Software Project Planning

- Project planning is an organized and integrated management process that focuses on the actions necessary for the project's practical completion.

- It avoids problems in the project, such as changes in the project's or organization's objectives, resource shortages, and so forth.

Project Planning Goals

- It establishes the project management team's duties and responsibilities.

- It guarantees that the project management team adheres to the company's goals.

- It examines the schedule's viability and the needs of the users.

- It establishes the project's limits.

Project Planning Guidelines

- Planning

- Risk Analysis

- Monitoring the project's progress

- Meet quality standards and offer high quality results

- Flexibility to accommodate change

Project Planning Process

- The project's objectives and scope.

- Techniques for undertaking project planning.

- Individuals participating in the project's effort (measured in time).

- Timeline and milestones for the project.

- The project will require specific resources.

Project Planning Activities

- Identification of Project Requirements
- Identification of cost estimates
- Identification of risk
- Identification of Critical Success factor
- Preparation of Project Charter
- Preparation of Project Plan
- Commencement of the Project

Need of Project Management

- Software is a intangible product.

- Every software development is a kind of all new stream in world business.

- Most software products are tailor made to fit client's requirements.

- Changes in technology and advances so frequently and rapidly that experience of one product may not be applied to the other one

- Business and environmental constraints bring risk in software development.

Need of Project Management

- It is an essential part of software organization to deliver quality product.

- keeping the cost within client's budget constrain and deliver the project as per scheduled.

- Other factors that affect project development in time are.
  - Time
  - Cost
  - Quality

Project Manager

- keeping the cost within client's budget constrain and deliver the project as per scheduled.

- Project manager monitors SDLC activities, controls and manages the activities involved in production.

- PM addresses issues of cost, budget, resources, time, quality and customer satisfaction.

- Project Manager responsibilities:
  - Managing People
  - Managing Project

Managing People

- Act as project leader
- Liaison with stakeholders
- Managing human resources
- Setting up reporting hierarchy etc.

Managing Project

- Defining and setting up project scope
- Managing project management activities
- Monitoring progress and performance
- Risk analysis at every phase
- Take necessary step to avoid or come out of problems
- Act as project spokesperson

Causes of failure of projects

- Failure to establish upper-management commitment to the project.

- Lack of organization's commitment to the system development methodology.

- Taking shortcuts through or around the system development methodology-

- Poor Expectation Management.

- Premature commitment to a fixed budget and Schedule

Causes of failure of projects

- Premature commitment to a fixed budget and Schedule

- Poor estimating Techniques

- Over optimism

- The mythical Man month

- Inadequate people management skills

- Failure to adapt business change
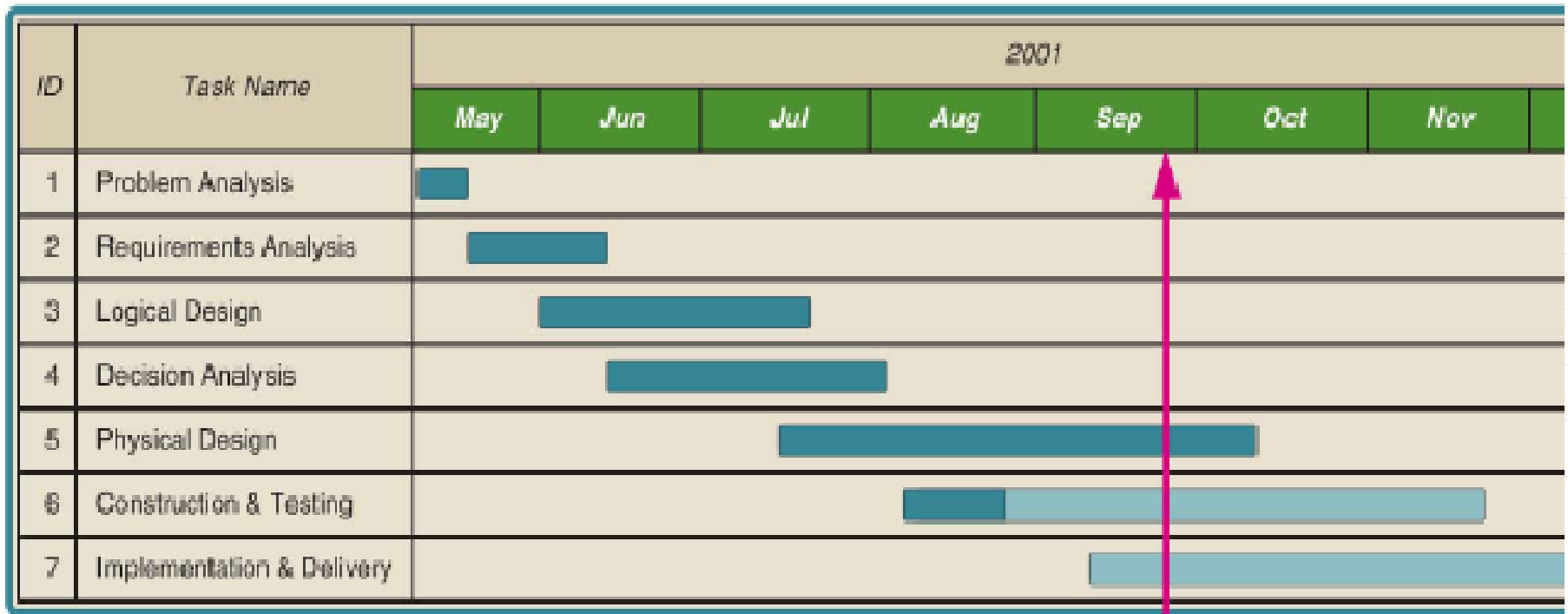
- Insufficient Resource

