

CSE304, Sec: 01-Project: Proposal

Group Name	Ride Sharing
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Project Description

We want to develop a ride-sharing Bangladesh-based mobile application entitled “**Pouche Dao**” by which one can pick up one or more passengers and reach them out to their desired location. There will be two types of normal users of this application.

1. **Service Provider:** There will be some service providers who will register in our application by providing some information such as service provider name, national ID card or passport number, gender, contact number, email address, home address, birthdate, bkaash or nogod account number, vehicle number (registration number), etc. who will share their ride with the passengers to reach out them their desired location. There will be 3 types of service providers in our application.
 - a. **Bike Rider:** They have to register by giving their bike number, license number associated with their previous details and the registration will be successful after checking the validation of their all given information and documents. They will be able to pick up only one passenger at a time with proper gears such as helmets, raincoats, etc.
 - b. **Car Driver:** They have to register by giving their car number, license number associated with their previous details and the registration will be successful after checking the validation of their all given information and documents. They will be able to pick up more than one passenger at a time and ensure proper safety of the passengers such as fastening the seat belt.
 - c. **Ambulance Driver:** This is the most important and unique part of our application comparing with our other competitors such as Pathao, Uber, Shohoz, etc. that we will also provide ambulance services to our clients. If any ambulance owner or driver wants to register in our app to provide service, one has to ensure 5 major features of an ideal ambulance along with the mentioned details above.
 - i. **Auxiliary heating and air conditioning,**
 - ii. **Climate controlled storage,**
 - iii. **Internet connectivity,**
 - iv. **Portable power,**
 - v. **Space where you want it most.**

- 2. Service Receiver:** There will be some service receivers who will register in our application by providing some information such as user name, national ID card or passport number, gender, contact number, email address, home address, birthdate, bkaash or nogod account number, etc. They will request for their desired services based on their need by giving their destination in our app and by using location and the nearest service provider, the application will send ride request to the service providers. The service request will be sent to all the nearest service provider of the sender and after being accepted by a service provider, he will contact the sender via contact number and reach to the destination. But if no one accept the request, service receiver can request again until it is accepted by any nearest service provider.

After installing the application, the first and foremost task of a user is he has to decide that in which role he wants to use it, whether as a service provider or service receiver. Because the view or required documents will not be the same for a service provider and a receiver. But point to be noted, if anyone wants to use both the features of service provider and receiver, he has to create different account in service provider section and receiver section and can use the same documents. He can switch his preference according to his need. Such as today he has a vehicle and wants to act as service provider, he will login to his service provider section. But the next day, suppose, he does not have the vehicle and needs to go to his office, then he can switch his preference to service receiver and request for ride sharing. Both the sections will be existed in one application which is very interesting. However, after submitting all the required information by the users, account will be successfully created after 24 to maximum 72 hours when proper validation checking will be done by the administration.

Location, Shortest Path and Traffic Handling: One has to enable his/her mobile location to use our application and the application will use google map to find the nearest service provider and to display the possible lower time consuming routes if it finds any unwanted traffic signal. A passenger can check which one is the shortest route or which route has the least traffic. This saves the time of both the parties involved. When any service provider accepts the service request, the live location of him will be displayed to the receiver.

Ride Scheduling: We will try to develop such an interesting feature by which the passengers can schedule a trip as per their preferred time and date just like one set his alarm on a mobile phone. This way, they can easily book a ride in advance so they don't have to suffer during rush hours or peak times. They won't be late to work or an event ever.

Payment: Since we are using the location and google map to find the shortest routes, calculate time and distance from the pick-up point to the destination point, after reaching out to the destination, the service provider will stop the journey and then based on distance and charge/meter distance, the application will display the total charge to both the service provider and receiver end. Payment can be handled by two procedure in our application.

- 1. Cash-on Payment:** If service receiver provide cash to the service provider, the service provider will press "Received Cash" button to complete the payment procedure.
- 2. Online Banking:** Since we have bkaash or nogod account of both service provider and receiver, they can complete the payment procedure by bkaash or nogod as well. After receiving the payment via online banking, the service provider will press "Received Online Payment" button to complete the payment procedure.

