Onion Diagram

Onion Diagram for Domestic Tours And Travel Management System

- **Core:** Domestic Tours And Travel Management System
- **Inner ring (Staff):** Staff, Driver, Vehicle Owner
- **Second ring:** IT Consultant, Client, Sponsor, Subject Matter Expert, Executive
- **Third ring:** Government, Transport Operators, Communities, Private Sector, Utilities And Infastructure Administrators, Supplier, Foreign Tourists, Financial Beneficiaries
- **Outer ring:** Competitors, Public Residents, External Investors

User Stories

1) Client

- As a client I want to login and register to the system online so that it is easy and convenient.
- As a client I want to book/reserve a specific tour online so that I do not want to wait in a queue and be present physically to get the service.
- As a client I want to view the summary of the trips so that I can plan and manage the budgets of the trips.
- As a client I want to change profile information so that I can keep every detail up-to date.

2) Vehicle Owner

- As a vehicle owner I want to login and register to the system so that it enables to manage the vehicles through the system.
- As a vehicle owner I want to add vehicles to the system online so that it is convenient and saves time.
- As a vehicle owner I want to check the status of the vehicles added and the summary so that it will be easy to manage the vehicles.

3) Staff

- As a staff member I want to operate according to the given privileges to the system so that I will be able to do and accomplish the duties assigned.
- As a staff member I want to check salary information and financial summary so that it is easy to manage financial activities.
- As a staff member I want to access and update account information so that it easy to keep details up-to date.

4) Driver

- As a driver I want to login and register to the system online so that it is convenient.
- As a driver I want to check the summary of the trips driven including the profit earned for each trip so that it is easy to manage the financial activities.
- As a driver I want to update the profile details so that it is easy to keep the information up-to date.

Functional Requirements

- **Register** – Client, Vehicle Owner, Driver
- **Login** – Client, Vehicle Owner, Staff, Driver
- **Book/Reserve Tours** – Client
- **Edit Profile Information** – Client, Vehicle Owner, Staff, Driver
- **Add Vehicles** – Vehicle Owner, Staff
- **View Vehicle Status** – Vehicle Owner
- **Generate Salary Report** – Staff, Vehicle Owner, Driver
- **View Trip Summary** – Client, Vehicle Owner
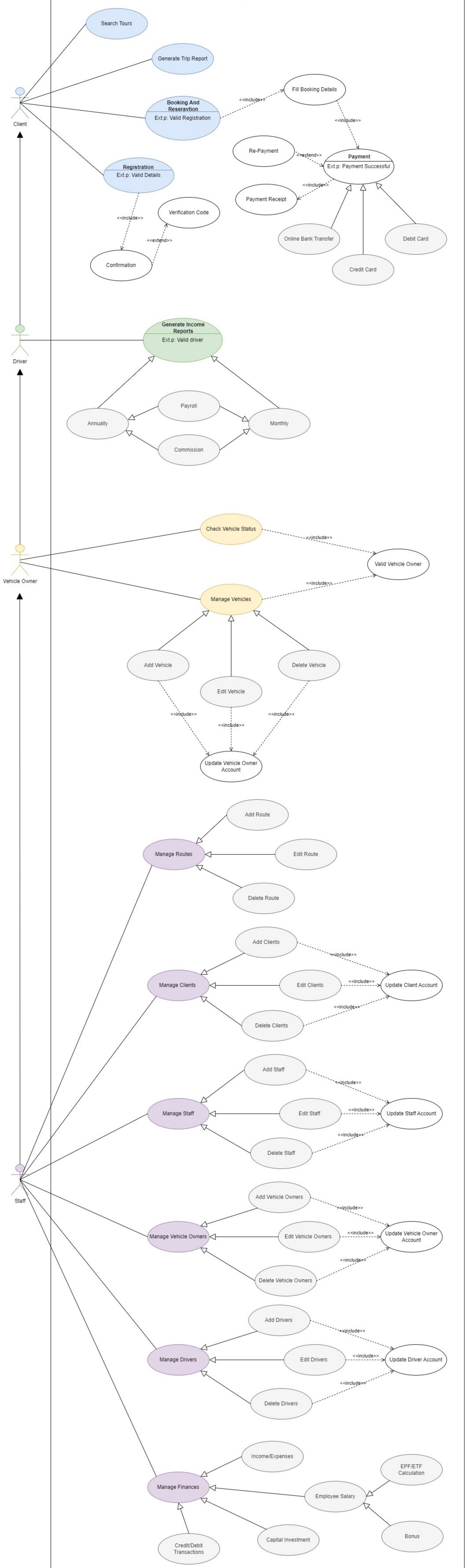- **View/Generate Financial Reports** – Staff

