

Project Management

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Project management

■ Project

"A project is a series of activities directed to accomplishment of a desired objective."

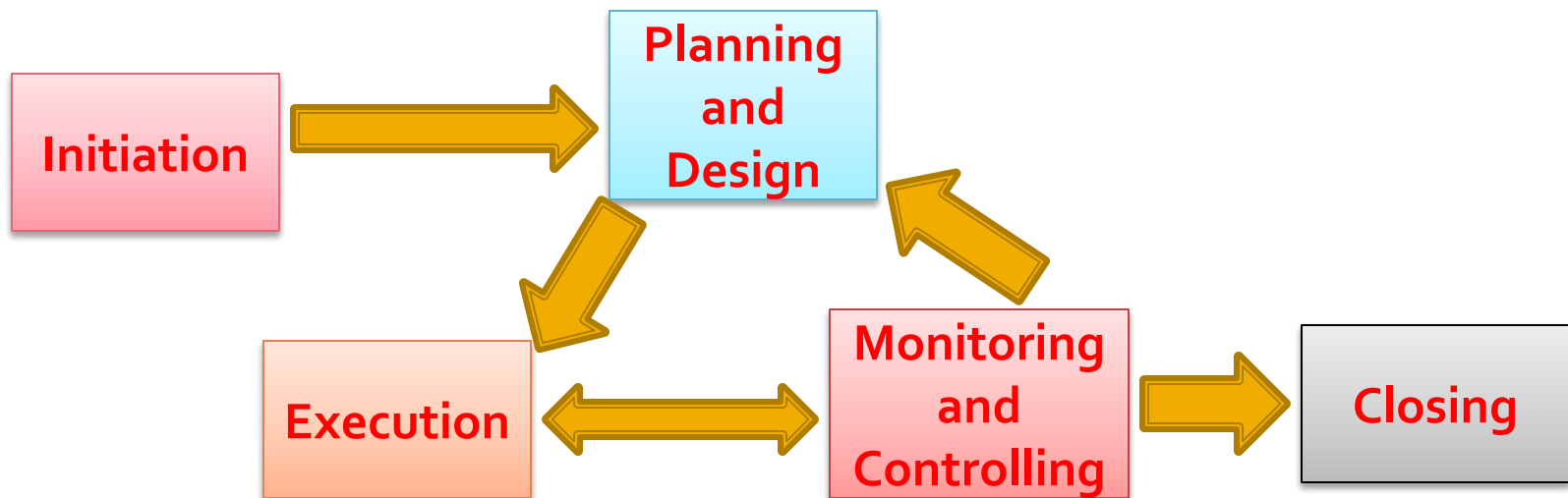
■ Management

"It is the process of Planning, Organizing, coordinating, and Controlling"

Plan your work first.....then work your plan

Project management (PM)

- Discipline of initiating, planning, executing, controlling, and closing the work of a team to achieve specific goals and meet specific success criteria at the specified time.



Types of projects

□ Civil projects

- buildings, metro rail, and bridges

□ IT projects

- Aadhar, online reservation system for APSRTC

□ Research and development (R&D) projects

- New medicine, defense, space

Goals of project management

- Focuses on three important goals:
 - time
 - budget
 - quality.
- Successful projects are completed on schedule, within budget, and according to previously agreed quality standards

But...

- MIS projects commonly sport 200–300% cost overruns and completion times twice that projected?
- Why do massive construction projects run so late and so over budget?

Allied functions of PM

- *Project Initiation*
- *Project Planning*
- *Project Execution*
- *Project Closure*
- *Risk Management*
- *Change Management*
- *Quality Management*
- *Cost Management*
- *Issue Management*
- *Time Management*
- *Procurement Management*
- *Acceptance Management*
- *Communications Management*

Road to Better Project Management

- Find a Project plan that fits your style of project management needs
- It may be as simple as creating templates, forms and spreadsheets to track tasks
- Formation of a Project Management committee
- Listing out all the tasks and sub-tasks to accomplish a goal
- Jot down the time period and person responsible against each task/sub-task

Road to Better Project Management

- Identify a Project Manager
- Identify Task Managers
- Sequence the activities in relation to time period
- Present to the PMC
- Finalize by reaching an agreement and start work.....

