RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES

RGUKT- RK VALLEY

LAB REPORT

Submitted in Partial Fulfillment of the Requirements for the Completion of

Software Engineering Laboratory

Submitted By

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TRANSPORT COMPANY COMPUTERIZATION(TCC) SOFTWARE

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SOFTWARE REQUIREMENT SPECIFICATION:

1. Introduction

1.1 Purpose

The purpose of this SRS(Software requirement Specification) document is to provide a detailed description of the Transport Company Computerization Software, which will automate various operations within a transport company. This document will serve as a guide for developers, stakeholders, and project managers, that includes all user requirements. It helps developers to add some more functionalities in software which can be more useful to the user. The main moto of this software is to save time of user by transporting their stocks without any issues

1.2.Scope

The software aims to streamline operations such as user management, fleet management, route planning, booking and reservations, payment processing, and reporting. It will be used by transport company staff, drivers, and customers.

1.3 References

1. IEEE Standard for Software Requirements Specifications (IEEE 830-1998)
2. Project management documents and guidelines

1.4 Overview

This SRS document is organized into three main sections. The first section provides an introduction to the software and its scope. The second section offers an overall description of the product, including user characteristics and constraints. The third section details specific requirements, both functional and non-functional.

2. Overall Description

2.1 Product Perspective

The software is intention is to replace the current manual processes within the transport company, providing a centralized and automated system for managing operations. It will be a web-based application accessible via desktops, laptops, and mobile devices.it all includes an online process i.e.,time saving

2.2 Product Functions

1. User registration and authentication
2. Fleet management (vehicle management) and vehicle tracking
3. Route planning and optimization
4. Booking and reservation management
5. Payment processing and invoicing
6. Reporting and analytics

2.3 User Classes and Characteristics

1. **Manager:** Manage system settings, user accounts, and overall operations.
2. **Drivers**: Access route information, update trip status, and manage vehicle maintenance logs.
3. **Customers**: Book and manage reservations, make payments, and provide feedback.
4. **Support Staff**: Assist customers and drivers, manage bookings, and handle customer inquiries.
5. **Dispatchers**:Dispatchers dispatch the given product which is an end for whole process.
6. **Supervisor:**holds key role in vehicle maintenance,driver allocation,managing consignment details,most importantly interface between user and manager

2.4 Operating Environment

The software will operate in a web environment, accessible via modern web browsers (e.g., Chrome, Firefox, Edge) on desktops, laptops, and mobile devices.we can operate it on any platform and in any smart device irrespective of location.

3. Specific Requirements

3.1 Functional Requirements

3.1.1 User Management

1. **Registration**: Users can create accounts by providing necessary details.
2. **Authentication**: Users can log in using their credentials.
3. **Profile Management**: Users can update their personal information.
4. **Consignment Details:**User enters the consignment details
5. **User Feedback:**User gives feedback after the whole process
6. **Payment:**User does payments after instructed by the manager and supervisor.

3.1.2 Fleet Management(Vehicle management):

7. **Vehicle Tracking**: Real-time tracking of vehicles using GPS.
8. **Maintenance Scheduling**: Scheduling and logging vehicle maintenance.
9. **Fleet Status**: Viewing current status and availability of vehicles.

3.1.3 Route Management

1. **Route Planning**: Optimizing routes based on various factors (e.g., distance, traffic).

2. **Route Assignment**: Assigning routes to drivers.
3. **Route Updates**: Real-time updates on route changes and conditions.

3.1.4 Booking and Reservation System

1. **Booking Creation**: Customers can create bookings by selecting routes and vehicles. Or it can be done by Supervisor its User choice.
2. **Booking Management**: Managing and updating bookings.
3. **Booking History**: Viewing past bookings and transaction history.

3.1.5 Payment Processing

1. **Payment Gateway Integration**: Integrating with payment gateways for secure transactions.
2. **Invoicing**: Generating invoices for completed bookings.
3. **Refunds and Cancellations**: Handling refunds and booking cancellations.

3.1.6 Reporting and Analytics

1. **Usage Reports**: Reports on vehicle usage and route performance.
2. **Customer Feedback**: Collecting and analyzing customer feedback.

3.2 Non-Functional Requirements

3.2.1 Performance Requirements

1. **Response Time**: The system should respond to user requests within 2 seconds.
2. **Scalability**: The system should handle up to 10,000 concurrent users.

3.2.2 Security Requirements

1. **Data Encryption**: Encrypting sensitive data during transmission and storage.
2. **Authentication**: Implementing multi-factor authentication for user login.
3. **Authorization**: Ensuring users have access only to permitted functions.

3.2.3 Usability Requirements

1. **User Interface**: Intuitive and user-friendly interface design.
2. **Accessibility**: Obedient with accessibility standards (e.g., WCAG).

3.2.4 Reliability Requirements

1. **Availability**: System uptime of 99.9%.
2. **Backup**: Regular data backups and disaster recovery plans.

3.2.5 Maintainability Requirements

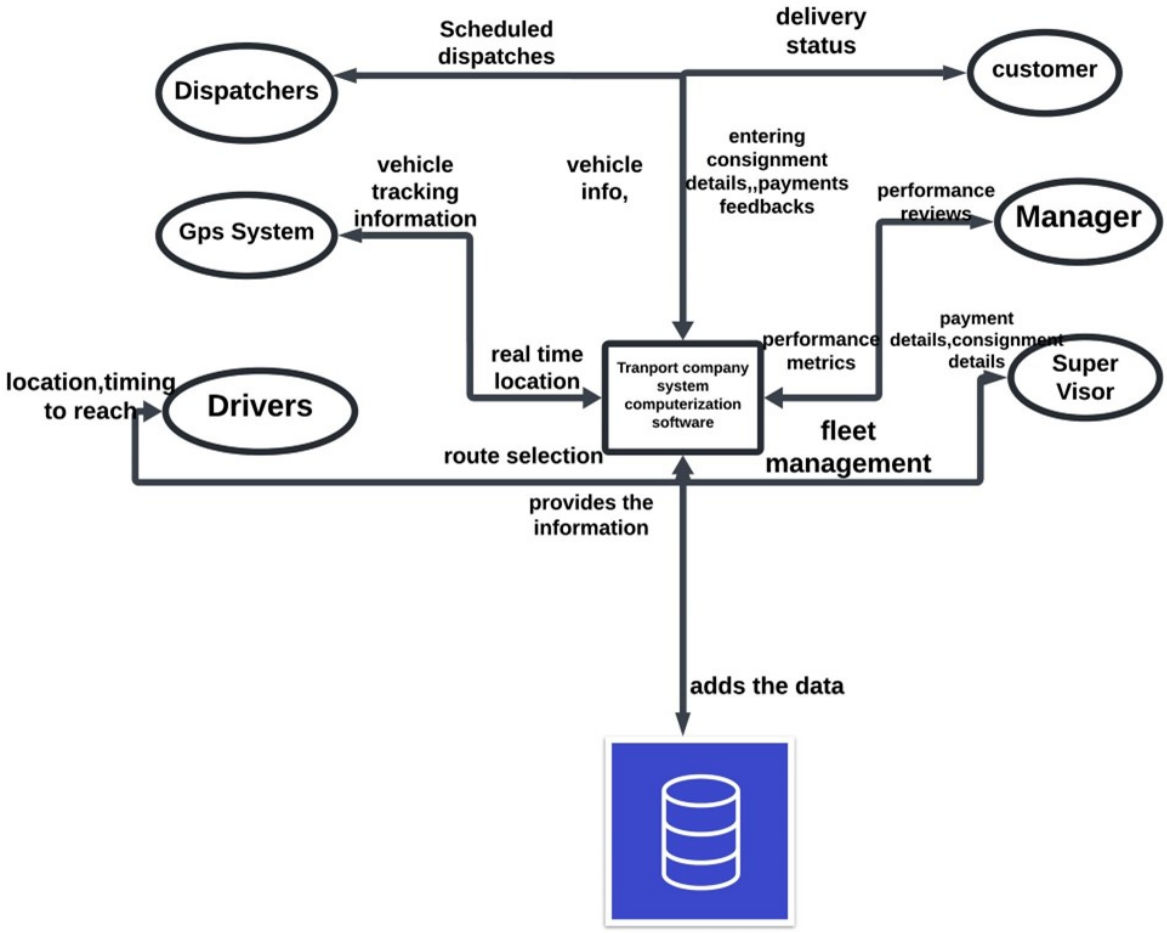
1. **Modularity**: Modular design for easy maintenance and updates.

2. **Documentation**: Comprehensive documentation for users and developers.

