course map

Week	Topics/Activities
Week 1	Introduction to IT Project Management
	Other: Form Assignment Groups
Week 2	Managing Project Scope
Week 3	Managing Project Time
Week 4	Managing Project Cost
Week 5	Managing Project Quality
Week 6	Managing Project Resources
Week 7	Knowledge Test
Week 8	Project Leadership and Communication Management
Week 9	Managing Project Risk Assessment Due: Group Project
Week 10	Managing Project Procurement
Week 11	Presentation
Week 12	Course Review
Exam Period	Assessment Due: Final Exam

What Will We Do Today ?

- Lecture
  - -Time Management
  - - Network Diagram
  - - CPM
  - - PERT
  - - IT Project Scenario Analysis (Uber & LinkedIn)

- Class activities
  - - Critical Thinking / Problem Solving
  - - Tools to use: https://padlet.com
    https://answergarden.ch

- Assessment
  - - Test: ?
  - - Assignment: ?
- Tutorial Updates: ? Start working on your project
- Announcement (if any): Additional tutorial sessions available

Learning Objectives

- Discuss the importance and processes of project time management

- Describe how IT project managers use network diagrams and dependencies to assist in activity sequencing

- Explain how various tools and techniques help project managers perform activity duration estimates

- Discuss Gantt chart for planning and controlling project schedule

- Describe how the Program Evaluation and Review Technique (PERT) affect schedule development

Why Project Time Management ?

- Delivering project on time as one of biggest challenges in IT project.

- Time has the least amount of flexibility; it passes no matter what happens on a project

- Schedule issues are the main reason for conflicts on projects, especially during the second half of projects
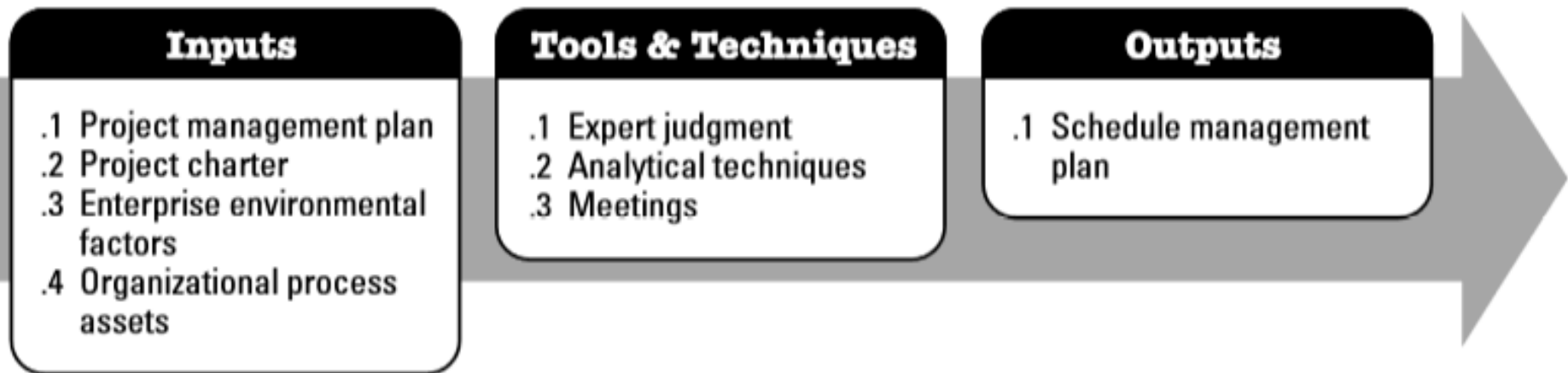
Project Time Management Overview

Project Time Management Overview

6.1 Plan Schedule Management

.1 Inputs
.1 Project management plan
.2 Project charter
.3 Enterprise environmental factors
.4 Organizational process assets

.2 Tools & Techniques
.1 Expert judgment
.2 Analytical techniques
.3 Meetings

.3 Outputs
.1 Schedule management plan

6.2 Define Activities

.1 Inputs
.1 Schedule management plan
.2 Scope baseline
.3 Enterprise environmental factors
.4 Organizational process assets

.2 Tools & Techniques
.1 Decomposition
.2 Rolling wave planning
.3 Expert judgment

.3 Outputs
.1 Activity list
.2 Activity attributes
.3 Milestone list

6.3 Sequence Activities

.1 Inputs
.1 Schedule management plan
.2 Activity list
.3 Activity attributes
.4 Milestone list
.5 Project scope statement
.6 Enterprise environmental factors
.7 Organizational process assets

.2 Tools & Techniques
.1 Precedence diagramming method (PDM)
.2 Dependency determination
.3 Leads and lags

.3 Outputs
.1 Project schedule network diagrams
.2 Project documents updates

6.4 Estimate Activity Resources

.1 Inputs
.1 Schedule management plan
.2 Activity list
.3 Activity attributes
.4 Resource calendars
.5 Risk register
.6 Activity cost estimates
.7 Enterprise environmental factors
.8 Organizational process assets

.2 Tools & Techniques
.1 Expert judgment
.2 Alternative analysis
.3 Published estimating data
.4 Bottom-up estimating
.5 Project management software

.3 Outputs
.1 Activity resource requirements
.2 Resource breakdown structure
.3 Project documents updates

6.5 Estimate Activity Durations

.1 Inputs
.1 Schedule management plan
.2 Activity list
.3 Activity attributes
.4 Activity resource requirements
.5 Resource calendars
.6 Project scope statement
.7 Risk register
.8 Resource breakdown structure
.9 Enterprise environmental factors
.10 Organizational process assets

.2 Tools & Techniques
.1 Expert judgment
.2 Analogous estimating
.3 Parametric estimating
.4 Three-point estimating
.5 Group decision-making techniques
.6 Reserve analysis

.3 Outputs
.1 Activity duration estimates
.2 Project documents updates

6.6 Develop Schedule

.1 Inputs
.1 Schedule management plan
.2 Activity list
.3 Activity attributes
.4 Project schedule network diagrams
.5 Activity resource requirements
.6 Resource calendars
.7 Activity duration estimates
.8 Project scope statement
.9 Risk register
.10 Project staff assignments
.11 Resource breakdown structure
.12 Enterprise environmental factors
.13 Organizational process assets

.2 Tools & Techniques
.1 Schedule network analysis
.2 Critical path method
.3 Critical chain method
.4 Resource optimization techniques
.5 Modeling techniques
.6 Leads and lags
.7 Schedule compression
.8 Scheduling tool

.3 Outputs
.1 Schedule baseline
.2 Project schedule
.3 Schedule data
.4 Project calendars
.5 Project management plan updates
.6 Project documents updates

6.7 Control Schedule

.1 Inputs
.1 Project management plan
.2 Project schedule
.3 Work performance data
.4 Project calendars
.5 Schedule data
.6 Organizational process assets

.2 Tools & Techniques
.1 Performance reviews
.2 Project management software
.3 Resource optimization techniques
.4 Modeling techniques
.5 Leads and lags
.6 Schedule compression
.7 Scheduling tool

.3 Outputs
.1 Work performance information
.2 Schedule forecasts
.3 Change requests
.4 Project management plan updates
.5 Project documents updates
.6 Organizational process assets updates

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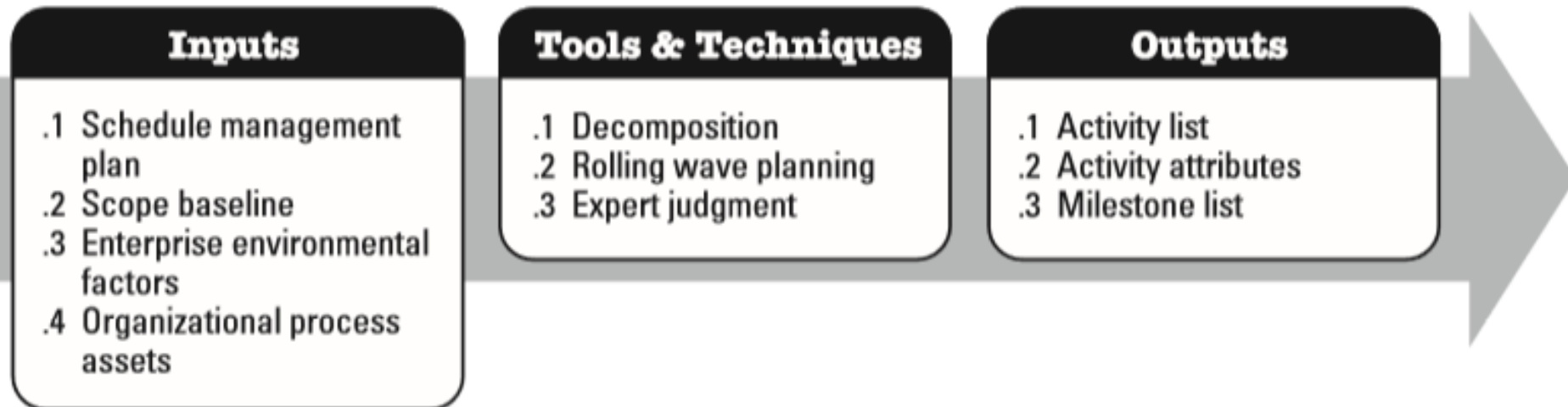
Project Time Management Processes

