User Requirement Document(URD)

for

Transport Company Computerization(TCC)

TEAM VENUS

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TABLE OF CONTENTS :

6. **UC-TCC-PB-006:** Pays Bill
7. **UC-TCC-PQ-007:** Post Query
8. **UC-TCC-GF-008:** Give Review/Feedback
9. **UC-TCC-LS-009:** Login/Sign Up (Branch Manager)
10. **UC-TCC-MS-010:** Manage Staff
11. **UC-TCC-VTS-011:** View Truck Status
12. **UC-TCC-CIT-012:** Check Idle Time
13. **UC-TCC-CWP-013:** Check Waiting Period
14. **UC-TCC-PQ-014:** Post Query (Branch Manager)
15. **UC-TCC-LS-015:** Login/Sign Up (Branch Staff)
16. **UC-TCC-VBC-016:** View Booking Consignment
17. **UC-TCC-ABC-017:** Approve Booking Consignment
18. **UC-TCC-SB-018:** Send Bills
19. **UC-TCC-MS-019:** Manage Schedule
20. **UC-TCC-GR-020:** Generate Report
21. **UC-TCC-SQ-021:** Solve Queries (Branch Staff)
22. **UC-TCC-L-022:** Login (Driver)
23. **UC-TCC-VC-023:** View Consignment
24. **UC-TCC-UDS-024:** Update Delivery Status
25. **UC-TCC-CTC-025:** Check Truck Condition
26. **UC-TCC-RBO-026:** Reports to Branch Office
27. **UC-TCC-MO-027:** Monitor Operations
28. **UC-TCC-PF-028:** Plan Future of TCC
29. **UC-TCC-SQ-029:** Solve Queries (Head Office)
30. **UC-TCC-MAR-030:** Make Annual Reports
31. **UC-TCC-VQ-031:** View Queries

NON-FUNCTIONAL REQUIREMENTS:

RELIABILITY:
USABILITY:
AVAILABILITY:
ACCESSIBILITY:
PERFORMANCE:
SECURITY:
PLATFORM COMPATIBILITY:

Introduction:

This document outlines the requirements for the Transport Company Computerization (TCC) software. The TCC software is designed to streamline and automate various bookkeeping activities related to the operations of a transport company. By using the TCC software, the company can efficiently manage consignments, track trucks, and optimize transportation operations.

Purpose:

The purpose of this document is to gather and detail the requirements necessary for implementing the Transport Company Computerization (TCC) software. It also highlights key features, the product vision, and the overall scope of the software. The TCC software aims to automate the process of managing consignments, tracking truck usage, and generating necessary reports to enhance operational efficiency.

Intended Audience:

The intended audience includes the management and operational staff of the transport company who will be utilizing the TCC software to manage consignments and truck logistics. Additionally, IT professionals responsible for implementing and maintaining the software are also part of the intended audience.

Stakeholders:

- **Client:** Transport Company – [Insert Client Name Here]
- **Users:** Managers and operational staff of the transport company who will interact with the TCC software.

Product Vision

Vision Statement:

The vision is to develop a user-friendly and easily accessible Transport Company Computerization (TCC) software that automates and enhances the management of consignments and truck logistics. The software will provide real-time solutions for tracking consignments, allocating trucks, and generating reports.

Technologies:

The TCC software will be developed using the following technologies:

- **Frontend:** HTML,CSS,BOOTSTRAP,JAVA SCRIPT

- **Backend:** JAVA DATABASE CONNECTIVITY(JDBC), MySQL,APACHE

System in Context:

The TCC software is a multi-user system that provides comprehensive solutions for the transport company's logistics management. It allows the company to input consignment details, calculate transport charges, and manage truck allocations automatically. The system also provides real-time status updates for consignments and trucks, allowing managers to make informed decisions about fleet management and future planning.

Key features of the system include:

- **Consignment Management:** Input consignment details such as volume, destination, and sender/receiver information.
- **Automated Truck Allocation:** Automatically assign trucks to consignments when the total volume for a destination reaches 500 cubic meters.
- **Real-Time Tracking:** Provide real-time status updates for trucks and consignments.
- **Reporting:** Generate detailed reports on truck usage, consignment volumes, revenue, and average waiting and idle times.

This document serves as the foundation for the development and implementation of the TCC software, ensuring that all requirements are met to improve the transport company's operational efficiency.

