Carpooling Project – Requirements Documentation

1. Actors

- <u>Standard User</u>: Can register (with or without a vehicle), offer trips (if they own a vehicle), search for trips, request seats, manage requests, and view their own trips.
- <u>Visitor</u>: Browses available trips without registering; can register or search trips.
- <u>Administrator</u>: Manages authorized routes and cities, moderates trip offers, and can deactivate user accounts.

2. Use Case List

UC-01: Register / Login – Visitor – Visitor registers an account with personal and optional vehicle details; logs in with email/password.

UC-02: Edit Profile & Vehicle – Standard User – Update personal information and, if applicable, vehicle details.

UC-03: Create Trip – Standard User – Propose a new trip specifying origin, destination, departure date/time, and available seats.

UC-04: View Trip Details – Standard User – View detailed information for a selected trip, including driver, route, seats, and status.

UC-05: Request Seat – Standard User – Submit a request to reserve a seat on a trip offered by another user.

UC-06: Manage Trip Requests – Standard User – Accept or reject seat requests for their trips up until the departure date.

UC-07: View My Trips – Standard User – List all trips created by the user, showing statuses.

UC-08: View My Requests – Standard User – List all seat requests made by the user, with statuses.

UC-09: Update Trip Status – Standard User – Mark a trip as Completed or Aborted, or cancel it before departure.

UC-10: View Notifications – Standard User – Display notifications for new acceptance, rejection, cancellations, etc.

UC-11: Add Authorized Route – Administrator – Create a new route with origin, destination, distance, and average travel time.
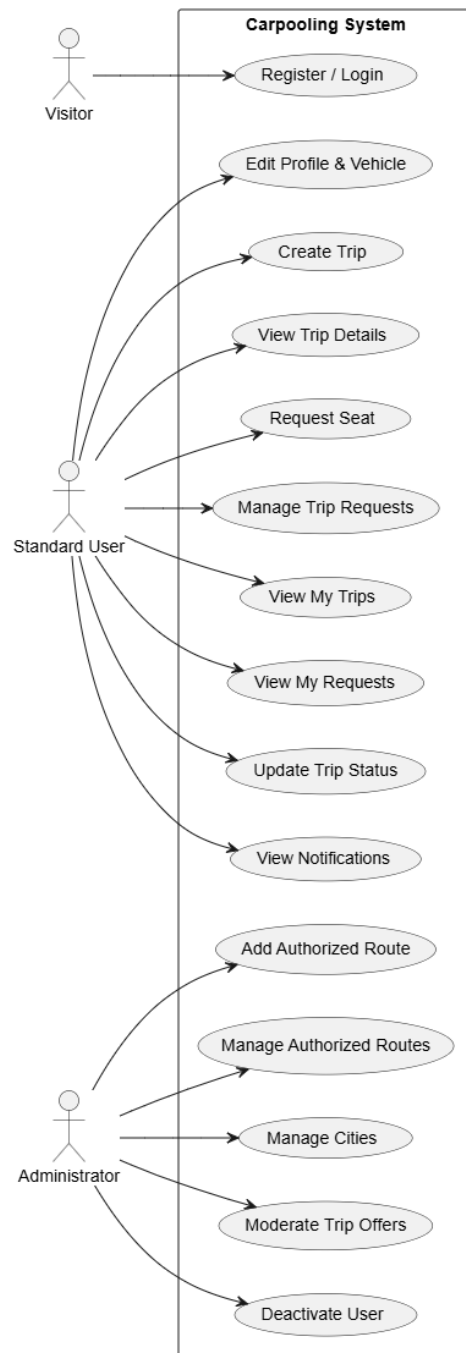
UC-12: Manage Authorized Routes – Administrator – Edit or delete existing authorized routes.

UC-13: Manage Cities – Administrator – Add or update city details (name, address, geocoordinates).

UC-14: Moderate Trip Offers – Administrator – Review and approve or reject trip offers submitted by users.

UC-15: Deactivate User – Administrator – Disable a user account for inappropriate behavior.

3. Use Case Diagram

4. Acceptance Criteria

Each use case must be validated end-to-end through acceptance tests that verify:

- The relevant UI elements or API endpoints are available.
- HTTP responses are correct (status codes, redirects).
- Data is correctly persisted or updated in the database.
- Notifications are generated and delivered where applicable.