Courier-management-system-srs-20 compress

Information Technology (PSG College of Technology)

Software Requirements Specification

for

Courier Management System

Version 1.0 approved

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1. Revision History

Name	Date	Reason For Changes	Version

2. Introduction

2.1 Purpose

This Software Requirements Specification (SRS) document will provide a detailed description of the steps, phases and designs necessary for the Courier Management System (CMS). This SRS document will allow for a complete understanding, of what is to be expected of the CMS to be constructed. A clear understanding of the system and it's functionality will allow for the correct software system to be developed for the users of the software, and will be used for the development of the future stages of the project. This SRS document will provide the foundation for the project. From this SRS document, the CMS can be designed, constructed, and finally implemented and tested. This SRS document will be used by the software engineers for helping and working side-by-side with the system analysts while constructing the CMS. The software engineers will also use the SRS document to fully understand the expectations of this CMS, to construct the appropriate software.

2.2 Document Conventions

The font used for text is Times New Roman with the font size of 12. Heading 1 & heading 2 styles are used for main and sub headings respectively. Important points are highlighted.

2.3 Intended Audience and Reading Suggestions

It is intended that the document may be read by development and design team, quality assurance and testing team, project manager, courier management staff as well as marketing staff. It is suggested to read the document carefully, especially the points highlighted need more intention of the readers. Read TOC given at start before going through the document. The readers are expected to read the reference books and visit reference sites in case of any inconvenience during reading the document.

2.4 Product Scope

This project provides the facility to all users to send and receive the courier. They can get the information of the status of the courier. System development is also considered as a process backed by engineering approach. Courier agency is considered as an expansion of business relations. It contributes a lot by providing quick & fast services of sending documents, letters and shipments.

This project is for only Domestic Courier Management. The main focus of the project is client/customer management along with focusing on employee management partially.

2.5 References

Following books are referred during the compilation of this document and it will be useful for the readers to go through the reference books.

- Software Engineering
  - By Sommerville

3. Overall Description

3.1 Product Perspective

Courier services means any services provided to a customer, by a courier agency in relation to door-to-door transportation of time sensitive documents, goods or articles. "Courier agency means a commercial concern engaged in the door-to-door transportation of time sensitive documents, goods or articles, utilizing the services of person, either directly or indirectly, to carry or accompany such goods, documents or articles."

3.2 Description of Proposed System

The system is simple to design and implement. The system requires low system resources and it will work in almost all configurations.
The system is supposed to;

- Ensure data accuracy.
- Maintain Records efficiently on the database (minimizing data redundancy).
- Inquire about the status of shipment easily.
- Process about the shipment in minimum time.
- Maintain the privacy of courier.
- provide Better service to the users.

3.3 Product Functions

As we have already entered the 21st century, we may not afford to listen words like Sorry, Misrouting, Confusion, Late deliveries, loss of Packets, No-response, No feedback etc. We have tried to make all these miss happenings minimum & feel pleasure to the customers. The main object of this project is given below:

- It will facilitate the user to communicate in a faster manner in comparison to the manual system.
- Through this system, the status of the courier can easily be known whereas in manual system it is difficult.
- It proposes an "all in one" system that will include both tracking & transportation of shipments.
- It is intended to develop a software solution for courier service system that will provide best service without errors.

- It is supposed to develop a long lasting system that may be used in future.
- It is supposed to develop a sustainable and adoptable system, so that it may be adopted by other organizations of the same domain.

3.4 User Classes and Characteristics

Expected users of the system are classified on the basis of features offered to them

- Employee (admin/staff)
- Customers/public

Roles and characteristics of each class are discussed here;

- The database can be accessed by only those employees having administrative rights in order to perform different operations on data from the database. Admin can access the system through main server.
- **Employees** that do not have administrative rights can access the system by logging in to the system through employee account provided. They can respond to the customer queries, update the courier status and book new orders for customers. Office staff will use the system through the issued computers placed in their offices.
- **Client/customer/public** will be able to book couriers at their door step. They will also be able to check the status of couriers sent to them or sent by them. They will access these specified features of the system by logging into the system an customer.

3.5 Operating Environment

- The proposed system will be able to operate in **windows operating system**.
- Applications developed (in future) for courier boy and clients will operate on **android** as well as **IOS.**

3.6 Design and Implementation Constraints

As mentioned above some of the functionalities are limited to some users. Record can only be updated by database administrator. Client and office staff can only request to update for their personal data like name, password etc. Admin will respond to that request. Staff at branch will be able to generate slips for couriers. In order to maximize the privacy of data, each individual will have his/her own user ID & password. Only authorized persons will have the access to specific features of the system.