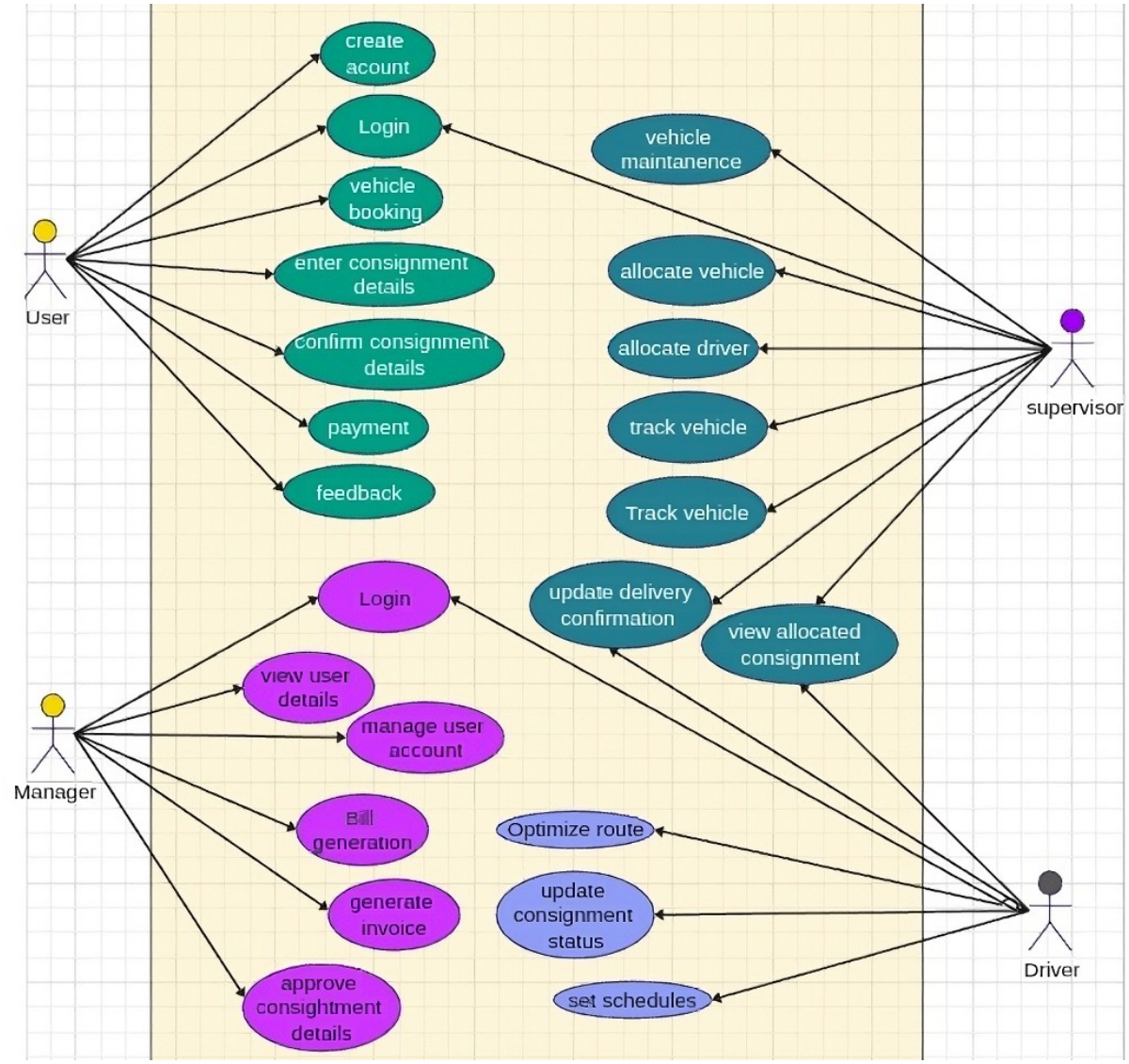
3.3 System Features

1. **Notifications**: Email and SMS notifications for bookings and updates.
2. **Customer Support**: Integrated customer support chat and ticketing system.
3. **Compliance**: Obedient to industry standards and regulations. • **Localization**: Support for multiple languages and currencies.

CONTEXT DIAGRAM:



USE CASE DIAGRAM:



USER REQUIREMENT DOCUMENT(URD)

1. Introduction

1.1 Purpose

The purpose of this User Requirement Document (URD) is to provide a detailed and clear specification of the requirements from the perspective of end-users for the Transport Company Computerization Software. This document serves as a basis for the development, testing, and validation of the software, ensuring that all user needs and expectations are met.

1.2 Scope

The Transport Company Computerization Software aims to automate and streamline various operations within a transport company, including user management, fleet management, route planning, booking and reservation, payment processing, and reporting. The software will cater to different user roles such as Managers, Drivers, Customers, Support Staff, Dispatchers, and Supervisors, facilitating a more efficient and organized workflow.

1.3 Definitions, Acronyms, and Abbreviations

- **URD:** User Requirement Document
- **SRS:** Software Requirement Specification
- **GPS:** Global Positioning System
- **UI:** User Interface
- **UX:** User Experience

1.4 References

- IEEE Standard for Software Requirements Specifications (IEEE 830-1998)
- Project management documents and guidelines
- Existing user workflows and process documentation

1.5 Overview

This URD is organized into several sections: an introduction, detailed descriptions of user requirements, specific functional and non-functional requirements, and a conclusion summarizing the document's purpose.

2. User Requirements

2.1 User Classes and Characteristics

2.1.1 Manager

- **Responsibilities:** Manage system settings, user accounts, approve bookings, oversee overall operations.
- **Needs:** Access to comprehensive dashboards, ability to manage user roles, and view detailed reports.

2.1.2 Drivers

- **Responsibilities:** Access route information, update trip status, manage vehicle maintenance logs.

- **Needs:** Real-time route updates, easy access to trip details, and vehicle maintenance reminders.

2.1.3 Users

- **Responsibilities:** Book and manage reservations, make payments, provide feedback.
- **Needs:** Intuitive booking system, secure payment processing, and prompt notifications

2.1.6 Supervisor

- **Responsibilities:** Oversee vehicle maintenance, driver allocation, manage consignment details.
- **Needs:** Tools to assign tasks, monitor consignment status, and communicate with drivers and dispatchers.

2.2 User Environment

- The software will be a web-based application accessible via desktops, laptops, and mobile devices.
- The software will be used in various environments including offices, warehouses, and on the road via mobile devices.

2.3 General Constraints

- **Internet Connectivity:** The software requires stable internet connectivity for optimal performance.
- **Device Compatibility:** The software must be compatible with modern web browsers (Chrome, Firefox, Edge) and mobile devices.
- **Data Privacy:** The software must comply with data protection regulations, ensuring user data is handled securely.

2.4 Assumptions and Dependencies

- Users have access to internet-enabled devices.
- Users are familiar with basic web and mobile interfaces.
- The company will provide necessary training for users on how to use the software.

3. Specific User Requirements

3.1 Functional Requirements

3.1.1 User Management

- **Registration(Login):** Users should be able to create accounts by providing necessary details (name, contact information, etc.).
- **Authentication:** Users should log in using a secure authentication system.
- **Profile Management:** Users should update their personal information, including contact details and preferences.
- **Consignment Details:** Users should enter consignment details when making a booking.
- **User Feedback:** Users should provide feedback on their experience with the booking and delivery process.
- **Payment:** Users should make secure payments through integrated payment gateways.

3.1.2 Fleet Management

- **Vehicle Tracking:** The software should support real-time GPS tracking of vehicles.
- **Maintenance Scheduling:** The system should allow scheduling and logging of vehicle maintenance activities.
- **Fleet Status:** The software should provide a real-time view of the current status and availability of vehicles.

3.1.3 Route Management

- **Route Planning:** The software should optimize routes based on distance, traffic, and other factors.
- **Route Assignment:** The system should allow managers and supervisors to assign routes to drivers.
- **Route Updates:** The software should provide real-time updates on route changes, traffic conditions, and other relevant information.

3.1.4 Booking and Reservation System

- **Booking Creation:** Customers should create bookings by selecting available routes and vehicles.
- **Booking Management:** Users should manage and update their bookings, including rescheduling and cancellations.
- **Booking History:** The system should maintain a history of past bookings, accessible by the user.

3.1.5 Payment Processing

- **Payment Gateway Integration:** The software should integrate with secure payment gateways to facilitate transactions.
- **Invoicing:** The system should generate invoices automatically for completed bookings.
- **Refunds and Cancellations:** The software should handle refunds and booking cancellations efficiently.

3.1.6 Reporting and Analytics

- **Usage Reports:** The system should generate reports on vehicle usage, route efficiency, and other performance metrics.
- **Customer Feedback:** The software should collect and analyze customer feedback to improve services.

3.2 Non-Functional Requirements

3.2.1 Performance Requirements

- **Response Time:** The software should respond to user requests within 2 seconds.
- **Scalability:** The system should handle up to 10,000 concurrent users without performance degradation.

3.2.2 Security Requirements

- **Data Encryption:** Sensitive data should be encrypted during transmission and storage.
- **Authentication:** Implement multi-factor authentication to enhance security.
- **Authorization:** Ensure users have access only to functions relevant to their role.

3.2.3 Usability Requirements

- **User Interface:** The interface should be intuitive and easy to navigate.
- **Accessibility:** The software should comply with accessibility standards, ensuring all users can access the system.

3.2.4 Reliability Requirements

- **Availability:** The system should maintain an uptime of 99.9%.
- **Backup:** Regular backups should be performed, with a disaster recovery plan in place.

3.2.5 Maintainability Requirements

- **Modularity:** The software should be designed modularly to facilitate easy updates and maintenance.
- **Documentation:** Comprehensive documentation should be provided for both users and developers.

3.3 System Features

- **Notifications:** The system should send email and SMS notifications for bookings, updates, and alerts.
- **Customer Support:** Integrated support features such as live chat and ticketing system should be available.
- **Compliance:** The software should comply with industry standards and regulations.
- **Localization:** The software should support multiple languages and currencies.

