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Projects Management (PM)

إدارة المشروعات

Lecture 7

Time Management (Part2)

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From Previous Lecture

Time Management

- Project time management involves the processes required to ensure timely completion of a project.

PM Process Group	Time Management Processes
Planning	1) Planning schedule management ✓ .
	2) Defining Activities ✓ .
	3) Sequencing Activities →
	4) Estimating Activity Resources
	5) Estimating Activity Durations
	6) Developing the Schedule
Monitor and Control	7) Controlling the Schedule

From Previous Lecture

3) Sequencing Activities

- Sequencing activities means determining the **dependencies** and **relationships** among different activities.

Network Diagrams

(1) Activity on Arrow (AOA)

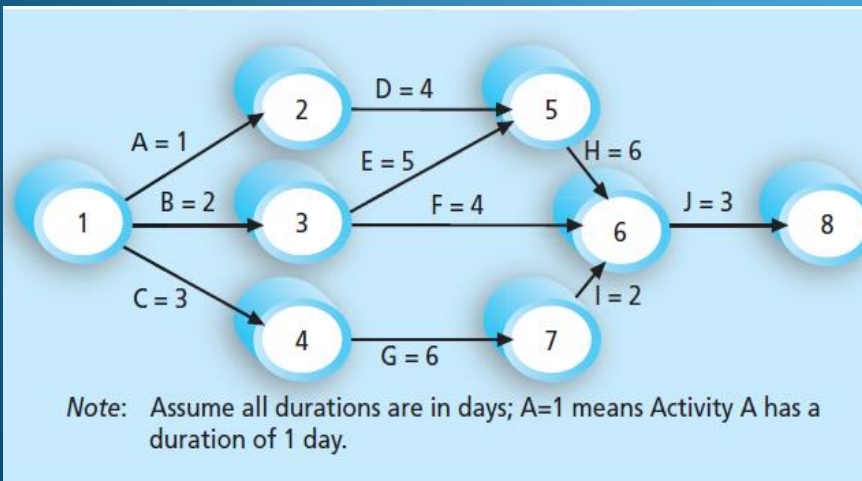


Fig. (AOA) Network diagram of Project X

3) Sequencing Activities (cont'd)

Network diagram types

(1) Activity on Arrow diagrams (AOA) or arrow diag. method (ADM).

- Network diag. technique in which activities are represented by arrows and connected at points called nodes to illustrate the sequence of activities.

(2) Precedence diagramming method (PDM): A network diagramming technique in which boxes represent activities.

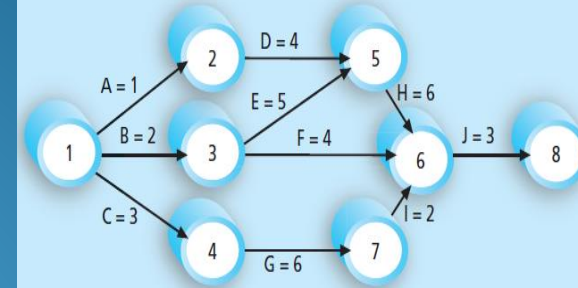
PDM is particularly useful for visualizing certain types of time relationships.

[Name]	
Start: [Start]	ID: [ID]
Finish: [Finish]	Dur: [Duration]
Res: [Resource Names]	

3) Sequencing Activities (cont'd)

Network diagram types (cont'd)

(2) Precedence diag. method (PDM):