CONTEXT DIAGRAM
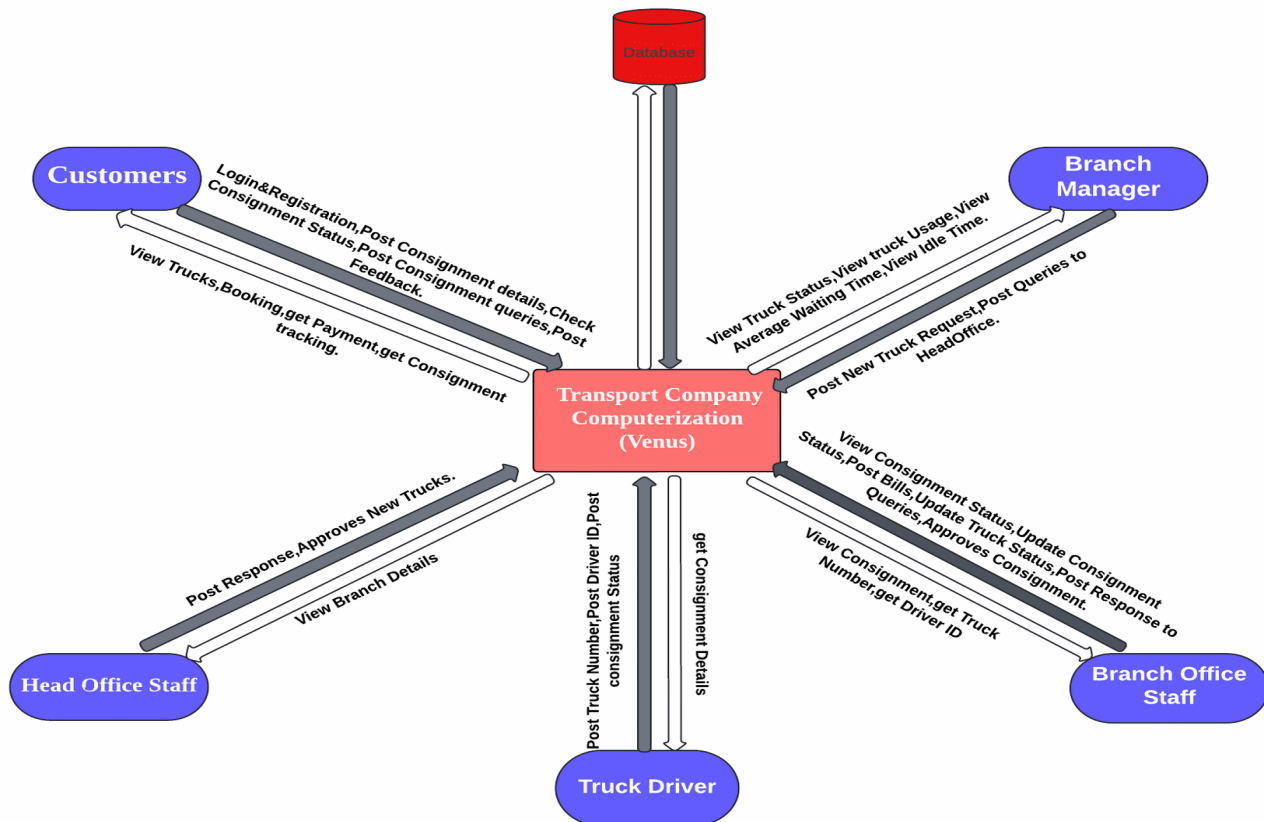
User Characteristics:

The users of the TCC software are typical computer users with a basic understanding of internet usage. They are familiar with standard web-based interfaces and can easily navigate through the software's features to manage consignments, track truck status, and generate necessary reports.

Constraints:

There are no specific constraints identified at this time for the development and implementation of the TCC software.

SYSTEM WIDE REQUIREMENTS(Received):-

Actors :

1. **Customer**

   - **Role:** Engages with the transport company's services.
   - **Work:**
     - **Login/Sign Up:** Access the system by creating an account or logging into an existing one.

- **View Truck:** Browse available trucks for consignment purposes.
- **Post Consignment:** Submit a request for transporting goods.
- **View Consignment Status:** Check the current status of their consignment.
- **Estimation of Truck:** Get cost estimates based on truck size.
- **Pays Bill:** Complete payment for the services rendered.
- **Post Query:** Submit any queries regarding the service.
- **Give Review/Feedback:** Provide feedback on the services.

2. **Driver**

- **Role:** Responsible for the transportation of consignments.
- **Work:**
  - **Login:** Access their account to manage deliveries.
  - **View Consignment:** Check details of consignments assigned.
  - **Update Delivery Status:** Mark the status of the delivery.
  - **Check Truck Condition:** Monitor and update the condition of the truck.
  - **Reports to Branch Office:** Submit reports and updates to the branch office.

3. **Branch Staff**

- **Role:** Manages day-to-day branch operations.
- **Work:**
  - **Login/Sign Up:** Access their accounts to manage operations.
  - **View Booking Consignment:** View and manage consignment bookings.
  - **Approve Booking Consignment:** Approve or reject consignment bookings.
  - **Send Bills:** Issue bills for consignments.
  - **Manage Schedule:** Organize and manage delivery schedules.
  - **Generate Report:** Produce reports on branch activities.
  - **Solve Queries:** Address and resolve customer or driver queries.

4. **Branch Manager**

- **Role:** Oversees the overall functioning of the branch.
- **Work:**
  - **Manage Staff:** Supervise and manage branch staff.
  - **View Truck Status:** Monitor the status and availability of trucks.
  - **Check Idle Time:** Assess the idle time of trucks to improve efficiency.
  - **Check Waiting Period:** Monitor the waiting time for trucks.
  - **Post Query:** Submit queries to higher management if needed.

5. **Head Office**

- **Role:** Manages and monitors the operations across all branches.
- **Work:**
  - **Monitor Operations:** Oversee the functioning of all branches.

- **Plan Future of TCC:** Make strategic decisions for the company's growth, including adding or removing trucks.
- **Solve Queries:** Address and resolve escalated queries from branches.
- **Make Annual Reports:** Compile and review annual reports for the company's performance.
- **View Queries: Track and monitor all queries raised by branches or customers.**

Events :

1. **Login/Sign Up**

   - Customers, drivers, and branch staff authenticate themselves and access their respective dashboards in the system.

2. **View Truck**

   - Allows customers to browse available trucks, and branch managers monitor truck availability and status.

3. **Post Consignment**

   - Customers submit a request for transportation services.

4. **View Consignment Status**

   - Customers and drivers can check the progress of a consignment.