USER CHARACTERISTICS:

Table:Actor,Action,Object,Frequency,Arrival Pattern,and Response

SNO	ACTOR	ACTION	OBJECT	FREQUENCY	ARRIVAL PATTERN	RESPONSE
1.	USER	VISIT WEBSITE	VISIT	1/DAY	ON-NEED	SUCCESFULLY OPEN THE WEBSITE
2.	USER	CREATE ACCOUNT	CREATE	1/DAY	ON-NEED	SUCCESFUL CREATE ACCOUNT
3.	USER	LOGIN	LOGIN	1/DAY	ON-NEED	SUCCESFUL LOGIN

4.	USER	VIEW BOOKING MENU	VIEWING	1/DAY	ON-NEED	REDIRECT TO BOOKING MENU AND SELECTING BOOKING TAB
5.	USER	ENTER CONSIGNMENT DETAILS	ENTERING	1/DAY	ON-NEED	SENT TO MANAGER
6.	USER	CONFIRMING CONSIGNMENT DETAILS	CONFIRM	1/DAY	ON-NEED	SHOULD CONFIRM THE DETAILS
7.	USER	PAYMENT	PAYING	1/DAY	AFTER BILL GENERATED	SUCCESFUL PAYMENT
8.	USER	VIEW CONSIGNMENT STATUS	VIEWING	1/DAY	RANDOM	VIEW STATUS
9.	USER	GET DELIVERY CONFIRMATION	GET CONFIRMATION	1/DAY	SCHEDULED	DELIEVERY CONFIRMATION
10.	USER	FEEDBACK	RATING	MULTIPLE/DAY	RANDOM	SUCCESFUL RATING
11.	MANAGER	LOGIN	LOGIN	EVERYDAY	SCHEDULED	LOGINS
12.	MANAGER	MANAGE USER ACCOUNTS	MANAGE	EVERYDAY	SCHEDULED	VIEWING ALL USER ACCOUNTS
13.	MANAGER	VIEW USER DETAILS	VIEWING	EVERYDAY	SCHEDULED	VIEW USER DETAILS

14.	MANAGER	VIEW CONSIGNMENT DETAILS	VIEWING	EVERYDAY	SCHEDULED	MONITOR THE CONSIGNMENT DETAILS
15.	MANAGER	CHECK CONSIGNMENT DETAILS	CHECKING	EVERYDAY	SCHEDULED	CHECK DETAILS
16.	MANAGER	APPROVE CONSIGNMNET DETAILS	APPROVING	EVERYDAY	SCHEDULED	APPROVE DETAILS
17.	MANAGER	BILL GENERATION	GENERATING	EVERYDAY	SCHEDULED	BILL GENERATED BASED ON CONSIGNMENT
18.	MANAGER	GENERATE INVOICE	INVOICING	EVERYDAY	SCHEDULED	AFTER PAYMENT INVOICE IS GENERATED
19.	MANAGER	WORK ALLOTMENT	ALLOTS	EVERYDAY	SCHEDULED	ALLOT FURTHER WORK TO SUPERVISOR
20.	SUPERVISOR	LOGIN	LOGIN	EVERYDAY	SCHEDULED	LOGINS
21.	SUPERVISOR	VIEW ALLOCATED CONSIGNMENT	VIEWING	EVERYDAY	SCHEDULED	VIEW CONSIGNMENT BEFORE LOADING
22.	SUPERVISOR	VEHICLE MAINTAINENCE	MAINTAININ G	EVERYDAY	SCHEDULED	MAINTAINS THE VEHICLE
23.	SUPERVISOR	ALLOCATE VEHICLE	ALLOT	EVERYDAY	SCHEDULED	ALLOTS VEHICLE BASED ON

						CONSIGNMENT
24.	SUPERVISOR	ALLOCATE DRIVER	ALLOT	EVERYDAY	SCHEDULED	ALLOTS DRIVER FOR RESPECTIVE VEHICLE
25.	SUPERVISOR	TRACK VEHICLE	GPS TRACK	EVERYDAY	RANDOM	TRACK THE VEHICLE
26.	SUPERVISOR	UPDATE DELIVERY CONFIRMATION	UPDATING	EVERYDAY	RANDOM	UPDATE THE DELIVERY CONFIRMATION TO USER
27.	DRIVER	VIEW ALLOCATED CONSIGNMENT	VIEW	EVERYDAY	SCHEDULED	VIEW CONSIGNMENT
28.	DRIVER	SET OPTIMIZED ROUTE	OPTIMIZING	EVERYDAY	SCHEDULED	SET OPTIMIZED ROUTE
29.	DRIVER	SET SCHEDULES	SETTING	EVERYDAY	SCHEDULED	SET SCHEDULES FOR ROUTE
30.	DRIVER	UPDATE CONSIGNMENT STATUS	UPDATING	EVERYDAY	RANDOM	UPDATE THE STATUS
31.	DRIVER	UPDATE DELIVERY CONFIRMATION	CONFIRMS	EVERYDAY	RANDOM	UPDATE CONFIRMED DELIVERY TO SUPERVISOR

USE -CASE OVERVIEW:

S.No:	Use Case ID	Use case Name	Priority	Stability	Verfiability

1	UC-TCCS-VW	VISIT WEBSITE	High	Stable	Verifiable
2	UC-TCCS-CA	CREATE ACCOUNT	High	Stable	Verifiable
3	UC-TCCS-LG	LOGIN	High	Stable	Verifiable
4	UC-TCCS-VBM	VIEW BOOKING MENU	High	Stable	Verifiable
5	UC-TCCS-ECD	ENTER CONSIGNMENT DETAILS	High	Stable	Verifiable
6	UC-TCCS-CCD	CONFIRMING CONSIGNMENT DETAILS	High	Stable	Verifiable
7	UC-TCCS-PT	PAYMENT	High	Stable	Verifiable
8	UC-TCCS-VCS	VIEW CONSIGNMENT STATUS	High	Stable	Verifiable
9	UC-TCCS-GDC	GET DELIVERY CONFIRMATION	High	Stable	Verifiable
10	UC-TCCS-FB	FEEDBACK	High	Stable	Verifiable
11	UC-TCCS-LG	LOGIN	High	Stable	Verifiable
12	UC-TCCS-MUA	MANAGE USER ACCOUNTS	High	Stable	Verifiable
13	UC-TCCS-VUD	VIEW USER DETAILS	High	Stable	Verifiable
14	UC-TCCS-VCD	VIEW CONSIGNMENT DETAILS	High	Stable	Verifiable
15	UC-TCCS-CCD	CHECK CONSIGNMENT DETAILS	High	Stable	Verifiable
16	UC-TCCS-ACD	APPROVE CONSIGNMNET DETAILS	High	Stable	Verifiable
17	UC-TCCS-BG	BILL GENERATION	High	Stable	Verifiable
18	UC-TCCS-GI	GENERATE INVOICE	High	Stable	Verifiable
19	UC-TCCS-WA	WORK ALLOTMENT	High	Stable	Verifiable

20	UC-TCCS-LG	LOGIN	High	Stable	Verifiable
21	UC-TCCS-VAC	VIEW ALLOCATED CONSIGNMENT	High	Stable	Verifiable
22	UC-TCCS-VM	VEHICLE MAINTAINENCE	High	Stable	Verifiable
23	UC-TCCS-AV	ALLOCATE VEHICLE	High	Stable	Verifiable
24	UC-TCCS-AD	ALLOCATE DRIVER	High	Stable	Verifiable
25	UC-TCCS-TV	TRACK VEHICLE	High	Stable	Verifiable
26	UC-TCCS-UDC	UPDATE DELIVERY CONFIRMATION	High	Stable	Verifiable
27	UC-TCCS-VAC	VIEW ALLOCATED CONSIGNMENT	High	Stable	Verifiable
28	UC-TCCS-SOR	SET OPTIMIZED ROUTE	High	Stable	Verifiable
29	UC-TCCS-SS	SET SCHEDULES	High	Stable	Verifiable
30	UC-TCCS-UCS	UPDATE CONSIGNMENT STATUS	High	Stable	Verifiable
31	UC-TCCS-UDC	UPDATE DELIVERY CONFIRMATION	High	Stable	Verifiable

Use Case Specifications:

USER

1.UC-TCCS-VW:USER_VISIT WEBSITE:

Use-case ID:UC-TCCS-VW	Use-case-name:visit website
Description	User visits the website to know details about the company
Frequency of use:	high
Success guarantee	After visiting website he must know complete details about website and proceed for next step
Main success scenario	To book users consignment he visits the website and get complete details what to do in website

Pre-conditions:	User must check wheather our website is suitable for his requirement or not
Frequency of occurence:	high

2.UC-TCCS-AC:USER_ACCOUNT CREATION:

Use-case ID:TCCS-AC	Use-case-name:Account creation
Description	User after visiting website creates account with his personal details
Frequency of use:	high
Success guarantee	User after visiting website succesfully creates an account
Main success scenario	User visits website and after getting clarity he creates account using his details
Pre-conditions:	User must be aware of what details he is providing for further enquiry and should give correct details
Frequency of occurence:	High

3.UC-TCC-LC:USER_LOGIN:

Use case ID:UC-TCC-LC:	Use-case Name:**Login**
Description:	The user logins into website to book his/her consignment transaction
Pre-conditions	1.User must view the website 2.User must have minimum consignment to transfer
Success guarantee(post-condition)	After login user must get an confirmation mail which has unique id
Frequency of use	High
Main Success Scenario	1.User access the company website homepage 2.User selects booking tab and enters his consignment details 3.after entering consignment details user gets a bill generated according to their consignment 4.They pay the bill and get bill invoice 5.At last they confirm their payment and further details are provided by company staff
Extension	1.If User details are not in a proper way system prompts them to fill proper details or denies the request if not filled
Frequency of Occurence	Very High

4.UC-TCCS-VBM:USER_VIEW BOOKING MENU:

Use-case ID:UC-TCCS-VBM	Use-case-name:view booking menu
Description	After logging into account website displays a menu where user can select different tabs for different purposes
Frequency of use:	high
Success guarantee	After succesful login to account user selects the tab he wants
Main success scenario	User visits the websites creates account and logins and then gets booking menu and selects booking tab to book vehicle to their consignment
Pre-conditions:	User must logging in to website succesfully to get booking menu
Frequency of occurence:	High

5.UC-TCCS-ECD:USER_ENTER CONSIGNMENT DETAILS

Use-case ID:UC-TCCS-ECD	Use-case-name:Enter consignment details
Description	User must login succesfully to do any type of activities in website
Frequency of use:	High
Success guarantee	User after viewing booking menu selects the booking tab and succesfully goes on further process
Main success scenario	User after logging into website gets the booking menu and selects the booking tab and then enter consignment details and proceeds for further process
Pre-conditions:	User must enter correct details about his consignment otherwise it may be denied
Frequency of occurence:	High

6.UC-TCCS-CCD:USER_CONFIRMING CONSIGNMENT DETAILS:

Use-case ID:UC-TCCS-CCD	Use-case-name:confirming consignment details
Description	User must confirm the approved details
Frequency of use:	High
Success guarantee	User should confirm the details he sent about consignment to perform further process
Main success scenario	User after logging into website and selecting booking tab and enter the consignment details they are sent to manager he checks approves and resents to user to confirm wheather these are corrct details or not if correct further process is done otherwise the details are re-entered

Pre-conditions:	User must check all details perfectly so that there should be no problem in further process
Frequency of occurence:	High

7.UC-TCCS-PT:USER_PAYMENT:

Use-case ID:UC-TCCS-PT	Use-case-name:Payment
Description	User does payment after details confirmation
Frequency of use:	High
Success guarantee	User gets the bill after he successfully confirms the details sent to him after approval by manager and he does the payment
Main success scenario	After user enters the consignmnet details they are sent to manager for approval after approval he gets request for confirming the details if they are confirmed then he gets request for payment then he does the payment
Pre-conditions:	User must confirm correct details and do payment otherwise there will be unknowing consequences
Frequency of occurence:	High

8.UC-TCC-VCS: VIEW CONSIGNMENT STATUS

Use-Case ID:UC-TCC-VCS:	Use-case Name:**View consignment Status**
Description:	User views the consignment status whether it is loaded or not ,if loaded where it is
Pre-conditions:	User must have a unique id of consignment
Success Guarantee	After entering his consignment id he comes to know his consignment status where it is which is vehicles tracking
Frequency of use:	High
Main Success scenario:	1.User opens company's website and selects view status tab 2.enters the consignmentid and submits 3.A webpage with full details of consignment is diplayed
Extensions	1.if user enters invalid consignment id System prompts to enter proper id or displays invalid
Frequency of occurence	High

9.UC-TCCS-GDC: USER_ GET DELIVERY CONFIRMATION:

Use-Case ID:UC-TCC-GDC:	Use-case-name:Get Delivery Confirmation
Description:	User gets delivery confirmation after the consignment is delivered
Pre-conditions:	User must logging into website to know wheather the consignment is delievered or not
Success Guarantee	User gets confirmation about delivery after it is reached.
Frequency of use:	High
Main Success scenario:	User after doing payment his consignment starts from his starting location and ends at its destination and finally gets delivery confirmation through website
Frequency of occurence	High

10.UC-TCC-FB:USER_FEEDBACK:

Use-case-Id:UC_TCC_FB:	Use-Case Name:Feedback
Description:	User must give feedback based on their consignment tranporting experience
Pre-Conditions:	User must give feedback after consignment is reached to its destination
Success-Guarantee:	After submitting feedback user will get a thank you message
Main success Scenario	If user consignment is reached happily then he gives a positive feedback which helps in company growth
Extension	If any case User give negative response then it will adversely affect the company's growth

MANAGER

11.UC-TCCS-LG:MANAGER_LOGIN:

Use-case ID:UC-TCCS-LG	Use-case-name:login
Description	Manager manages all user accounts and does the further work
Frequency of use:	High
Success guarantee	Manager succesfully logins and views all user accounts
Main success scenario	Manager succesfully logins into with his credentials
Pre-conditions:	Manager credentials must be correct otherwise there will be obstacles in the process
Frequency of occurence:	High

12.UC-TCCS-MUA:MANAGER_MANAGE USER ACCOUNTS:

Use-case ID:UC-TCCS-MUA	Use-case-name:Manager user accounts
Description	Manager manages all user accounts and view all user details
Frequency of use:	High
Success guarantee	Manager manages user accounts based on dates and views user details when opened them
Main success scenario	Manager logins into the website and views all user accounts based on dates
Pre-conditions:	Manager must view all user accounts properly so that he can t miss any user requests
Frequency of occurence:	High

13.UC-TCC-VD:MANAGER_VIEWS ALL USER DETAILS:

Use-Case ID:UC-TCC_VD:	Use-Case Name:Manager_views all user details
Description:	Manager manages all user details and can view all user details
Pre-conditons	Manager has to login into website
Success-Guarantee	After successful login the manager can view all user details sent by user and view their consignments and due dates

Frequency of use:	High
Main success Scenario	1.Manager opens the website 2.click on login tab and logs in and then views all user requests about their consignment date to date 3.and viewing all user details and checks their requests
Frequency of occurence	High

14.UC-TCCS-VCN:MANAGER_CONSIGNMENT DETAILS:

Use-case ID:UC-TCCS-VCN	Use-case-name:Consignment details
Description	Manager manages all user accounts and view their details
Frequency of use:	High
Success guarantee	Manager manages all user accounts and select any user based on quick request and see their complete details
Main success scenario	Manager logins into the website views all user accounts and selects any one of the user based on who kept first request and view their consignment details i.e., how much consignmnet is there and when and where it should be transfered.
Pre-conditions:	Manager should view the user accounts and select based on their request timings properly
Frequency of occurence:	High

15.UC-TCCS-CCD:MANAGER_CHECK CONSIGNMENT DETAILS:

Use-case ID:UC-TCCS-CCD	Use-case-name:check consignment details
Description	Manager manages all user accounts and views all user details
Frequency of use:	High
Success guarantee	Manager views all user accounts and views their consignment details
Main success scenario	Manager logins to the website and views all user accounts and selects users to view details based on their request timing i.e., first come first serve and then view user details and their check consignment details
Pre-conditions:	Manager must view user consignment details properly to proceed further work
Frequency of occurence:	High

16.UC-TCCS-ACD:MANAGER_APPROVE CONSIGNMENT DETAILS

Use-case ID:UC-TCCS-ACD	Use-case-name:Approve consignment details

Description	Manager views all user details and confirms them
Frequency of use:	High
Success guarantee	Manager views all user details and their consignment details and approves them
Main success scenario	Manager logins into website view all user accounts view selected user details check consignment details if they are proper then approves them
Pre-conditions:	Manager must check consignment details properly so that other process should be done properly
Frequency of occurence:	High

17.UC-TCC-BG:MANAGER_BILL GENERATION

Use-case ID:UC-TCC_BG:	Use-Case Name:Manager Bill Generation
Description:	Manager manages all user requests
Pre-Conditons:	Manager must login to the system
Success-Guarantee	After succesful login manager views all the user details date to date and get full details by clicking on their requests
Frequency of use:	High
Main Success Scenario	1.Manager opens the website and logs into it 2.after logging in he views all user details based on date to date 3.after viewing all user details he approves the details and generates a bill based on consignment of user 4.the bill is sent to user and finally the payment is done by user 5.here the manager works completes further work is assigned to supervisor
Frequency of occurence	High

18.UC-TCCS-GI:MANAGER_GENERATE INVOICE:

Use-case ID:UC-TCCS-GI	Use-case-name:Generate invoice
Description	Manager must provide an invoice for confirming payment done by user
Frequency of use:	High
Success guarantee	Manager succesfully sends invoice after payment
Main success scenario	Manager logins into website views all user accounts view selected user details check and approve the consignment details after user confirms the details manager generates a bill and after payment done manager generates an invoice which is sent to user
Pre-conditions:	Manager must be aware of payment before generating invoice
Frequency of occurence:	High

19.UC-TCCS-WA:MANAGER_WORK ALLOTMENT:

Use-case ID:UC-TCCS-WA	Use-case-name:Work Allotment
Description	Manager allots further work to supervisor
Frequency of use:	High
Success guarantee	Manager after all sucesful generation of invoice allots further work to super visor
Main success scenario	After bill generation payment is done so as to confirm that managers generates an invoice and finally his role is done and allots further work to supervisor
Pre-conditions:	Manager before alloting work to supervisor he must be sure that all his work is done properly
Frequency of occurence:	High