Non-Functional Requirements

- **Client** – Security, Availability, Performance, Usability, Accuracy, Scalability
- **Vehicle Owner** – Performance, Security, Scalability, Reliability
- **Staff** – Security, Scalability, Performance, Reliability
- **Driver** – Availability, Security, Performance, Reliability, Scalability

Technical Requirements

- **System -** Web-Based System
- **Technology** – MERN Stack
- **Security** – SSL Encryption

Domestic Tours And Travel Management System

Use Case Descriptions

Use case name:	Booking And Reservation
Actor:	Client
Goal:	Booking/Reserving a tour or trip.
Overview:	Client is booking/reserving a tour or a trip of a specific travel medium.
Pre-conditions:	Client logged in successfully.
Post-conditions	Client should be registered to the system.
Basic path	1. Customer login to the system using his/her credentials. 2. System validates the login credentials. 3. Client prompted to homepage. 4. Client book/reserve a tour or trip. 5. Prompted to the payment UI.
Alternate path	If client is not registered, he/she should be is prompted to the "Register" UI.
Non-Functional requirements	• Performance • Usability • Scalability

Use case name:	Manage Routes
Actor:	Staff (Employees with the privilege)
Goal:	Manage the routes of tours and trips for various travel mediums.
Overview:	Employees with the privilege of managing the routes have the ability to access and manage routes specific to each travel medium.
Pre-conditions:	Staff employee should login to the system.
Post-conditions:	Staff employee must be registered and be verified.
Basic path:	1. Employee login to the system using his/her credentials. 2. System validates the login credentials. 3. Employee is directed to the dashboard. 4. Employee can manage various routes of each travel medium in the "Manage Routes" page. 5. Add, edit, delete routes. 6. After specific route changes he/she can save the route changes made.
Alternative path:	If the login credentials are invalid, system gives an error message and asks to re-login to the system.
Non-functional requirements:	• Reliability • Maintainability • Scalability • Performance

Use case name:	Manage Clients
Actor:	Staff (Employees with the privilege)
Goal:	Manage the clients in the system.
Overview:	Employees with the privilege of managing the clients have the ability to add, edit and delete clients.
Pre-conditions:	Employee should login to the system.
Post-conditions:	Staff employee must be registered in the system with the set of privileges.
Basic path:	1. Staff employee login into the system. 2. Validate login credentials. 3. Employee redirected to the dashboard. 4. Directing to "Manage Clients" page. 5. Add, edit or delete clients. 6. Verify client details. 7. System update client accounts.
Alternative path:	System prompts an error message if the employee credentials are invalid.
Non-functional requirements:	• Security • Reliability • Usability • Scalability • Performance

Use case name:	Manage Finances
Actor:	Staff (Employees with the privilege)
Goal:	Manage the financial component of the system.
Overview:	Employees are granted the privileges to manage the finances such as income and expenses.
Pre-conditions:	Employee should login to the system.
Post-conditions:	Employee must be a registered employee and with the specific privileges.
Basic path:	1. Staff employee login to the system. 2. Validate login credentials. 3. Employee redirected to the dashboard. 4. Directing to "Manage Finances" page. 5. Make changes to specific financial components. 6. Verify changes made. 7. The system updates the changes.
Alternative path:	System displays an error message if the login is not successful.
Non-functional requirements:	• Security • Usability • Reliability • Scalability • Performance

Use case name:	Manage Vehicles
Actor:	Staff (Employees with the privilege)
Goal:	Manage the vehicles in the system.
Overview:	Employees with the privilege of managing the vehicles have the ability to add, edit and delete vehicles in the system.
Pre-conditions:	Employee should login to the system.
Post-conditions:	Staff employee must be registered in the system with the specific set of privileges to manage vehicles.
Basic path:	1. Employee login to the system. 2. Validate employee login credentials. 3. Employee redirected to dashboard. 4. Directing to "Manage Vehicle" page. 5. Add a new vehicle, edit or delete an existing vehicle. 6. Verify vehicle details. 7. System updates vehicle details.
Alternative path:	System displays an error message if the employee credentials are invalid.
Non-functional requirements:	• Usability • Availability • Performance • Security

Use case name:	Manage Staff
Actor:	Staff (Employees with the privilege)
Goal:	Manage the staff in the system.
Overview:	Staff employees such as administrators have the ability to add, edit or delete existing staff.
Pre-conditions:	Employee should successfully login to the system.
Post-conditions:	Staff employee must be verified and should be registered in the system.
Basic path:	1. Employee login into the system. 2. Validate login credentials. 3. Employee redirected to dashboard. 4. Directing to "Manage Staff" page. 5. Add a new staff member, edit or delete an existing staff member. 6. Verify staff member details. 7. System updates staff employee details.
Alternative path:	System prompts an error message if the employee login credentials are invalid.
Non-functional requirements:	• Security • Scalability • Performance • Reliability

