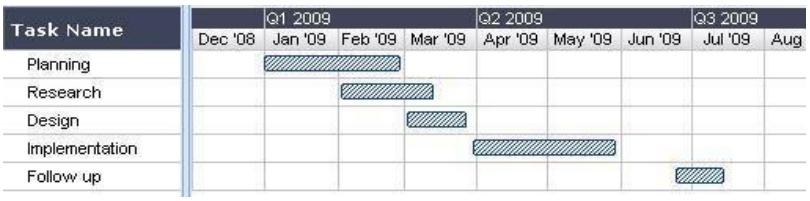
EXPERIMENT NO. 07

AIM: Use project management tool to prepare schedule for the project.
Gantt chart, PERT

Theory: The main aim of PROJECT SCHEDULING AND TRACKING is to get the project completed on time. Program evaluation and review technique (PERT) and Gantt chart are two project scheduling methods that can be applied to software development. Split the project into tasks and estimate time and resources required to complete each task. Organize tasks concurrently to make optimal use of workforce. Minimize task dependencies to avoid delays caused by one task waiting for another to complete **Gantt chart**: A Gantt chart, commonly used in project management, is one of the most popular and useful ways of showing activities (tasks or events) displayed against time. On the left of the chart is a list of the activities and along the top is a suitable time scale. Each activity is represented by a bar; the position and length of the bar reflects the start date, duration and end date of the activity. This allows you to see at a glance:

- What the various activities are
- When each activity begins and ends
- How long each activity is scheduled to last
- Where activities overlap with other activities, and by how much
- The start and end date of the whole project



RMMM plan:

The risk components are defined in the following manner:

- **Performance** risk—the degree of uncertainty that the product will meet its requirements and be fit for its intended use.
- **Cost** risk—the degree of uncertainty that the project budget will be maintained.
- **Support** risk—the degree of uncertainty that the resultant software will be easy to correct, adapt, and enhance.
- **Schedule** risk—the degree of uncertainty that the project schedule will be maintained and that the product will be delivered on time.

The impact of each risk driver on the risk component is divided into one of four impact categories—**negligible, marginal, critical, or catastrophic.**

Components / Category		Performance	Support	Cost	Schedule
Catastrophic	1	Failure to meet the requirement would result in mission failure		Failure results in increased costs and schedule delays with expected values in excess of $500K	
	2	Significant degradation to nonachievement of technical performance	Nonresponsive or unsupportable software	Significant financial shortages, budget overrun likely	Unachievable IOC
Critical	1	Failure to meet the requirement would degrade system performance to a point where mission success is questionable		Failure results in operational delays and/or increased costs with expected value of $100K to $500K	
	2	Some reduction in technical performance	Minor delays in software modifications	Some shortage of financial resources, possible overruns	Possible slippage in IOC
Marginal	1	Failure to meet the requirement would result in degradation of secondary mission		Costs, impacts, and/or recoverable schedule slips with expected value of $1K to $100K	
	2	Minimal to small reduction in technical performance	Responsive software support	Sufficient financial resources	Realistic, achievable schedule
Negligible	1	Failure to meet the requirement would create inconvenience or nonoperational impact		Error results in minor cost and/or schedule impact with expected value of less than $1K	

Impact assessment

For risks with high impact and high probability create a RMMM plan

Risk information sheet

Risk ID: P02-4-32	Date: 5/9/02	Prob: 80%	Impact: high

Description:
Only 70 percent of the software components scheduled for reuse will, in fact, be integrated into the application. The remaining functionality will have to be custom developed.

Refinement/context:
Subcondition 1: Certain reusable components were developed by a third party with no knowledge of internal design standards.
Subcondition 2: The design standard for component interfaces has not been solidified and may not conform to certain existing reusable components.
Subcondition 3: Certain reusable components have been implemented in a language that is not supported on the target environment.

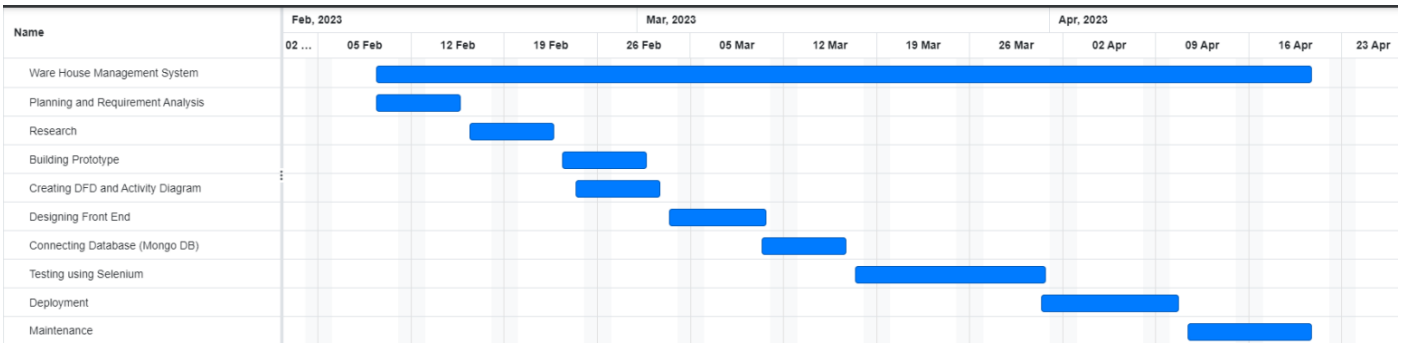
Mitigation/monitoring:
1. Contact third party to determine conformance with design standards.
2. Press for interface standards completion; consider component structure when deciding on interface protocol.
3. Check to determine number of components in subcondition 3 category; check to determine if language support can be acquired.

Management/contingency plan/trigger:
RE computed to be $20,200. Allocate this amount within project contingency cost. Develop revised schedule assuming that 18 additional components will have to be custom built; allocate staff accordingly.
Trigger: Mitigation steps unproductive as of 7/1/02

Current status:
5/12/02: Mitigation steps initiated.

Originator: D. Gagne	Assigned: B. Laster

Result and discussion:



Conclusion: Through this experiment, we were able to learn about project scheduling using Gantt chart and implemented the same for doctor's appointment system. The tasks were scheduled till the entire project was completed and it was successfully implemented.

For Faculty Use

Correction Parameters	Formative Assessment [40%]	Timely completion of Practical [40%]	Attendance / Learning Attitude [20%]	
Marks Obtained				