TRACK RIDER

**1. INTRODUCTION**

**1.1 Background**

This Android Application is developed to track your Friends or Family or People travelling in groups towards a common destination. One of the traditional methods to get the current location of a person is to call that person & hope he/she gives you the correct information of the surroundings of their particular location. Another popular method is to ‘share live location’ on Whatsapp. While this is a good way to share 1’s location, it becomes a tedious task to track all the people at the same time. This Application overcomes the above problems & shows the live location of each user connected with each other in the Application in just a single click!

**1.2 Objective**

1. Get live location of connected users.

2. Share live location of connected users with eachother.

**1.3 Purpose & Scope**

**1.3.1 Purpose**

This Android Application provides facility to track Friends or Family or People travelling in groups towards a common destination. However, it can also be used by a user to track their loved ones to check if they reached their destination. User has the privilege to add, remove users from his/her account. User can also create a room & add other users to it. The people in the room can view each other’s location. Users can leave the room at any time if they wish too.

**1.3.2 Scope**

Scope of the project is very broad.

They are :-

* This app can be widely used by Bike Riders as they usually travel in groups.
* Also it can be us8ed by anyone anywhere anytime.

**1.3.3 Applicability**

# 2. SURVEY OF TECHNOLOGIES

Available technologies for developing the proposed system are as follows :

* C++
* C# (Xamarin)
* Html 5
* Hybrid Applications
* Java
* Kotlin
* **C++ :**
  + C++ is a middle-level programming language which can be used to develop Android Applications.
  + Java, with the JVM-optimized byte-code, can generate pretty fast code, but native (i.e., machine code) can be faster and useful in areas such as gaming, physics simulations and signal processing.
  + As C++ usually has no standard user Interface, the user-interface code is written in the native language and C++ used for the business logic.
  + C++ has a smaller memory footprint, as it is nearer to the metal and has no garbage collection.
  + C++ is a superset of C and compilea virtually all C programs, so it can reuse C software.

* C# (Xamarin) :
  + C# is a programming language developed by Microsoft which can be used to develop Android Applications.
  + Xamarin, a Microsoft owned software company has created a Cross Platform development tool which enables developers to develop iOS and Android apps in C# language.
  + Xamarin is offered in different licenses from free to enterprise levels.
  + The beauty of Xamarin is that despite the differences under the hood, Xamarin.iOS and Xamarin.Android (coupled with Microsoft’s Windows SDKs) offer a seamless experience for writing C# code that can be re-used across all three platforms.
  + Business logic, database usage, network access, and other common functions can be written once and re-used on each platform

* **HTML 5 :**
  + A HTML5 app refers to a mobile app built completely using HTML, CSS and Javascript only.
  + HTML5 apps are web apps and they must be run using the underlying OS browser.
  + A well written HTML5 app can be used even when the device is offline, or at the very least, show an error message.
  + HTML5 apps are portable across different OSes and device types.
  + HTML5 apps are generally cheaper to develop and maintain than native apps.
* **Hybrid Applications :**
  + Hybrid apps are built using on language/framework like HTML5, CSS and Javascript and are then wrapped with native specific code for each desired mobile OS.
  + A hybrid app is no different from a native app.
  + Hybrid apps can be made available and distributed via the relevant app store, just like native apps.
  + Hybrid apps have greater access to the native hardware resources than plain HTML5 apps, usually through the corresponding framework’s own APIs.
  + Popular hybrid app frameworks include Apache Cordova (formerly PhoneGap), Appcelerator Titanium, Appear IQ, CocconJS and Appzillon among others.
* **Java :**
  + Java is a Programming Language developed by James Gosling at Sun Microsystems.
  + Java is the official programming language for Android app development.
  + It is the most widely used programming language for android application development.
  + Java itself is used by Google for large parts of the Android internals.
  + Java has many frameworks and classes for features like networking, threading, IO operations and thus, programmers can leverage these qualities in their apps.