

### **Problem Statement/Description:**

I recognize the challenges many of us face when it comes to transportation. Whether it's for commuting between campus and home, running errands around the city, or embarking on road trips with friends, having access to reliable transportation is essential. However, car ownership can be costly and impractical for many students, especially those living on a tight budget or in urban areas where parking is scarce.

To address this issue, I am undertaking the development of a Car Rental Application using Java Spring Boot. The goal of this application is to provide students and other community members with a convenient and affordable solution for accessing vehicles on demand, without the financial burden and commitment of ownership.

The Car Rental Application will offer a user-friendly platform where users can browse through a fleet of available vehicles, including cars, vans, and possibly bikes or scooters, depending on demand. Users will be able to search for vehicles based on their location, desired pickup/drop-off times, and specific vehicle preferences such as size, fuel efficiency, or amenities.

Key features of the application will include a seamless booking process, allowing users to reserve vehicles in advance or on the spot, with options for flexible pickup and return locations. The application will also incorporate pricing transparency, providing users with upfront information about rental rates, fees, and any additional charges such as insurance or mileage fees.

In terms of security and safety, the application will implement measures to verify user identities, validate driver's licenses, and ensure that only authorized individuals can access and operate the rental vehicles. It will also include features for reporting any issues or concerns, such as vehicle damage or mechanical problems, and for providing emergency assistance if needed.

To enhance user experience and streamline operations, the application will integrate with payment gateways for secure online transactions, as well as with GPS tracking systems to monitor vehicle locations and availability in real time. Additionally, the application will offer features for managing reservations, tracking rental history, and providing feedback and ratings for both users and vehicles.

By developing this Car Rental Application, I aim to empower students and members of the university community with a flexible and affordable transportation solution that meets their needs and fits their lifestyle. Through the use of Java Spring Boot technology, I am committed to creating a reliable and scalable application that can adapt to changing demand and continue to serve its users effectively for years to come.