- **Plan schedule management:** determining the <u>policies, procedures, and documentation</u> that will be used for planning, executing, and controlling the project schedule

- **Define activities:** identifying the <u>specific activities</u> that the project team members and stakeholders <u>must perform to produce</u> the project deliverables

- **Sequence activities:** identifying and documenting the <u>relationships between project activities</u>

- **Estimate activity resources:** estimating <u>how many resources</u> a project team should use to perform project activities

- **Estimate activity durations:** estimating the <u>number of work periods</u> that are needed to complete individual activities

- **Develop the schedule:** <u>analyzing activity sequences, activity resource estimates, and activity duration estimates</u> to create the project schedule

- **Control the schedule:** <u>controlling and managing changes</u> to the project schedule

Process 1: Plan Schedule Management

Inputs	Tools & Techniques	Outputs
.1 Project management plan	.1 Expert judgment	.1 Schedule management plan
.2 Project charter	.2 Analytical techniques	
.3 Enterprise environmental factors	.3 Meetings	
.4 Organizational process assets		

Process 2: Defining Activities

- An **activity** or **task** is an element of work <u>normally found on the work breakdown structure (WBS)</u> that has an expected duration, a cost, and resource requirements

- Activity definition involves developing <u>a more detailed WBS</u> and supporting explanations to <u>understand all the work to be done</u> so you can develop realistic cost and duration estimates

Inputs	Tools & Techniques	Outputs
.1 Schedule management plan .2 Scope baseline .3 Enterprise environmental factors .4 Organizational process assets	.1 Decomposition .2 Rolling wave planning .3 Expert judgment	.1 Activity list .2 Activity attributes .3 Milestone list

Activity Lists and Attributes

- An **activity list** is a tabulation of activities to be included on a project schedule that includes
  - the activity name
  - an activity identifier or number
  - a brief description of the activity

- **Activity attributes** provide more information such as predecessors, successors, logical relationships, leads and lags, resource requirements, constraints, imposed dates, and assumptions related to the activity

Milestones

- A **milestone** is a significant event in a project that occurs at a point in time.

- It often takes several activities and a lot of tasks to complete a milestone

- They're useful tools for setting schedule goals and monitoring progress

Example of Milestones

- Any Idea?

Process 3: Sequencing Activities

- Involves reviewing activities and determining tasks dependencies
- You must determine dependencies in order to use critical path analysis

Inputs	Tools & Techniques	Outputs
.1 Schedule management plan .2 Activity list .3 Activity attributes .4 Milestone list .5 Project scope statement .6 Enterprise environmental factors .7 Organizational process assets	.1 Precedence diagramming method (PDM) .2 Dependency determination .3 Leads and lags	.1 Project schedule network diagrams .2 Project documents updates

Three types of Dependencies

- **Mandatory dependencies:** essential in the nature of the work being performed on a project, sometimes referred to as hard logic

- **Discretionary dependencies:** defined by the project team, sometimes referred to as soft logic and should be used with care since they may limit later scheduling options

- **External dependencies:** involve relationships between project and non-project activities

Network Diagrams

- Network diagrams are the preferred technique for showing activity sequencing

- A **network diagram** is a graphic display of the logical relationships among, or sequencing of, project activities

Network Diagram for a Project

- Activity On the Node (AON)

- Activity-On-Arrow (AOA)

- Precedence Diagramming Method (PDM)

Activity On the Node (AON) Network Diagram

Activity	Estimated Duration	Predecessor
A	5	None
B	4	A
C	5	B
D	6	B
E	7	D
F	3	C,D
G	6	D
H	7	F,G
I	8	E,G
J	3	H,I
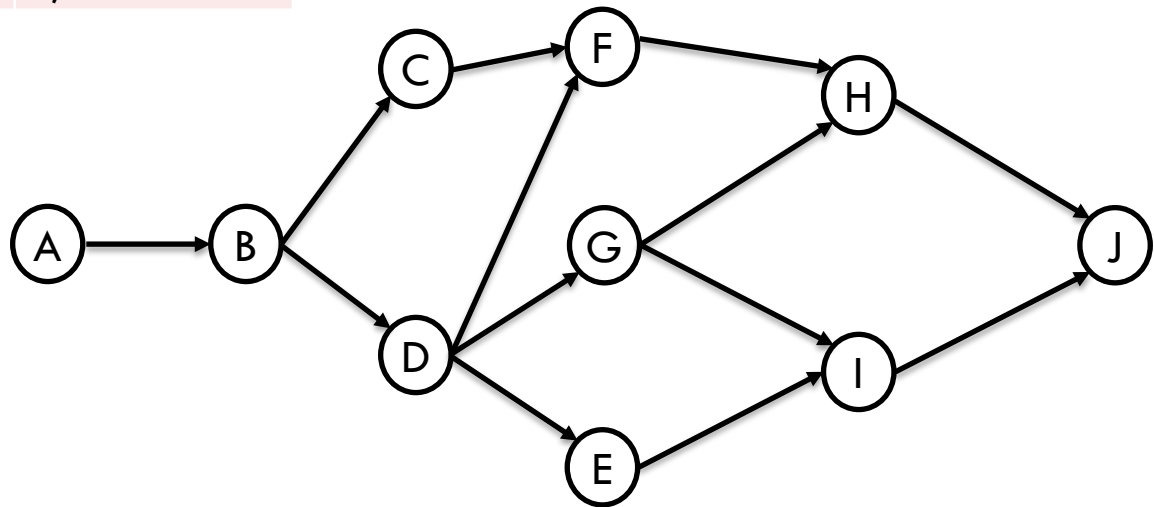
Activity-On-Arrow (AOA)

- Activities are represented by arrows
- Nodes or circles are the starting and ending points of activities
- Can only show finish-to-start dependencies

Note: Assume all durations are in days; A=1 means Activity A has a duration of 1 day.
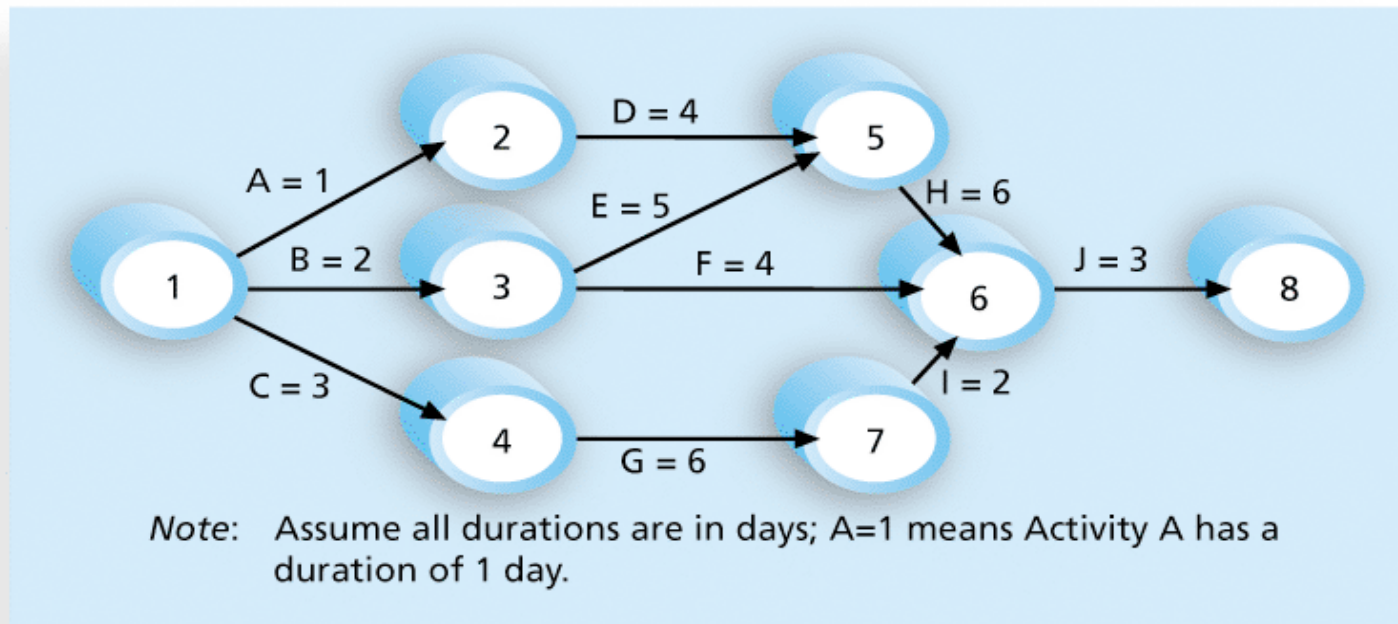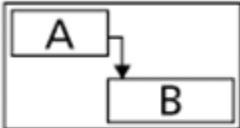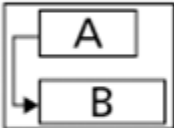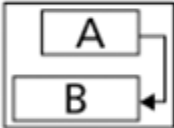
Process for Creating AOA Diagrams

1. Find all the activities that start at node 1. Draw their finish nodes and draw arrows between node 1 and those finish nodes. Put the activity letter or name and duration estimate on the associated arrow

2. Continue drawing the network diagram, working from left to right. Look for bursts and merges. **Bursts** occur when a single node is followed by two or more activities. A **merge** occurs when two or more nodes precede a single node

3. Continue drawing the project network diagram until all activities are included on the diagram that have dependencies

4. As a rule of thumb, all arrowheads should face toward the right, and no arrows should cross on an AOA network diagram

Precedence Diagramming Method (PDM)

- Activities are represented by boxes

- Arrows show relationships between activities

- More popular than AOA and used by project management software

- Better at showing different types of dependencies

PDM – Task Dependency Types

Task dependency	Example	Description
Finish-to-start (FS)		Task (B) cannot start until task (A) finishes.
Start-to-start (SS)		Task (B) cannot start until task (A) starts.
Finish-to-finish (FF)		Task (B) cannot finish until task (A) finishes.
Start-to-finish (SF)		Task (B) cannot finish until task (A) starts.