Implementation

- Regular Monitoring
- Resource Support
- Critical issues discussed and solution
- Meeting with the team on completion of each major milestone
- Track the progress against the plan
- System to add/delete tasks in the PMT

Consequences of not using PMT

- DELAY
- COST
- WASTE OF RESOURCES
- QUALITY
- DISSATISFACTION
- REPUTATION

Network Planning Methods

- ❑ Critical Path Method (CPM)
- ❑ Programme Evaluation and Review Technique (PERT)
- ❑ They involves **four steps**:
 - i. Describing the Project.
 - ii. Diagramming the Network.
 - iii. Estimating time of completion.
 - iv. Monitoring Project Progress.

Questions Answered by CPM & PERT

- Completion date?
- On Schedule?
- Within Budget?
- Critical Activities?
- How can the project be finished early at the least cost?

CPM - Critical Path Method

- **Critical Path**

The sequence of activities and events where there is no “slack” i.e.. **Zero slack**

- Longest path through a network

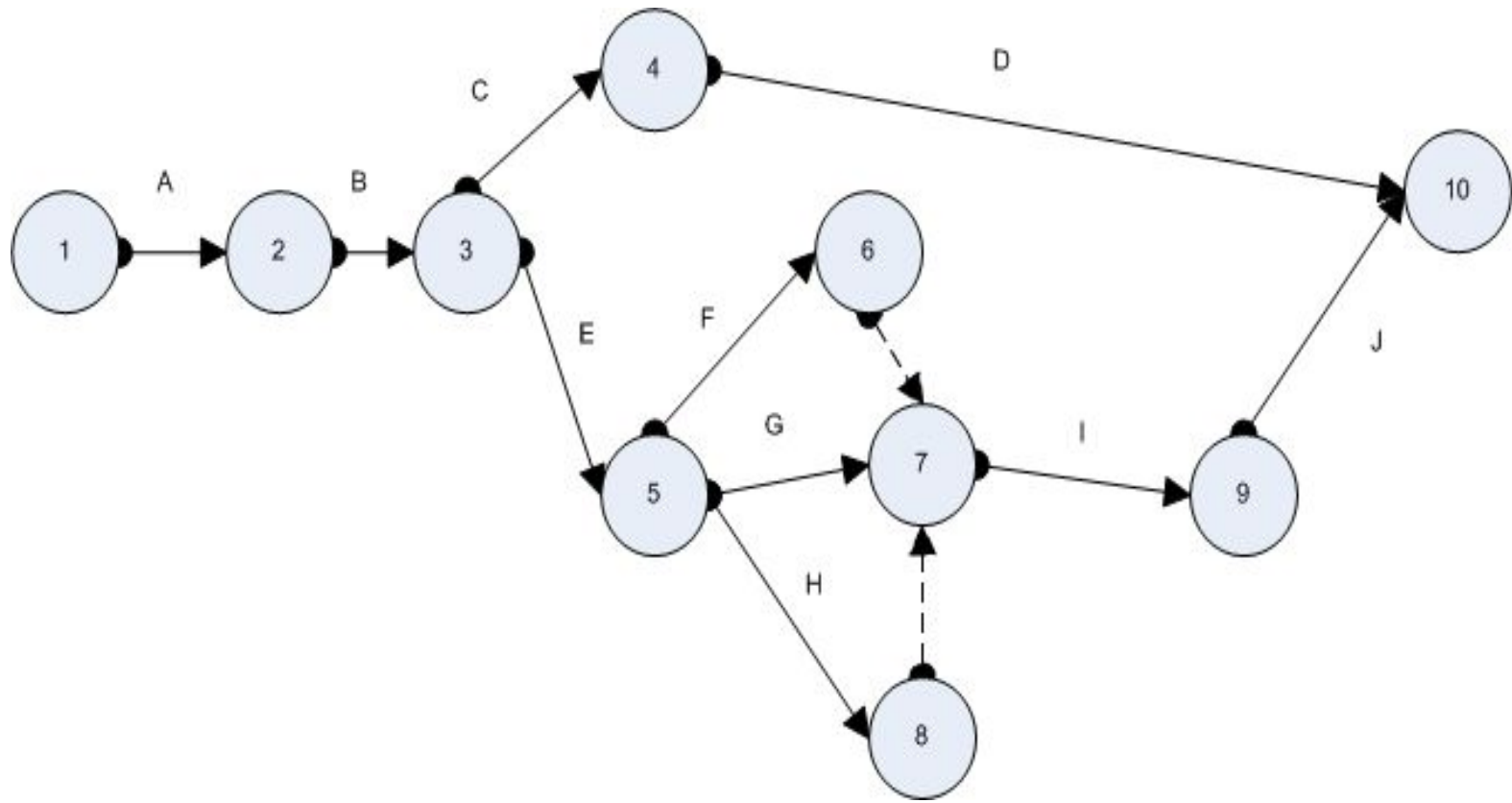
Building a new house

- Preparation of land
- Build the foundation
- Construct pillars
- Roofing
- Construct walls
- Plumbing work
- Electrical work
- Carpentry work
- Plastering
- Painting