AOA Project X

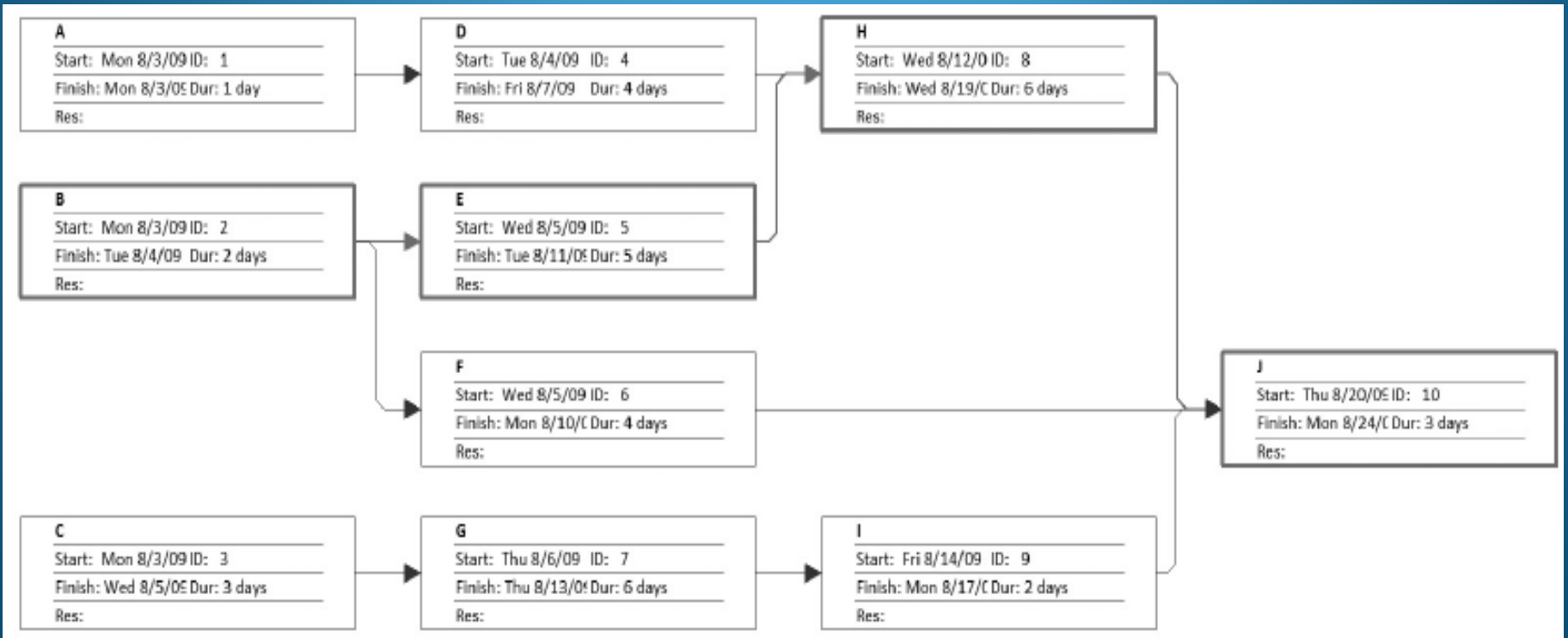
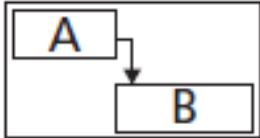
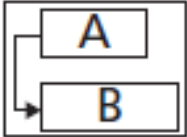
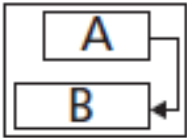
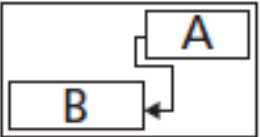


Fig. PDM Network diagram of Project X

3) Sequencing Activities (cont'd)

Types of task dependencies

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.

3) Sequencing Activities (cont'd)

Types of task dependencies (cont'd)

FS: Ex. you cannot provide user training until a software has been installed.

➤ FS is the **most common type**. (AOA diag. use only FS dependencies)

SS: Ex. a group of activities might start simultaneously.

FF: Ex. quality control cannot finish before production finishes.

SF: Rarely used type, but it is appropriate in some cases.

Ex. an organization strive to stock raw materials just in time for the manufacturing process to begin.

4) Estimating Activity Resources

- Estimate the resources (people, equipment, and materials) that will be assigned to each activity.

5) Estimating Activity Durations

- Estimate the required time to complete each activity.

6) Developing the Schedule

- Schedule development uses the results of all previous processes to determine the start and end dates of the project and its activities.

Gantt Charts

- A technique that display project schedule information by listing project activities and their corresponding start and finish dates in calendar form.