PDM Network Diagram – Example

A
Start: Mon 8/3/09 ID: 1
Finish: Mon 8/3/09 Dur: 1 day
Res:

D
Start: Tue 8/4/09 ID: 4
Finish: Fri 8/7/09 Dur: 4 days
Res:

H
Start: Wed 8/12/0 ID: 8
Finish: Wed 8/19/0 Dur: 6 days
Res:

B
Start: Mon 8/3/09 ID: 2
Finish: Tue 8/4/09 Dur: 2 days
Res:

E
Start: Wed 8/5/09 ID: 5
Finish: Tue 8/11/09 Dur: 5 days
Res:

F
Start: Wed 8/5/09 ID: 6
Finish: Mon 8/10/0 Dur: 4 days
Res:

J
Start: Thu 8/20/09 ID: 10
Finish: Mon 8/24/0 Dur: 3 days
Res:

C
Start: Mon 8/3/09 ID: 3
Finish: Wed 8/5/09 Dur: 3 days
Res:

G
Start: Thu 8/6/09 ID: 7
Finish: Thu 8/13/09 Dur: 6 days
Res:

I
Start: Fri 8/14/09 ID: 9
Finish: Mon 8/17/0 Dur: 2 days
Res:

Process 4: Estimating Activity Resources

- Before estimating activity durations, you must have a good idea of the quantity and type of resources that will be assigned to each activity; **resources are people, equipment, and materials**

- Consider important issues in estimating resources
  - How difficult will it be to do specific activities on this project?
  - What is the organization's history in doing similar activities?
  - Are the required resources available?

- A **resource breakdown structure** is a hierarchical structure that identifies the project's resources by category and type

Estimating Activity Resources

- Estimate Activity Resources is the process of estimating the type and quantities of material, human resources, equipment, or supplies required to perform each activity.

Inputs	Tools & Techniques	Outputs
.1 Schedule management plan .2 Activity list .3 Activity attributes .4 Resource calendars .5 Risk register .6 Activity cost estimates .7 Enterprise environmental factors .8 Organizational process assets	.1 Expert judgment .2 Alternative analysis .3 Published estimating data .4 Bottom-up estimating .5 Project management software	.1 Activity resource requirements .2 Resource breakdown structure .3 Project documents updates

Process 5: Estimating Activity Duration

- **Duration** includes the actual amount of time worked on an activity *plus* elapsed time
- **Effort** is the number of workdays or work hours required to complete a task
- Effort does not normally equal duration

Inputs

.1 Schedule management plan
.2 Activity list
.3 Activity attributes
.4 Activity resource requirements
.5 Resource calendars
.6 Project scope statement
.7 Risk register
.8 Resource breakdown structure
.9 Enterprise environmental factors
.10 Organizational process assets

Tools & Techniques

.1 Expert judgment
.2 Analogous estimating
.3 Parametric estimating
.4 Three-point estimating
.5 Group decision-making techniques
.6 Reserve analysis

Outputs

.1 Activity duration estimates
.2 Project documents updates

Three-Point Estimates

- Instead of providing activity estimates as a discrete number, such as four weeks, it's often helpful to create a **three-point estimate**
  - an estimate that includes an optimistic, most likely, and pessimistic estimate, such as three weeks for the optimistic, four weeks for the most likely, and five weeks for the pessimistic estimate
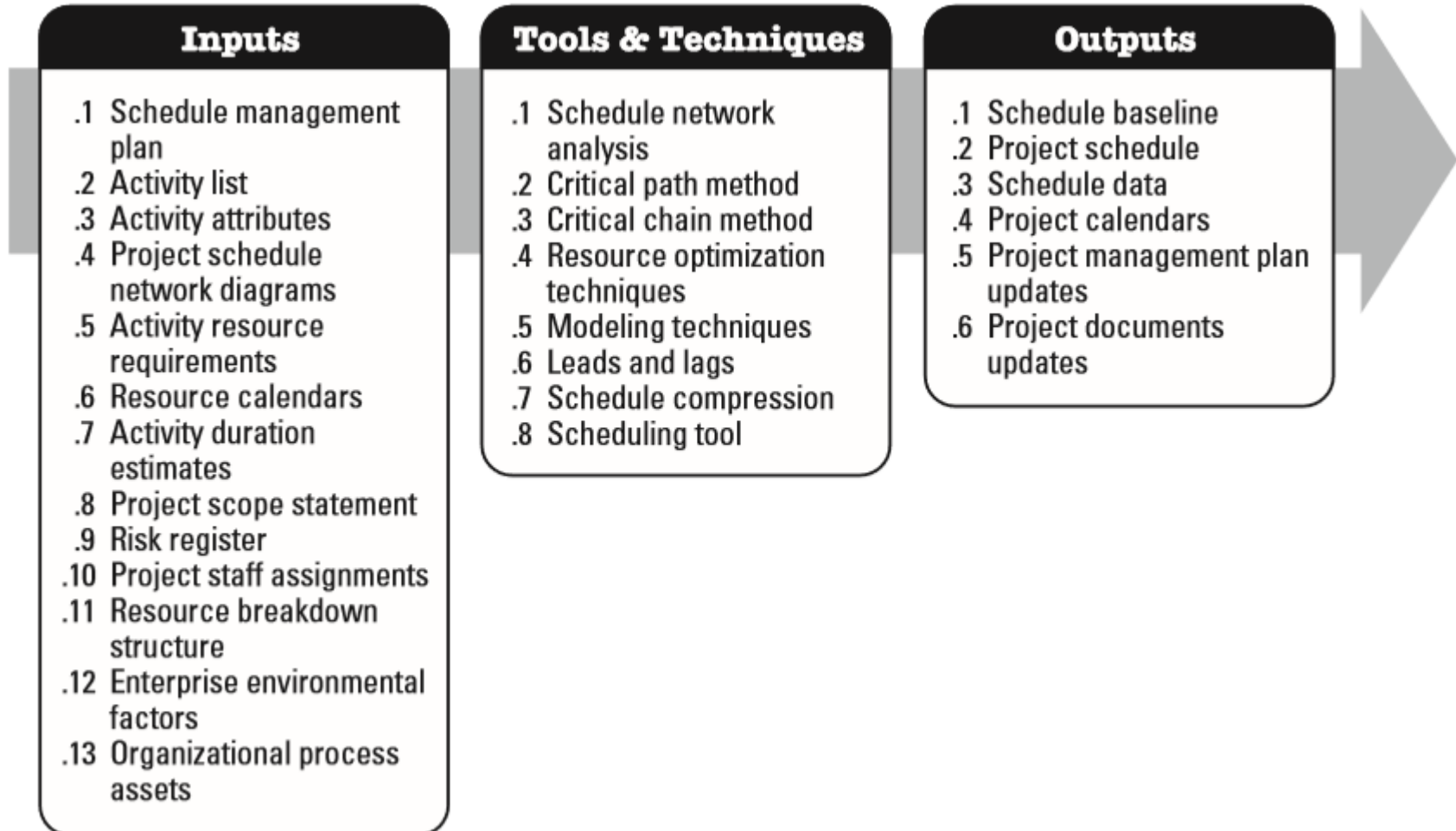- Three-point estimates are needed for PERT analysis.

Lead Time and Lag Time

- **Lead:** When the first activity is still running and second activity starts, this is called Lead. The balance of time for the first activity is known as Lead Time. Lead Time is the overlap between the first and second activity.

Finish to Start
Activity with Lead

- **Lag:** When the first activity completes, if there is then a delay or wait period before the second activity starts, this is called lag and the delay is known as the Lag Time. Lag Time is the delay between the first and second activity.

