



# **Software Construction & Development**

**BSSE 5-1**

**Semester Project**

**Submitted To:**

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## **Title:**

# **A Modern Courier Management System**

## **Introduction:**

This project focuses on designing and developing a Modern Courier Management System for Leopard Courier. The system aims to overcome the existing inefficiencies in Express Operations, E-Commerce Operations, and Line Haul (Fleet Management) by integrating AI-powered route optimization, IoT-enabled fleet tracking, automated e-commerce platform integration, and cross-department communication. By addressing challenges such as manual routing, poor service-level adherence, lack of integration, and limited real-time visibility, the proposed system will enhance operational efficiency, improve customer satisfaction, and strengthen the company's competitive edge in the courier and logistics industry.

## **Stakeholders:**

1. **Admin / System Administrator** – manages system setup, roles, and overall monitoring.
2. **Express Department Users**
  - Express Officer
  - Customer Service Agent
  - Dispatch Rider
3. **E-Commerce Department Users**
  - E-Commerce Manager
  - Warehouse Staff
  - Vendor Liaison Officer
4. **Customers (External Stakeholders)** – individuals and businesses booking and receiving parcels.

## **Functional Requirements (User-Level):**

### **Admin / System Administrator**

- FR1.** Can create, update, and delete user accounts across departments.
- FR2.** Can assign roles and permissions.
- FR3.** Can access dashboards and reports for overall performance monitoring.

### **Express Department**

- **Express Officer**

- FR4.** Can register new parcels and update shipment details.
- FR5.** Can track parcels in real time using GPS data.
- FR6.** Can generate delivery performance reports.
- FR7.** Process Payment.
- FR8.** Generate bill.

- **Customer Service Agent**

**FR9.** Can check shipment tracking for customers.

**FR10.** Can log complaints, returns, and escalate issues.

- **Dispatch Rider**

**FR11.** Can view assigned deliveries.

**FR12.** Can update delivery status (delivered, returned, failed).

**FR13.** Report issues.

**E-Commerce Department**

- **E-Commerce Manager**

**FR14.** Can register business client

**FR15.** Can track client parcels.

**FR16.** Generate client reports.

- **Warehouse Staff**

**FR17.** Can scan barcodes/QR codes on parcels to register them into the courier system.

**FR18.** Can update parcel status as received, sorted, or dispatched

**FR19.** Can generate batch lists of parcels ready for dispatch.

**FR20.** Can mark returned parcels.

**Customers**

**FR21.** Can book parcels online via web/app.

**FR22.** Can track shipment in real time.

**FR23.** Can submit complaints or feedback digitally.