Use case name:	Manage Vehicle Owners
Actor:	Staff (Employees with the privilege)
Goal:	Manage the vehicle owners in the system.
Overview:	Employees with the privilege of managing the vehicle owners have the ability to add, edit or delete existing vehicle owners.
Pre-conditions:	Employee should login to the system.
Post-conditions:	Staff employee must be registered in the system with the required privileges.
Basic path:	1. Employee login to the system. 2. Validate login credentials. 3. Employee redirected to the dashboard. 4. Directing to "Manage Vehicle Owners" page. 5. Add a new vehicle owner, edit or delete existing vehicle owners. 6. Verify vehicle owner details. 7. System updates vehicle owner details.
Alternative path:	System displays an error message if the login is unsuccessful and asks the employee to re-login.
Non-functional requirements:	• Performance • Security • Scalability • Reliability

Use case name:	Manage Drivers
Actor:	Staff (Employees with the privilege)
Goal:	Manage the drivers in the system.
Overview:	Employees with the privileges to manage the drivers has the ability to add new drivers, edit or delete existing drivers in the system.
Pre-conditions:	Employee should login to the system.
Post-conditions:	Employee must be registered to the system with the set of privileges.
Basic path:	1. Employee login into the system. 2. Validate login credentials. 3. Employee redirected to the dashboard. 4. Employee directing to "Manage Drivers" page. 5. Add a new driver, edit or delete existing drivers in the system. 6. Verify driver details. 7. System updates driver details.
Alternative path:	System displays an error message if the login credentials are invalid.
Non-functional requirements:	• Security • Performance • Scalability • Reliability

Use case name:	Generate Trip Report
Actor:	Client
Goal:	Generate reports of the tours and trips.
Overview:	Clients have the ability to generate a report based on the budgets of the travelled tours and trips.
Pre-conditions:	Clients should login to the system.
Post-conditions:	Client should be registered to the system.
Basic path:	1. Client login to the system using his/her credentials. 2. System validates the login credentials. 3. Client redirected to the dashboard. 4. Client generates the trip report.
Alternative path:	System displays an error message if the login credentials are invalid.
Non-functional requirements:	• Performance • Security • Accuracy • Usability

Use case name:	Generate Income Report
Actor:	Driver
Goal:	Generate a report of the income earned.
Overview:	Driver as the ability to generate a report of the incomes earned from the trips.
Pre-conditions:	Driver should login to the system.
Post-conditions:	Driver should be registered to the system.
Basic path:	1. Driver login to the system using his/her credentials. 2. System validates the login credentials. 3. Driver is redirected to the dashboard. 4. Driver generates income report.
Alternative path:	If the driver login credentials are invalid, the system displays an error message.
Non-functional requirements:	- Security - Accuracy - Usability - Performance

Use case name:	Check Vehicle Status
Actor:	Vehicle Owner
Goal:	Checks the status of the vehicle.
Overview:	Vehicle owners have the ability to check the vehicle status, whether if the vehicle is booked for a tour or a trip.
Pre-conditions:	Vehicle owner should login to the system.
Post-conditions:	Vehicle owner must be registered to the system.
Basic path:	1. Vehicle owner login to the system. 2. Validate vehicle owner login credentials. 3. Vehicle owner redirected to the dashboard. 4. Vehicle owner can view the status of each vehicle.
Alternative path:	System displays an error message if the vehicle owner login credentials are invalid.
Non-functional requirements:	• Performance • Security • Scalability • Reliability

Use case name:	Search Tours
Actor:	Client
Goal:	Search tours and trips in the system.
Overview:	Clients have the ability to search specific tours and trips of various travel mediums.
Pre-conditions:	-
Post-conditions:	-
Basic path:	1. Client can search for tours and trips of specific travel mediums.
Alternative path:	-
Non-functional requirements:	- Performance - Usability - Accuracy - Scalability

Use case name:	Registration
Actor:	Client
Goal:	Client register to the system.
Overview:	Client has the ability to register to the system.
Pre-conditions:	-
Post-conditions:	System should validate the client credentials with the existing credentials in the system.
Basic path:	1. Client redirects to "Register" UI after clicking "Sign Up" button. 2. Client fills the details. 3. Client registers to the system.
Alternative path:	If the username already exists in the system, the system displays an error message.
Non-functional requirements:	• Usability • Scalability • Performance • Security