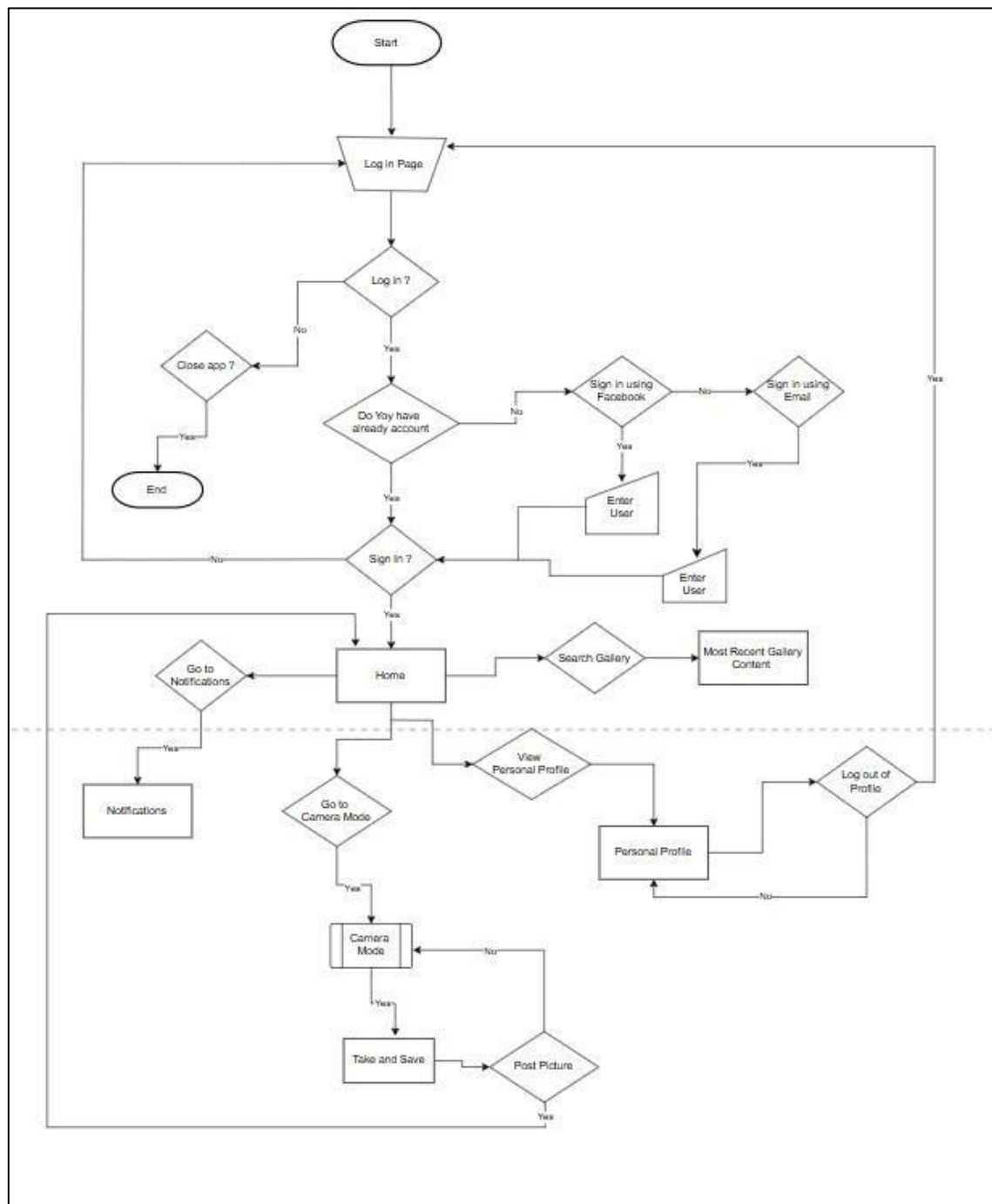