Finish To Start
Activity with Lag
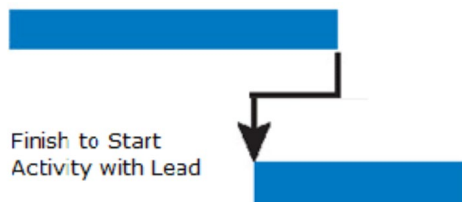
Process 6: Developing the Schedule

- Ultimate goal is to create a realistic project schedule that provides a basis for monitoring project progress for the time dimension of the project.

Inputs	Tools & Techniques	Outputs
.1 Schedule management plan .2 Activity list .3 Activity attributes .4 Project schedule network diagrams .5 Activity resource requirements .6 Resource calendars .7 Activity duration estimates .8 Project scope statement .9 Risk register .10 Project staff assignments .11 Resource breakdown structure .12 Enterprise environmental factors .13 Organizational process assets	.1 Schedule network analysis .2 Critical path method .3 Critical chain method .4 Resource optimization techniques .5 Modeling techniques .6 Leads and lags .7 Schedule compression .8 Scheduling tool	.1 Schedule baseline .2 Project schedule .3 Schedule data .4 Project calendars .5 Project management plan updates .6 Project documents updates

Gantt Charts

- **Gantt charts** provide a standard format for displaying project schedule information by listing project activities and their corresponding start and finish dates in a calendar format

- Symbols include:
    - A black diamond: a milestones
    - Thick black bars: summary tasks
    - Lighter horizontal bars: durations of tasks
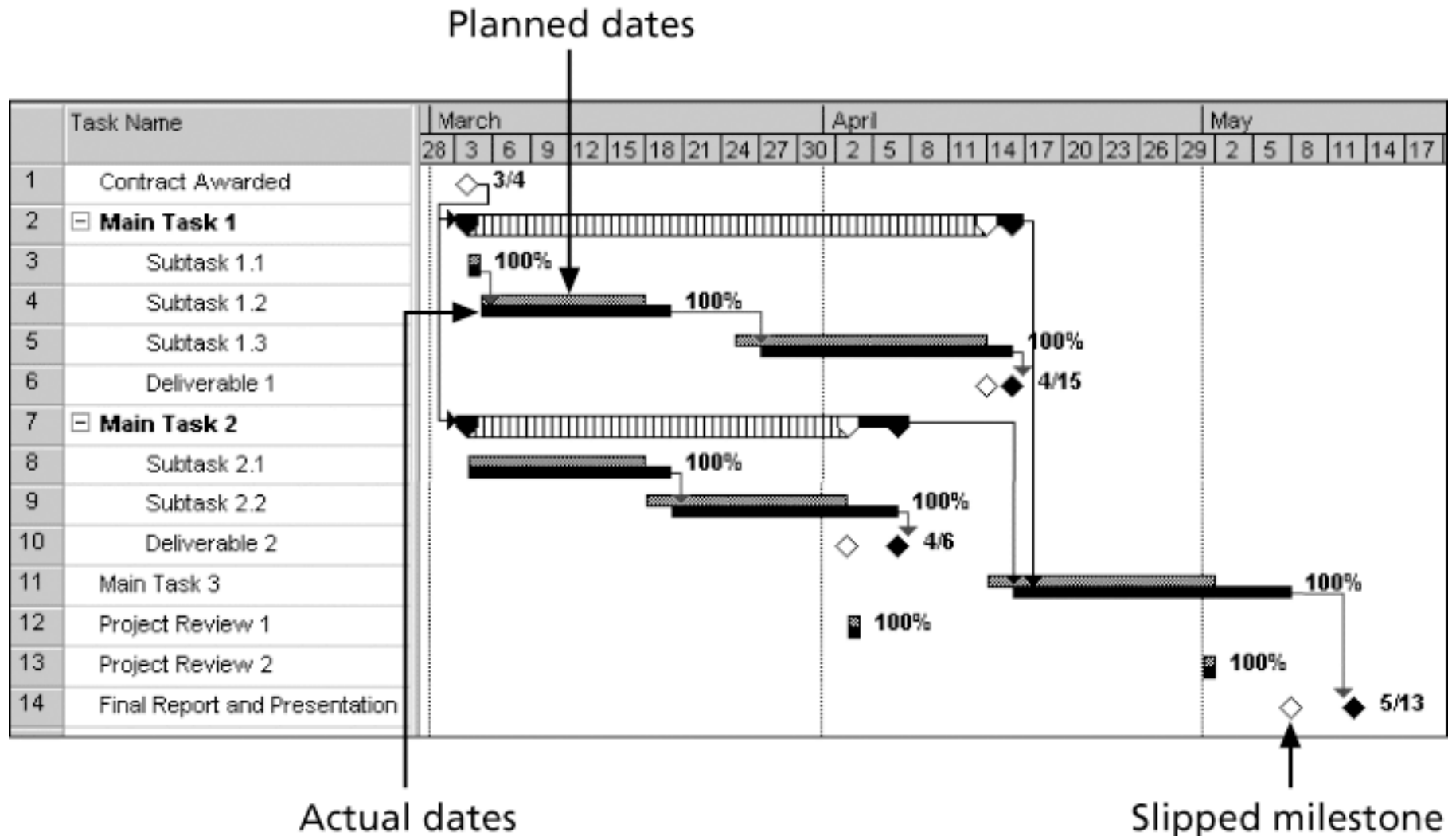   - Arrows: dependencies between tasks

Gantt Chart for Software Launch Project

WBS hierarchy shown by indentations

Summary task

Milestone

Individual task bar

Arrows show dependencies
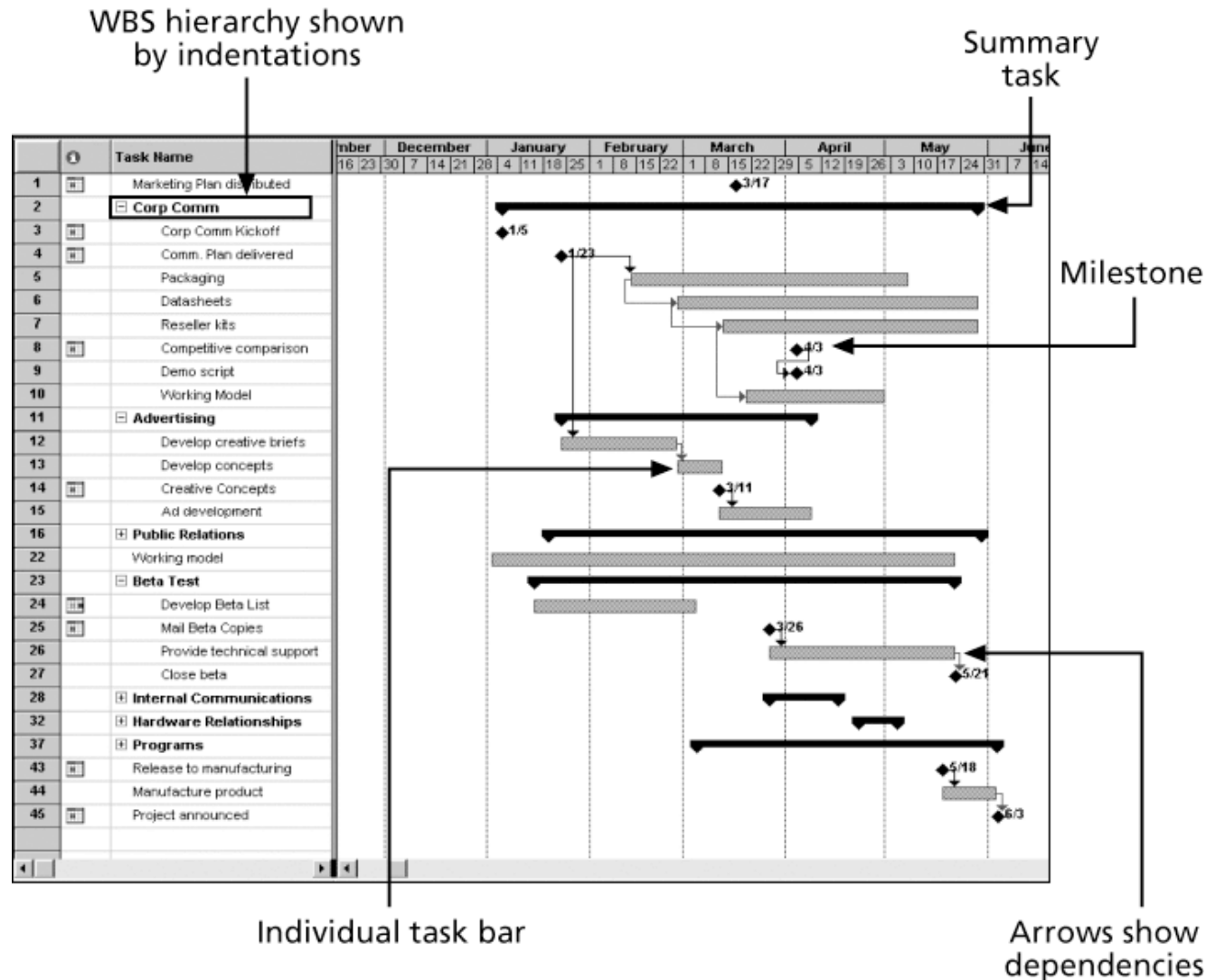
Adding Milestones to Gantt Charts

