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Motor Part Shop Software
Software Requirements Specification
Version <1.0>

Revision History

Date	Version	Description	Author
<04/01/2024>	<1.0>	SRS 1.0	Aaditya Sahu
<15/02/2024>	<2.0>	SRS 2.0	Aaditya Sahu
<15/03/2024>	<3.0>	SRS 3.0	Aaditya Sahu
<14/04/2024>	<4.0>	SRS 4.0	Aaditya Sahu

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Software Requirements Specification

1. Introduction

The introduction of the Motor Part Shop Software (MPSS) project encapsulates a comprehensive overview of the Software Requirements Specification (SRS), encompassing its purpose, scope, definitions, acronyms, abbreviations, references, and an overview of the entire SRS. This document aims to delve into the intricacies of the MPSS, detailing the problem statement, and focusing on the capabilities required by stakeholders. Additionally, it aims to delineate the high-level features of the software, offering a thorough understanding of the project's requirements.

1.1 Purpose

The purpose of this document is to systematically gather and analyze a myriad of ideas that contribute to defining the MPSS, elucidating its requirements from the perspective of end-users. It seeks to anticipate and resolve issues related to how the product is intended to be used, thereby providing a comprehensive understanding of the project. Furthermore, the document concentrates on outlining concepts that may evolve over time and documenting considerations that may be subject to change during the product development phase.

In essence, the purpose of the MPSS SRS is to furnish a detailed overview of the software product, encompassing its parameters and objectives. The document delineates the target audience, user interface, as well as hardware and software requirements of the project. It defines the expectations of the client, team, and end-users regarding the product's functionality. Moreover, it serves as a guide for designers and developers, aiding them in the Software Delivery Lifecycle (SDLC) processes.

1.2 Scope

The scope of the MPSS project primarily revolves around the functionalities and features of the Motor Part Shop Software. It is geared towards streamlining the sales and supply ordering processes for a small automobile spare parts shop. The focus is on managing a diverse

inventory of motor parts from various manufacturers and for different vehicle types. The MPSS also addresses the challenges faced by the shop owner, such as maintaining optimal inventory levels inspired by the just-in-time (JIT) philosophy.

The SRS defines the boundaries of the project by outlining the features and requirements essential for the software to facilitate the sale, tracking, and management of motor parts. It encompasses aspects such as inventory management, order generation, revenue calculation, and reporting. The scope extends to the development of a system that calculates the threshold value for each item, ensuring the shop can sustain sales for approximately one week. The MPSS SRS can be utilized not only for software development but also for aiding in the selection of suitable in-house or commercial software products. The document serves as a versatile model for creating software requirements specifications, providing a foundation for project-specific standards without prescribing a specific method, nomenclature, or tool for its preparation.

1.3 Definitions, Acronyms, and Abbreviations

JIT	Just-In-Time
Shop Owner	Admin of the software, who owns the shop
Vendor	Producer or supplier of motor parts for the shop owner
Buyer	Customer of the shop owner
Inventory	Large structured storage space for items
Reck Number	Number for addressing the position of item in the inventory
Threshold	Number of units of an item below which replenishment requred

1.4 Overview

The subsequent sections of this document offer a comprehensive understanding of the Motor Part Shop Software (MPSS) project, encompassing user characteristics, hardware specifications, and functional and data requirements. Section 2 delves into a general description of the project, shedding light on its key attributes. Section 3 outlines functional requirements, data requirements, constraints, and assumptions related to the MPSS. It provides a user-centric perspective and specifies detailed product requirements. Additionally, this section discusses external interface requirements and offers an in-depth description of functional requirements. Section 4 is dedicated to supporting information that complements

the core content of the document.

2. Overall Description

This section outlines the challenges faced by the current system, emphasizing the necessity for the Motor Part Shop Software (MPSS) as a solution. It identifies stakeholders and users, presenting their needs and wants from insights gained during a requirements workshop. Additionally, a brief overview of major features is provided.
The subsequent Software Requirements Specification (SRS) sections dive into detailed perspectives from stakeholders, offering insights into E-Store functions, user characteristics, constraints, assumptions, dependencies, and requirements subsets, presenting a comprehensive view of the proposed MPSS solution.

