



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.