SUPERVISOR

20.UC-TCCS-LG:SUPERVISOR_LOGIN:

Use-case ID:UC-TCCS-LG	Use-case-name:login
Description	Supervisor logins to the website succesfully
Frequency of use:	High
Success guarantee	Super visor logins to the website succesfully using his credentials
Main success scenario	After manager allots work to super visor,supervisor comes into action and logins to the website to do further work
Pre-conditions:	Super visor must come into action after instructed my manager
Frequency of occurence:	High

21.UC-TCCS-VAC:SUPERVISOR_VIEW ALLOCATED CONSIGNMENT:

Use-case ID:UC-TCCS-VAC	Use-case-name:View allocated consignment
Description	Super visor after logging into the coount must view allocated consignment
Frequency of use:	High
Success guarantee	Super views all the allocated for further process
Main success scenario	After login to the website super visor views the allocated consignment to know what should be done next
Frequency of occurence:	High

22.UC-TCCS-VM:SUPERVISOR_VEHICLE MAINTENANCE:

Use-case ID:UC-TCCS-VM	Use-case-name:Vehicle maintainence
Description	Super visor maintains vehicle and take care of their repairs and send to maintainence department
Frequency of use:	High
Success guarantee	Super visor maintains all the vehicle
Main success scenario	Supervisor logins into website views allocated consignment maintains vehicles if they are available or not
Pre-conditions:	Super visor must logins to website before doing any work in the website
Frequency of occurence:	High

23.UC-TCC-VA:SUPERVISOR_VEHICLE ALLOTMENT

Use-case ID:UC_TCC_VA:	Use-case Name:SuperVisor_Vehicle Allotment
Description:	Supervisor manages vehicle allotment and all other works
Pre-conditions:	Super visor should start his work after manager work is completed or when ordered by manager to start to do this he must login into website
Success-Guarantee	After manager work is completed supervisorcomes into action and does vehicle allotment
Frequency of use	High
Main success Scenario	1.Supervisor logins into website 2.he allocates vehicle based on user consignment 3.this information is share to both user and drivers 4.after allocating vehicles to drivers the vehicle status is given to user by supervisor and updates delivery details after getting from driver
Frequency of occurrence:	High

24.UC-TCCS-AD:SUPERVISOR_ALLOCATE DRIVER:

Use-case ID:UC-TCCS-AD	Use-case-name:Allocate driver
Description	Super visor allocates driver to the vehicle
Frequency of use:	High
Success guarantee	Super visor allocates vehicle and allocates driver to the respective vehicle
Main success scenario	Super visor logins into website views allocated consignment details allocate vehicle to the consignment allocate driver to the consignment
Pre-conditions:	Supervisor should allocate vehicle before allocating driver
Frequency of occurence:	High

25.UC-TCCS-TV:SUPERVISOR_TRACK VEHICLE:

Use-case ID:UC-TCCS-TV	Use-case-name:Track vehicle
Description	Super visor tracks vehicle
Frequency of use:	High
Success guarantee	Supervisor tracks vehicle and be updated about vehicle
Main success scenario	Supervisors logins into website view allocated consignment based on allocated consignment he allocates the vehicle and driver respectively and finally tracks the vehicle and be updated about vehicle and consignment
Pre-conditions:	Supervisor must load all consignment and track vehicle
Frequency of occurence:	High

26.UC-TCCS-UDC:SUPERVISOR_UPDATE DELIVERY CONFIRMATION:

Use-case ID:UC-TCCS-UDC	Use-case-name:update delivery confirmation
Description	Supervisor tracks vehicle and get delivery confirmation from driver
Frequency of use:	High
Success guarantee	Supervisor tracks vehicle after consignment loading and gets delivery confirmation
Main success scenario	Super visor logins to website view allocated consignment allocate vehicle and driver and then track vehicle and get delievery confirmation from driver
Pre-conditions:	Supervisor must track vehicle to get delivery confirmation
Frequency of occurence:	High

DRIVER

27.UC-TCCS-VAC:DRIVER_VIEW ALLOCATED CONSIGNMENT:

Use-case ID:UC-TCCS-VAC	Use-case-name:View allocated consignment
Description	Driver views allocated consignment
Frequency of use:	High
Success guarantee	Driver views allocated consignment
Main success scenario	Driver after allocated by supervisor views allocated consignment before starting the journey
Pre-conditions:	Driver must be aware of consignment which he is

	transporting
Frequency of occurence:	High

28.UC-TCC-SOR:DRIVER_SET OPTIMIZED ROUTE:

Use-case ID:UC_TCC_SOR:	Use-case Name:Driver_route optimization
Description:	Driver manages the consignmnet tranport with optimized route
Frequency of use:	High
Success-Guarantee	Driver tracks his route and vehicle status and sends to supervisor later it is sent to user by supervisor
Main success scenario	1.Driver shares the route details and vehicle status to super visor 2.after supervisor gets the vehicle tracking information and updates in website which later on seen by user and confirms where his consignment is.
Frequency of occurrence:	High

29.UC-TCCS-SS:DRIVER_SET SCHEDULES:

Use-case ID:UC-TCCS-SS	Use-case-name:Set Schedules
Description	Driver after selecting optimized route set schedules
Frequency of use:	High
Success guarantee	Driver set schedules after selecting optimized route
Pre-conditions:	Driver must aware of the route he selected
Frequency of occurence:	High

30.UC-TCCS-UCS:DRIVER_UPDATE CONSIGNMNET STATUS:

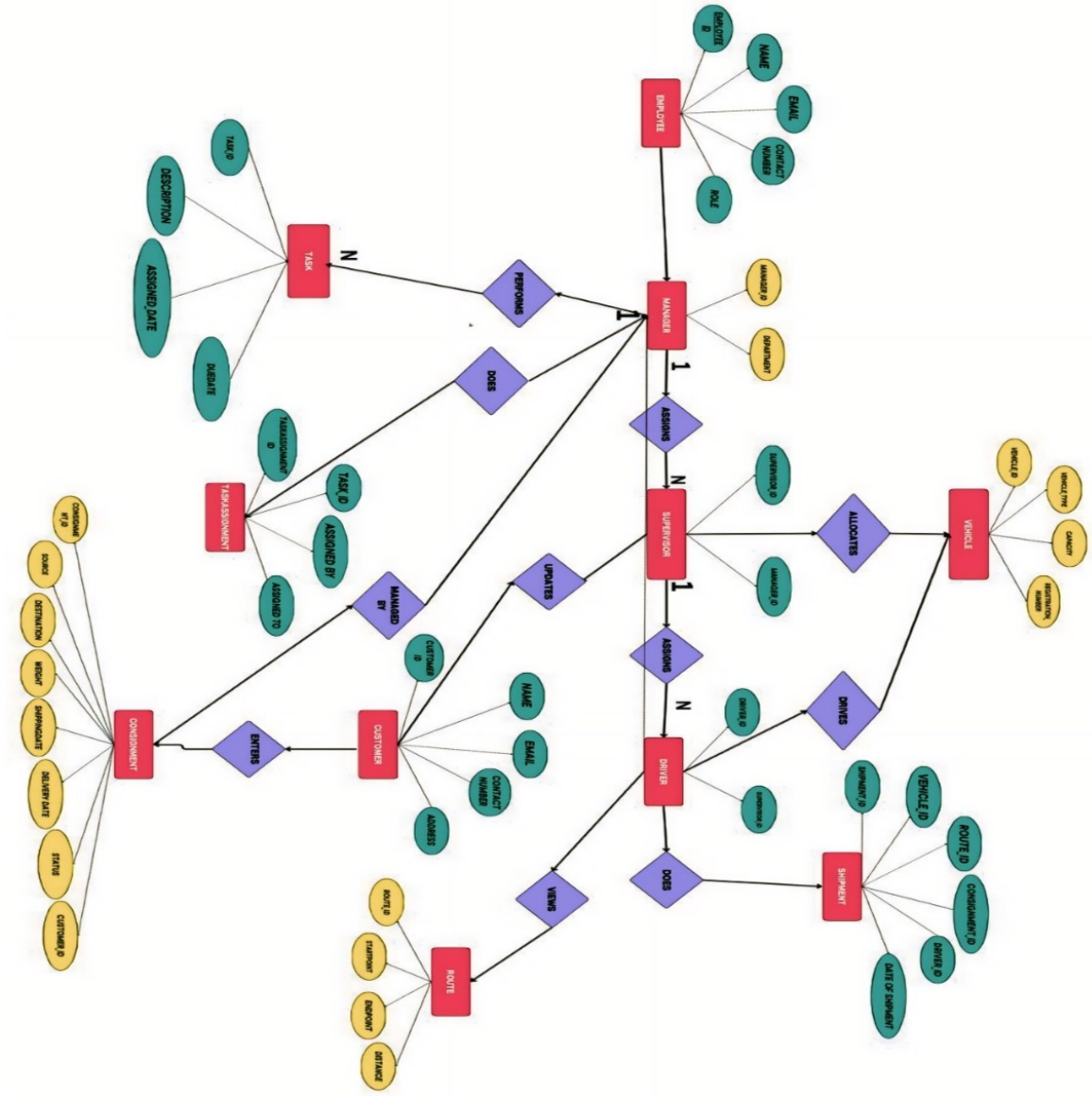
Use-case ID:UC-TCCS-UCS	Use-case-name:Update consignment status
Description:	Driver updates consignment status to supervisor
Frequency of use:	High
Success guarantee	Driver updates consignment status to supervisor to be aware where the consignment is
Main success scenario	Driver set optimized route and set schedules and update vehicle and consignment status to super visor and further to user
Pre-conditions:	Driver should update proper consignment status for correct delievry location
Frequency of occurence:	High