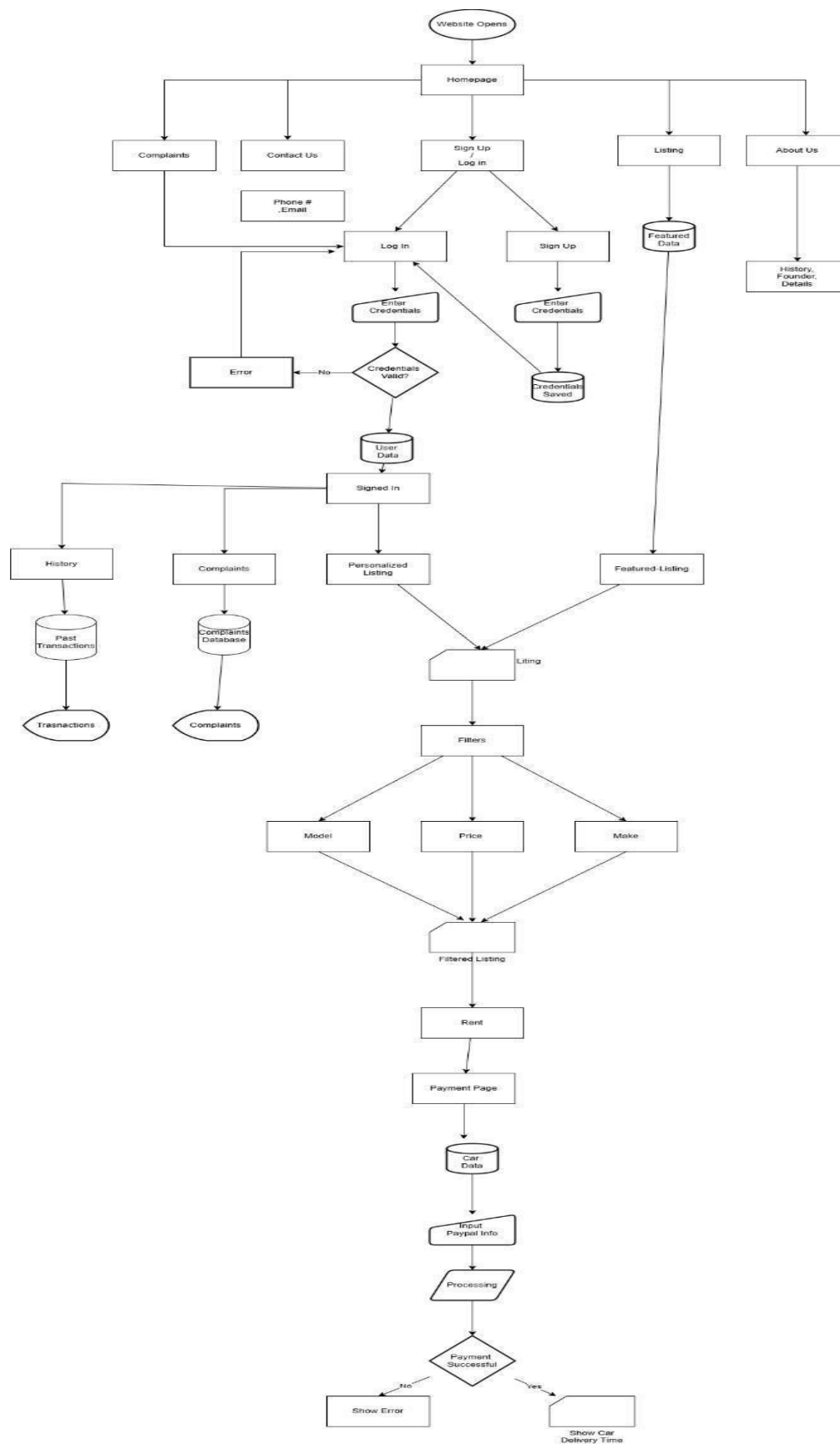# LAB # 01

