Meeting Master

Team 17 Product Backlog

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Problem Statement

GPS navigation has become a staple in modern life, allowing people to get to where they need to go in a timely manner and in a much simpler way. However, not many applications take advantage of an interpersonal approach to support group meetings. Our application utilizes GPS navigation by allowing users to coordinate meetups and ensure other users arrive safely to their respective destinations.

Background Information

Audience

Our audience consists of groups of people who are travelling to the same destination and would like to coordinate their arrivals, groups of people leaving separately and travelling to different destinations, and people who are travelling and want to share their location with friends and family members. One of our target populations is college students. Many college students walk as their main form of transportation and can live in many different types of areas on a college campus. Some areas are less safe than others, so walking can be dangerous, especially when alone or at night. Our application provides both safety and convenience for these groups by allowing friends to view each others' locations in real-time while travelling.

Similar Applications

There are quite a few applications for event planning and geographic features. Google Calendar allows groups to plan event times in advance. The "Share Location" feature of Google Maps allows one-to-one sharing of your current location. Facebook Events allows users to post events with locations and times, invite other users, and let invitees RSVP to those events.

Limitations

These existing platforms are useful in isolation but using them in unison requires a lot of effort. Google Maps only allows sharing your location with one other person, not a group, and cannot be used to schedule meetings. Google Calendar and Facebook Events lets users coordinate meetings, but does not assist with travel to and from the meeting. Our application will integrate the features of these applications and make them available to users in one compact package.

Functional Requirements

1. As a user, I would like to be able to register for an account.
2. As a user, I would like to be able to login and manage my account.
3. As a user, I would like my password to be reset if I forget it.
4. As a user, I would like to be able to edit my profile.
5. As a user, I would like to store a picture on my profile.
6. As a user, I would like to create an event.
7. As a user, I would like to be able to view a list of all the events I need to attend today, this week, and this month.
8. As a user, I would like to suggest a meeting place to the event admin.
9. As a user, I would like to receive notifications about events that I have been invited to.
10. As a user, I would like to view the list of the attendees and be able to view their profiles.
11. As a user, I would like to be able to search for other users using their phone number.
12. As a user, I would like to accept or decline invitations to events.
13. As a user, I would like to see a list of events that I have declined.
14. As a user, I would like to rejoin an event even if I originally declined.
15. As a user, I would like to send my location to other users without being attached to any events.
16. As an event admin, I would like to add other users to an event.
17. As an event admin, I would like to optionally specify additional details regarding location, such as room number.
18. As an event admin, I would like to set permissions on which attendees are allowed to modify the event and the attendees list.
19. As an event admin, I would like to change details of an event.
20. As an event admin, I would like to see recommendations for common nearby meeting places.
21. As an event admin, I would like to choose a recommendation as the meeting place.
22. As an event admin, I would like to cancel a meeting at any given point in time, including on the way to the event.
23. As an event admin, I would like to add a plain-text note to an event.
24. As an event admin, I would like to attach arbitrary documents to an event.
25. As an attendee, I would like to see the location of the attendees as the event is about to start.
26. As an attendee, I would like to see my estimated time of arrival to the event location.
27. As an attendee, I would like to know when I have to leave to arrive on time.
28. As an attendee, I would like to see everyone else’s estimated time of arrival to the event location.
29. As an attendee, I would like to see my recommended route to the event.
30. As an attendee, I would like to see everyone else’s personal recommended route to the event.

31. As an attendee, I would like to optionally receive notifications/reminders about changes to an event.
32. As an attendee, I would like to be able to add individual events to my personal calendar.
33. As an attendee, I would like to sync all events to my calendar.
34. As an attendee, I would like to display my location to others even if I have left an event earlier than everyone else.
35. As an attendee, I would like to notify other attendees when I arrive home safely.
36. As an attendee, I would like to be notified when other attendees arrive home safely.
37. As an attendee, I would like to be recommended nearby parking locations.
38. As an attendee, I would like to exit from an event at any given point in time, including on the way to the event.

Non-Functional Requirements

Architecture

We plan to develop an application for the Android operating system for mobile devices. The app will be coded using the Java programming language and the geographic features will be handled using the Google Maps API.

Our backend will be developed in Python 3 with Django, a popular Python web framework. It will implement a RESTful API.

Security

Since peoples' real-time locations will be shared through this service, security is paramount for this application. Django includes built-in protection for SQL injection. Each user will only be able to view the locations of people that are going to the same soon-to-be-starting event. All server API endpoints will require the client to be logged in.

Hosting

Our backend will be hosted on DigitalOcean. Our mobile app will be published on the Google Play Store.