3.7 Assumptions and Dependencies

- All users are supposed to know how to use the system and basic knowledge about the system.
- It is assumed that the computer system having the proposed system will have enough memory and efficiency to have compatibility with the system.
- The database system is assumed to have enough memory to save big data growing with passage of time. The central database system is dependent on large amount of memory and If the system has less space or RAM the system may fail.
- The efficiency of system depend upon the interaction of users with the system, overall load to the system & other factors.

4. System Features

Following are the main features of the system;

4.1 Sign Up

4.1.1 Description & Priority

Sign up is the top priority function. Each user is supposed to sign up to the system once and hence to use the feature at least once. The function will create an account for the user providing login credentials.

4.1.2 Stimulus/Response Sequence

Database administrator will get the employees (Office staff) and customers at the start of the job. They will be supposed to enter their details, the system will allocate them a specific employee ID/User ID, the user will insert a password for him/her. After finish sign up, the user will become a member of the specified user class in the system and an instance will be created in the database for his/her records.

4.1.3 Functional Requirements

- The user once signed up to the system do not need to sign up again. Instead he/she will login to the system.
- Only signed up users can log into the system.

4.2 Login

4.2.1 Description & Priority

Login is the most basic & Primary feature of the system which provides privacy as well as secure and safe use of the system. All types of users are supposed to login to the system first to access other features. The user is supposed to provide his/her User ID & password along with his/her user class to login to the system. After providing the required credentials the users are logged into the specified user class from which they belonged to. The priority of the feature is highest as each individual interacting with the system will have to use this feature. The users having no login account will sign up to get access to login by creating their account.

4.2.2 Stimulus/Response Sequence

First of all the user is asked to specify his user class during this process. If the user in an Employee (administrator or staff) he is supposed to provide his employee ID as his username and password. If the user is a customer, he/she will be logged in after providing his customer ID as his username and password. The user will be offered to create a new account if he/she does not have an account already.

4.2.3 Functional Requirements

- The user will have to first provide his/her user ID and password before getting logged into the system.
- Users providing valid credentials will be logged into the system
- For invalid credentials, the system will generate "INVALID USER ID or PASSWORD" error.
- The user can create account at the time of log in if he/she is not signed into the system first.

4.3 Courier send request/ place an order

4.3.1 Description & Priority

Courier send request is made by customer. It is a high priority requirement as each of the customer uses this feature always while he/she has to send some shipments. The customer giver details of his/her courier and clicks on submit button to register a new request.

4.3.2 Stimulus/Response Sequence

This function is designed for the customers so the logged in customer can see request new courier button on his interface. When he/she clicks on the button, a window opens to ask details about the courier. Detail includes customer id , sending details, receiving details. Before responding to the system will asks to confirm the submission of details through popup message. When the user clicks submit button the system will process the request to the associated branch and after the successful completion of process the customer is given a courier id for specific request.

4.3.3 Functional Requirements

- The user will have to first provide his/her user ID and password before getting logged into the system.
- While giving the courier details if the user provides an invalid details the system will generate "Invalid details" error and ask user to correct that particular field.

4.4 Track courier status

4.4.1 Description & Priority

The function is of a medium priority. The customer can track the status of his/her courier sent.

4.4.2 Stimulus/Response Sequence

Logged in user can check the status of his/her courier. The customer will have to give the courier ID. The system will process and then return the status of that courier (to be received, received at branch, courier under process, delivered at branch, delivered at destination

4.4.3 Functional Requirements

- The customer will have to provide courier ID.
- The courier must be sent to check status.
- If courier does not found due to any reason the system will generate an error to "retrack the courier" after confirming the details again.

4.5 Generate bill

4.5.1 Description & Priority

This is a high priority requirement as each customer sending a courier will have to use "generate bill" function. This function will generate a bill on the basis of policies mentioned.

4.5.2 Stimulus/Response Sequence

The customer may use this function just after providing a courier details at the time of courier submission or at the time of courier delivery .The system will calculate the bill and show it to user menu.

4.5.3 Functional Requirements

- The user will have to be logged into the system to access this function.
- The status of this function will be initially unpaid and updated after payment.

4.6 Post queries & view replies

4.6.1 Description & Priority

This is low priority function,. Helpful for user in submitting their problem and also the quires helpful for updating system.