5. **Estimation of Truck**

   - Customers can estimate the cost of service based on the truck size.

6. **Pays Bill**

   - Customers process payments for consignment services.

7. **Post Query**

   - Customers, branch managers, and head office staff can submit queries regarding services or operations.

8. **Give Review/Feedback**

   - Customers provide feedback on the services they have received.

9. **View Consignment**

   - Drivers and branch staff access details of consignments.

10. **Update Delivery Status**

    - Drivers update the current status of a consignment during and after delivery.

11. **Check Truck Condition**

    - Drivers assess and report the condition of the truck they are operating.

12. **Reports to Branch Office**

    - Drivers submit operational reports to the branch office.

13. **View Booking Consignment**

- Branch staff view and manage consignment bookings.

14. **Approve Booking Consignment**

   - Branch staff approve or reject consignment requests.

15. **Send Bills**

   - Branch staff issue billing statements to customers.

16. **Manage Schedule**

   - Branch staff schedule and assign consignments and trucks.

17. **Generate Report**

   - Branch staff create operational and financial reports for the branch.

18. **Solve Queries**

   - Branch staff and head office staff address and resolve customer or internal queries.

19. **Manage Staff**

   - Branch managers oversee and manage branch employees.

20. **View Truck Status**

   - Branch managers monitor the availability and status of trucks at the branch.

21. **Check Idle Time**

   - Branch managers review the non-operational time of trucks to optimize their usage.

22. **Check Waiting Period**

   - Branch managers monitor the time trucks spend waiting for assignments.

23. **Monitor Operations**

   - The head office centrally monitors branch activities and performance.

24. **Plan Future of TCC**

   - The head office conducts strategic planning, including decisions on fleet management and branch expansion.

25. **Make Annual Reports**

   - The head office compiles yearly performance and financial reports.

26. **View Queries**

   - The head office tracks and manages queries from branches or customers.

USER VISIBLE EVENTS:-

Sl.No	Actor	Action	Object	Frequency	Arrival Pattern	Response
1	Customer	Login/Sign Up	Account	High	Upon accessing the system	Directs to main dashboard after successful login
2	Customer	View Truck	Trucks	Medium	After logging in and selecting trucks option	Displays list of available trucks
3	Customer	Post Consignment	Consignment	Medium	After selecting a truck	Submits request and awaits approval
4	Customer	View Consignment Status	Consignment Status	High	Multiple times during consignment lifecycle	Displays current consignment status
5	Customer	Estimation of Truck	Cost Estimate	Medium	After entering truck parameters	Displays cost estimate based on truck parameters
6	Customer	Pays Bill	Bill	High	After service completion	Completes payment and generates receipt
7	Customer	Post Query	Query	Low	When a query arises	Submits query for response
8	Customer	Give Review/Feedback	Feedback	Medium	After service completion	Records and stores feedback
9	Branch Manager	Login/Sign Up	Account	High	Upon accessing the system	Directs to main dashboard after successful login
10	Branch Manager	Manage Staff	Staff	High	Daily, during branch operations	Records and updates staff details
11	Branch	View Truck	Truck Status	Medium	When	Displays truck

Sl.No	Actor	Action	Object	Frequency	Arrival Pattern	Response
	Manager	Status			monitoring truck availability	status and availability
12	Branch Manager	Check Idle Time	Idle Time	Medium	As needed to optimize efficiency	Displays truck idle time data
13	Branch Manager	Check Waiting Period	Waiting Period	Medium	As needed during truck scheduling	Displays truck waiting times
14	Branch Manager	Post Query	Query	Low	When a query arises	Submits query for response
15	Branch Staff	Login/Sign Up	Account	High	Upon accessing the system	Directs to main dashboard after successful login
16	Branch Staff	View Booking Consignment	Consignment	Medium	Daily, during branch operations	Displays consignment booking details
17	Branch Staff	Approve Booking Consignment	Consignment	Medium	After reviewing consignment details	Updates consignment status
18	Branch Staff	Send Bills	Bill	High	After consignment approval	Generates and sends the bill to the customer
19	Branch Staff	Manage Schedule	Schedule	High	Daily, during delivery planning	Updates delivery schedule
20	Branch Staff	Generate Report	Report	Medium	Weekly or monthly	Generates and makes the report available for review
21	Branch Staff	Solve Queries	Query	High	As queries are received	Resolves query and notifies customer/driver