3. Specific Requirements

The specific requirements are –

3.1 Functionality

Introduction –
This subsection contains the requirements for the e-store. These requirements are organized by the features discussed in the vision document. Features from vision documents are then refined into use case diagrams and to sequence diagram to best capture the functional requirements of the system. All these functional requirements can be traced using tractability matrix.

3.1.1 Add New Item to Inventory

3.1.1.1 The system shall allow the shop owner to add a new item to the inventory.

3.1.1.2 The system shall capture item details such as Item ID, Name, Vehicle, Price Per Item, Vendors, Rack Numbers, and Threshold.

3.1.2 Update Item Details

3.1.2.1 The system shall allow the shop owner to update item details such as price, vendors, and threshold.

3.1.2.2 The system shall notify the user about any potential conflicts with the existing inventory.

3.1.3 Remove Item from Inventory

3.1.3.1 The system shall allow the shop owner to remove an item from the inventory.

3.1.3.2 The system shall prompt for confirmation before removing the item.

3.1.4 Generate Daily Order

3.1.4.1 - The system shall calculate the average number of parts sold for each item over a week.

3.1.4.2 The system shall generate a daily order list based on the inventory levels and threshold values.

3.1.4.3 The system shall display the part number, amount required, and vendor details for each item in the order list.

3.1.5 Record Sales Transactions

The system shall calculate the daily revenue based on the recorded sales transactions.

