

Project Management

Lecture notes

Lec#3

Project Planning-Project representation

Nov 2023

Project representation

- Represent project manager
- Define project team
- Share the objective of the project clearly to project team
- Basic work breakdown of the project must raise the following questions:
 - 1- How work will be done
 - 2- how people will be organized
 - 3- how resources will be allocated
 - 4- how progress will be monitored

Means of project representation

- Project name and description
- List of jobs that constitute the project(it will not provide the precedence and relation of the jobs)
- Charts or graphs that shows when the activities take place.
- Project network showing activities, their dependencies and relation to the whole.
- Project network is a common vehicle for planning, communication and implementation of the project from inception.
- Generally there are two type of project representation
 - 1- Activity On Arrow (A-O-A) arrows represent the activities
 - 2- Activity On Node (A-O-N) nodes represents the activities

Why using project networks

- To show the activities and precedence
- Responsibility allocation
- Definition of subcontracting units
- Role of different players
- Basic scheduling and creating time table for the project.
- Determination of critical path (the activities that the control the duration of the project)
- Resource planning (Resource aggregation, leveling and limited resource allocation)
- It useful in project implementation phase for updating the schedules, monitoring and reporting progress

Example#1 Organizing one day Seminar

The activities are:

Activities	Predecessors
1- decide date, and place of the seminar	---
2- identify speakers and participants	---
3- contact and finalize speakers	A2
4- Print seminar brochure	A1, A3
5- mail brochure to some participants.	A4
6- estimate number of attendances.	A5
7-decide menu for tea, coffee break and lunch	A6
8-arrangement for serving lunch	A1, A7
9- arrange IT facilities	A6
10- receiving guests and registration	A8, A9
11-conduct seminar as per plan	A8, A9, A10
12- see off guests.	A11

A-O-A and A-O-N

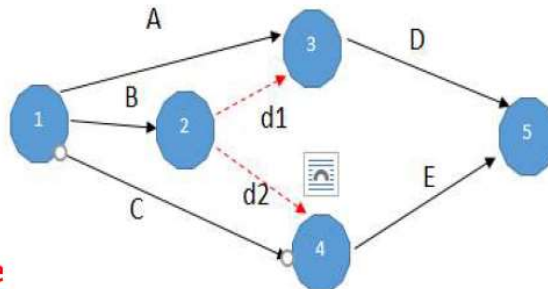
- Class activity Example #1

Logical dummies

Example # 2

Job Predecessors

A ---
 B ---
 C ---
 D A,B
 E B,C

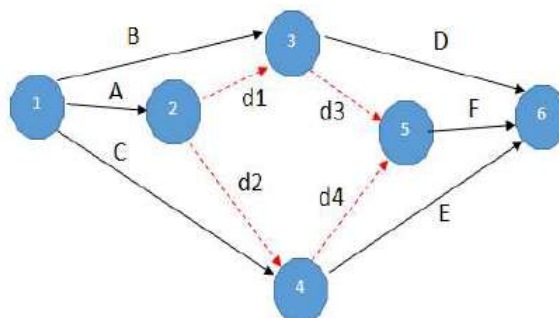


d1 and d2 are
logical dummies

Example #3

Job Predecessors

A ---
 B ---
 C ---
 D A,B
 E A,C
 F A,B,C



Dummies to represent Uniqueness of activities

Example#4

Job Predecessor:

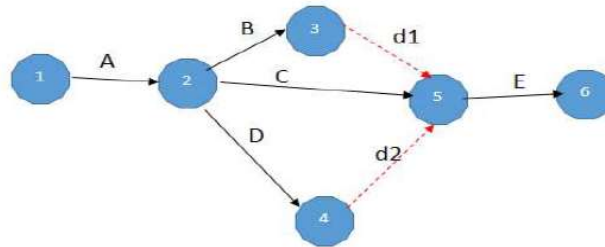
A ---

B A

C A

D A

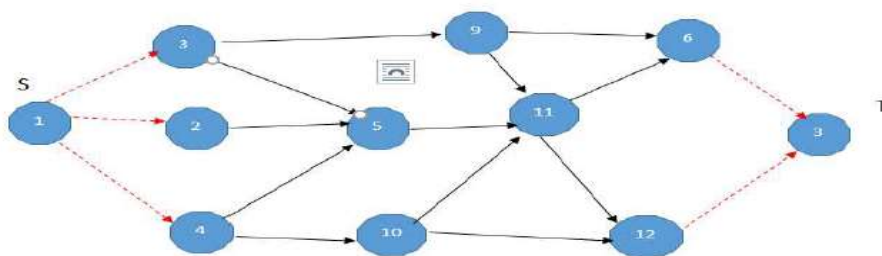
E B,C,D



d1 and d2 are **DUMMIES** to represent uniqueness of activities

Dummies: Single source and Single Terminal

Example #5



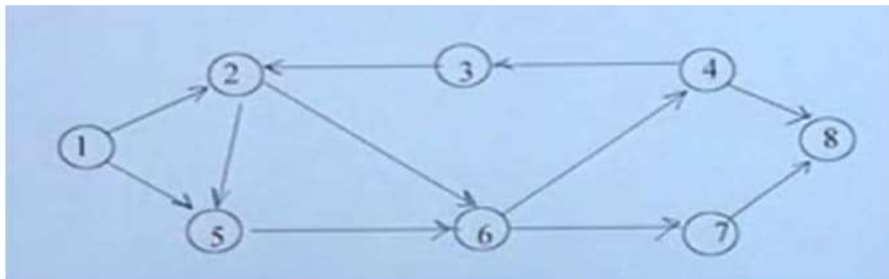
DUMMIES to represent Single source and Single Terminal

Role of DUMMIES

- 1- correct representation of precedence logic (only A-O-A)
- 2- uniqueness of activities representation (only A-O-A)
- 3- creation of single source and termination (A-O-A and A-O-N)

Properties of project networks

- 1- project network must be consistence



A closed loop in a project network is a logical inconsistency

Redundancy (A-O-N)