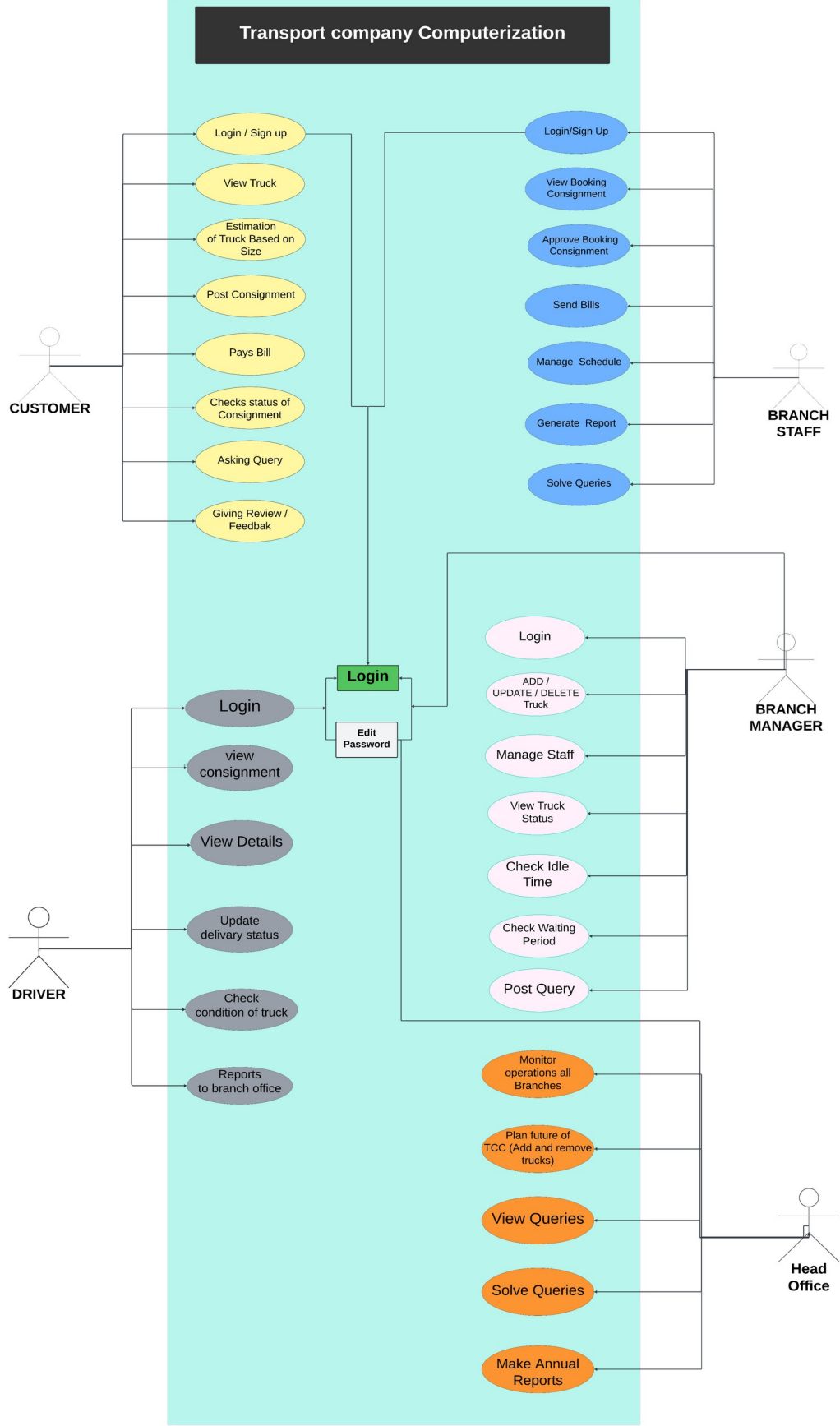| Sl.No	Actor	Action	Object	Frequency	Arrival Pattern	Response
22	Driver	Login	Account	High	Upon accessing the system	Directs to main dashboard after successful login
23	Driver	View Consignment	Consignment	Medium	After logging in and accessing consignment section	Displays consignment details
24	Driver	Update Delivery Status	Delivery Status	High	After each delivery milestone	Updates delivery status
25	Driver	Check Truck Condition	Truck Condition	High	Daily, during pre-trip inspection	Updates truck condition
26	Driver	Reports to Branch Office	Report	Medium	As needed after completing tasks	Submits report to branch office
27	Head Office	Monitor Operations	Operations Data	High	Daily, during operational review	Displays data for review
28	Head Office	Plan Future of TCC	Strategic Plans	Low	Annually or during strategic meetings	Updates system with new strategic plans
29	Head Office	Solve Queries	Query	Medium	As needed when queries are escalated	Resolves query and notifies branch
30	Head Office	Make Annual Reports	Annual Report	Low	Annually, after data collection	Generates and reviews the annual report
31	Head Office	View Queries	Queries	Medium	During regular review sessions	Displays queries for review and action

FUNCTIONAL REQUIREMENTS:-

USE-CASE OVERVIEW:-

Use Case ID	Actor	Use Case Name	Priority	Stability	Verifiability
UC001	Customer	Login/Sign Up	High	Stable	Verifiable
UC002	Customer	View Truck	Medium	Stable	Verifiable
UC003	Customer	Post Consignment	Medium	Stable	Verifiable
UC004	Customer	View Consignment Status	High	Stable	Verifiable
UC005	Customer	Estimation of Truck	Medium	Stable	Verifiable
UC006	Customer	Pays Bill	High	Stable	Verifiable
UC007	Customer	Post Query	Low	Stable	Verifiable
UC008	Customer	Give Review/Feedback	Medium	Stable	Verifiable
UC009	Branch Manager	Login/Sign Up	High	Stable	Verifiable
UC010	Branch Manager	Manage Staff	High	Stable	Verifiable
UC011	Branch Manager	View Truck Status	Medium	Stable	Verifiable
UC012	Branch Manager	Check Idle Time	Medium	Stable	Verifiable
UC013	Branch Manager	Check Waiting Period	Medium	Stable	Verifiable
UC014	Branch Manager	Post Query	Low	Stable	Verifiable
UC015	Branch Staff	Login/Sign Up	High	Stable	Verifiable
UC016	Branch Staff	View Booking Consignment	Medium	Stable	Verifiable
UC017	Branch Staff	Approve Booking Consignment	Medium	Stable	Verifiable
UC018	Branch Staff	Send Bills	High	Stable	Verifiable
UC019	Branch Staff	Manage Schedule	High	Stable	Verifiable

