

1st semester 2019-20; CSF 213(OOP) Mini-Project (Home Assignment)

Project Title: CAB Booking Application **Max Marks:** 30 **Dt:** 16-Oct-2019

Brief Description of the Application:

This Online Cab Booking project deals with an online application designed for booking cabs as per the requirements of the customers at their convenience. The customer side of the application should have the ability to:

- Register as a new user with information such as user name, a user id (unique across the system), phone number, and email id.
- An existing customer should log in into the system with user id and password.
- A customer has options to book a cab by entering details like pick-up point and drop-off point.
- After the customer has requested a cab, the cab driver located nearest to the customer will be assigned to him/her and a booking confirmation containing the details of the driver like name, phone number and rating will be shown to the customer. Also, the estimated fare and an approximate duration of the trip will be displayed to the customer.
- If more than one driver gets matched with a customer, then the driver with the maximum rating will be assigned to the customer.
- A request timed out message will be shown to the customer if there are no drivers available.
- Once the trip is complete the necessary money will be deducted from the customer's wallet. A wallet is associated with a customer that contains money that the customer can use to pay for his/her ride. Here, it is assumed that a customer's digital wallet associated with the cab booking portal is the only acceptable mode of payment.
- There should also be an option to add more money to the digital wallet.
- A customer will have to maintain a minimum of 300 INR for making a booking request. If the balance in the wallet is not sufficient, then the customer will have to first add money to the wallet and then proceed with the booking.

Assume a set of location points which can be either a pickup point or a drop-off point for a customer. Every location point may contain a set of customers C and a set of cab drivers D. The set C and/or D can be empty for a location. Customers and drivers can be located only at these pre-defined location points. Once a trip is booked both the driver and the user will be busy for the duration of the trip and will not participate in any booking. The application should be able to support multiple customers simultaneously.

Guidelines:

1. This is a **group** activity. Each group will have 4 students. Give names to Class reps by 21-Oct-19.
2. Apply OO concepts to specify classes, roles, functionality etc.
3. Maintain a separate hard copy (one or two A4 sheets) for the design details of the system.
4. Final evaluation consists of reviewing the design, Demo and viva.
5. Evaluation dates: between 13th -15th Nov. All team members must be present, and we will ask each one of the team to present a portion of the work as per our wish. So, all must be prepared.
6. Marking strategy: Design-5, Demo of the system-18, Viva-7.
7. Special Note: Plagiarism check will be done. Hence please make sure that your work is original.
8. You may use IDEs.

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