

## Practical No: 03

**Title:** Scheduling Project – Pharmacy Management System

**Subject:** Software Engineering and Project Management (SEPM)

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### 1. Introduction

The Pharmacy Management System is a software application developed to automate and manage the daily operations of a pharmacy. Scheduling plays a crucial role in planning the project timeline, ensuring each phase is completed efficiently and on time. A proper project schedule enables developers to meet deadlines, allocate resources effectively, and minimize risks such as delays or cost overruns. The goal of this scheduling process is to complete the project within the planned time frame and deliver a fully functional system that manages medicine stocks, sales, billing, and customer records efficiently.

The primary objectives of this practical are: To plan and schedule the development of the Pharmacy Management System efficiently. To divide the project into clear phases such as requirement gathering, design, development, testing, and deployment. To ensure timely delivery through proper resource allocation and monitoring mechanisms. To optimize the use of available human and technical resources throughout the project lifecycle.

### 2. Resource Scheduling

The resource scheduling phase involves identifying and allocating the necessary human and technical resources for each task. Proper scheduling ensures that team members have clear responsibilities and dependencies are managed efficiently. **Resources Needed:** **Frontend Development:** 2 developers skilled in UI/UX design and JavaScript frameworks. **Backend Development:** 3 developers proficient in database management and Python/Java. **Testing Team:** 2 testers responsible for performing functional and integration testing. **Project Manager:** 1 manager to supervise the timeline and resolve bottlenecks.

#### **Task Allocation:**

Each task is assigned based on expertise. The frontend team handles interface design and user experience, while the backend team focuses on database integration and functionality. Testing begins only after development is complete, ensuring no overlapping tasks cause confusion or dependency issues.

### 3. Creating the Gantt Chart

A Gantt chart provides a visual representation of project scheduling, showing task timelines, durations, and dependencies. For the Pharmacy Management System, the chart spans a six-month timeline divided into phases: **Month 1:** Requirements gathering and analysis. **Month 2:** System and database design. **Month 3–4:** Frontend and backend development. **Month 5:** Testing and debugging. **Month 6:** Deployment and maintenance setup. **Dependencies:** Testing cannot begin until both backend and frontend development are complete. Deployment is dependent on successful completion of the testing phase.

### 4. Monitoring

Regular monitoring is essential to ensure the project remains on schedule. Weekly progress meetings are conducted to assess task completion and identify potential delays. In case of slippage, task priorities are readjusted, and additional support is allocated where needed. Progress tracking tools and milestone reports are used to visualize development progress. If testing or design falls behind, contingency time is adjusted to prevent cascading delays. Communication between developers, testers, and the project manager is maintained throughout the project to ensure synchronization and accountability.

## **5. Conclusion**

Effective project scheduling is vital for the successful completion of the Pharmacy Management System. It ensures that resources are utilized optimally and that the project adheres to its timeline. The use of scheduling techniques such as Gantt charts and task dependencies helps maintain transparency and predictability throughout development. Proper scheduling not only ensures timely delivery but also reduces risks related to delays, resource shortages, and communication gaps.

## **6. References**

Pressman, R.S., "Software Engineering: A Practitioner's Approach." Sommerville, Ian. "Software Engineering," Pearson Education. PMBOK Guide – Project Management Institute. Class Lecture Notes on SEPM.