Rating: Both the service provider and receiver can rate each other based on their service. If the rating goes below 60, their account will be in red zone that means they have to be more sincere to their providing and

receiving services. But if the rating goes below 40, the account will be permanently banned since we are very concern about proper use of our application and will not compromise at all with user satisfaction.

Report a problem: Both the service provider and receiver can submit any issue or problem they face while using our application. Our technical team will respond as early as possible and provide all the possible solutions.

Key Benefits of the application:

1. **Earning Money:** It will be a great source of income for the unemployed people of Bangladesh as unemployment is one of the biggest problem in our country. The service providers can be unemployed, students, corporate persons, teachers or any other person who can work anytime, anywhere whenever they want and earn a good amount of instant cash based on their number of trips. To explain it the best way possible, we will illustrate it in this way: Assume that you go to the office from the same route every day. If you want to share this ride with another passenger who wants to go to the same destination, then you can easily do it with this application and earn extra money.

Besides, there will be some target offers such as if any service provider complete 15-20 trip within a day, he will be rewarded 300 or 500 taka which will be automatically added to his bkaash account and so on.

2. **Secured Service:** Often we see in television or newspaper that a taxi driver kidnaps or rapes a woman when renting a car for going home or workplace. This problem can be solved in a great rate by using our application since we have every possible important information and identification of both service provider and receiver.
3. **Emergency Needs:** This application can be one of the best solution to them who are usually very busy persons and to them who need to travel mostly at night. Because our riders will pick up the passengers from the location where the request is made. So anyone can be picked directly from his home or workplace which will solve the problem of searching vehicle on road for a long time. After that, if any patients need to be taken to hospital at mid night, one can make a request to our ambulance section to get highly featured ambulance within a possible short time.

Data Description

- ✓ Each service provider must contain name, national ID card or passport number, license number, gender, contact number, email address, home address, birthdate, bkaash or nogod account number, vehicle number(registration number) and type of service provider whether bike rider or car driver or ambulance driver.
- ✓ Each service receiver must contain a name, national ID card or passport number, gender, contact number, email address, home address, birthdate, bkaash or nogod account number.
- ✓ License number must be unique for each service provider.
- ✓ One vehicle number (registration number) will be associated only with one service provider.
- ✓ In Bangladesh, a NID number contains 10 characters and a passport number contains 14 character which is fixed. So when a service receiver will enter his NID or passport number, the system will

auto detect that what type of number it is which must be unique for every service receiver. The service receivers can create only one account using his national ID or passport number. It can be ensured that if anyone creates an account using his NID number, he will not be able to create another account using his passport number because the system will check that whether the all other information are associated or not.

- ✓ Each vehicle will contain a vehicle number (registration number), brand, model, type (bike/car/ambulance) and color.
- ✓ Vehicle number (Registration number) must be unique for each vehicle.
- ✓ Each trip will contain a trip ID, service provider license number, service receiver NID or passport number, vehicle number, pick-up location, destination, request sent time, trip waiting time, waiting cost, trip start time, trip end time, trip date, trip cost, total cost (including waiting cost), service provider rating, service receiver rating.
- ✓ Trip ID must be unique for each trip.
- ✓ One service provider and receiver can make multiple number of trip.
- ✓ Each payment will contain a payment ID, type (cash on/bkash/nogod), waiting cost, trip cost, total cost (including waiting cost), payment date, payment time, bkash/nogod account number (by default cash-on payment), transaction ID (by default cash-on payment).
- ✓ Payment ID must be unique for each payment and every payment ID will be equal to trip ID which is also unique for each trip.
- ✓ Every payment ID will be associated with only one trip ID.
- ✓ Each report will contain a report ID, reporter ID (whether service provider license number or service receiver NID/passport number), reporting date, reporting time, problem statement and feedback (by default pending).
- ✓ Report ID must be unique for each report.
- ✓ One service provider or service receiver can report multiple time multiple issues.

THE END