Bhartiya Vidya Bhavan's

Sardar Patel Institute of Technology

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(Autonomous College Affiliated to University of Mumbai)

Experiment No.:	6
Aim:	To perform project scheduling using Gantt chart and to represent the same graphically using Pert chart.
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Class & Division:	TE-CE [COMPS A(A)]

Problem Statement:

A platform for individuals to report and access data on criminal activities in their community is what the Crime Reporting Website wants to offer. It makes it easier to report crimes, see crime stats, and have conversations about incidences. A smooth exchange of information and communication is made possible by the website's service to both administrators and registered users. While administrators have control over user accounts and can handle reported occurrences, users can report crimes, examine in-depth crime reports, sign up for notifications, and analyze crime data.

Implementation:

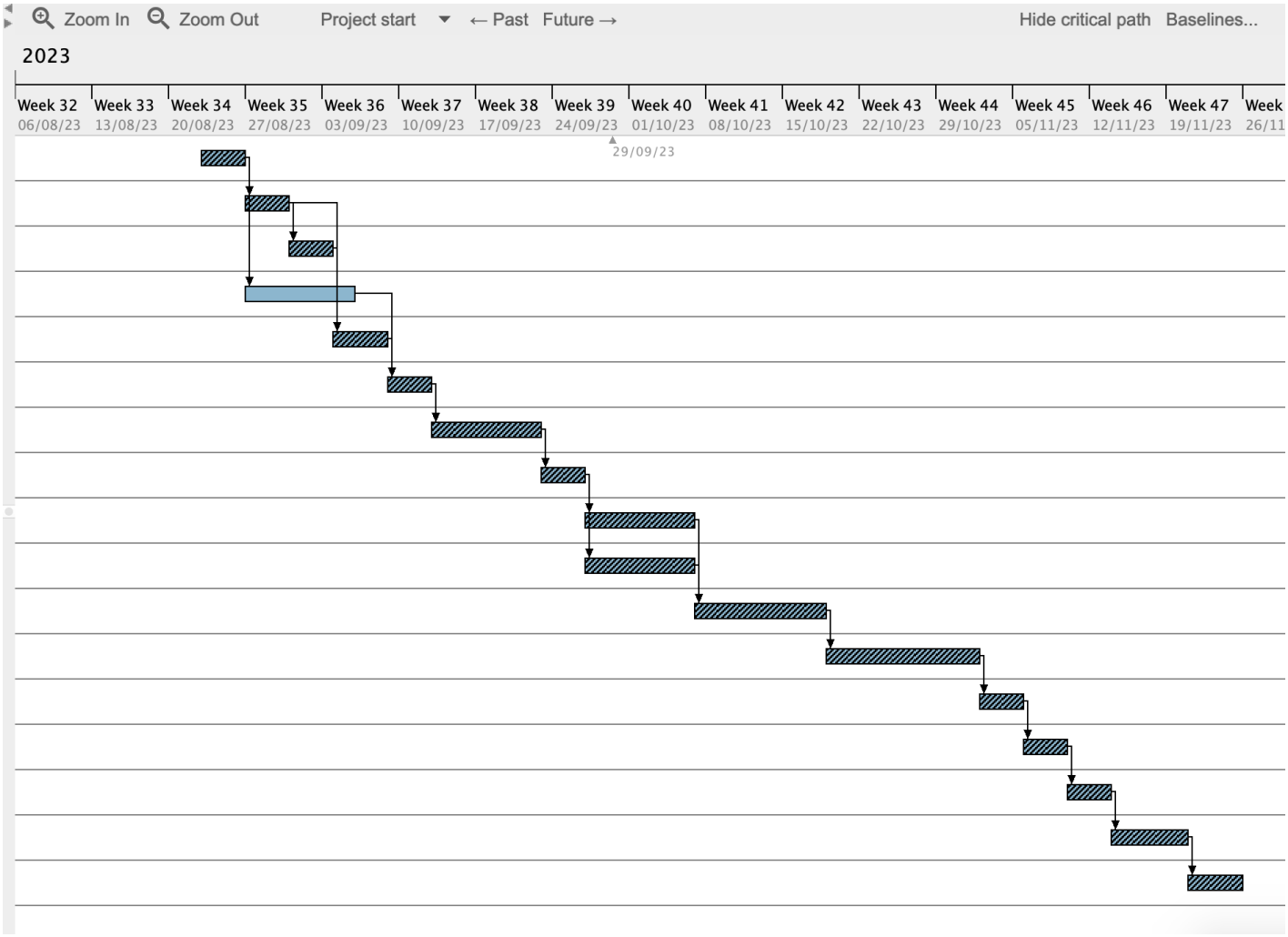
We utilized the 'Gantt Project' tool to generate Gantt and Pert charts for our project, which involves developing Crime Reporting Web Portal. The tool was instrumental in visualizing the critical path. To validate the results, we manually replicated the process, including calculating the project's completion time and determining slack time for all non-critical nodes (nodes outside the critical path).