Use Case ID	Actor	Use Case Name	Priority	Stability	Verifiability
UC020	Branch Staff	Generate Report	Medium	Stable	Verifiable
UC021	Branch Staff	Solve Queries	High	Stable	Verifiable
UC022	Driver	Login	High	Stable	Verifiable
UC023	Driver	View Consignment	Medium	Stable	Verifiable
UC024	Driver	Update Delivery Status	High	Stable	Verifiable
UC025	Driver	Check Truck Condition	High	Stable	Verifiable
UC026	Driver	Reports to Branch Office	Medium	Stable	Verifiable
UC027	Head Office	Monitor Operations	High	Stable	Verifiable
UC028	Head Office	Plan Future of TCC	Low	Stable	Verifiable
UC029	Head Office	Solve Queries	Medium	Stable	Verifiable
UC030	Head Office	Make Annual Reports	Low	Stable	Verifiable
UC031	Head Office	View Queries	Medium	Stable	Verifiable

Use Case Diagram :

Transport company Computerization

CUSTOMER
- Login / Sign up
- View Truck
- Estimation of Truck Based on Size
- Post Consignment
- Pays Bill
- Checks status of Consignment
- Asking Query
- Giving Review / Feedbak

BRANCH STAFF
- Login/Sign Up
- View Booking Consignment
- Approve Booking Consignment
- Send Bills
- Manage Schedule
- Generate Report
- Solve Queries

Login

Edit Password

DRIVER
- Login
- view consignment
- View Details
- Update delivery status
- Check condition of truck
- Reports to branch office

BRANCH MANAGER
- Login
- ADD / UPDATE / DELETE Truck
- Manage Staff
- View Truck Status
- Check Idle Time
- Check Waiting Period
- Post Query

Head Office
- Monitor operations all Branches
- Plan future of TCC (Add and remove trucks)
- View Queries
- Solve Queries
- Make Annual Reports

Use Case Specifications :

Use Case Specification for Customer :

Use Case 1: Login/Sign Up

Heading	Details
Use Case ID	UC-TCC-LS-001
Use Case	Login/Sign Up
Actors	Customer
Description	Customer creates a new account or logs into an existing one to access services.
Preconditions	Customer has an internet connection and device to access the system.
Postconditions	Customer is successfully logged in or registered and directed to the main dashboard.
Main Flow	1. Customer selects Login/Sign Up. 2. Enters credentials or registration details. 3. System validates and grants access.
Alternate Flow	1. Incorrect credentials. 2. System displays an error and prompts retry.
Frequency of Use	High
Occurrence	Multiple times daily

Use Case 2: View Truck

Heading	Details
Use Case ID	UC-TCC-VT-002
Use Case	View Truck
Actors	Customer
Description	Customer browses available trucks for consignment purposes.
Preconditions	Customer is logged into the system.
Postconditions	Truck details are displayed with availability and specifications.
Main Flow	1. Customer navigates to the truck section. 2. System displays a list of available trucks. 3. Customer views details of selected trucks.
Alternate Flow	1. No trucks available. 2. System displays a message indicating no availability.
Frequency of Use	Medium
Occurrence	As needed

Use Case 3: Post Consignment

Heading	Details
Use Case ID	UC-TCC-PC-003
Use Case	Post Consignment
Actors	Customer
Description	Customer submits a request for transporting goods.
Preconditions	Customer is logged into the system and has selected a truck.
Postconditions	Consignment request is submitted and awaits approval.
Main Flow	1. Customer navigates to the consignment submission page. 2. Fills in consignment details. 3. Submits the consignment request.
Alternate Flow	1. Incomplete consignment details. 2. System prompts to complete required fields.
Frequency of Use	Medium
Occurrence	As needed

Use Case 4: View Consignment Status

Heading	Details
Use Case ID	UC-TCC-VCS-004
Use Case	View Consignment Status
Actors	Customer
Description	Customer checks the current status of their consignment.
Preconditions	Customer has a consignment in progress and is logged in.
Postconditions	Consignment status is displayed with current updates.
Main Flow	1. Customer navigates to the consignment status page. 2. System retrieves and displays current status.
Alternate Flow	1. No consignment found. 2. System displays a message indicating no active consignments.
Frequency of Use	High
Occurrence	Multiple times during consignment

Use Case 5: Estimation of Truck

Heading	Details
Use Case ID	UC-TCC-ET-005
Use Case	Estimation of Truck
Actors	Customer

Heading	Details
Description	Customer gets cost estimates based on truck size and other factors.
Preconditions	Customer is logged into the system and has selected truck parameters.
Postconditions	Cost estimate is displayed based on the selected truck size and other factors.
Main Flow	1. Customer navigates to the estimation page. 2. Selects truck size and other factors. 3. System calculates and displays the estimate.
Alternate Flow	1. Missing parameters. 2. System prompts to complete required fields for estimation.
Frequency of Use	Medium
Occurrence	As needed

Use Case 6: Pays Bill

Heading	Details
Use Case ID	UC-TCC-PB-006
Use Case	Pays Bill
Actors	Customer
Description	Customer completes payment for the services rendered.
Preconditions	Customer has received a bill and is logged in.
Postconditions	Payment is successfully completed, and a receipt is generated.
Main Flow	1. Customer navigates to the payment page. 2. Reviews bill details. 3. Completes payment. 4. System generates a receipt.
Alternate Flow	1. Payment failed. 2. System displays an error and prompts retry.
Frequency of Use	High
Occurrence	After service completion

Use Case 7: Post Query

Heading	Details
Use Case ID	UC-TCC-PQ-007
Use Case	Post Query
Actors	Customer
Description	Customer submits any queries regarding the service.
Preconditions	Customer is logged into the system and has a query.