Activity relationships

S. No	Activity particulars	Name of the activity	Predecessor	Activity duration (Weeks)
1	Preparation of land	A	-	1
2	Build the foundation	B	A	2
3	Construct pillars	C	B	3
4	Fix roofing	D	C	4
5	Construct walls	E	B	2
6	Plumbing work	F	E	4
7	Electrical work	G	E	3
8	Carpentry work	H	E	3
9	Plastering	I	F, G, H	2
10	Painting	J	I	1

Network diagram



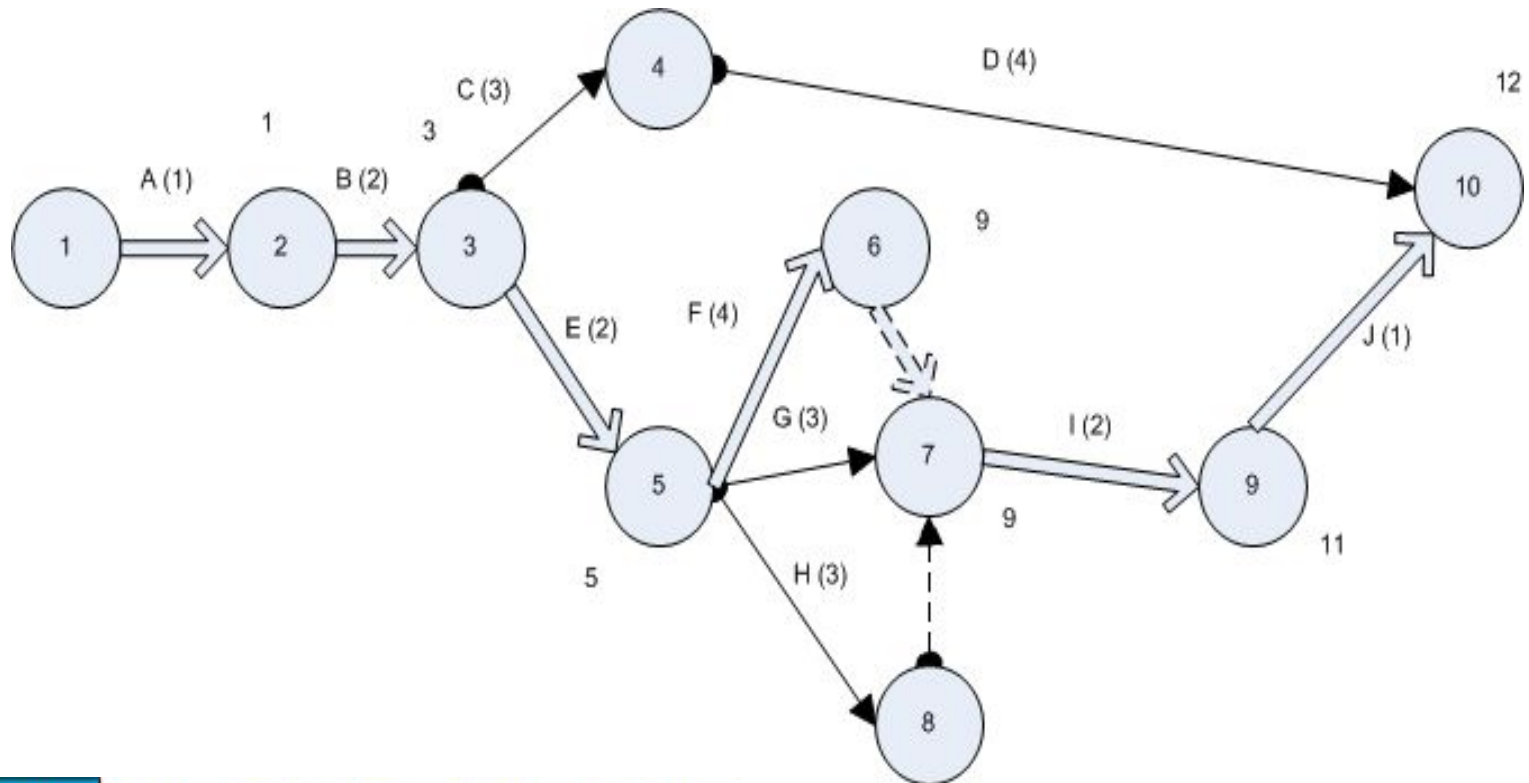
Evaluating activity slack

Each event has two important times associated with it :