- Many people like to focus on meeting milestones, especially for large projects

- Milestones emphasize important events or accomplishments on projects

- Normally create milestone by entering tasks with a zero duration, or you can mark any task as a milestone

Sample Tracking Gantt Chart

Planned dates

	Task Name	March	April	May
1	Contract Awarded	◇ 3/4		
2	**Main Task 1**			
3	Subtask 1.1	100%		
4	Subtask 1.2	100%		
5	Subtask 1.3		100%	
6	Deliverable 1		◇◆ 4/15	
7	**Main Task 2**			
8	Subtask 2.1	100%		
9	Subtask 2.2		100%	
10	Deliverable 2	◇◆ 4/6		
11	Main Task 3		100%	
12	Project Review 1		100%	
13	Project Review 2			100%
14	Final Report and Presentation			◇◆ 5/13

Actual dates

Slipped milestone

Class Exercise 1: IT Project for Town of Eden Bay

- Background: Eden Bay is a medium-sized municipality. The town has grown rapidly, and so has the demand for town services. Eden Bay currently own 90 vehicles, which the town's equipment department maintains. The fleet includes police cars, sanitation trucks, and other vehicles assigned to town employees. The maintenance budget has risen sharply in recent years, and people are asking whether the town should continue to perform its own maintenance or outsource it to private firms.

- **Your role:** You are assigned as an IT project manager reporting to Dawn, the town's IT manager. This morning, Dawn called you into her office to discuss the situation. A summary of her comments follows:

- "Dawn (IT manager): When I came here two years ago, I was told that Eden Bay had a computerised information system for vehicle maintenance. What I found was a spreadsheet designed by a parttime employee as a quick answer to a complex problem. It's probably better than no system at all, but what we really need is a new information system to meet our current and future needs. I want you to develop a proposal for a new system." (Case adapted from Tilley and Rosenblatt 2017)

Class Exercise 1: IT Project for Town of Eden Bay

Please refer to assessment guide, page 4, the project case

- What are the goals and project objectives ?
- What are key deliverables and requirements?
- Create 2-level WBS for the case given
- **Develop a high level (summary) schedule for the project**

Everyone can do the exercise here, click on the link

https://docs.google.com/document/d/14_AzAHy59yhMUofB-ZeRjFUwYH_A0QwmdEqvmPp0yMA/edit

Critical Path Method (CPM)

- CPM is a network diagramming technique used to predict total project duration

- A **critical path** for a project is the series of activities that determines the *earliest time* by which the project can be completed

- The critical path is the *longest path* through the network diagram and has the least amount of slack or float

- **Slack** or **float** is the amount of time an activity may be delayed without delaying a succeeding activity or the project finish date

Calculating the Critical Path

- Develop a good network diagram
- Add the duration estimates for all activities on each path through the network diagram
- The longest path is the critical path
- If one or more of the activities on the critical path takes longer than planned, the whole project schedule will slip *unless* the project manager takes corrective action

Calculate Critical Path – Example

Path A–B–D = 25

Path A–C–D = 30
(Critical Path)

KEY — Activity Node

Early Start	Duration	Early Finish
	Activity Name	
Late Start	Total Float	Late Finish

Critical Path Link ➡
Non-Critical Path Link ➡
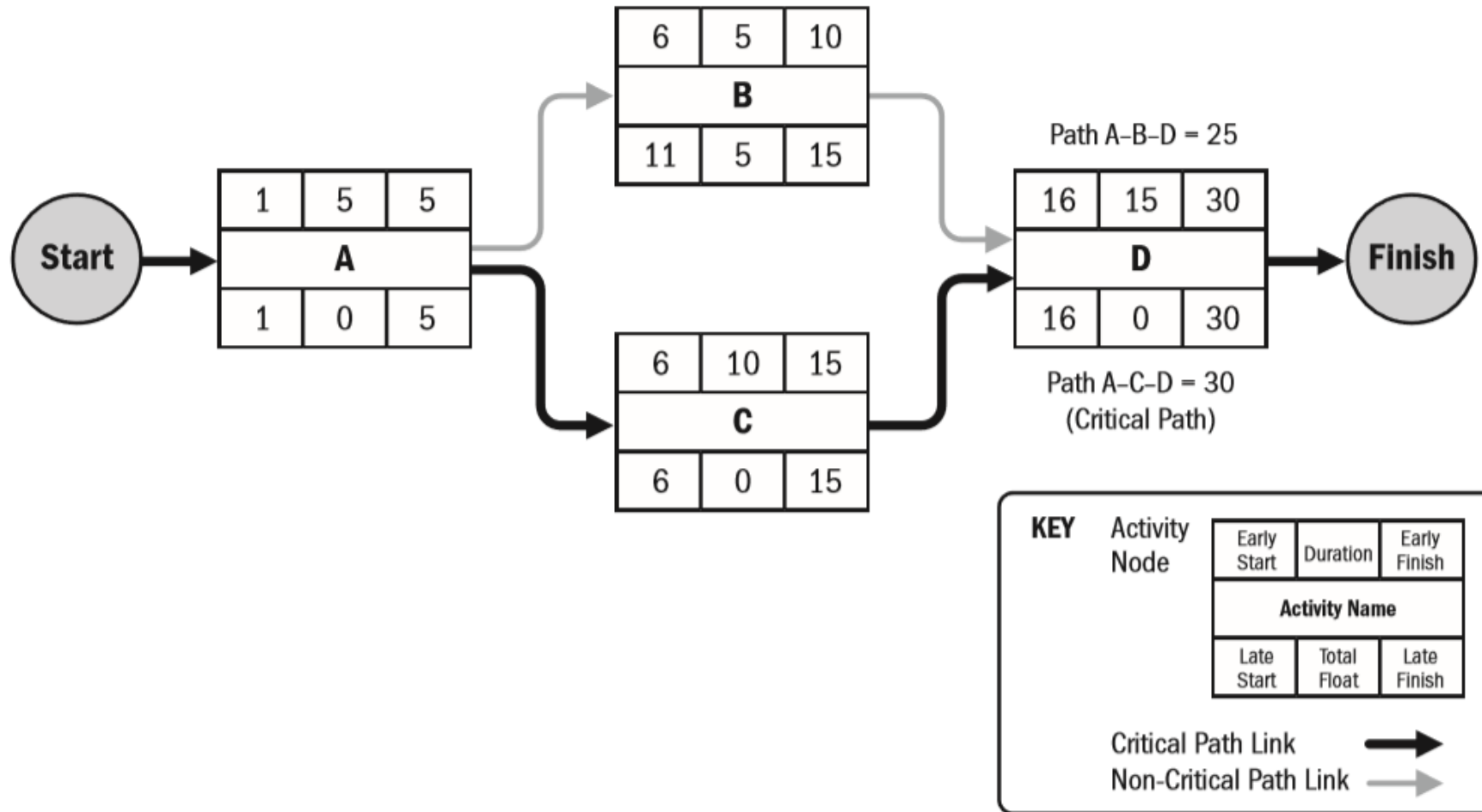
Class Exercise 2: Calculate Critical Path

Note: Assume all durations are in days; A=1 means Activity A has a duration of 1 day.
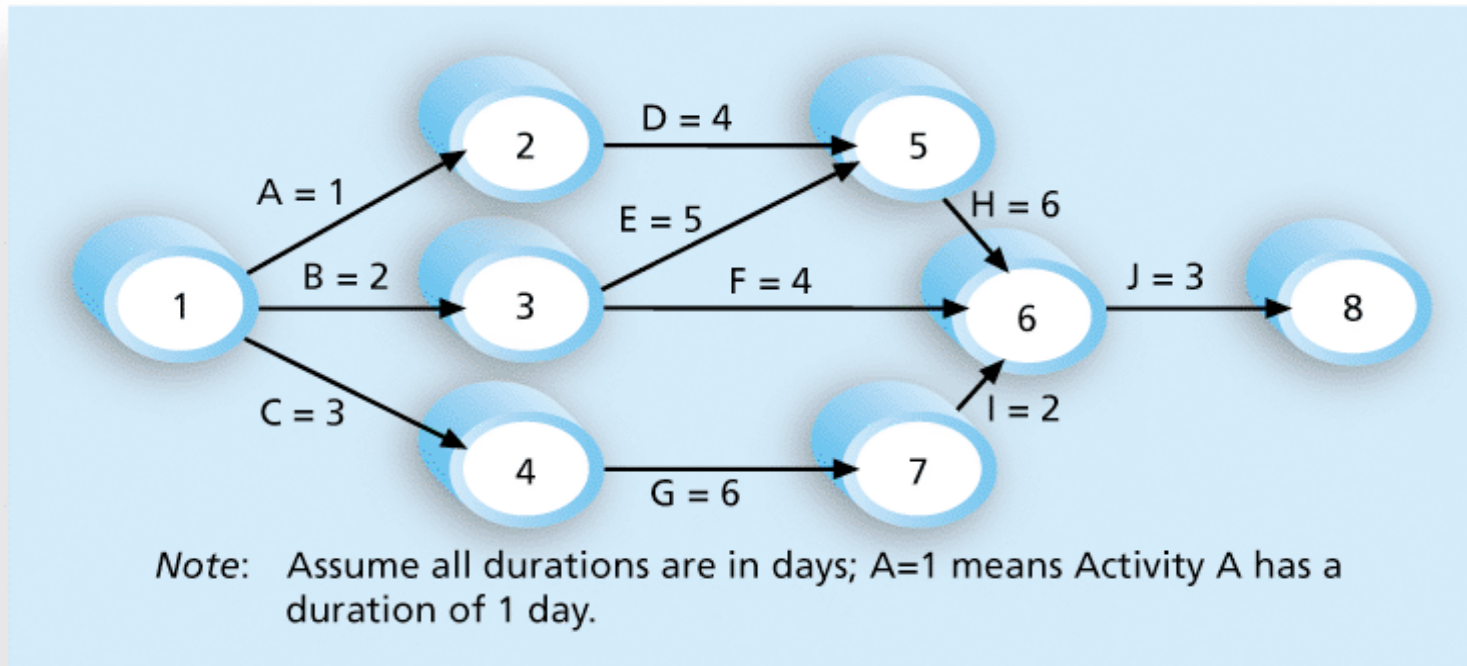
- Identify the number of paths available to complete the project?
- Which path is the Critical Path?
- Using the critical path, how long will it take to complete the project?
- What is the earliest time to complete the project?
- Any advantages/disadvantages of using CPM in project ?