Heading	Details
Postconditions	Query is submitted and awaiting response.
Main Flow	1. Customer navigates to the query submission page. 2. Enters query details. 3. Submits the query. 4. System records and forwards the query.
Alternate Flow	No alternate flow.
Frequency of Use	Low
Occurrence	As needed

Use Case 8: Give Review/Feedback

Heading	Details
Use Case ID	UC-TCC-GF-008
Use Case	Give Review/Feedback
Actors	Customer
Description	Customer provides feedback on the services rendered.
Preconditions	Customer has completed a service and is logged in.
Postconditions	Feedback is submitted and recorded in the system.
Main Flow	1. Customer navigates to the feedback page. 2. Enters review details. 3. Submits the feedback. 4. System records the feedback.
Alternate Flow	No alternate flow.
Frequency of Use	Medium
Occurrence	After service completion

Use Case Specification for Branch Manager :

Use Case 9: Login/Sign Up

Heading	Details
Use Case ID	UC-TCC-LS-009
Use Case	Login/Sign Up
Actors	Branch Manager
Description	Branch Manager logs into the system or signs up to manage branch operations.
Preconditions	Branch Manager has an internet connection and device to access the system.
Postconditions	Branch Manager is successfully logged in or registered and directed to the main dashboard.

Heading	Details
Main Flow	1. Branch Manager selects Login/Sign Up. 2. Enters credentials or registration details. 3. System validates and grants access.
Alternate Flow	1. Incorrect credentials. 2. System displays an error and prompts retry.
Frequency of Use	High
Occurrence	Multiple times daily

Use Case 10: Manage Staff

Heading	Details
Use Case ID	UC-TCC-MS-010
Use Case	Manage Staff
Actors	Branch Manager
Description	Branch Manager supervises and manages branch staff.
Preconditions	Branch Manager is logged into the system.
Postconditions	Staff management actions are recorded.
Main Flow	1. Branch Manager navigates to staff management. 2. Selects staff member. 3. Updates details or assignments. 4. System records updates.
Alternate Flow	No alternate flow.
Frequency of Use	High
Occurrence	Daily

Use Case 11: View Truck Status

Heading	Details
Use Case ID	UC-TCC-VTS-011
Use Case	View Truck Status
Actors	Branch Manager
Description	Branch Manager monitors the status and availability of trucks.
Preconditions	Branch Manager is logged into the system.
Postconditions	Truck status is displayed with details.
Main Flow	1. Branch Manager navigates to truck status page. 2. Selects truck. 3. System displays status and availability.
Alternate Flow	No alternate flow.
Frequency of	Medium

Heading	Details
Use	
Occurrence	Daily

Use Case 12: Check Idle Time

Heading	Details
Use Case ID	UC-TCC-CIT-012
Use Case	Check Idle Time
Actors	Branch Manager
Description	Branch Manager assesses the idle time of trucks to improve efficiency.
Preconditions	Branch Manager is logged into the system.
Postconditions	Truck idle time is displayed with details.
Main Flow	1. Branch Manager navigates to idle time page. 2. System displays idle time data for each truck.
Alternate Flow	No alternate flow.
Frequency of Use	Medium
Occurrence	As needed

Use Case 13: Check Waiting Period

Heading	Details
Use Case ID	UC-TCC-CWP-013
Use Case	Check Waiting Period
Actors	Branch Manager
Description	Branch Manager monitors the waiting time for trucks.
Preconditions	Branch Manager is logged into the system.
Postconditions	Waiting period data is displayed with details.
Main Flow	1. Branch Manager navigates to the waiting period page. 2. System displays waiting times for trucks.
Alternate Flow	No alternate flow.
Frequency of Use	Medium
Occurrence	As needed

Use Case 14: Post Query

Heading	Details
Use Case ID	UC-TCC-PQ-014

Heading	Details
Use Case	Post Query
Actors	Branch Manager
Description	Branch Manager submits queries to higher management if needed.
Preconditions	Branch Manager is logged into the system and has a query.
Postconditions	Query is submitted and awaiting response.
Main Flow	1. Branch Manager navigates to the query submission page. 2. Enters query details. 3. Submits the query. 4. System records and forwards the query.
Alternate Flow	No alternate flow.
Frequency of Use	Low
Occurrence	As needed

Use Case Specification for Branch Staff :

Use Case 15: Login/Sign Up

Heading	Details
Use Case ID	UC-TCC-LS-015
Use Case	Login/Sign Up
Actors	Branch Staff
Description	Branch Staff logs into the system or signs up to manage day-to-day branch operations.
Preconditions	Branch Staff has an internet connection and device to access the system.
Postconditions	Branch Staff is successfully logged in or registered and directed to the main dashboard.
Main Flow	1. Branch Staff selects Login/Sign Up. 2. Enters credentials or registration details. 3. System validates and grants access.
Alternate Flow	1. Incorrect credentials. 2. System displays an error and prompts retry.
Frequency of Use	High
Occurrence	Multiple times daily

