**Software Engineering**

**Project phase# 2**

**Group # 08**

**Group members**

Tania Saleem BSCS14016

Sidra Khalil BSCS14024

HiraAkram BSCS14080

Muhammad urRehman BSCS14081

**Introduction**

Drag and Drop, It’s an app which is being used by people who use pick and drop service by a company “Drag & Drop”. The basic theme is to provide a trustful service of pick and drop by providing current location to guardians. The list of guardians will be provided by the user. The user will be able to choose his/her pick and drop location using map and set its timing accordingly. This app consists of three levels, Users, Guardians, and Admin. Admin can see the locations of all the vans which are being use for the purpose. Also Admin will be able to assign vans to users and can approve a person as their driver for their service. Guardians can view the current location of the children while their pick and drop times. The Guarding can use this app only if they have a unique “pass-code” which is given to a user.

**Requirements Engineering**

* **Techniques used**

1. Use cases
2. Scenario

**Scenario:**

We will use this technique to observe normal and abnormal behavior of our system. In normal situation everything will be done in first trial. User authentication, driver registration, response time, picks & drop service and payment all functions will perform well in first try. And we will observe worst situation of system also by this technique.

**Use case:**

Use cases will define each requirement of our project evidently. And describe scenarios more clear way. And describe all possible interactions with the system.

**Use cases**

User

Driver

Guardian

* **Requirements grouping**

2.1-**Functional requirements:**

Drivers should know the pick and drop location of users; admin can access the location of all vans. User can easily use app for signing in and setting it's pick and drop off location on map. There should be proper way for payment. If the payment is not completed then it should roll back. User can cancel a ride on a particular day by a simple one click. Driver can register and authenticated by admin.

2.2- **Non-functional requirements:**

* **Product requirements :**

The very important requirement of this project is the authentication of drivers. The driver must be authenticated by his/her CNIC number, because we want to make it reliable service for users.

At user end, when the user has signed-up , he/she should not be activated until and unless the admin approves it .

* **Security :**

The security in this project is at different panels. Since there are three panels in this project, so we will handle security at all these panels separately. The location is of user will be accessible to the guardian of user (pin secured end).

The service will be secured to use because while a driver applies to get registered, the admin will authenticate the person via the CNIC card and driving license.

* **Development requirements :**

The development requirement in this project is to make this application in android platform. Also the server of this appllication should be at “Firebase”

* **Response time:**

When a person requests for being a driver, the response time is of one week, for a user to avail our service the response time will be of 3 days.

But when the user requests for something, let’s say guardian wants to get the location; the response of the request will be quick, if he/she have the key.

* **Usability:**

The very important thing of any application is its usability, so is ours. The application will have user friendly interface and will be easy to use, so that the users of the application don’t face any difficulty in using it.

|  |  |
| --- | --- |
| Property | Measure |
| Speed | User will get the response from admin within 3 days after registration.  Drivers will get response from admin within a week after registration.  Location will be updated within 2-3 sec on maps. |
| Ease of use | The application will give a tour for first time. |
| Reliability | This service is unavailable due to un connectivity with internet and due to un availability of GPS. |
| Robustness | It will restart immediately after failure  There are two events those can cause failure  1-GPS Disable  2-No Internet Connection  Probability of data corruption is very less because we are using firebase for saving data which saves the data in cache if user is offline. |
| Portability | This app is runnable on all android devices. |

**3- Requirements Validation**

**3.1- Consistency Checks:**

No, there are no conflicts in our requirements.

**3.2- Realism Checks:**

Yes, our system can b easily builds by the current available resources and technology.

**3.3- Verifiability Checks:**

We will use prototyping to verify our system. As we have to check response time and successful alerts of system on time.