4.6.2 Stimulus/Response Sequence

A separate button " FAQ" is appeared on users menu bar .if the user is in problematic condition related to system then user is supposed to click on FAQ button to easily submitted his/her quirey.

4.6.3 Functional Requirements

- The user will have to be a Registered User.

4.7 View delivery charges

4.7.1 Description & Priority

This is a low priority feature. The user may enter the weight and destination, system will show the cost of courier.

4.7.2 Stimulus/Response Sequence

The user will enter the weight and then system will ask user to enter destination. System will calculate the charges of courier. The function will be disabled unless the customer has sent or received the courier.

4.8 Handle customer queries

4.8.1 Description & Priority

A medium priority function designed for staff members. Whenever the customer reports a query staff member the worker will be informed by the system and handle customer query will be enabled. He/she will click on this button and all the queries sent from their area. after reading the queries, he/she will answer to the customer with a reply and take steps to solve customer's problem.

4.9 Update courier status

4.9.1 Description & Priority

This is a high priority function for staff as the users are keen to see the status of their upcoming or outgoing couriers and the staff is supposed to provide them the accurate status of their courier. The staff member can update the status coming to or going from his area. He/she will track the couriers and then update their status which the user can also see for his specific couriers.

4.10 Manage reports

4.10.1 Description & Priority

The admin will be responsible to create and manage audit reports of his/her branch. He will update the total income coming to the branch regularly.

4.11 Create account

This is a high priority function used by admin. Administrator will create account for the employees. He will get the details from employee and save in database. He will assign the employee an employee ID a password which can be changed by the employee at any time and a pay scale on the basis of nature of the job. The employees will have to use the Employee ID as their username to access the system.

4.12 Update employee information

4.12.1 Description & Priority

The employees as well as customer can request to update their personal information. Admin will give them access to update their current information.

5. Nonfunctional Requirements

5.1 Safety Requirements

- New system is safe to use.
- Its usage will not provide any damage or any type of loss of data of the systems currently in use (manual system).
- The security model is prepared regarding the safety of Database so that data is not lost in case of any damage to the system.

5.2 Performance Requirements

- The system will be efficient to response & simpler and easy to use. Application will take less memory space and will run smoothly.

5.3 Security Requirements

- Security of the system shall definitely be maintained through the password.
- Each employee of every branch office will need to be authenticated with a login ID and password.
- Any employee cannot change the system date.
- There will be a table of all the users in database along with usernames login IDs and passwords of authorized users
- Only authorized users can access the database.

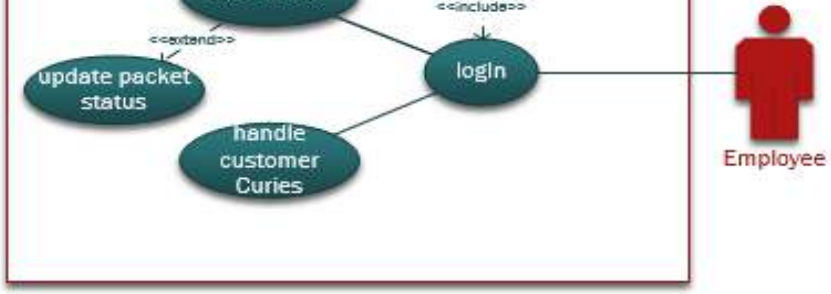
5.4 Software Quality Attributes

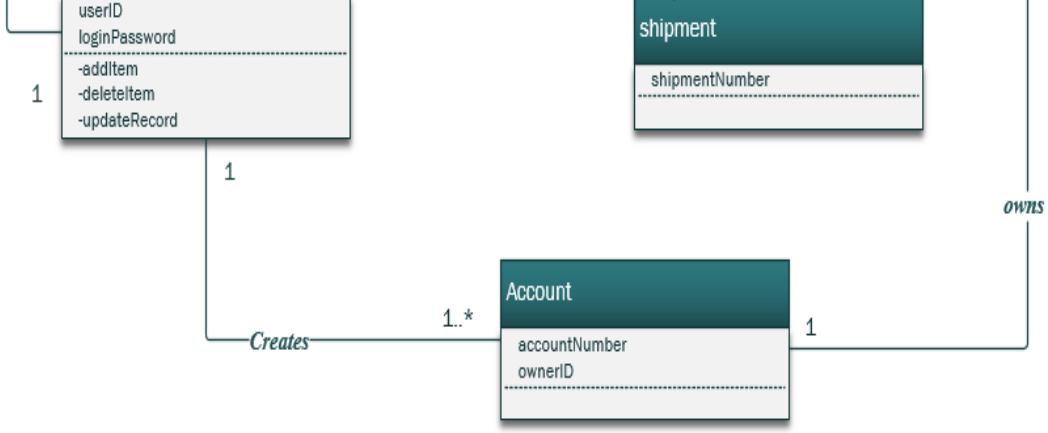
- The proposed system will be a quality system for the different department of the courier company.
- The system will be highly Adaptable, Available, and Portable.

