

# ClusterGo – Phase 1 Report

Mobile Development Project

November 14, 2025

## 1 App Idea

ClusterGo is a ride-pooling coordination app for people who share the same location, such as university students, office workers, or event attendees. The problem it solves is simple: people leaving the same place often request separate Uber or Careem rides even when heading in similar directions.

The app allows users to post ride intentions (pickup point, destination, time, available seats) and discover others with compatible plans. It does not book rides or handle payments – it just helps users find matches and coordinate themselves. Phase 1 uses a university as the example cluster, but the concept works for any group.

### 1.1 Main Purpose

Reduce duplicate ride requests, save money, and make coordination easier for people in the same cluster.

### 1.2 Target Users

- University students leaving campus
- Employees in the same office complex
- Event or conference attendees

### 1.3 Key Use Cases

- A student checks if anyone is going toward the same area
- A user posts their ride intent and browses matches
- Two people coordinate to share one ride instead of ordering separately

## 2 Development Plan

### 2.1 Phase 1 (This Submission)

**Goal:** Foundation and UI structure

- Set up Flutter project with organized folder structure
- Implement bottom navigation bar with three tabs
- Build three functional screens: Home, Create Ride, Profile
- Apply consistent design (colors, typography, spacing)
- Use placeholder data to demonstrate the interface

## 2.2 Phase 2

**Goal:** Core functionality and data persistence

- Implement creating, editing, and deleting ride intents
- Add local storage (Hive or SharedPreferences)
- Build basic filtering and matching logic

## 2.3 Phase 3

**Goal:** Advanced features and polish

- Implement join requests and ride groups
- Add optional enhancements (map preview, notifications)
- Finalize UI and prepare demonstration

# 3 Main App Modules

## 3.1 Home Screen

Displays a scrollable list of available rides using placeholder data. Each ride card shows the user's name, pickup location, destination, departure time, and available seats. Includes an empty state when no rides exist.

## 3.2 Create Ride Screen

A form where users enter ride details: pickup point, destination, date, time, and number of seats (1-4). Uses Flutter's date/time pickers and a slider for seat selection. The submit button currently shows a placeholder message (functionality comes in Phase 2).

## 3.3 Profile Screen

Shows user information including name, email, university, join date, and preferences (music, talking, AC). Uses a card-based layout with a colored header section.

# 4 Conclusion

Phase 1 successfully delivers the app foundation with clean code structure, three functional screens, smooth navigation, and a consistent design system. The modular architecture makes it easy to add Phase 2 features (data persistence, ride creation, matching logic) without restructuring existing code. ClusterGo is ready to evolve into a practical coordination tool for shared transportation.