

**Date: 25/07/2025**

### **Lab Practical #06:**

Practice using a requirements management tool to document and categorize requirements.

### **Practical Assignment #06:**

- **Create a Work Breakdown Structure (WBS):** Divide the project into smaller, more manageable components.
- **Implement it in Excel:** Utilize Gantt Chart as the project management software for tracking and managing the project.

### **Description:**

#### **Part 1: Work Breakdown Structure (WBS)**

**Goal:** Break down your web application project into smaller, manageable tasks (hierarchical format: Level 1 → Level 2 → Level 3)

#### **1. Project Initiation**

- 1.1 Requirement Gathering (Client needs, user expectations)
- 1.2 Stakeholder Meetings (Logistics team, customers, admins)
- 1.3 Feasibility Study (Cost, timeline, technology)
- 1.4 Approval & Sign-off

#### **2. UI/UX Design**

- 2.1 User Research (Courier staff, customers, admins)
- 2.2 Wireframing
  - Dashboard (Admin/Courier)
  - Order Tracking
  - Customer Portal
  - Reporting
- 2.3 Prototype (Figma/Adobe XD)
- 2.4 User Feedback & Iteration

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- 2.5 Final UI Kit

### **3. Frontend Development (Web/Mobile App)**

- 3.1 Project Setup (React/Flutter)
- 3.2 Authentication Module (Login, Roles: Admin/Courier/Customer)
- 3.3 Order Placement & Tracking
- 3.4 Dashboard (Real-time Updates)
- 3.5 Payment Integration
- 3.6 Notification System (SMS/Email)
- 3.7 UI Integration with APIs

### **4. Backend Development**

- 4.1 Database Design
  - Users (Admin, Courier, Customer)
  - Orders (Parcels, Status, Location)
  - Payments
- 4.2 Authentication APIs
- 4.3 Order Management APIs (Create, Update, Track)
- 4.4 Location Tracking APIs (GPS/Map Integration)
- 4.5 Reporting APIs (Analytics, Delivery Times)
- 4.6 Testing & Optimization

### **5. Integration & Testing**

- 5.1 API Integration (Frontend-Backend)
- 5.2 Unit Testing

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- 5.3 UI Testing (Cross-browser/device)
- 5.4 Bug Fixes
- 5.5 Beta Testing (Pilot with select users)

## **6. Deployment**

- 6.1 Cloud Setup (AWS/Azure/Google Cloud)
- 6.2 CI/CD Pipeline (GitHub Actions/Jenkins)
- 6.3 Production Release
- 6.4 Post-launch Monitoring (Uptime, logs)

## **7. Maintenance & Support**

- 7.1 Bug Reports
- 7.2 System Updates
- 7.3 Performance Monitoring
- 7.4 Feature Enhancements (e.g., AI Route Optimization)

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Semester 3<sup>rd</sup> | Practical Assignment | Project Management Tools (2305CS322)

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courier management system

VanArsdel, Ltd.

Project lead

Project start: Fri, 7-25-2025

Display week: 1