Critical Path

- The critical path is *not* the one with all the critical activities; it only accounts for time

- There can be more than one critical path if the lengths of two or more paths are the same

- The critical path can change as the project progresses

Calculating Early and Late Start and Finish Times

- A **forward pass** through the network diagram determines the early start and finish dates

- A **backward pass** determines the late start and finish dates
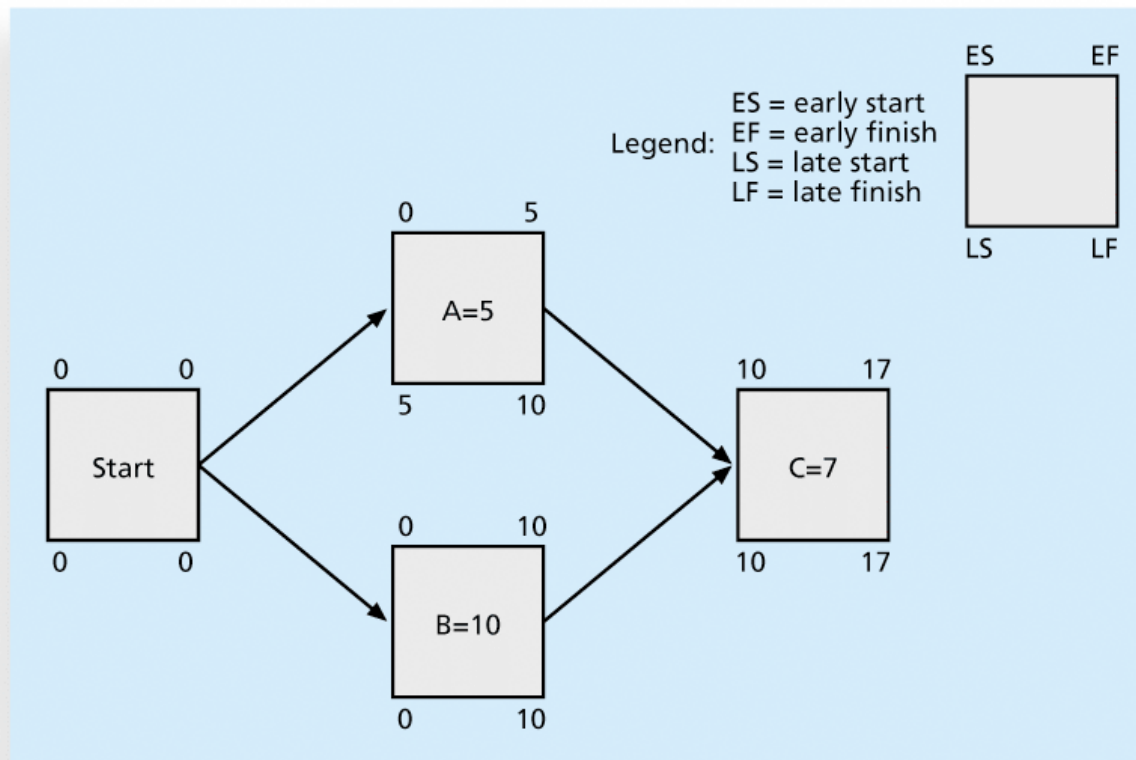
Shortening a Project Schedule

- Shortening durations of critical activities/tasks by **adding more resources or changing their scope**

- **Crashing** activities by obtaining the greatest amount of schedule compression for the least incremental cost

- **Fast tracking** activities by doing them in parallel or overlapping them
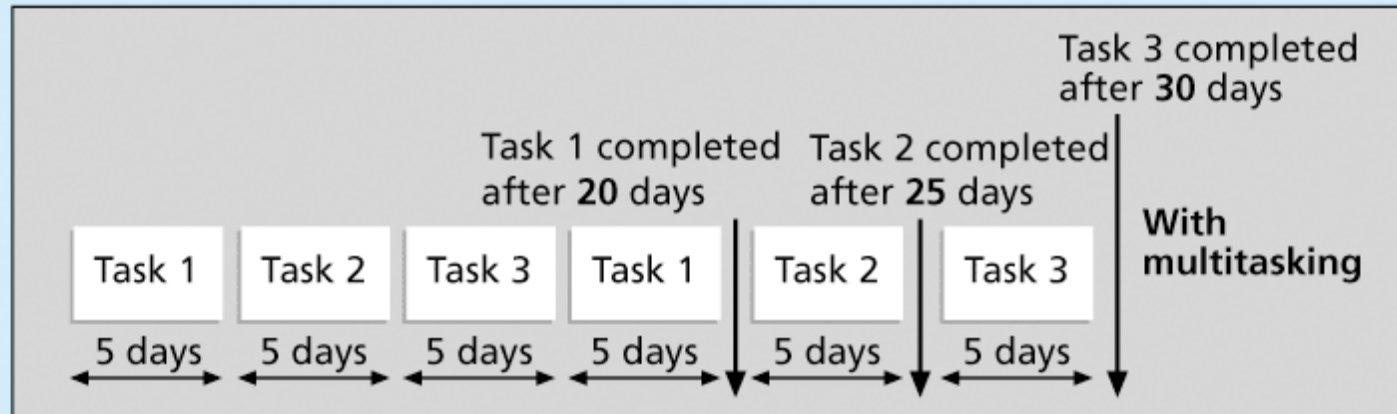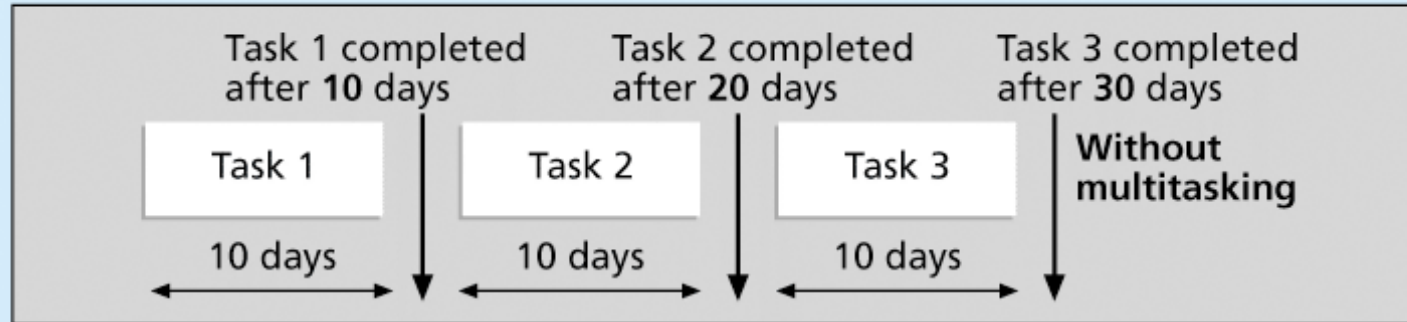
Critical Chain Scheduling

- **Critical chain scheduling**
  - a method of scheduling that considers limited resources when creating a project schedule and includes buffers to protect the project completion date