5.5 Business Rules

- Taxes will be applicable to the transactions made for courier

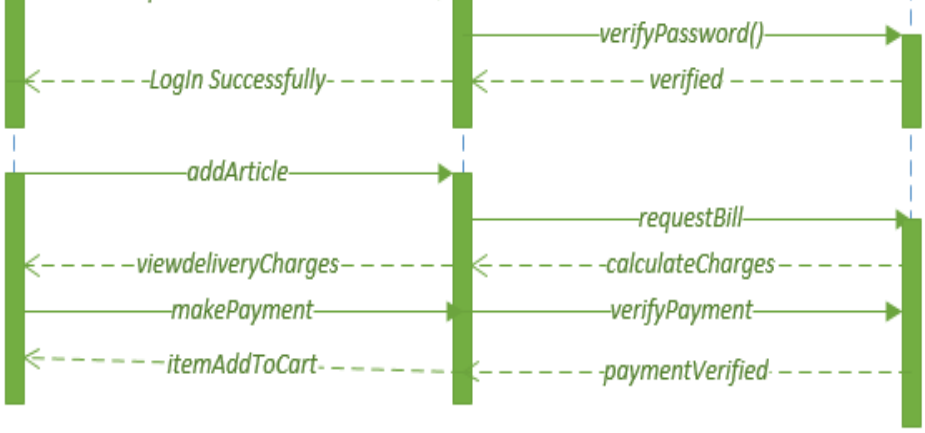
6. Design Of the system:

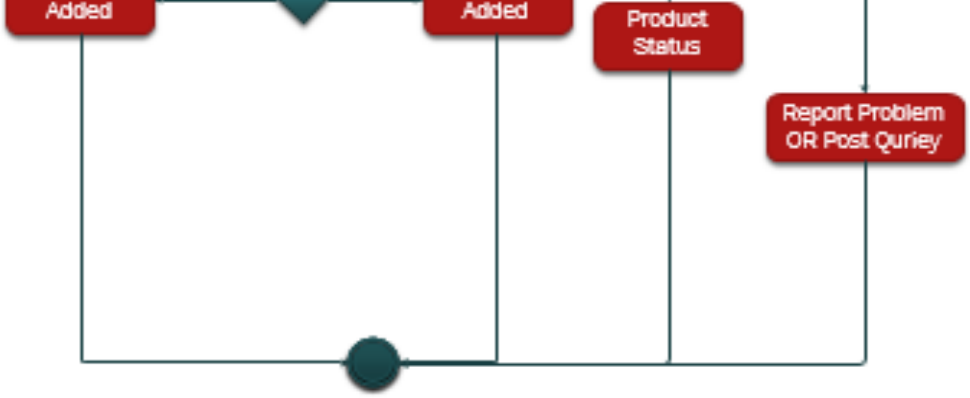


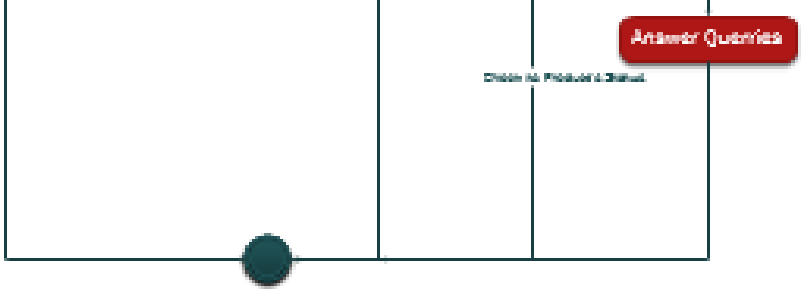


8. Object Diagram:

9. *Collaboration Diagram:*







14. Appendix A: Glossary

Terms/Acronyms /Abbreviations	Interpretation
CMS	Courier management system
SRS	Software Requirements Specification