3.1.6 Calculate Daily Revenue

3.1.6.1 The system shall prompt for confirmation before removing the item.

3.1.7 Generate Monthly Sales Graph

3.1.7.1 At the end of each month, the system shall generate a graph showing the sales for each day of the month.

3.1.8 Create Customer Profile

3.1.8.1 The system shall allow the shop owner to create customer profiles with credentials.

3.1.9 Authenticate Customer

3.1.9.1 The system shall authenticate customer credentials to access the profile.

3.1.10 Update Customer Profile

3.1.10.1 The system shall allow customers to update their profile information.

3.1.11 Order History

3.1.11.1 The system shall display both active and completed order history in the customer profile.

3.1.11.2 The system shall allow customers to select orders from the history and view detailed information.

3.1.12 Newsletter and Surveys

3.1.12.1 The system shall allow customers to register for newsletters and surveys in their profile.

3.1.13 Online Help and FAQ

3.1.13.1 The system shall provide online help and FAQ options for customer support.

3.1.14 Support Type Selection

3.1.14.1 The system shall allow users to select the type of support they need.

3.1.15 Enter Support Information

3.1.15.1 The system shall allow users to enter customer and product information for support.

3.1.16 Contact Numbers

3.1.16.1 The system shall display customer support contact numbers on the screen.

3.1.16.2 Users can enter their contact numbers for support personnel to call.

3.1.17 Email Confirmation

3.1.17.1 The system shall maintain customer email information and send order confirmations through email.

3.1.18 Detailed Invoice

3.1.18.1 The system shall display a detailed invoice for each confirmed order.

3.1.18.2 Optionally, allow users to print the invoice.

3.1.19 Shipping Methods

3.1.19.1 The system shall display multiple shipping options during the payment process.

3.1.19.2 Show shipping charges and tentative duration for shipping.

3.1.20 Order Change or Cancellation

3.1.20.1 The system shall allow online change or cancellation of orders.

3.1.20.2 Users can change shipping, payment method, or cancel the order.

3.1.21 Product Reviews and Ratings

3.1.21.1 The system shall display product reviews and ratings.

3.1.21.2 Users can enter their own reviews and ratings.

3.1.22 Financing Options

3.1.22.1 The system shall display available financing options.

3.1.22.2 Users can select financing options, and the system shall notify them about financing requests.

3.1.23 Promotions and Rewards

3.1.23.1 The system shall display available promotions.

3.1.23.2 Users can select and avail promotions.

3.2 Usability

3.2.1 Graphical User Interface

3.2.1.1 The system shall provide a uniform look and feel across all web pages.

3.2.1.2 Digital images for each product in the catalog shall be displayed.

3.2.1.3 Icons and toolbars shall be used for better usability.

3.2.2 Accessibility

3.2.2.1 The system shall provide handicap access.

3.2.2.2 Multi-language support shall be available.

3.3 Reliability & Availability

3.3.1 Redundant Computers

3.3.1.1 The system shall store all databases on redundant computers with automatic switchover.

3.3.2 Internet Service Provider

3.3.2.1 The system shall provide handicap access. Multi-language support shall be available.

3.4 Performance

The product shall run on a web server and take initial load time based on internet connection strength. Performance may depend on client hardware components.

3.5 Security

3.5.1 Data Transfer

3.5.1.1 Secure sockets shall be used in all transactions with confidential customer information.

3.5.1.2 Automatic logout after a period of inactivity.

3.5.2 Data Storage

3.5.2.1 Customer passwords and credit card numbers shall be securely stored and displayed.

3.6 Supportability

3.6.1 Configuration Management Tool

3.6.1.1 The source code developed for this system shall be maintained in configuration management tool.

3.7 Design Constraints

3.7.1 Standard Development Tools

3.7.1.1 The system shall be built using standard web page development tools following industry standards.

3.7.2 Web Based Product

3.7.2.1 No specific memory requirements.

3.7.2.2 Compatible with web browsers like Internet Explorer.

3.7.2.3 Response time for loading the product should be within five minutes.

3.8 On-line User Documentation and Help System Requirements

3.8.1 *Online help system providing specific guidelines to users.*

3.8.2 *Links and search fields for easy navigation within the system.*

3.9 Purchased Components

Not Applicable

3.10 Interfaces

3.10.1 User Interfaces

3.10.1.1 Compatible with browsers like Internet Explorer, Mozilla, or Netscape Navigator.

3.10.1.2 Implemented using tools like Java Applet, MS Front Page, EJB, etc.

3.10.2 Hardware Interfaces

3.10.2.1 Hardware interfaces for internet connectivity, e.g., Modem, WAN-LAN, Ethernet Cross-Cable.

3.10.3 Software Interfaces

3.10.3.1 Communication with Configurator, Content Manager, BillPay, Credit Management, CRM, Sales, Shipping, Tax, Export Regulation, and third-party secure transaction systems.