- Attempts to minimize **multitasking**
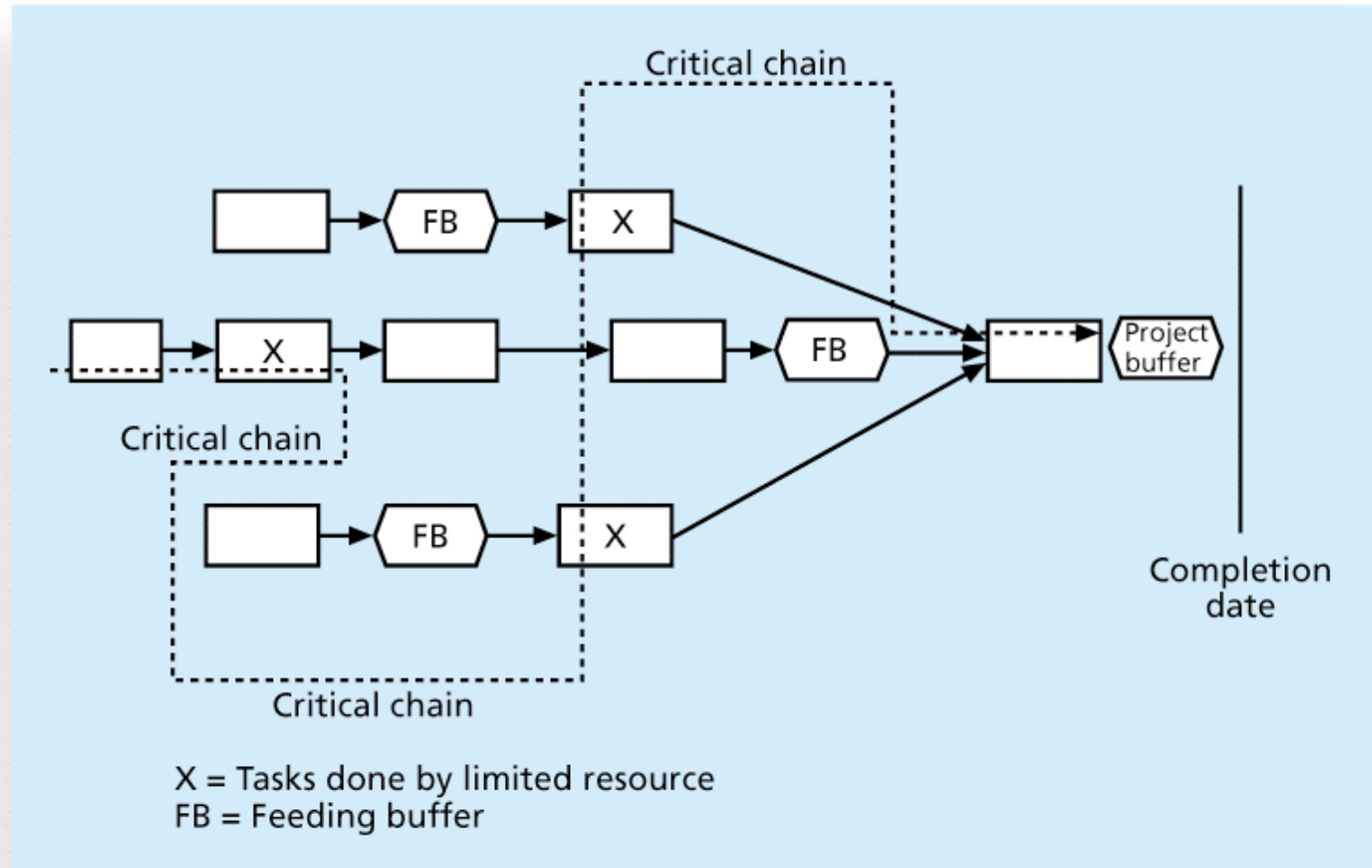 - when a resource works on more than one task at a time

Would You Do Multitasking in IT Project Management?

Buffers and Critical Chain

- A **buffer** is additional time to complete a task

- In traditional estimates, people often add a buffer to each task and use it if it's needed or not

- **Critical chain scheduling** removes buffers from individual tasks and instead creates
  - a **project buffer** or additional time added before the project's due date
  - **feeding buffers** or additional time added before tasks on the critical path

Example of Critical Chain Scheduling

Critical chain

FB

X

Critical chain

X

FB

Project buffer

Critical chain

FB

X

Completion date

X = Tasks done by limited resource
FB = Feeding buffer

Program Evaluation and Review Technique (PERT)

- **PERT** is a network analysis technique used to estimate project duration when there is a high degree of uncertainty about the individual activity duration estimates

- PERT uses **probabilistic time estimates**
  - duration estimates based on using optimistic, most likely, and pessimistic estimates of activity durations, or a three-point estimate

PERT Formula and Example

- PERT weighted average =

optimistic time + 4X most likely time + pessimistic time
                          6

- Short form of the formula: Expected $E = (O+4M+P)/6$

PERT Example 1

- Example:

PERT weighted average =

$$\underline{8 \text{ workdays} + 4 \times 10 \text{ workdays} + 24 \text{ workdays}} \quad = \textbf{12 days}$$
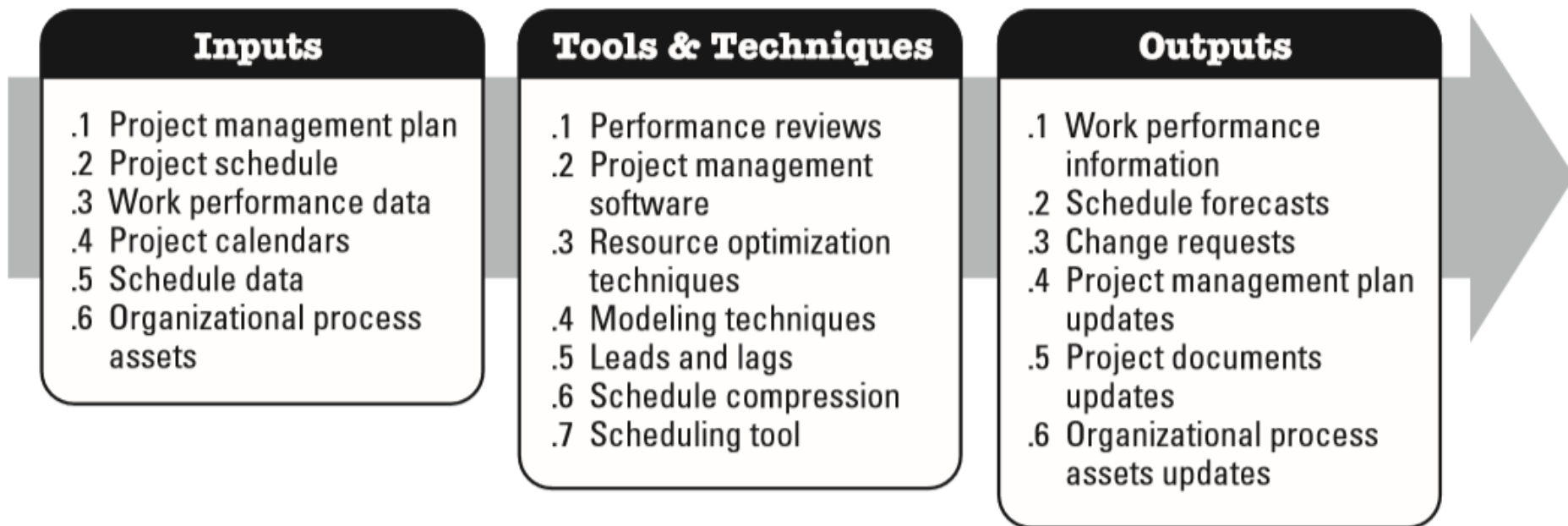$$6$$

where optimistic time= 8 days

most likely time = **10 days,** and

pessimistic time = 24 days

Therefore, you'd use **12 days** on the network diagram instead of 10 when using PERT for the above example

Process 7: Control Schedule

■ Control Schedule is the process of monitoring the status of project activities to update project progress and manage changes to the schedule baseline to achieve the plan.

Inputs	Tools & Techniques	Outputs
.1 Project management plan .2 Project schedule .3 Work performance data .4 Project calendars .5 Schedule data .6 Organizational process assets	.1 Performance reviews .2 Project management software .3 Resource optimization techniques .4 Modeling techniques .5 Leads and lags .6 Schedule compression .7 Scheduling tool	.1 Work performance information .2 Schedule forecasts .3 Change requests .4 Project management plan updates .5 Project documents updates .6 Organizational process assets updates

Control Schedule– Suggestions

- Perform reality checks on schedules
- Allow for contingencies
- Don't plan for everyone to work at 100% capacity all the time
- Hold progress meetings with stakeholders and be clear and honest in communicating schedule issues
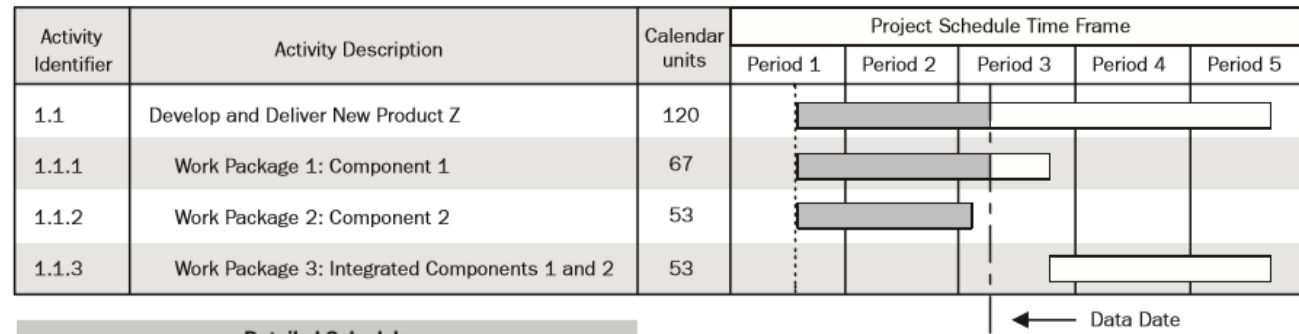
Reality Checks on Scheduling