Use Case 16: View Booking Consignment

Heading	Details
Use Case ID	UC-TCC-VBC-016
Use Case	View Booking Consignment

Heading	Details
Actors	Branch Staff
Description	Branch Staff views and manages consignment bookings.
Preconditions	Branch Staff is logged into the system.
Postconditions	Booking details are displayed with options for further actions.
Main Flow	1. Branch Staff navigates to the booking consignment page. 2. System displays consignment bookings. 3. Branch Staff reviews details.
Alternate Flow	No alternate flow.
Frequency of Use	Medium
Occurrence	Daily

Use Case 17: Approve Booking Consignment

Heading	Details
Use Case ID	UC-TCC-ABC-017
Use Case	Approve Booking Consignment
Actors	Branch Staff
Description	Branch Staff approves or rejects consignment bookings.
Preconditions	Branch Staff is logged into the system and has viewed a consignment booking.
Postconditions	Booking status is updated based on the decision.
Main Flow	1. Branch Staff reviews consignment booking. 2. Approves or rejects booking. 3. System updates booking status accordingly.
Alternate Flow	No alternate flow.
Frequency of Use	Medium
Occurrence	Daily

Use Case 18: Send Bills

Heading	Details
Use Case ID	UC-TCC-SB-018
Use Case	Send Bills
Actors	Branch Staff
Description	Branch Staff issues bills for consignments.
Preconditions	Branch Staff is logged into the system and a consignment has been approved.
Postconditions	Bill is generated and sent to the customer.
Main Flow	1. Branch Staff navigates to the billing section.

Heading	Details
	2. Selects consignment. 3. Generates bill. 4. System sends the bill to the customer.
Alternate Flow	1. Billing error occurs. 2. System displays error and prompts retry.
Frequency of Use	High
Occurrence	After consignment approval

Use Case 19: Manage Schedule

Heading	Details
Use Case ID	UC-TCC-MS-019
Use Case	Manage Schedule
Actors	Branch Staff
Description	Branch Staff organizes and manages delivery schedules.
Preconditions	Branch Staff is logged into the system.
Postconditions	Delivery schedule is updated and communicated to drivers.
Main Flow	1. Branch Staff navigates to the scheduling section. 2. Selects consignment. 3. Updates or sets new delivery schedules. 4. System updates and communicates schedule.
Alternate Flow	No alternate flow.
Frequency of Use	High
Occurrence	Daily

Use Case 20: Generate Report

Heading	Details
Use Case ID	UC-TCC-GR-020
Use Case	Generate Report
Actors	Branch Staff
Description	Branch Staff produces reports on branch activities.
Preconditions	Branch Staff is logged into the system.
Postconditions	Report is generated and available for review.
Main Flow	1. Branch Staff navigates to the reports section. 2. Selects report type. 3. System generates the report.
Alternate Flow	1. System error during report generation. 2. System displays error and prompts retry.

Heading	Details
Frequency of Use	Medium
Occurrence	Weekly or Monthly

Use Case 21: Solve Queries

Heading	Details
Use Case ID	UC-TCC-SQ-021
Use Case	Solve Queries
Actors	Branch Staff
Description	Branch Staff addresses and resolves customer or driver queries.
Preconditions	Branch Staff is logged into the system and has received a query.
Postconditions	Query is resolved and the customer/driver is notified.
Main Flow	1. Branch Staff reviews the query. 2. Investigates and resolves the issue. 3. Updates query status. 4. System notifies the customer/driver.
Alternate Flow	No alternate flow.
Frequency of Use	High
Occurrence	Daily

Use Case Specification for Truck driver :

Use Case 22: Login

Heading	Details
Use Case ID	UC-TCC-L-022
Use Case	Login
Actors	Driver
Description	Driver logs into the system to manage deliveries.
Preconditions	Driver has an internet connection and device to access the system.
Postconditions	Driver is successfully logged in and directed to the main dashboard.
Main Flow	1. Driver selects Login. 2. Enters credentials. 3. System validates and grants access.
Alternate Flow	1. Incorrect credentials. 2. System displays an error and prompts retry.
Frequency of Use	High
Occurrence	Multiple times daily

Use Case 23: View Consignment

Heading	Details
Use Case ID	UC-TCC-VC-023
Use Case	View Consignment
Actors	Driver
Description	Driver checks the details of consignments assigned to them.
Preconditions	Driver is logged into the system and has an assigned consignment.
Postconditions	Consignment details are displayed for the driver.
Main Flow	1. Driver navigates to the consignment section. 2. Selects the assigned consignment. 3. System displays consignment details.
Alternate Flow	No alternate flow.
Frequency of Use	Medium
Occurrence	Daily

Use Case 24: Update Delivery Status

Heading	Details
Use Case ID	UC-TCC-UDS-024
Use Case	Update Delivery Status
Actors	Driver
Description	Driver updates the status of the delivery after each key milestone.
Preconditions	Driver is logged into the system and has an ongoing delivery.
Postconditions	Delivery status is updated in the system.
Main Flow	1. Driver navigates to the delivery status section. 2. Updates status based on the current delivery stage. 3. System records the update.
Alternate Flow	No alternate flow.
Frequency of Use	High
Occurrence	After every delivery milestone

Use Case 25: Check Truck Condition

Heading	Details
Use Case ID	UC-TCC-CTC-025
Use Case	Check Truck Condition
Actors	Driver
Description	Driver monitors and updates the condition of the truck.

