Software Requirements Specification

for

Transport Company Computerization (TCC) Software

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Revision History

Name	Date	Reason For Changes	Version
Sunny Kumar		SRS document for Transport Company Computerization Software	
Praful Kumar		SRS document for Transport Company Computerization Software	
Munesh Vasuniya		SRS document for Transport Company Computerization Software	

1. Introduction

1.1 Purpose

The purpose of this System Requirements Specification document is to give a detailed description of the requirements, specifications and features of the Transport Company Computerization (TCC) software, which would help to manage the administrative works of a Transport Company. This document is used to convey information about the functional and non-functional requirement proposed by the client. It also explains system constraints, and its interaction with various other external entities.

1.2 Product Scope

The purpose of the software is to computerize the major processes of a Transport Company, so that the administrative works can be done in a more efficient, faster and elegant manner. The software would be installed in computers at the transport company. It helps to keep all data related to trucks customers and drivers under a single shade . The purpose of thisdocument is to list the requirements that this software must meet.

The product will be a Nodejs application as a Nodejs program has lots of advantage in terms ofperformance, reusability, reliability, cost, portability and ease in implement, maintenance and development process.

1.3 References

[1] Rajib Mall “Fundamentals of Software Engineering”
[2] www.geeksforgeeks.org/how-to-write-a-good-srs-for-your-project/

[3] www.wikipedia.org/wiki/SRS

2. Overall Description

This section describes the functions of the software. It also tries to bring out the design and implementation constraints in development of the software.

2.1 Product Functions

This software will help to make the management and administrative processes of a Transport company faster and efficient. The functionalities of the software are as follows:

- The software will be able to store the details of consignment, compute the transport charge and issue bill for the consignment.
- It will be able to automatically allot the next available truck as the consignment for a particular destination exceeds a certain limit.
- It will be able to store the truck details and show the status of trucks as well as consignments at a given time.
- It will also be able to compute the average waiting time for consignments and the idle time of a truck.
- Passwords and user ID will be used to protect the accounts of employees and manager.

2.2 Operating Environment

The software is a Nodejs application that also makes use of a database. It must be designed to database (like DBMS, MongoDB etc.) to be used.

2.3 Design and Implementation Constraints

The major constraints in the development of the software:

- Customers will be asked to fill a form for the detail of the trucks and their tenure etc which will be stored in the database.
- The admin or manager manages the customers and assign driver to each of the trucks and manages the trucks and drivers.
- The software will use password for login. The customer can only ask for truck only if he login into the software.
- The customer needs to pay the amount after demanding for the truck then the manager would only assign them the truck and manages it.

2.4 Assumptions and Dependencies

The software will be made with the following assumptions:

- The users have computers with windows OS.
- Internet connection is must required in order to see the allotment for the customers.
- Each user must remember his password and login ID, failing which, he cannot login into the system. The manager will be the only one to have the right to reset password.

- User should not tamper/experiment with the source code/executable file of the software.
- The user should have a good knowledge about the basic attributes of an object and fill in the details of the objects and employee properly.

3. External Interface Requirements

3.1 User Interfaces

The user interface of the software will be easy to use and interactive. Each customer and admin will have to loginusing his own login id and password. Only after that, he will be able to make any changes to the database or have his/her queries answered.

1. Customers: They will be given the access to do the following jobs:
   a) Enter details of a consignment like type, volume, details of name, address and valid Government ID
   b) They will be able to make the payment for the allotment of the trucks.
   c) They would be able to view the allotment of the truck and take a printout of the details of consignment number, volume, sender's name and address and receiver's name and address to be forwarded along with the truck.
2. Admin: Admin will be given the admin rights. He:
   a) Can do all the tasks that an customer can do
   b) Can view status of availability of trucks at that particular time.
   c) Can view the corresponding revenue generated .
   d) Can appoint new customers and drivers and add them to customers database or drivers database remove anycustomer from the company as well as from the database after the tenure and can remove the drivers.
   e) He will give a customer an username and a password and he can also reset the password of an customer.

3.2 Hardware Interfaces

The storage of the data on the physical drive will depend on the tools used for the development of software. The software will run properly on a computer having support for NodeJS applications and also the database to be used.

3.3 Software Interfaces

Nodejs will be used in the development of the software. A database will also be required to store the customers information about consignment details and truck information in a logical manner. Nodejs applications must be able to communicate with the database properly. All major internal dependencies should be taken into account. Internet connection is required for the communication of computers at different branches.

4. System Features

This section describes the major functionalities of the software.

4.1 Customers Registration and login

Functional Requirements:

1. Customer must register with user ID and password.
2. Customers must be able to login only with that user ID and password.
3. In case they forget their password, the admin himself must reset it.
4. A admin will be able to add new customers or remove customers after login or the period is over as well as add drivers or remove drivers.

4.2 Consignment details

Functional requirements:

1. The details of the consignment will be entered by customers.
2. The software must have/store all details of consignment: volume, sender and sender's address receiver and receiver's address and the truck it is being carried.
3. It must be able to allot a new truck as the amount of consignments for a certain destination increases a certain amount.

4. The software must be able to check the real time status of the assignment.
5. It must be able to calculate the waiting time of a consignment, so that the manager is able to take useful decisions from it.

4.3 Account Details

Functional Requirements:

1. Admin must be able to see the payment collected from each customer.
2. Admin must request to the customer about the consignment.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Software must perform smoothly and efficiently. Performance of the software will greatly depend on the speed of the internet, ease and speed of accessing data from the database. The software uses a few computations that are not computationally heavy but are very much dependent on the database and processing and data handling power of the computer. The software provides security to the customer to provide data integrity.

5.2 Software Quality Attributes

The software must be easy to use and should run without issues in windows. It should be correct and easily maintainable. The system developed by the software should be flexible,that is there must be provisions for different changes (like expansion) in the management Company.
The software should also be reliable and reusable for additional purposes.