Project Charter

Team 20

**Team Members:**

Kalpan Jasani, Ashwin Chidanand, John Redmon, Scott Walters

**Problem Statement:**

The modern alarm clock is usually the built in alarm app of a person’s smartphone. However, there are limitations to this that can be improved. Our project tackles the issue by focusing on smarter ways to wake a person up. These include setting alarms based on specific locations for travelers, notifying people if your alarm is not manually turned off, set alarms for others in groups, and involve lights, speakers, and curtains to wake you up. So, it is a smart alarm!

**Project Objectives:**

* The application can allow a user to manually set a person to be notified using calls and messages if the alarm is not stopped by the user at its set time.
* Wake a user at a location within a specific radius, instead of time.
* Have groups for app users, with which one member can
  + Set an alarm for others
  + Set a message or voice message to played on their phones when they wake up
  + Be notified if they stop the alarm
* Analytics of past alarms
  + Graphical description for success rate and wake up times of past alarms. Call-a-friend feature, location based alarm and other features have their own analytics.
  + Suggest alarms or notifications based off past use
* Allow the app to interact with Spotify to set a playlist for an alarm.
* Alarm can trigger a motor using a seperate microcontroller that lifts up the curtains in the room.
* Simple things such as a normal alarm, such as ringtone, time, and setting a recurring alarm.

**Stakeholders:**

* Software Developers
  + Kalpan Jasani
  + Ashwin Chidanand
  + John Redmon
  + Scott Walters
* Users
  + Any android smartphone user
  + Frequent travelers that may not be able to rely on a consistent time frame of travel
  + Teams or committees who schedule regular meetings
  + Families with kids who want to use the group feature to set alarms for their children, and give them a to-do list when they stop their alarm in the morning.
* Project Manager
  + Mohammad Haseeb

**Deliverables:**

* Front end: Making an Android application on Android Studio, that has an interface for the user to select features and set alarms.
* Back End: Elasticsearch database to maintain groups and alarm/notifications on the central application server.
* Build a constant service running in the background to check any updates from other users, present on the server.
* Integrate Twilio API for custom text and call alerts.
* Integrate Google Maps API for location based alarm feature.
* Integrate Spotify API for the playlist linked with an alarm
* Utilize a microcontroller to shine LED lights