**CSE 535 Project Proposal**

1. **Project Members**
   1. Prachi More - 1211175417
   2. Varsha Muzumdar - 1210993729
   3. Anitharaj Natarajan - 1211102318
   4. Arun Subramanian - 1211257824
2. **Project Idea**

We are planning to develop an application for a social cause. The application is named Volunteer Finder. The application is aimed to be instrumental for organizations and individuals who look out for volunteers to organize their events. Each user of the application will have their own profile. At the time of the creation of profile, the user enters his address and the applications learns about the home location of the user. As and when events that require volunteers are posted, users are notified accordingly so that they can choose to volunteer for a particular event. This helps event planners organize their events accordingly.

The project is relevant to the materials that we discuss in class as it performs location based prediction for event organizers to plan their events that are guaranteed to maximize the success of their events. It also informs users of events that they could possibly attend as it is close to their location. The application automatically identifies ‘hot-zones’ for every type of social event so that maximum participation of people is ensured.

1. **Plan to use of external sensors:**

For the scope of this project, we do not use any external sensor. The only sensor that we use is GPS as it is instrumental in identifying the location of the user.

1. **Type of platform used:**

The application should work in android devices with API Level 19+

1. **Development Setup:**
   1. IDE: Android Studio 2.2.3
   2. Testing: Android Emulator and Personal Phones of the Team
2. **Specification of Context Aware Behaviour:**
   1. We use the GPS to get the real-time location of the user. We plan to update the feed of the user based on the user’s current location and show events that are happening around him along with an approximate distance from the user.
   2. If a new event is created near the user or in his home location, a push notification is immediately sent to the user. This enables the user to have a quick look at the event as soon as it is created.
   3. Each event has an associated volunteer counter which is the maximum number of volunteers that the event requires. The event organizer is given a push notification as soon as this is reached and the event is no longer available for the volunteers to select. However, volunteers have the option of following the event in case a volunteer opts-out of the event. In this case, volunteers following the event get immediately notified so that they can take that slot up

1. **Major Tasks for the project:**
   1. Database Schema Design
   2. Setup the web servers so that the app can be updated on the go
   3. Design UI screens for volunteer- This will enable user to view and sign up for nearby events.
   4. Design UI screens for event organizer- This will enable user to create and manage an event
   5. Sign in/ Sign up screen- For new users to create profile, username & password.
   6. Create profile using Facebook/Twitter/LinkedIn.
   7. Create Database encryption to protect login and sensitive data
   8. Generate a volunteer ID and event organizer ID for each user of the application.
   9. Event data acquisition for every event- This will store and retrieve all event related data.
   10. Cancellation/Modification of event by event organizers: This ensures that all volunteers associated with the event are notified via a push notification. Database reflects the changes.
   11. Identify user location based activity to determine which events to suggest
   12. Preference based events- Suggest events based on event types of previously attended events
   13. Matching each user to an event using his or her unique ID (Volunteer or Event Organizer depending on the role).
   14. Design the feed updates listing events near home location for every user which is unique
   15. Attach a counter which signifies the number of volunteers each event has at any point of time.
   16. “Grey-out” events if volunteer count equals the required number of volunteers. All volunteers can follow the event that has been greyed out. If someone opts out, then the volunteers who follow the event are informed via push notification. This ensures that volunteers who are genuinely interested in the event get to participate in it.
   17. Option to make an event reminder in the google calendar so that user is reminded 2 hours before each event.
   18. Ensure that a user does not enrol for two different events that are occurring at the same time
   19. Ratings for each event from the volunteer feedback which will help in suggesting events for the volunteer and for suggesting ideal locations for each type of social activity.
   20. Maintain history of each volunteer which will be visible to event organizers and themselves only.
   21. Create an attendance page for each of the event if the event organizer wants it. Points are lost if the user signs up and does not attend.
   22. Points for a volunteer based on his performance in previous events. In this case, if the event has limited vacancies and huge pool of volunteers interested, the volunteers with best ratings will be chosen. This ensures that the volunteers give their best in every event they volunteer.
   23. We can maintain a summary of tasks performed by each volunteer at different events with an option of exporting it to LinkedIn
   24. Test and Debug Application.
2. **Task-Member Assignment**

|  |  |  |  |
| --- | --- | --- | --- |
| Sr No | Task | Assignee | Deadline |
| 1 | Database Schema Design | Everyone | 19th February |
| 2 | Setup the web servers | Arun | 26th February |
| 3 | Design UI screens for volunteer | Varsha | 26th February |
| 4 | Design UI screens for event organizer | Varsha | 1st March |
| 5 | Sign in/ Sign up screen | Anitha | 1st March |
| 6 | Create profile using Facebook/Twitter/LinkedIn | Arun | 5th March |
| 7 | Create Database encryption | Arun | 5th March |
| 8 | Generate a volunteer ID and event organizer ID | Prachi | 5th March |
| 9 | Event data acquisition for every event | Prachi | 5th March |
| 10 | Cancellation/Modification of event by event organizers | Prachi | 12th March |
| 11 | Identify user location based activity | Arun | 12th March |
| 12 | Preference based events | Everyone | 19th March |
| 13 | Match event to user ID | Prachi | 19th March |
| 14 | Feed updates for home location | Anitha | 19th Match |
| 15 | Maintain volunteer count for each event | Varsha | 19th Match |
| 16 | “Grey out” full event | Anitha | 26th March |
| 17 | Event reminder/add to google calender | Varsha | 26th March |
| 18 | Handle collision of events for each user | Varsha | 2nd April |
| 19 | Maintain Rating for event | Anitha | 2nd April |
| 20 | Maintain Rating for volunteer | Anitha | 2nd April |
| 21 | Maintain volunteer history | Prachi | 2nd April |
| 22 | Maintain Attendance for event | Everyone | 9th April |
| 23 | Maintain summary of events for volunteer to export to LinkedIn | Arun | 9th April |
| 24 | Test and debug application | Everyone | 15th April |