System Requirements

- Digitalized package handling to avoid manual logging
- Allow creation and assignment for best daily delivery routes
- Provide easy delivery status updates
- Accessible package handler tracking
- Provide reports: daily deliveries, delays, driver performance

Software Requirements

- Python (Programming Language)
- Data Storage (.json file within the project)
- PDF/CSV imports for report generation

Analysis

- Document comprehensive system functional and non-functional requirements.
- Establish scope, objectives, and project feasibility.
- Define system inputs and outputs (data required for package tracking and reporting).
- Create a data model for the JSON storage structure.

Program Design

- Design overall system architecture and module structure.
- Define specific functions and procedures within the Python modules.
- Detail the JSON file structure to accommodate all tracking and report data.
- Design user interfaces for data entry and status updating.

Coding

- Develop Python code for all system functions.
- Implement algorithms for best daily delivery route calculation.
- Build data persistence logic using JSON file storage.
- Develop routines for PDF/CSV report generation and data import.
- Conduct component-level unit testing.

Testing

- Execute integration testing across all developed modules.
- Perform comprehensive system testing against all defined requirements.
- Validate report accuracy (daily deliveries, delays, driver performance).
- Conduct User Acceptance Testing (UAT) with key stakeholders.

Operation

- Deploy the final system into the production environment.
- Provide training for all end-users (handlers and management).
- Perform ongoing system monitoring and maintenance (corrective and adaptive).
- Manage system upgrades and performance enhancements over time.