UOIT

Software Project Management: Lab 2

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Topic Overview

In this fast-paced day and age, there are countless options for users to choose from when it comes to product delivery services. Keeping that in mind, the majority of these services fail to voice many of their own issues. Our group selected UberRUSH as there is potential for growth in this business. We feel that we can implement various interesting and innovative ideas into this project.

Topic Selection and Reasoning

Our main aim is projected towards collaborating with small businesses for the delivering of parcels and packages with real-time tracking of all your items as they are in transit compared to what is offered by many other delivery services. The services could be utilized for both, short and long distances, but what will set us apart from delivery services, is the efficiency of delivery over longer distances by calculating the fastest route to and from the required destinations, as well as provide updates to the sender and receiver upon each checkpoint of the transit. Drivers are allowed to sign up to do small, partial, and delivery on their way to their destination or as just a part-time job. However, the system would need to have some limitations. Deliveries that are being made on UberRUSH would need to be restricted as to which towns or cities that we will operate in. The population of each city/town decided should be sufficient enough that a productive amount of deliveries can be made, and many drivers making these deliveries can be supported through our platform. One of the major advantages of this application would be the ability to deliver products even if you are located in a remote environment that makes it difficult for such deliveries in normal cases.

Short Distance Deliveries: Our service will cover major cities and drivers that apply for a delivery service in their towns or Uber drivers willing to provide delivery services will also be able to join. Based on a registered drivers radius, they will receive delivery requests.

Project Objectives

Our project includes these fundamental objectives:

- To develop a system that will provide efficient customer service.
- A system that is able to handle the load of multiple orders/requests at a time.
- To measure our service performance based on deliveries made.
- Reducing costs such as minor automation in the delivery system.

Measure for Success

- Reviews/ratings from both the business client and the business itself. After a package is delivered, the app will ask the user to rate the service and this can be used to measure how successful the system is working.
- The business and client are able to keep track of the delivery which is updated in the system using the driver's GPS
- The costs of developing this delivery service does not exceed the money provided by Uber.
- Both applications for business/clients and Uber drivers are available across all mobile platforms (iOS/Android etc)
- The system is able to connect the two different applications of Uber as it takes delivery requests from one application (business client and business side) and successfully presents it to another application (Uber Driver side).

Infrastructure

- An IDE for developing two cross-platform mobile applications, that can be used in both IOS and Android.
- Node.js for the back end of the applications
- Socket.IO for real-time communication between the clients and servers
- Using the CoreLocation framework to identify device locations, which can be used for tracking deliveries. Also, MapKit framework can be used for the selection of routes and directions. These can be used for IOS.
- Maps SDK and GeoLocation API can be used to get precise locations for Android devices.
- To deliver push notifications on mobiles, we will need to use Apple Push Notifications Service (APN) for IOS, and Firebase Cloud Messaging (FCM) for Android.
- We would need mapping technologies to be able to access a map. Google Maps will be used for this.
- For payment services, we will be using gateway providers such as Braintree or Stripe.
- Amazon EC2 for deploying the application on.
- Amazon S3 for cloud storage services.