- **Earliest time, T_e** , which is a calendar time when a event can occur when all the predecessor events completed at the earliest possible times
- **Latest time, T_L** , which is the latest time the event can occur with out delaying the subsequent events and completion of project.
- Difference between the latest time and the earliest time of an event is the **slack time** for that event

Positive slack: Slack is the amount of time an event can be delayed without delaying the project completion

Critical path



Critical path



Project completion time = 12 weeks

Benefits of CPM/PERT

- Useful at many stages of project management
- Mathematically simple
- Give critical path and slack time
- Provide project documentation
- Useful in monitoring costs

Network analysis Software

- MS Project
- Primavera
- Prism
- WinQSB
- Excel – Solver
- LINDO

Can Mr Naidu take a decision?

- Mr Naidu is a young engineer working in Water Recourse Department, Govt. of AP. He wants to buy a new car. He makes an online survey of 60 different cars in various segments.
- Based on different parameters he selects three different cars: Maruti Swift, Hyundai i-10 and Ford Figo.
- Mr Naidu has four parameters: Cost, Mileage, Aesthetic, and Comfort.
- At this moment he is not able to decide which particular car he has to buy?

Alternatives



Maruthi
Swift



Ford
Figo



Hyuandai
i-10

Cost and Mileage parameters

- **Maruti Swift**
Rs. 7,40,000; Mileage 20.4 KMPL
- **Ford Figo**
Rs. 7,15,000; Mileage 18.16KMPL
- **Hyundai Grand i-10**
Rs. 7,30,000; Mileage 24KMPL

Weightage of attributes

	Cost	Mileage	Aesthetic	Comfort
Cost	X			
Mileage		X		
Aesthetic			X	
Comfort				X

Weightage of attributes

	Cost	Mileage	Aesthetic	Comfort	Total score	Weightage
Cost	X	1	1	0	2	2/6
Mileage	0	X	0	1	1	1/6
Aesthetic	0	1	X	0	1	1/6
Comfort	1	0	1	X	2	2/6

Factor considered (Cost)

	Maruthi Swift	Hyundai i-10	Ford Figo	Total score
Maruthi Swift	X	0	0	0
Hyundai i-10	1	X	0	1
Ford Figo	1	1	X	2

Factor considered (Mileage)

	Maruthi Swift	Hyundai i-10	Ford Figo	Total score
Maruthi Swift	X	0	1	1
Hyundai i-10	1	X	1	2
Ford Figo	0	0	X	0

Factor considered (Aesthetic)

	Maruthi Swift	Hyundai i-10	Ford Figo	Total score
Maruthi Swift	X	0	1	1
Hyundai i-10	1	X	0	1
Ford Figo	0	1	X	1

Factor considered (Comfort)

	Maruthi Swift	Hyundai i-10	Ford Figo	Total score
Maruthi Swift	X	1	1	2
Hyundai i-10	0	X	1	1
Ford Figo	0	0	X	0

Total weightage matrix

Car	Attribute	Cost	Mileage	Aesthetic	Comfort	Total score	Rank
	weightage	2/6	1/6	1/6	2/6		
Maruthi Swift	Score	0	1/6	1/6	2/6		
	Wt Score	0	1/6	1/6	4/6	6/6	II
Hyundai i-10	Score	1	2	1	1		
	Wt Score	2/6	2/6	1/6	2/6	7/6	I
Ford Figo	Score	2	0	1	0		
	Wt Score	4/6	0	1/6	0	5/6	III

Project Management & Organizational Excellence

- Modern Life, Increased opportunities and comfort
- Demand for better services
- Increased Responsibility
- Multiple assignments & projects
- People Orientation, Service Orientation
- Build Organizations, Serve People, Serve the Nation
- Achieve Organizational Excellence by mastering Project Management Skills



Thank You All
&
Happy Journey