31.UC-TCC-UDC:DRIVER_UPDATE DELIVERY CONFIRMATION:

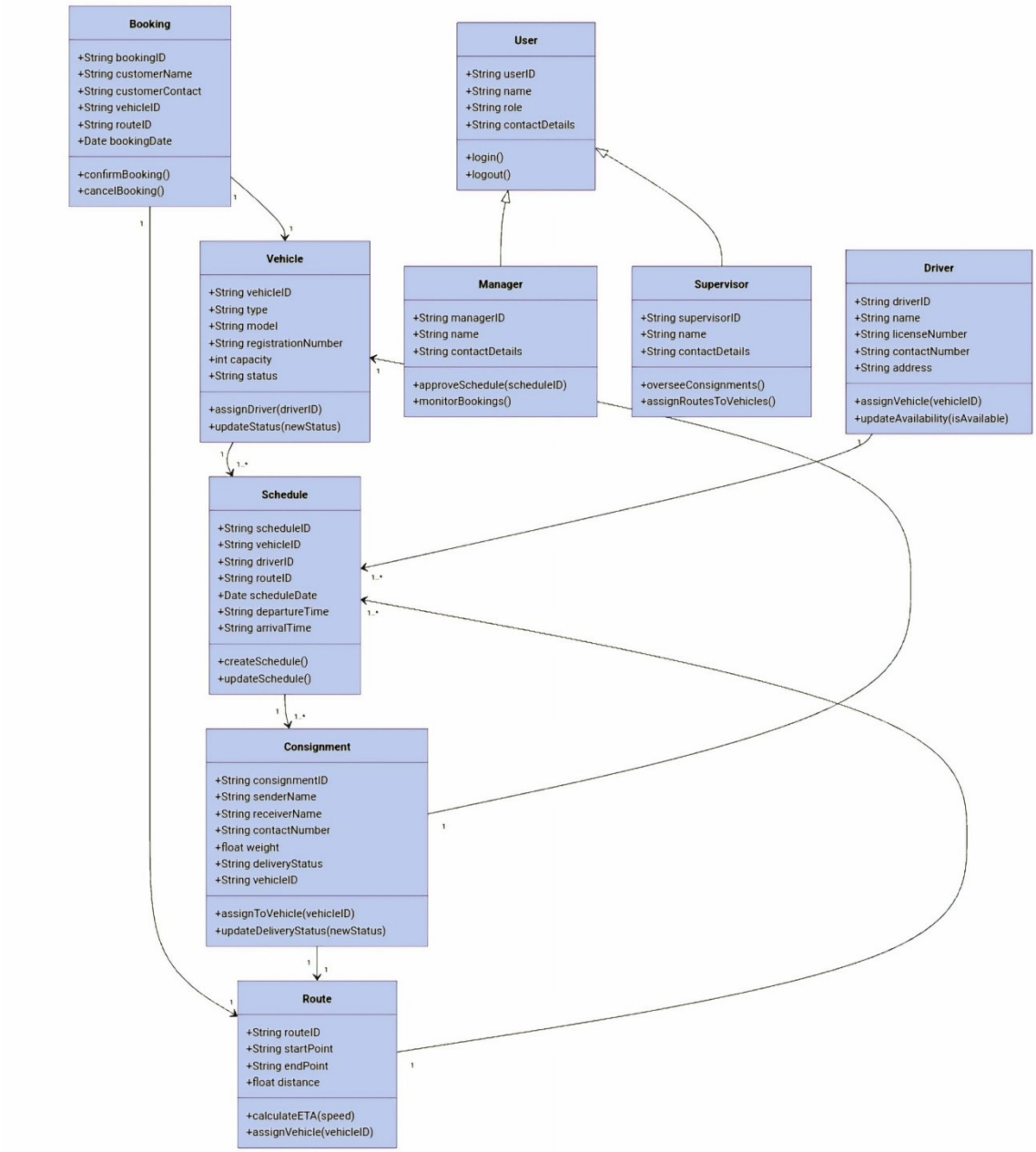
Use-case ID:UC_TCC_DC:	Use-case Name:Driver_Delivery Confirmation
Description:	Driver manages the delivery of consignment i.e., transportation of consignment
Frequency of use	High
Success -guarantee	Driver shares the delivery confirmation information to supervisor later on it is sent to user by supervisor

Main success scenario	1.Driver after delivering the consignment,updates the dispatch details to super visor 2.supervisor updates it in website later on which is seen by user 3.finally the user gets delivery confirmation and gives feedback
Frequency of occurrence:	High

ER DIAGRAM:



CLASS DIAGRAM:



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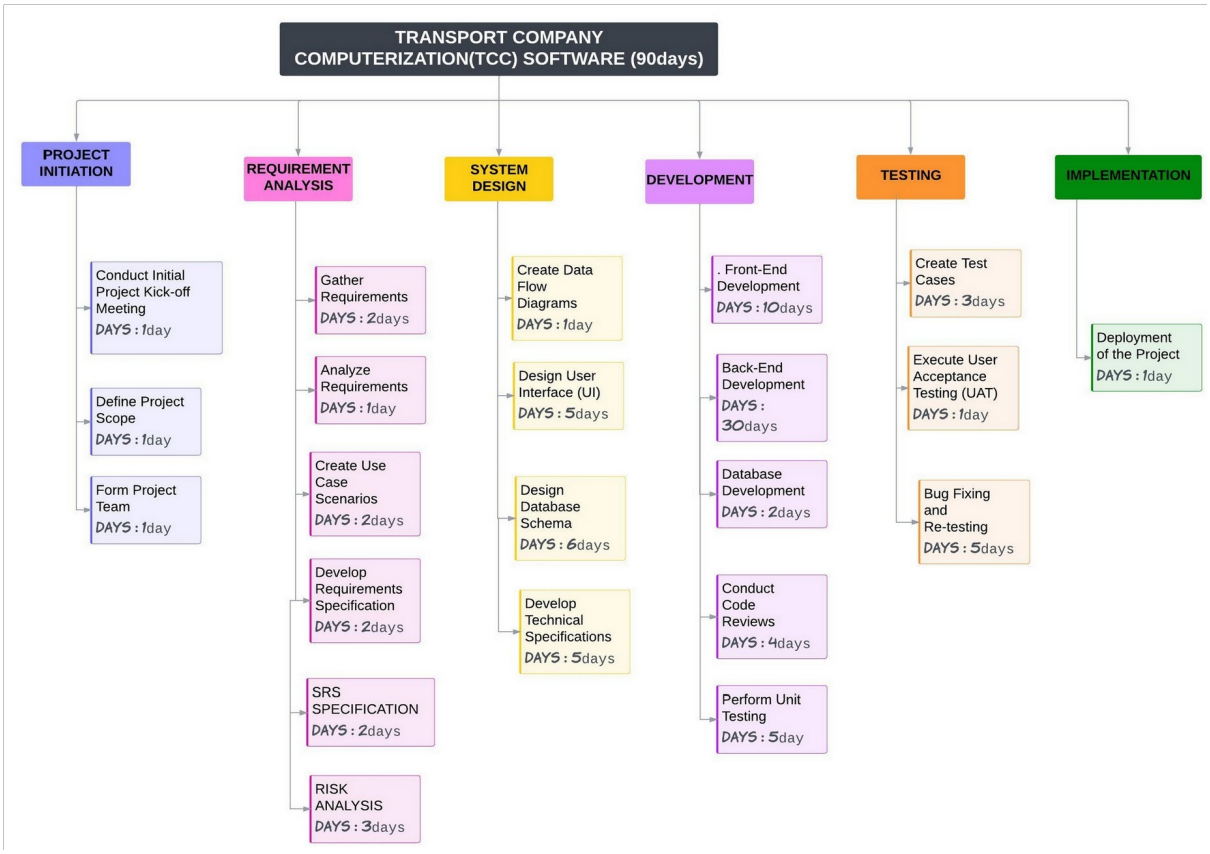
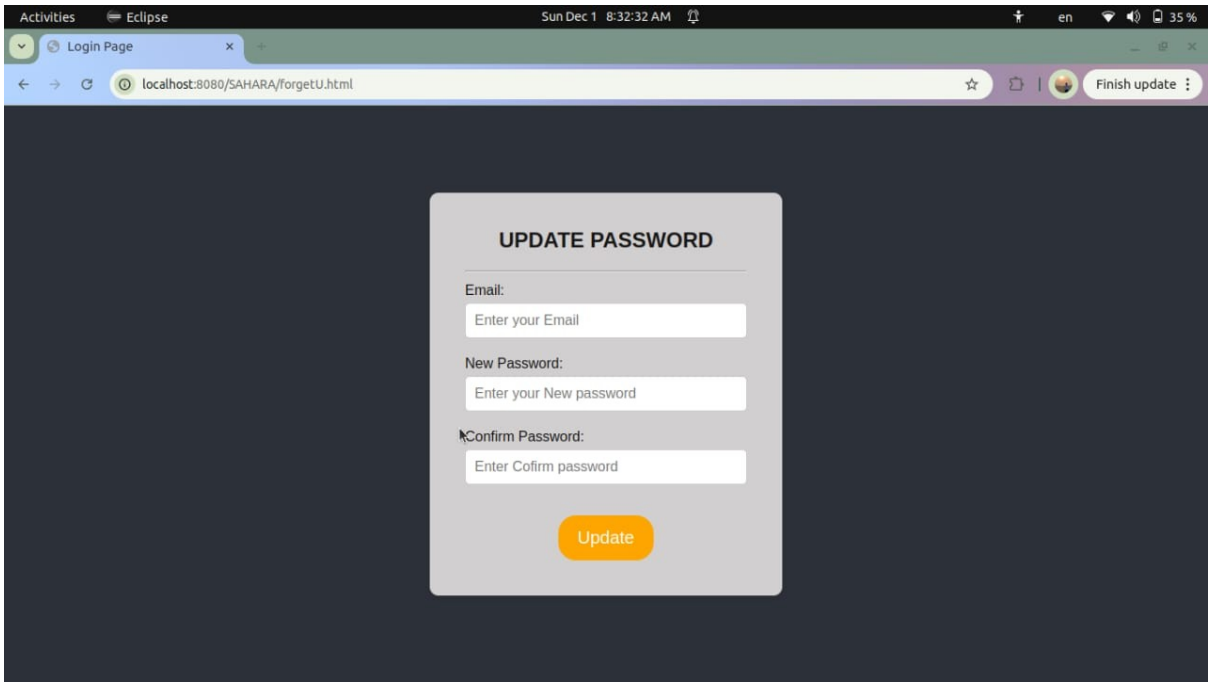
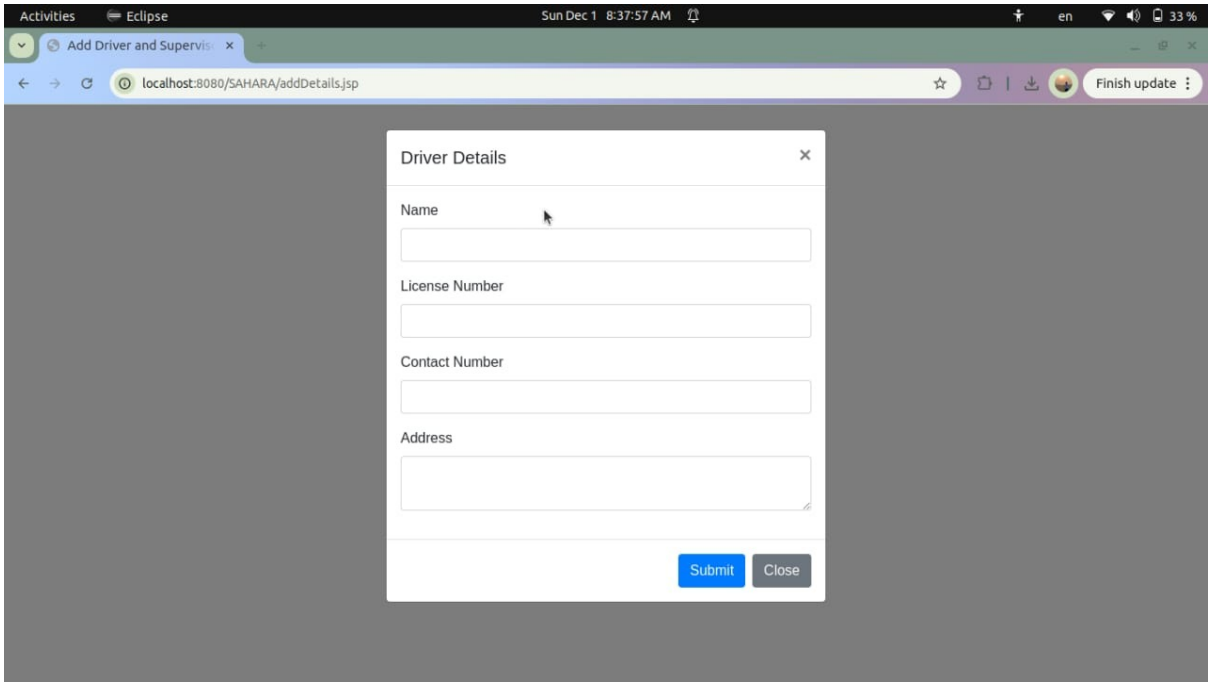
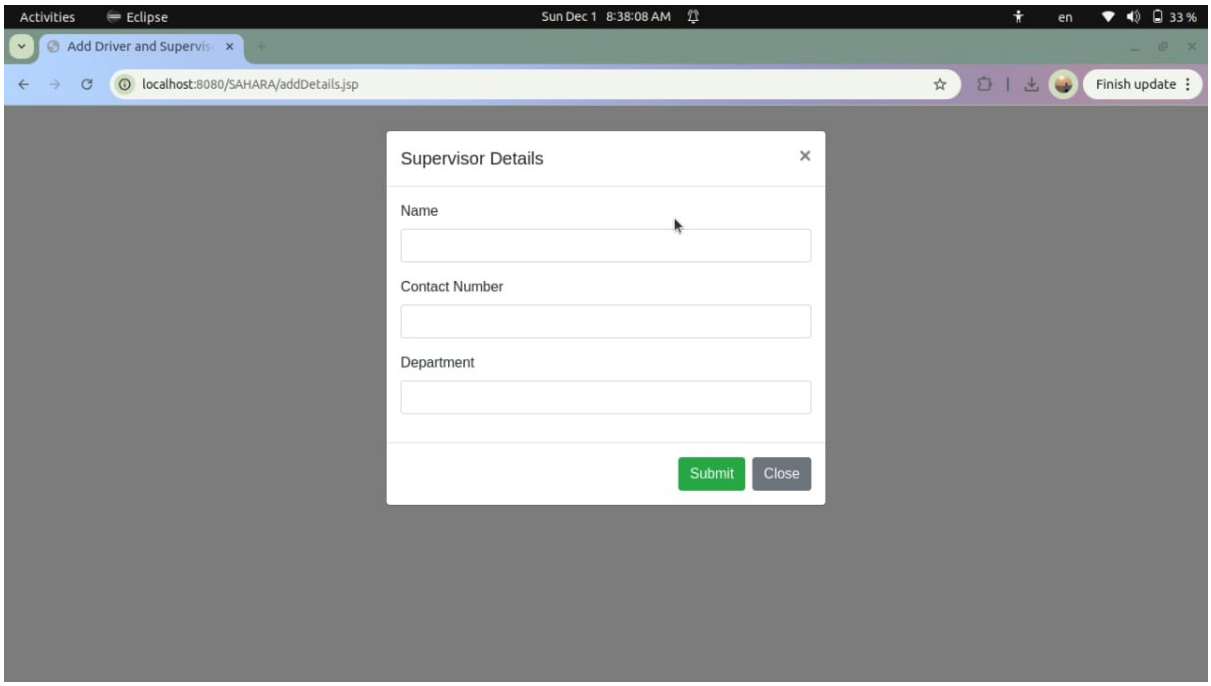


TRANSPORT COMPUTARIZATION SOFTWARE UI PAGES:



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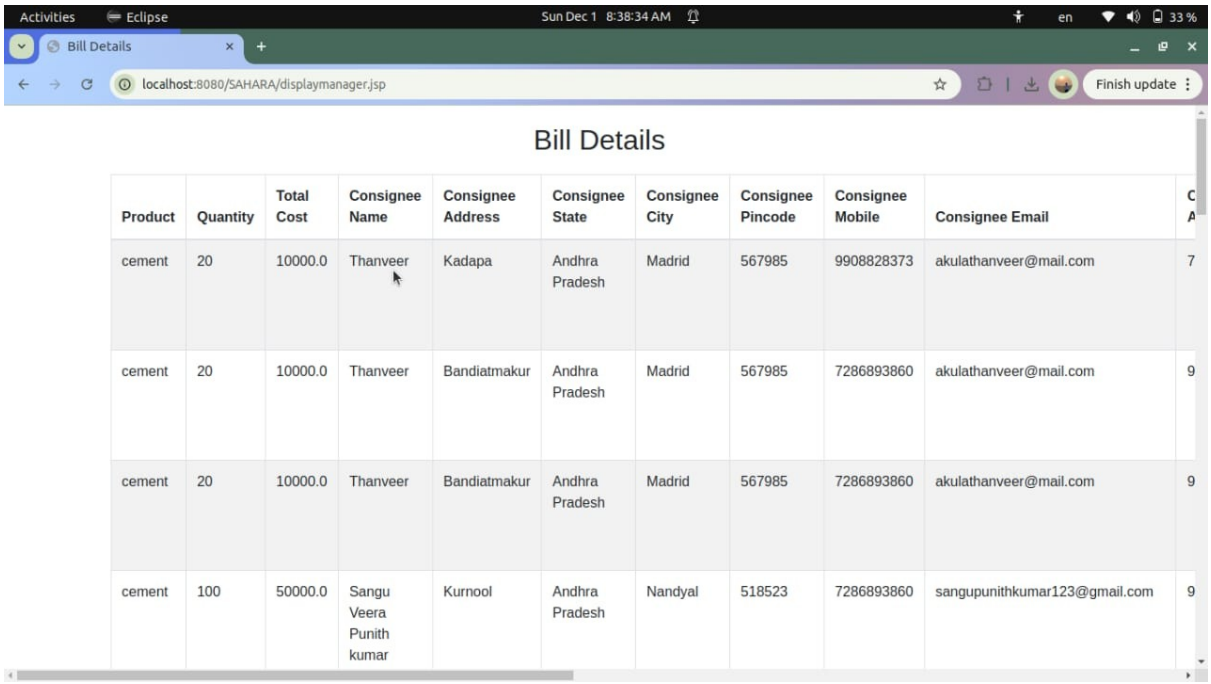
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Consignee State
Consignee City
Consignee Pincode
Consignee Mobile
Consignee Email
cement 20 10000.0 Thanveer Kadapa Andhra Pradesh Madrid 567985 9908828373 akulathanveer@mail.com
cement 20 10000.0 Thanveer Bandiatmakur Andhra Pradesh Madrid 567985 7286893860 akulathanveer@mail.com
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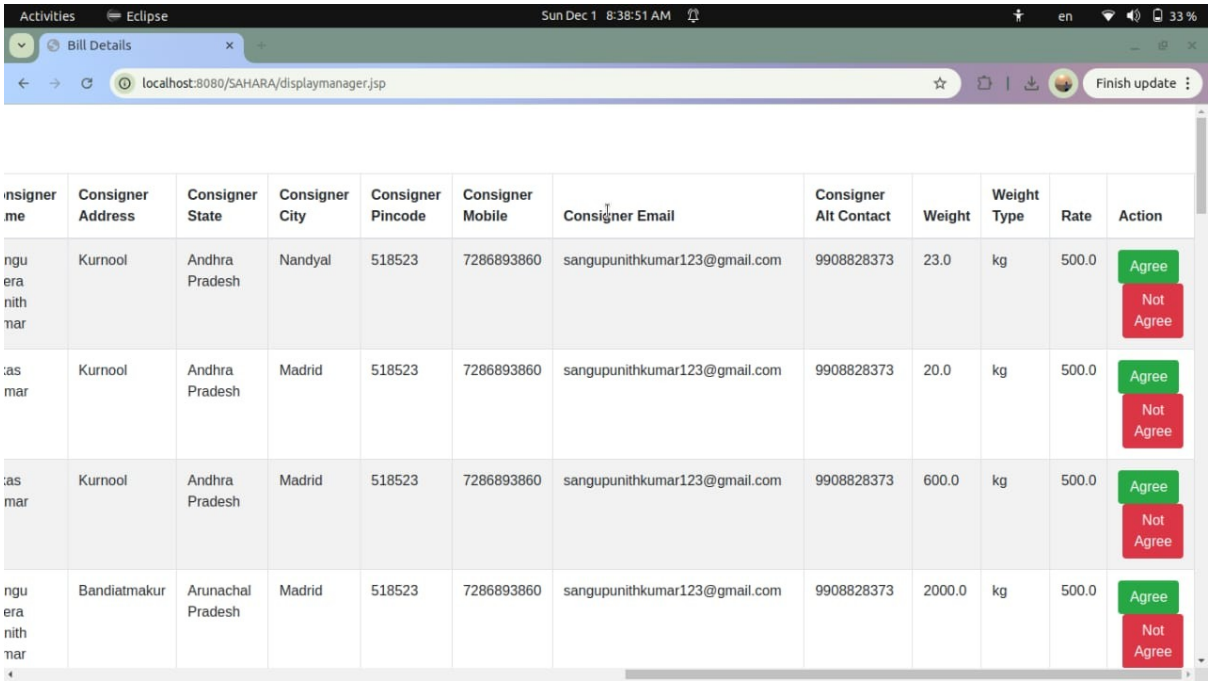

nsigner me	Consigner Address	Consigner State	Consigner City	Consigner Pincode	Consigner Mobile	Consigner Email	Consigner Alt Contact	Weight	Weight Type	Rate	Action
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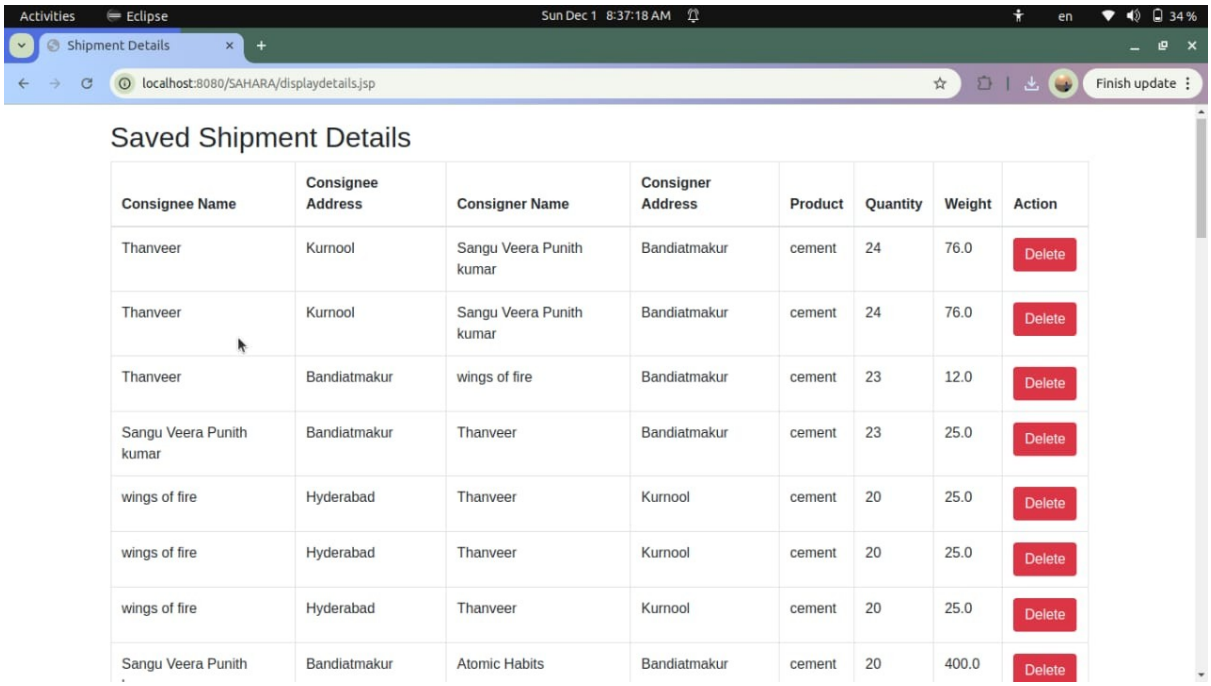
as mar	Kurnool	Andhra Pradesh	Madrid	518523	7286893860	sangupunithkumar123@gmail.com	9908828373	20.0	kg	500.0	Agree Not Agree
as mar	Kurnool	Andhra Pradesh	Madrid	518523	7286893860	sangupunithkumar123@gmail.com	9908828373	600.0	kg	500.0	Agree Not Agree
ngu era nith mar	Bandiatmakur	Arunachal Pradesh	Madrid	518523	7286893860	sangupunithkumar123@gmail.com	9908828373	2000.0	kg	500.0	Agree Not Agree



Saved Shipment Details

Consignee Name	Consignee Address	Consigner Name	Consigner Address	Product	Quantity	Weight	Action
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Thanveer	Kurnool	Sangu Veera Punith kumar	Bandiatmakur	cement	24	76.0	Delete
Thanveer	Bandiatmakur	wings of fire	Bandiatmakur	cement	23	12.0	Delete
Sangu Veera Punith kumar	Bandiatmakur	Thanveer	Bandiatmakur	cement	23	25.0	Delete
wings of fire	Hyderabad	Thanveer	Kurnool	cement	20	25.0	Delete
wings of fire	Hyderabad	Thanveer	Kurnool	cement	20	25.0	Delete
wings of fire	Hyderabad	Thanveer	Kurnool	cement	20	25.0	Delete
Sangu Veera Punith	Bandiatmakur	Atomic Habits	Bandiatmakur	cement	20	400.0	Delete

Overall Description

The Transport Company Computerization (TCC) software is a comprehensive system designed to automate and streamline the operations of a transport company. The project employs Java, JDBC, and Servlets to provide a robust and efficient platform for managing consignments, trucks, and financial transactions. This software aims to enhance productivity, reduce manual effort, and optimize resource utilization for the company.

The system allows seamless tracking and management of consignments from the sender to the receiver, ensuring efficient scheduling of trucks and prompt billing. By integrating a database using JDBC, the system maintains real-time records of consignments, trucks, and revenues, enabling managers to make informed decisions. Servlets are utilized to manage dynamic web interactions, providing an intuitive and responsive interface for users.

Conclusion

The TCC software successfully addresses the complex operational requirements of the transport company by automating key processes and providing real-time insights. The use of Java with JDBC ensures a robust backend database interaction, while Servlets facilitate dynamic and user-friendly web applications. This combination enables seamless integration of data storage, retrieval, and processing capabilities.

By implementing this project, the company can achieve significant improvements in operational efficiency, cost management, and customer satisfaction. Additionally, the system equips the management team with valuable analytics for strategic planning, such as identifying the need for additional trucks or optimizing branch performance. Overall, this project demonstrates how modern technology can be leveraged to transform traditional business operations into an efficient and scalable system.