



## Department of Computer Science and Engineering

PES University, Bangalore, India

### UE23CS151B Problem Solving with C (4-0-2-5-5)

Design a CUI based interactive car-pooling (sharing) system which takes into account the points of start of the commuter at that particular point in time to match with the available vehicles during morning hours and similarly the points of stop of the commuter at that particular point in time to match with available vehicles during the evening hours. The application is to be developed in C programming language.

#### **Description:**

The system should have minimum two roles and proper file handling implemented.

#### **Vehicle Owner**

- For a vehicle owner, it should give an option to add/delete his/her vehicles(s) with appropriate parameters.
- The vehicle owner should be able to mention the availability of his/her vehicle for carpooling with the option before 24 hours.
- The vehicle owners should be able to see all upcoming carpooling requests and approve/reject each request.
- He / She should also be able to see a record of past trips.
- There should also be options for forming temporary groups.
- App should calculate and display the cost of the rides made by the commuters.
- Owners should be able to see status of the payment of the rides (paid rides, pending payments).
- Flat Files should be used to store vehicle owners and commuter details. Payment or Transaction details should also be tracked properly.

#### **Commuter**

- For a commuter, he/she should be able to search for available vehicles by mentioning 3 parameters:
  - Trip start location for the morning trip
  - Trip end location for the evening trip
  - Trip date & time
- He / She should be able to send carpooling requests to multiple car owners before 24 hrs.
- He / She should be able to see all upcoming trips with status (approved/rejected).
- Commuters should be displayed different types of vehicles with ride cost per kilo meters (for example Luxury type Vehicle cost can be Rs.12/Km otherwise Rs 8/Km)

- App should calculate and display the cost of the rides made by the commuters.
- There should be an CUI interface for the payment of the rides taken by the commuters
- There should also be options for forming temporary groups with owner's approval.
- Commuters should be able to view area wise vehicle availability
- Commuter who travels with owner of the vehicle should give the feedback about the rides.

**Tools to be used:**

C programming Language (CUI based Implementation)