Deep Understanding about Software Flowchart using Draw.io

Practical Task:

Task # 1: Design a Process Flow Diagram of any Scalable App from Below:

Instagram

Task # 2: Design a Process/System Flow Diagram on One of your Unique idea

Lab # 2
Understanding the Importance of Collaborative Work in Technical Software System Diagramming Using Lucid chart

Objective: To enable students to understand and appreciate the value of collaborative work in technical software system diagramming using tools like Lucid chart, Draw.io, or Miro.

Task

Collaborative Diagramming Assignment

Create a technical system diagram
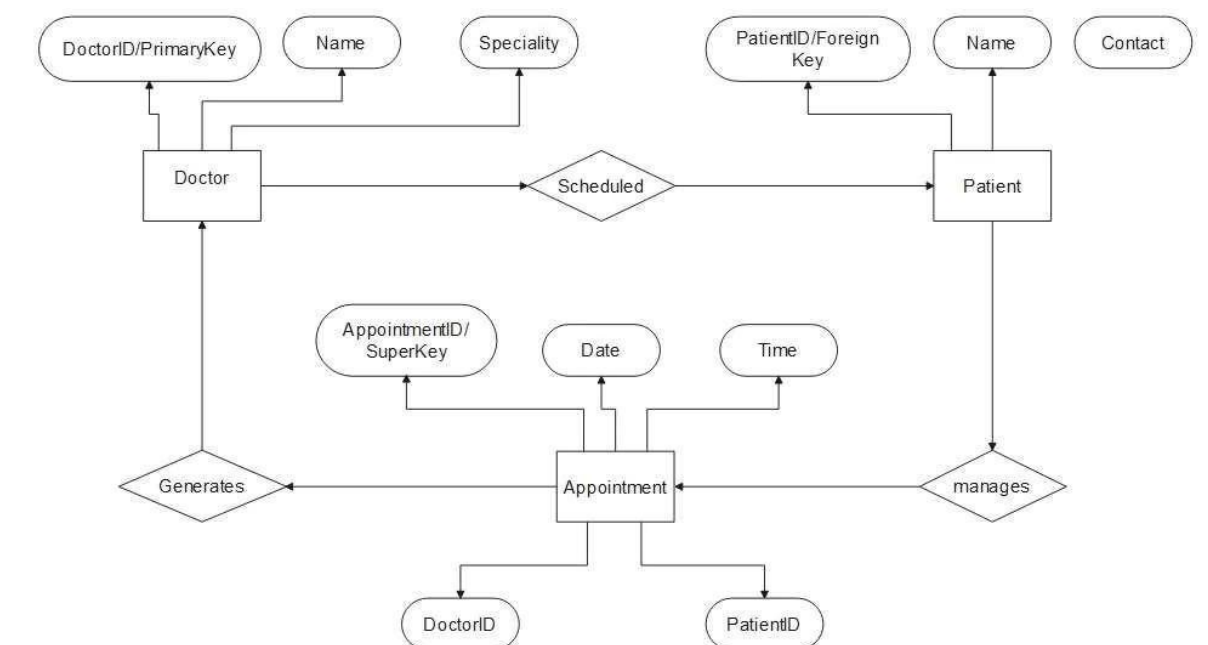
❖ Choose a system and define the scope.

Scope of the System:

- Patient Registration and Management
- Doctor Scheduling and Availability
- Appointment Booking
- Medical Records and History
- Billing and Payment System
- Pharmacy Integration (Optional) ◻   Admin Dashboard for Reporting and Control

❖ Process Flow Diagram.
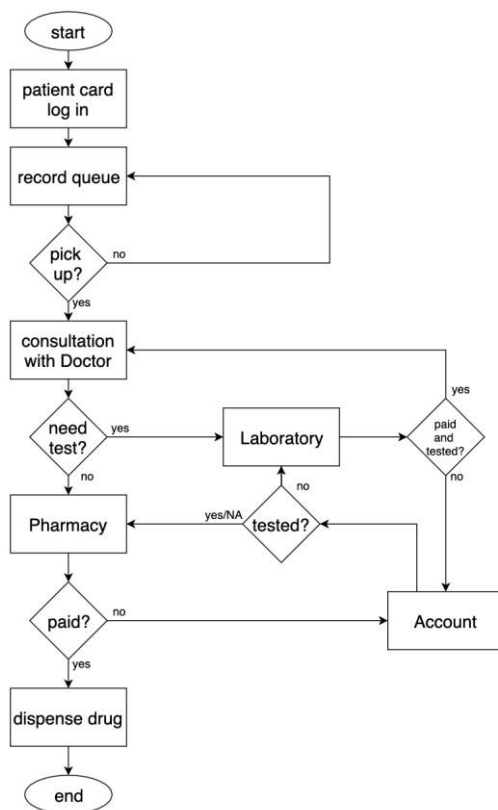
❖ Group Member Responsibilities