Project Management Plan

- A PMP is a formal document prepared by the project manager, that documents project goals ,what are the processes to be executed, and how they will be monitored and controlled to accomplish these goals.

- The project management plan outlines the scope, budget, goals, timeline, and project deliverables.

Steps to create project Plan

- Describe the project Plan to Key Stakeholders.
- Define Roles, Responsibilities and Resources
- Create a Project Scope
- Graft An Extensive Project Schedule
- Create Baseline Management Plans
- Define the staffing Plan
- Plan for When Thing Don't go as Planned
- Analyze Product Quality
- Communication Plan

Gantt Chart

ID	Task Name	2001							
		May	Jun	Jul	Aug	Sep	Oct	Nov	
1	Problem Analysis	▬							
2	Requirements Analysis	▬▬							
3	Logical Design		▬▬▬						
4	Decision Analysis		▬▬▬						
5	Physical Design				▬▬▬▬				
6	Construction & Testing				▬▬▬▬▬▬▬▬▬▬▬				
7	Implementation & Delivery						▬▬▬▬		

Today

Legend

Complete task

Incomplete task

PERT Chart

Scope Definition

5-3-2001	N/A
5-3-2001	N/A

Legend

Task		intertask dependency	Task	
Scheduled Start	Scheduled Finish		Scheduled Start	Scheduled Finish
Actual Start	Actual Finish		Actual Start	Actual Finish

Problem Analysis

5-3-2001	5-12-2001
5-3-2001	5-11-2001

Requirements Analysis

5-12-2001	6-12-2001
5-12-2001	6-14-2001

Logical Design

5-28-2001	7-15-2001
5-30-2001	7-18-2001

Decision Analysis

6-13-2001	7-30-2001
6-13-2001	8-3-2001

Physical Design

7-3-2001	9-25-2001
7-5-2001	10-9-2001

Construction & Testing

7-19-2001	11-13-2001
7-20-2001	In Progress

Resource require in Project

- Services
- Labour
- Equipment
- Materials
- Money
- Space
- Time

How to manage resource in software projects

- Plan Resources Management
- Estimate Activity Resources
- Acquire Resources
- Develop Team
- Manage Team
- Control Resource

Project Management Skills

- Effective Communication Skills

- Negotiation

- Scheduling and Time Management

- Leadership

- Technical Expertise

- Risk Management

- Critical Thinking and Problem Solving

Risk Assessment

- Identifying, assessing, and controlling hazards and risks in the systematic process is the meaning of risk assessment.

- Determining which safeguards are in place—or ought to be—to eliminate or manage risk in the workplace in any conceivable circumstance is the responsibility of a competent person.

- These evaluations aid in identifying these innate risks and offer countermeasures, procedures, and controls to lessen their adverse effects on business operations.

Risk Assessment Steps

- Identify the Hazards
- Determine what, or who, could be harmed.
- Evaluate the risk and develop control measures.
- Record the findings.
- Review and update risk assessment regularly.

Risk Management

- *Risk assessment* includes both identification of potential risk and the evaluation of the potential impact of the risk.

- A **risk mitigation plan** is designed to eliminate or minimize the impact of the **risk events**—occurrences that have a negative impact on the project.

- Identifying risk is both a creative and a disciplined process.

Risk Management

- Risk Identification

- Risk Evaluation

- Risk Mitigation

  - Risk Avoidance

  - Risk Sharing

  - Risk reduction

  - Risk Transfer

Steps in the Risk Management Process

- Identify
- Assign Ownership
- Analyze
- Prioritize
- Respond
- Monitor

Tips to reduce and Management Risk

- Create a Project Management Plan
- Keep your risk register up to date
- Understand the event
- Be Proactive instead of reactive
- Develop your Project Management Skils

Service Contract Include

- Service description and scope
- Project Time and Cost
- Acceptance Testing and Delivery
- Warranties and Liabilities
- Intellectual Property transfer
- Privacy and Confidentiality
- Success Matrix
- Pricing and Billing