3.10.4 Communications Interfaces

3.10.4.1 Use HTTP protocol for internet communication and TCP/IP for intranet communication.

3.11 Licensing Requirements

Not Applicable

3.12 Legal, Copyright, and Other Notices

3.12.1 Display disclaimers, copyright, word mark, trademark, and product warranties.

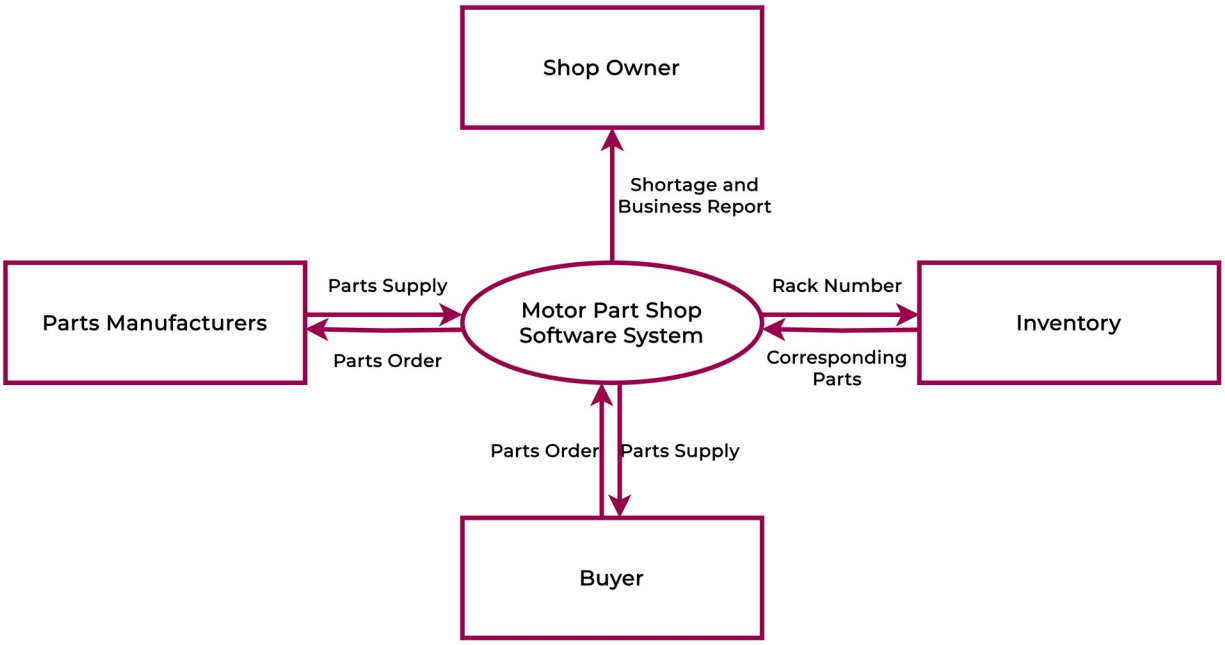
3.13 Applicable Standards