Group Members:

1. **Muhammad Asad Khan** – System Analyst & Diagram Designer
2. **Sheikh Ammar Mustafa**– Research and Scope Finalization
3. **Muhammad Saad**– Documentation and Validation

Lab # 03

Understanding and Familiarity with the Project Management Tool Using Project Libre

Objective: The objective of this document is to help students gain an understanding and familiarity with **ProjectLibre**, a free and open-source project management software. The document introduces core proj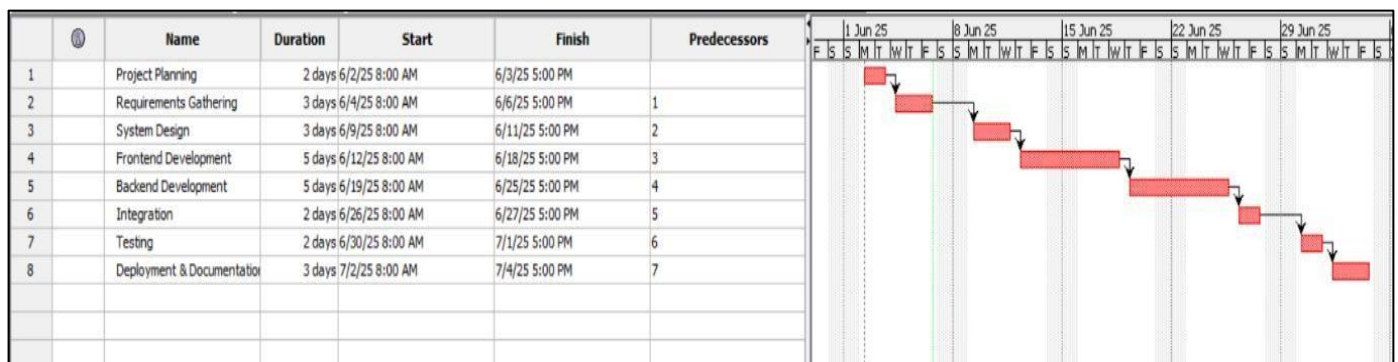ect management concepts and demonstrates the practical implementation of Work Breakdown Structures (WBS), Gantt Charts, and Scheduling using ProjectLibre.

Tasks

1. Install and Set up Project Libre.
2. Create a new project named "**Student Management System** / **Student Portal**"
3. Define the WBS structure for the project.
4. Enter at least 8 tasks and arrange them with dependencies.
5. View and analyze the Gantt Chart.

		Name	Duration	Start	Finish	Predecessors
1		Project Planning	2 days	6/2/25 8:00 AM	6/3/25 5:00 PM	
2		Requirements Gathering	3 days	6/4/25 8:00 AM	6/6/25 5:00 PM	1
3		System Design	3 days	6/9/25 8:00 AM	6/11/25 5:00 PM	2
4		Frontend Development	5 days	6/12/25 8:00 AM	6/18/25 5:00 PM	3
5		Backend Development	5 days	6/19/25 8:00 AM	6/25/25 5:00 PM	4
6		Integration	2 days	6/26/25 8:00 AM	6/27/25 5:00 PM	5
7		Testing	2 days	6/30/25 8:00 AM	7/1/25 5:00 PM	6
8		Deployment & Documentation	3 days	7/2/25 8:00 AM	7/4/25 5:00 PM	7

❖ WBS structure for the project.

1. Project Initialization
2. Requirement Gathering
3. Design Phase
4. Database Setup
5. Backend Development
6. Frontend Development
7. Testing
8. Deployment & Documentation