Heading	Details
Preconditions	Driver is logged into the system and has an assigned truck.
Postconditions	Truck condition is updated in the system.
Main Flow	1. Driver navigates to the truck condition section. 2. Updates the condition of the truck. 3. System records the update.
Alternate Flow	No alternate flow.
Frequency of Use	High
Occurrence	Daily

Use Case 26: Reports to Branch Office

Heading	Details
Use Case ID	UC-TCC-RBO-026
Use Case	Reports to Branch Office
Actors	Driver
Description	Driver submits reports and updates to the branch office.
Preconditions	Driver is logged into the system.
Postconditions	Report is submitted and awaiting review by branch office.
Main Flow	1. Driver navigates to the report submission section. 2. Fills in the report details. 3. Submits the report. 4. System records the submission and notifies the branch office.
Alternate Flow	No alternate flow.
Frequency of Use	Medium
Occurrence	As needed

Use Case Specification for Head Office :

Use Case 27: Monitor Operations

Heading	Details
Use Case ID	UC-TCC-MO-027
Use Case	Monitor Operations
Actors	Head Office
Description	Head Office oversees the functioning of all branches.
Preconditions	Head Office is logged into the system.
Postconditions	Operations data is displayed for review.
Main Flow	1. Head Office navigates to the operations monitoring section. 2. System displays data from all branches. 3. Head Office reviews the data.

Heading	Details
Alternate Flow	No alternate flow.
Frequency of Use	High
Occurrence	Daily

Use Case 28: Plan Future of TCC

Heading	Details
Use Case ID	UC-TCC-PF-028
Use Case	Plan Future of TCC
Actors	Head Office
Description	Head Office makes strategic decisions for the company's growth, including adding or removing trucks.
Preconditions	Head Office is logged into the system and has access to performance data.
Postconditions	Strategic plans are updated and communicated to relevant branches.
Main Flow	1. Head Office reviews performance and market data. 2. Develops strategic plans. 3. Updates the system with new plans. 4. System communicates the changes to relevant branches.
Alternate Flow	No alternate flow.
Frequency of Use	Low
Occurrence	Annually

Use Case 29: Solve Queries

Heading	Details
Use Case ID	UC-TCC-SQ-029
Use Case	Solve Queries
Actors	Head Office
Description	Head Office addresses and resolves escalated queries from branches.
Preconditions	Head Office is logged into the system and has received an escalated query.
Postconditions	Query is resolved and the branch is notified.
Main Flow	1. Head Office reviews the escalated query. 2. Investigates and resolves the issue. 3. Updates query status. 4. System notifies the branch.
Alternate Flow	No alternate flow.
Frequency of Use	Medium

Heading	Details
Occurrence	As needed

Use Case 30: Make Annual Reports

Heading	Details
Use Case ID	UC-TCC-MAR-030
Use Case	Make Annual Reports
Actors	Head Office
Description	Head Office compiles and reviews annual reports for the company's performance.
Preconditions	Head Office is logged into the system and has access to yearly performance data.
Postconditions	Annual report is generated and ready for review.
Main Flow	1. Head Office navigates to the annual reports section. 2. System compiles data for the year. 3. Annual report is generated. 4. Head Office reviews and finalizes the report.
Alternate Flow	1. System error during report generation. 2. System displays error and prompts retry.
Frequency of Use	Low
Occurrence	Annually

Use Case 31: View Queries

Heading	Details
Use Case ID	UC-TCC-VQ-031
Use Case	View Queries
Actors	Head Office
Description	Head Office tracks and monitors all queries raised by branches or customers.
Preconditions	Head Office is logged into the system.
Postconditions	Queries are displayed with details for review and action.
Main Flow	1. Head Office navigates to the query management page. 2. System retrieves and displays all queries. 3. Head Office reviews the queries.
Alternate Flow	1. No queries available. 2. System displays a message indicating no queries to review.
Frequency of Use	Medium
Occurrence	As needed, typically during regular review sessions or when queries are escalated

Non-Functional Requirements :

RELIABILITY

- The system should have a minimum uptime of 99.9% over a year, ensuring consistent availability to users.
- It should be resilient to failures, with automated backup and recovery processes in place to prevent data loss.

USABILITY

- The user interface should be intuitive, with a minimal learning curve for customers, branch managers, staff, and drivers.
- The system should include clear instructions and tooltips to assist users in completing tasks without extensive training.
- It should support multiple languages to cater to a diverse user base.

AVAILABILITY

- The system should be available 24/7, with planned maintenance windows clearly communicated to users in advance.
- In the event of unplanned downtime, the system should have mechanisms in place to restore services within an hour.

ACCESSIBILITY

- The system should comply with international accessibility standards (e.g., WCAG 2.1) to ensure that it is usable by people with disabilities.
- It should support screen readers, keyboard navigation, and other assistive technologies to cater to users with varying needs.

PERFORMANCE

- The system should support up to 1000 concurrent users without performance degradation.
- All actions, such as logging in or posting consignments, should be completed within 2-3 seconds under normal operating conditions.
- The system should be optimized to handle high volumes of transactions efficiently.

SECURITY

- The system must implement robust security measures, including encryption for data at rest and in transit, to protect sensitive information.
- Multi-factor authentication (MFA) should be required for all users accessing the system.
- The system should undergo regular security audits and vulnerability assessments to identify and mitigate risks.

PLATFORM COMPATIBILITY

- The system should be compatible with all major web browsers (e.g., Chrome, Firefox, Safari, Edge) and mobile operating systems (iOS, Android).
- It should be responsive, ensuring a seamless user experience across various devices, including desktops, tablets, and smartphones.
- The system should integrate smoothly with third-party services, such as payment gateways and GPS tracking systems, without requiring extensive customization.