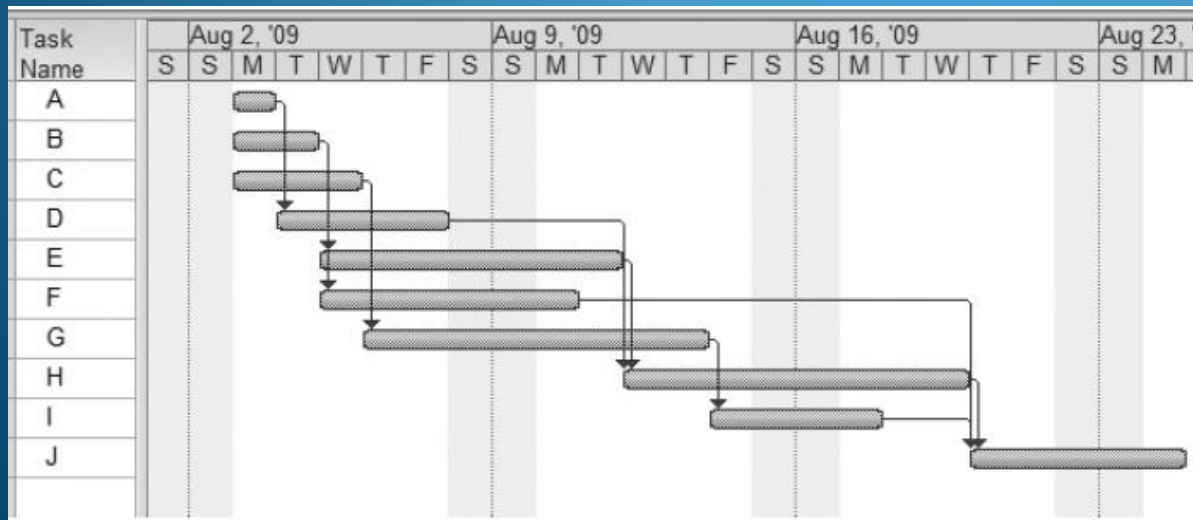
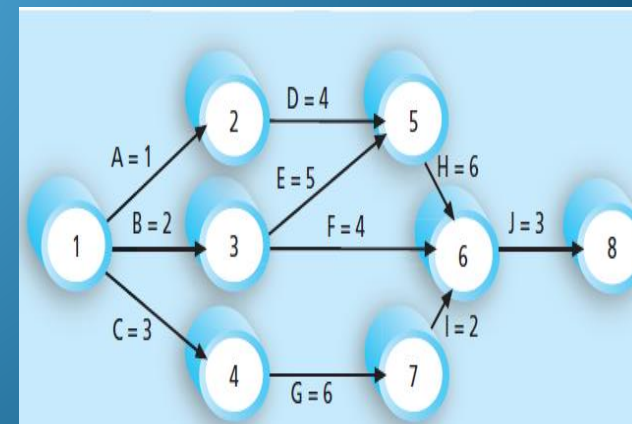


FIGURE 6-5 Gantt chart for Project X



AOA Project X

6) Developing the Schedule (cont'd)

Tracking Gantt Chart

- A special form of a Gantt chart to evaluate progress on a project by showing actual schedule information compared to the planned dates