❖ View and analyze the Gantt Chart
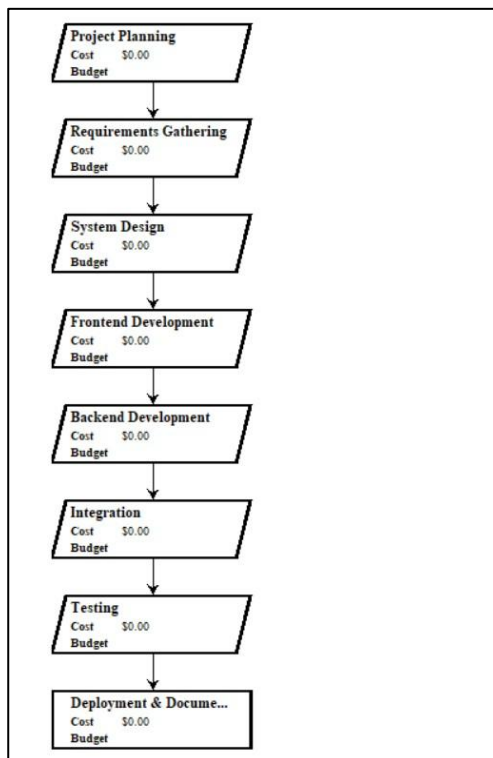
		Name	Duration	Start	Finish	Predecessors	1 Jun 25	8 Jun 25
1		⊟ Project Planning	3 days	6/2/25 8:00 AM	6/4/25 5:00 PM			
2		⊟ Requirements Gatherir	3 days	6/2/25 8:00 AM	6/4/25 5:00 PM			
3		⊟ System Design	3 days	6/2/25 8:00 AM	6/4/25 5:00 PM			
4		⊟ Frontend Developm	3 days	6/2/25 8:00 AM	6/4/25 5:00 PM			
5		⊟ Backend Developr	3 days	6/2/25 8:00 AM	6/4/25 5:00 PM			
6		⊟ Integration	3 days	6/2/25 8:00 AM	6/4/25 5:00 PM			
7		⊟ Testing	3 days	6/2/25 8:00 AM	6/4/25 5:00 PM			
8		Deployment & C	3 days	6/2/25 8:00 AM	6/4/25 5:00 PM			

Lab # 4

Network Diagram Using Project Libre

Objective: Understanding the visualization of task dependencies using Network Diagrams.

Tasks

1. Create a WBS on Project Idea, must be Unique / Your Own / Your Last Semester Project

   Project Title: To-Do List Application

2. Define the WBS structure for the project.

WBS Code	Task Name
1	Project Initialization
1.1	Requirements Gathering
1.2	UI/UX Design
2	Development
2.1	Frontend Implementation
2.2	Backend Logic (Task Mgmt)
3	Integration & Testing
3.1	Integration of Modules
3.2	Functional Testing
4	Deployment
4.1	Final Deployment
4.2	Documentation Submission

3. Enter at least 8 tasks and arrange them with dependencies.

	ⓘ	Name	Duration	Start	Finish	Predecessors	Resourc
1		Project Initialization	2 days	6/9/25 8:00 AM	6/10/25 5:00 PM		
2		Requirements Gathering	3 days	6/11/25 8:00 AM	6/13/25 5:00 PM	1	
3		UI/UX Design	3 days	6/16/25 8:00 AM	6/18/25 5:00 PM	2	
4		Development	4 days	6/19/25 8:00 AM	6/24/25 5:00 PM	3	
5		Frontend Implementation	2 days	6/25/25 8:00 AM	6/26/25 5:00 PM	4	
6		Backend Logic (Task Mgmt)	3 days	6/27/25 8:00 AM	7/1/25 5:00 PM	5	
7		Integration & Testing	4 days	7/2/25 8:00 AM	7/7/25 5:00 PM	6	
8		Integration of Modules	3 days	7/8/25 8:00 AM	7/10/25 5:00 PM	7	
9		Functional Testing	3 days	7/11/25 8:00 AM	7/15/25 5:00 PM	8	
10		Deployment	1 day?	7/16/25 8:00 AM	7/16/25 5:00 PM	9	
11		Final Deployment	1 day?	7/17/25 8:00 AM	7/17/25 5:00 PM	10	
12		Documentation Submission	1 day?	7/18/25 8:00 AM	7/18/25 5:00 PM	11	

