

3.2 Project Management Techniques

Project Management Process

- Initiation
- Planning
- Execution
- Closing down

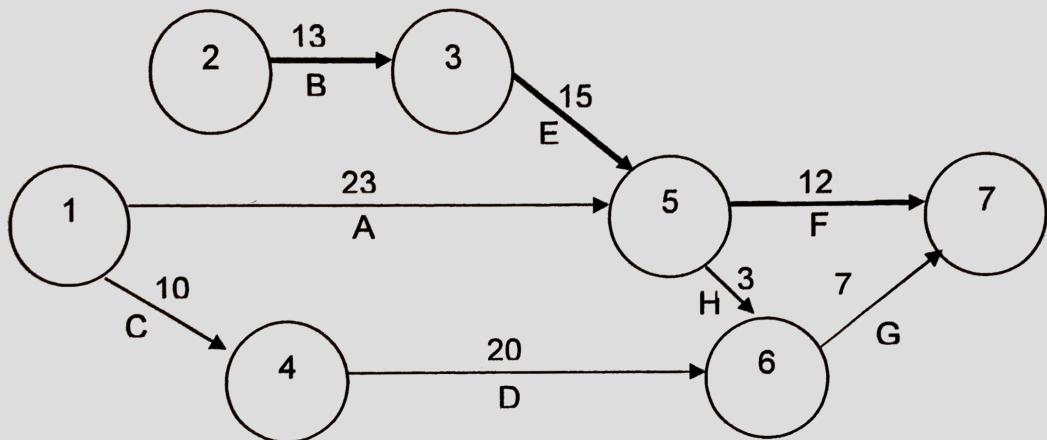
Project Management Tools

- Gantt Chart:
 - Used to plan time scale for project
 - Estimate resources required
 - Graphical illustration of schedule of tasks to complete
 - Helps to plan, coordinate and track specific tasks for a project

| Project Planning Documentation | | Page: 1 of 3 | | | | | | | | | | |
|---|--|---------------------|------|----|-----|----|---|----|----|----|---|----|
| System: ABC Second-Hand Books | | Date: 17 Jul 04 | | | | | | | | | | |
| Legend: Scheduled Activity Completed Activity | | Analyst: Harry Chen | | | | | | | | | | |
| Activities | | Individual assigned | Week | | | | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 Systems Planning | | | | | | | | | | | | |
| 1.1 Determine requirements | | HC, John | ■■ | | | | | | | | | |
| 1.2 Evaluate alternative plan | | HC | | ■■ | | | | | | | | |
| 1.3 Prepare design specifications | | John | | | ■■ | | | | | | | |
| 2 Develop Data Storage | | | | | | | | | | | | |
| 2.1 Determine requirements | | HC | | | | ■ | | | | | | |
| 2.2 Evaluate alternative structures | | HC, Jack | | | | ■■ | | | | | | |
| 2.3 Design data structure & interfaces | | Jack | | | | | ■ | | | | | |
| 2.4 Build test database | | Jack | | | | | | ■■ | | | | |
| 2.5 Code & test interfaces | | HC, Ryan | | | | | | | ■■ | | | |
| 2.6 Build production database | | Ryan | | | | | | | | ■■ | | |
| 3 Develop Data Retrieval | | | | | | | | | | | | |
| 3.1 Training on 4 th generation tools | | Team | | | ■■■ | | | | | | | |
| 3.2 Code programs | | John, Bob | | | | | | | | | | |
| 3.3 Test with test database | | John, Bob | | | | | | | | | | |
| 3.4 test with production database | | John | | | | | | | | | | |

- PERT Chart:
 - Displays inter-dependency between tasks
 - Ability to calculate critical path (path that effectively

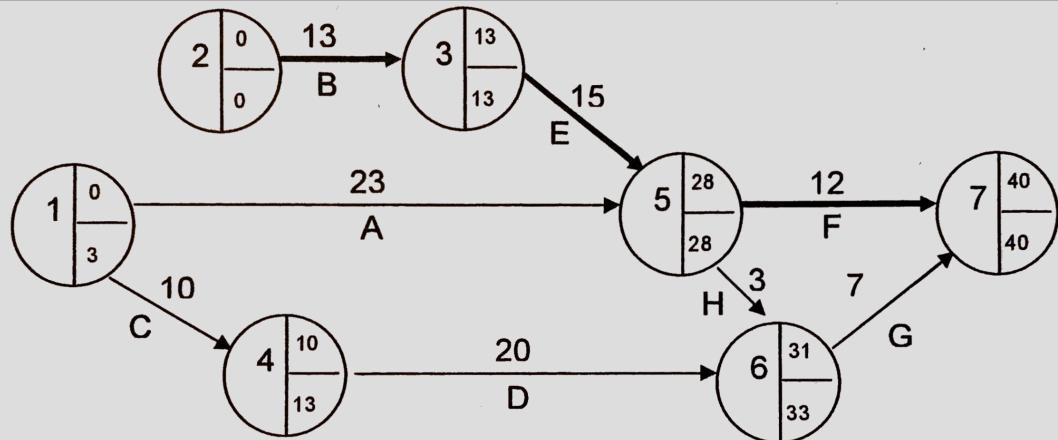
- indicates completion time of project)
 - ◆ Dependent events: events where one can't be started until another one has been completed
 - ◆ Concurrent events: events that can happen at the same time
- Use of critical path:
 - ◆ Good visual communication and planning tool for effective time management
 - ◆ Displays clearly interdependent relationships
 - ◆ Arranges tasks into optimal sequence of events for project to be completed most efficiently
 - ◆ Highlights critical / crucial tasks
 - ◆ Enables more effective resource allocation — resources can be diverted from non-critical tasks to critical tasks to ensure critical tasks are finished on time
 - ◆ Highlight "float times" for all activities (i.e. amt of time an activity can overrun without delaying the project)
- Process of critical path analysis:
 1. Breakdown project into logical sequence to be completed
 2. Estimate time duration for each task
 3. Arrange activities in the most efficient sequence
 4. Estimate total duration for project

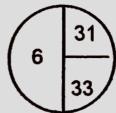


 Event 4

 It takes 23 unit of time to complete Activity A

 Critical Path (path which effectively dictates the completion time of the project)



 Event 6, 31 is the earliest start time and 33 is the latest start time.

 It takes 23 unit of time to complete Activity A

 Critical Path (path which effectively dictates the completion time of the project)