

Zewail City of Science, Technology and Innovation

University of Science and Technology

School of Computational Sciences and Artificial Intelligence

CSAI 203 - Fall 2025

Introduction to Software Engineering

< Elherafeen >

< Requirement Analysis Report >

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1. Executive Summary

This report outlines the development status of the Elherafeen Store web application, an online platform for buying and selling car spare parts⁷. The project has reached a 50% completion milestone. The development team has successfully implemented the core architecture using Python Flask ⁸ and completed the majority of the Customer Module functional requirements and key usability benchmarks.

2. Current Status Overview

- Overall Completion: **50%**
- Focus Area: Customer Side Implementation & Core UI/UX
- Technical Stack: Python Flask (Backend), HTML/CSS (Frontend), JSON (Data Storage)

3. Completed Tasks

We have successfully implemented requirements **FR1 through FR8 out of 15**, covering the essential buying flow. The following features have been implemented, tested, and are currently functional within the application:

3.1 Functional Requirements (Customer Module)

- User Authentication:
 - FR1 Registration: Customers can register with personal details and email validation¹¹.
 - FR2 Login: Secure login functionality using email and password¹².
- Product Discovery:
 - FR3 Browsing: Users can view the full catalog of spare parts¹³.
 - FR4 Search: Implementation of search bars to find parts by name, model, or category¹⁴¹⁴¹⁴.
 - FR5 Filtering: Logic to filter results by brand, model, and price range is active¹⁵.
 - FR6 Product Details: Dynamic routing to display detailed views (Price, Description, Images) for specific items¹⁶.
- Transaction Management:
 - FR7 Shopping Cart: Users can add products to a cart session for future purchase¹⁷.
 - FR8 Order Confirmation: Users can proceed to confirm orders and initiate the payment process¹⁸.

3.2 Non-Functional Requirements (Implemented)

We have met the criteria for the first three NFRs outlined in the SRS:

- NFR1 Usability: The interface is designed to be intuitive for non-technical users¹⁹.
- NFR2 Language: The platform strictly enforces an English-only interface for consistency²⁰.
- NFR3 Performance: Initial load tests confirm page load speeds are under three seconds for main views²¹.

4. Pending Work & Next Steps

The remaining 50% of the project will focus on the Seller Module, Admin Dashboard, and advanced system integrations.

4.1 Immediate Next Steps (Customer Completion)

- Implementing order status tracking (Pending/Shipped) and automated email confirmations²².

4.2 Upcoming Development (Seller & Admin Modules)

- Seller Functions : Developing the dashboard for verified sellers to add, edit, and delete their own product listings
- Admin Functions : Building the control panel for approving seller accounts and monitoring inappropriate listings

4.3 Remaining Non-Functional Optimization

- Security (NFR6-NFR7): Finalizing password hashing and ensuring HTTPS compliance²⁵.
- Scalability (NFR4): Stress testing the database to handle concurrent users²⁶.

5. Conclusion

The "Elherafeen Store" project is on schedule. The critical path—enabling a customer to find and buy a product—is functional. The team is now pivoting to backend administrative features and the seller ecosystem to complete the marketplace loop.