3.13.1 It shall be as per the industry standard.

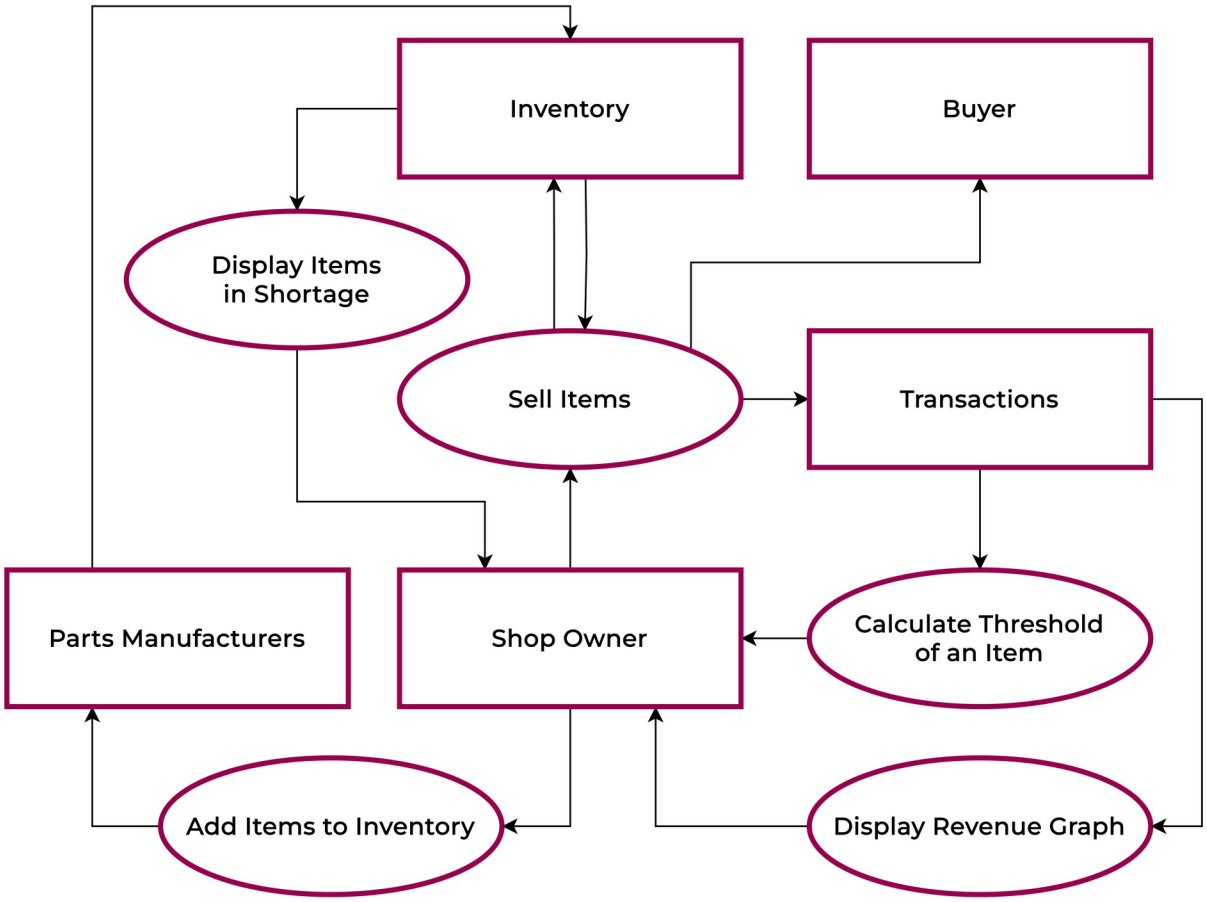
4. Designs and Diagrams

4.1 Data Flow Diagram (DFD)

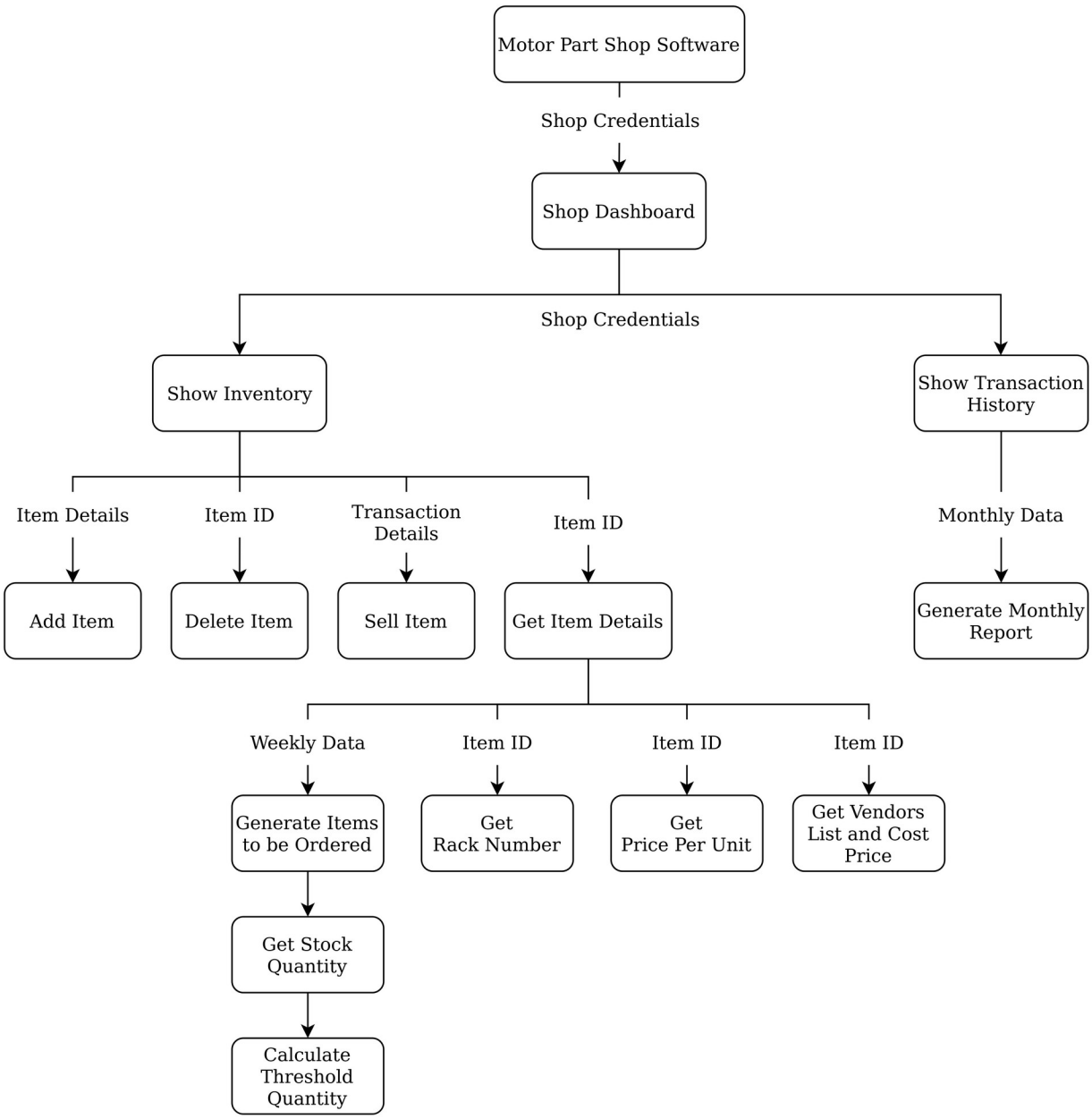
4.1.1 Level-0



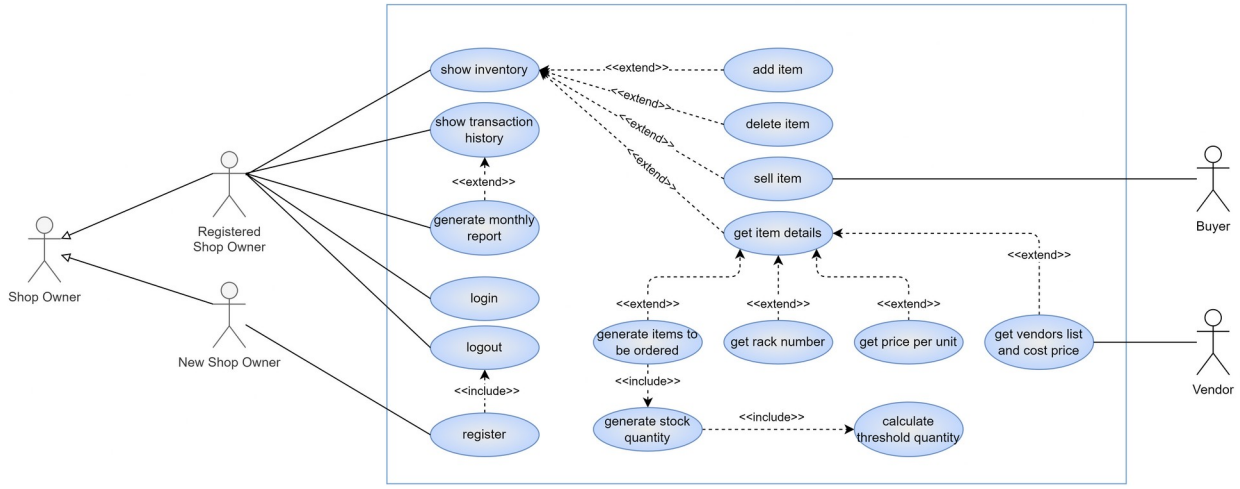
4.1.2 Level-1


Inventory
Buyer
Display Items in Shortage
Sell Items
Transactions
Parts Manufacturers
Shop Owner
Calculate Threshold of an Item
Add Items to Inventory
Display Revenue Graph

4.2 Structure Diagram



4.3 Use Case Diagram



4.4 Class Diagram

5. Supporting Information

Please refer the following document:

1. Vision document for E-store.
2. Use case analysis.
3. Structural models.
4. Behavioral models.
5. Non functional requirements model.
6. Traceability Matrix.

7. Project Plan