Screenshots of Gantt Project:

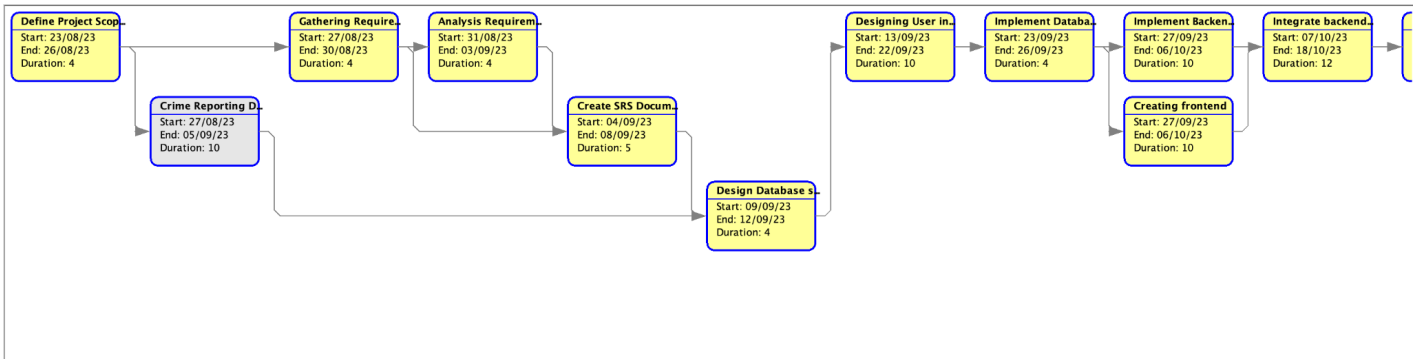
1.Various tasks in our Project

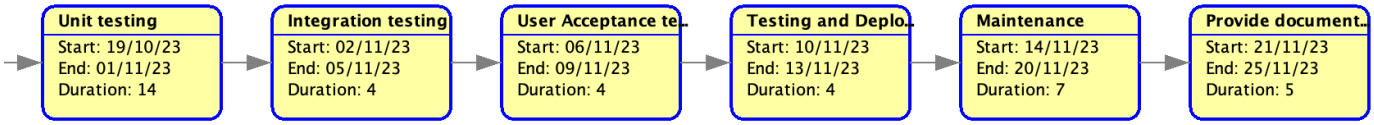
Name	Begin date	End date
Define Project Scope and Objective	23/08/23	26/08/23
Gathering Requirements	27/08/23	30/08/23
Analysis Requirement	31/08/23	03/09/23
Crime Reporting Database Requi...	27/08/23	05/09/23
Create SRS Document	04/09/23	08/09/23
Design Database shema	09/09/23	12/09/23
Designing User interface	13/09/23	22/09/23
Implement Database	23/09/23	26/09/23
Implement Backend Logic	27/09/23	06/10/23
Creating frontend	27/09/23	06/10/23
Integrate backend and Frontend	07/10/23	18/10/23
Unit testing	19/10/23	01/11/23
Integration testing	02/11/23	05/11/23
User Acceptance testing	06/11/23	09/11/23
Testing and Deployment	10/11/23	13/11/23
Maintenance	14/11/23	20/11/23
Provide documentation	21/11/23	25/11/23

2.Gantt Chart



3.Pert Chart





Manual Solution:

* Gantt Chart →

→ Lets consider the following convention, for the tasks,

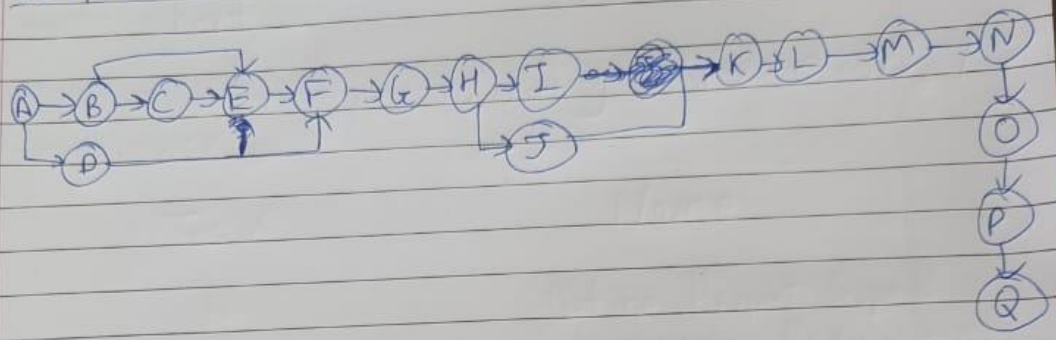
Task	Name
A	Define Project Scope & Objective
B	Gathering Requirements
C	Analysis Requirements
D	Crime Reporting Database Requirement
E	Create SRS Document
F	Design Database Schema
G	Designing User Interface
H	Implement Database
I	Implement Backend Logic
J	Creating Frontend
K	Integrate Backend & Frontend
L	Unit testing
M	Integration testing
N	User acceptance testing
O	Testing and Deployment
P	Maintenance
Q	Provide documentation

- Table:

Sub-Task	Duration (days)	Dependencies	Completion days
A	4	–	4
B	4	A	8
C	4	B	12
D	10	A	14
E	5	B, C	17
F	4	E, D	21
G	10	F	31
H	4	G	35
I	10	H	45
J	10	H	45
K	12	I, J	57
L	14	K	71
M	4	L	75
N	4	M	79
O	4	N	83
P	7	O	90
Q	5	P	95

⇒ Total days to complete project = 95 days

- Graph for our project



Critical Path ⇒ A→B→C→E→F→G→H→I,J→K→L→M→N→O→P→Q

Non Critical Node = {D}

At Node D,

Earliest Start time = 4 = 4 days
Latest Start time = 21-10 = 11 days
Slack time = 11-4 = 7 days

Conclusion:
By making the gantt chart and implementing it in our Crime Reporting Web Portal , we have successfully understood the timeline of tasks in project management.