**Practical No. 03**

**Garage Management System – Scheduling and Resource Allocation**

**1. Introduction**

**A** Garage Management System is a software solution that helps automate and streamline garage operations such as vehicle servicing, billing, inventory management, and customer appointments.

Objective:

The goal is to develop and deploy the system within 11 months, ensuring efficient management of garage activities, reducing manual efforts, and improving customer satisfaction.

Importance of Scheduling**:**

* Helps in timely delivery of the project.
* Ensures efficient use of resources (developers, testers, and system requirements).
* Reduces risks of delays by proper task sequencing and dependency management.
* Facilitates continuous monitoring and necessary adjustments.

**2. Task Identification**

The project is divided into key phases:

1. **Requirement Analysis**
2. **System Design**
3. **Frontend Development** (UI/UX Design, Dashboard, Customer Interface)
4. **Backend Development** (Database, API Development, Business Logic)
5. **Integration & Testing**
6. **Deployment & Maintenance**

**4. Creating the Gantt Chart**

**Tasks and Timeline:**

* **Project Duration:** 11 months

| **Task** | **Duration (Weeks)** | **Dependencies** |
| --- | --- | --- |
| Requirements Gathering | 4 weeks | - |
| System Design | 4 weeks | Requirements Gathering |
| Frontend Development | 8 weeks | System Design |
| Backend Development | 10 weeks | Database Setup |
| Database Setup | 6 weeks | System Design |
| Testing | 6 weeks | Backend & Frontend Development |
| Deployment | 2 weeks | Testing |
| Maintenance | Ongoing | Deployment |