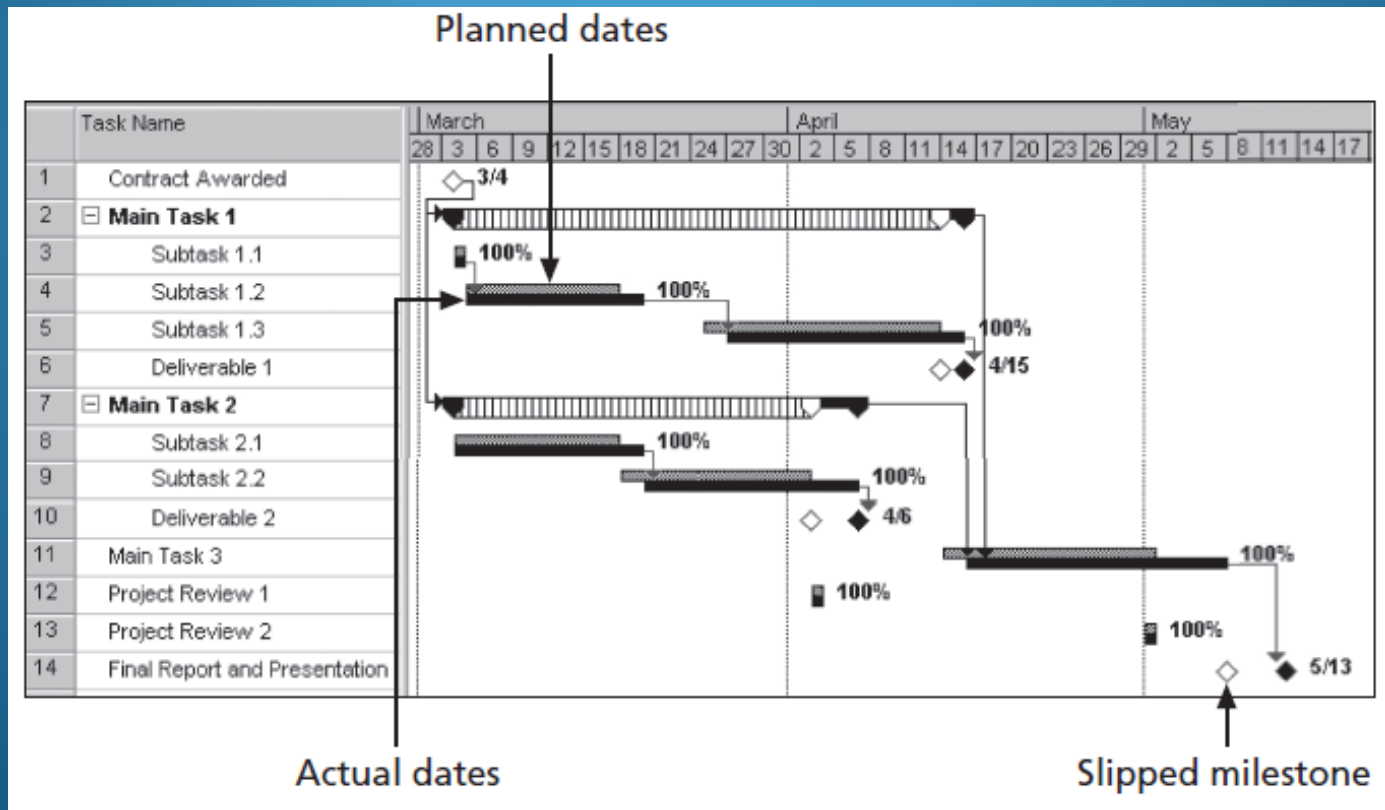


FIGURE 6-7 Sample Tracking Gantt chart

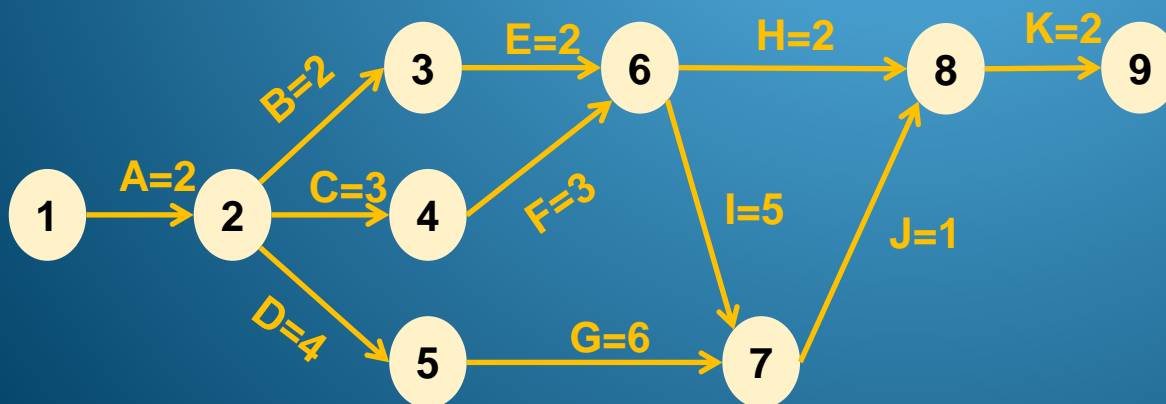
Exercise (1):

Consider project Y with the shown data, use **Microsoft project** to create:

- PDM network diagram **Precedence Diag. Method**
- Gantt chart

Activity	Initial Node	Final Node	Estimated Duration
A	1	2	2
B	2	3	2
C	2	4	3
D	2	5	4
E	3	6	2
F	4	6	3
G	5	7	6
H	6	8	2
I	6	7	5
J	7	8	1
K	8	9	2

AOA network diagram (Previous Lecture)



For more information on using MS project

APPENDIX **A**

**GUIDE TO
USING MICROSOFT
PROJECT 2010**

Reference:

Information Technology Project Management, Kathy Schwalbe, 7th Edition.

6) Developing the Schedule (cont'd)

Critical Path Method (CPM) or critical path analysis

Next Lecture

Thanks for Attention