4. View and analyze the Gantt Chart & Submit screenshots of the WBS, Gantt Chart, and Network Diagram views.

	①	Name	Duration	Start	Finish	Predecessors
1		Project Initialization	2 days	6/9/25 8:00 AM	6/10/25 5:00 PM	
2		Requirements Gathering	3 days	6/11/25 8:00 AM	6/13/25 5:00 PM	1
3		UI/UX Design	3 days	6/16/25 8:00 AM	6/18/25 5:00 PM	2
4		Development	4 days	6/19/25 8:00 AM	6/24/25 5:00 PM	3
5		Frontend Implementation	2 days	6/25/25 8:00 AM	6/26/25 5:00 PM	4
6		Backend Logic (Task Mgmt)	3 days	6/27/25 8:00 AM	7/1/25 5:00 PM	5
7		Integration & Testing	4 days	7/2/25 8:00 AM	7/7/25 5:00 PM	6
8		Integration of Modules	3 days	7/8/25 8:00 AM	7/10/25 5:00 PM	7
9		Functional Testing	3 days	7/11/25 8:00 AM	7/15/25 5:00 PM	8
10		Deployment	1 day?	7/16/25 8:00 AM	7/16/25 5:00 PM	9
11		Final Deployment	1 day?	7/17/25 8:00 AM	7/17/25 5:00 PM	10
12		Documentation Submission	1 day?	7/18/25 8:00 AM	7/18/25 5:00 PM	11

Project Initialization
Duration : 2 days
Start : 6/9/25 8:00 AM
Finish : 6/10/25 5:00 PM

Requirements Gathering
Duration : 3 days
Start : 6/9/25 8:00 AM
Finish : 6/11/25 5:00 PM

UI/UX Design
Duration : 3 days
Start : 6/9/25 8:00 AM
Finish : 6/11/25 5:00 PM

Development
Duration : 4 days
Start : 6/9/25 8:00 AM
Finish : 6/12/25 5:00 PM

Frontend Implementation
Duration : 2 days
Start : 6/9/25 8:00 AM
Finish : 6/10/25 5:00 PM

Project Initialization
Duration : 2 days
Start : 6/9/25 8:00 AM
Finish : 6/10/25 5:00 PM

Requirements Gathering
Duration : 3 days
Start : 6/9/25 8:00 AM
Finish : 6/11/25 5:00 PM

UI/UX Design
Duration : 3 days
Start : 6/9/25 8:00 AM
Finish : 6/11/25 5:00 PM

Development
Duration : 4 days
Start : 6/9/25 8:00 AM
Finish : 6/12/25 5:00 PM

Frontend Implementation
Duration : 2 days
Start : 6/9/25 8:00 AM
Finish : 6/10/25 5:00 PM

Final Deployment
Duration : 1 day?
Start : 6/9/25 8:00 AM
Finish : 6/9/25 5:00 PM

Documentation Submission
Duration : 1 day?
Start : 6/9/25 8:00 AM
Finish : 6/9/25 5:00 PM

5. Open the Network Diagram view and capture its screenshot.

Project Initialization		Requirements Gathering		UI/UX Design		Development		Frontend Implementation
Duration 2 days		Duration 3 days		Duration 3 days		Duration 4 days		Duration 2 days
Start 6/9/25 8:00 AM		Start 6/11/25 8:00 AM		Start 6/16/25 8:00 AM		Start 6/19/25 8:00 AM		Start 6/25/25 8:00 AM
Finish 6/10/25 5:00 PM		Finish 6/13/25 5:00 PM		Finish 6/18/25 5:00 PM		Finish 6/24/25 5:00 PM		Finish 6/26/25 5:00 PM

Backend Logic (Task Mgmt)		Integration & Testing		Integration of Modules		Functional Testing		Deployment
Duration 3 days		Duration 4 days		Duration 3 days		Duration 3 days		Duration 1 day?
Start 6/27/25 8:00 AM		Start 7/2/25 8:00 AM		Start 7/8/25 8:00 AM		Start 7/11/25 8:00 AM		Start 7/16/25 8:00 AM
Finish 7/1/25 5:00 PM		Finish 7/7/25 5:00 PM		Finish 7/10/25 5:00 PM		Finish 7/15/25 5:00 PM		Finish 7/16/25 5:00 PM

Final Deployment		Documentation Submission
Duration 1 day?		Duration 1 day?
Start 7/17/25 8:00 AM		Start 7/18/25 8:00 AM
Finish 7/17/25 5:00 PM		Finish 7/18/25 5:00 PM