- First review the draft schedule or estimated completion date in the project charter
- Prepare a more detailed schedule with the project team
- Make sure the schedule is realistic and followed
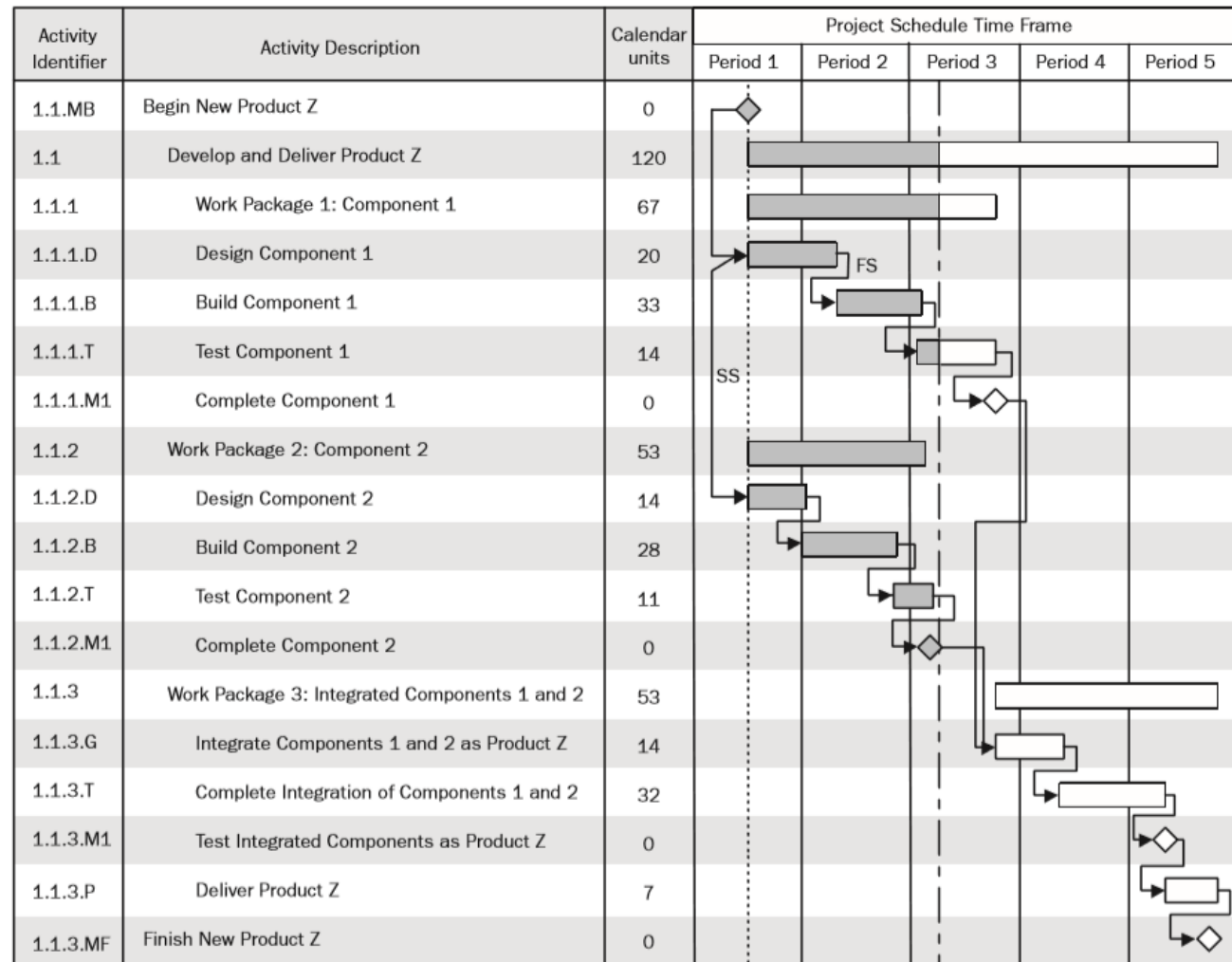- Alert top management well in advance if there are schedule problems

Summary Schedule

&

Detailed Schedule

Summary Schedule

Activity Identifier	Activity Description	Calendar units	Period 1	Period 2	Period 3	Period 4	Period 5
1.1	Develop and Deliver New Product Z	120					
1.1.1	Work Package 1: Component 1	67					
1.1.2	Work Package 2: Component 2	53					
1.1.3	Work Package 3: Integrated Components 1 and 2	53					

Detailed Schedule

Activity Identifier	Activity Description	Calendar units	Period 1	Period 2	Period 3	Period 4	Period 5
1.1.MB	Begin New Product Z	0					
1.1	Develop and Deliver Product Z	120					
1.1.1	Work Package 1: Component 1	67					
1.1.1.D	Design Component 1	20					
1.1.1.B	Build Component 1	33					
1.1.1.T	Test Component 1	14					
1.1.1.M1	Complete Component 1	0					
1.1.2	Work Package 2: Component 2	53					
1.1.2.D	Design Component 2	14					
1.1.2.B	Build Component 2	28					
1.1.2.T	Test Component 2	11					
1.1.2.M1	Complete Component 2	0					
1.1.3	Work Package 3: Integrated Components 1 and 2	53					
1.1.3.G	Integrate Components 1 and 2 as Product Z	14					
1.1.3.T	Complete Integration of Components 1 and 2	32					
1.1.3.M1	Test Integrated Components as Product Z	0					
1.1.3.P	Deliver Product Z	7					
1.1.3.MF	Finish New Product Z	0					

Class Exercise 4:
IT Project Scenario Analysis– Self-driving Uber Issue

Check Canvas week 3 module for this exercise

Class Exercise 5:
IT Project Scenario Analysis– Example from LinkedIn

- Check Canvas week 3 module for this exercise

Lecture Summary

- Project time management is often cited as the main source of conflict on projects, and most IT projects exceed time estimates

- Project Time Management processes include
  - Plan schedule management
  - Define activities
  - Sequence activities
 - Estimate activity resources
  - Estimate activity durations
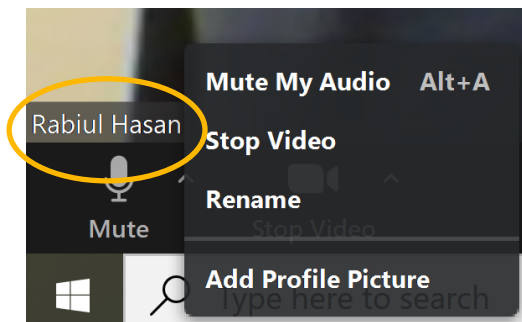 - Develop schedule
  - Control schedule

Update on Group Projects

- All Projects are finalised

Announcement – Tonight's Tutorial

- We will create breakout rooms during the zoom tutorial session.
- To save our management time, after joining the tutorial, <u>click on "Rename" and add your group number in front of your name.</u>

See the example below:
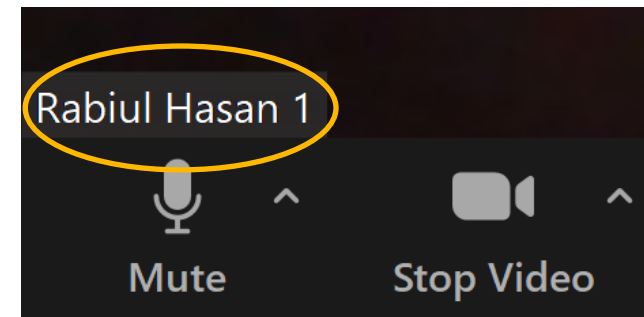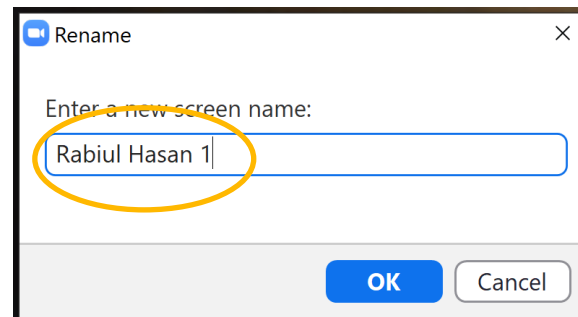
- If you are late, wait in the main tutorial meeting room until you are assigned to your breakout room.
- If you need help, click on the help button or type in the chat or inform your group members.

Q &A?
Thanks everyone !