Team 5 Project Proposal

Project Title

Happenings UTD

Project Overview

A problem that UT Dallas students face is the discovery of organizations/clubs and events that interest them. There are plenty of events held on campus, but they often go undiscovered by students who may be interested in attending. Our aim is to simplify the process by which students discover events and organizations on campus.

We propose an application that recommends events to students on a proximity and time basis. The application will send push notifications to a user's mobile device when they are in close proximity to an ongoing event or near the location of a past event. In the latter case, the user will gain information about the event and when it will occur next should they want to attend.

A primary intended outcome of our project is increased student involvement on campus, and an overall lowering of the barrier between students and campus activities.

Project Scope

The platform will be limited to mobile.
This app is not meant to compete with social media.
This app is designed for UTD specifically.
The app is designed to be administered by a staff member of UTD.
The app is not meant to facilitate payments to any users, clubs, or events.
Users shall be matched with groups they will potentially like to join.
The user is notified when they are near an ongoing event.

Project Objectives

To allow users to easily identify events occurring on campus
To match users with groups they might be interested in
To allow clubs on campus to have a convenient way to gain exposure with events and membership
To increase student awareness of current events occurring around campus, thereby reducing the lack of information surrounding campus involvement

Specifications

Functional Requirements

> R1. The application shall utilize GPS integration and push notifications that alert users of

events, both past and present.
R2. The user must be able to save locations and timeframes based on their personal schedule (notification optional).
R3. User profiles must be stored in a database.
R4. Users must be able to take photos and save to a public gallery for an event.
    R4.1. The application must use AI to detect and remove offensive content.
R5. Users must be able to view a hot map overlay of campus of ongoing/recent events.
R6. Users must be able to RSVP to events (keep track of number).
R7. Club leader users must be able to create new club events.
R8. Club profiles must be stored in a database.
R9. Users must be able to utilize a matching feature to see which clubs may match their profile interests.
R10. Events must get stored on the database.
R11. Admin users must be able to create club profiles.
R12. A user must be able to recover their account using their email if they forgot any credentials, password/username.
R13. A user must be able to update all profile/account data.
R14. A user must be able to turn off event notifications for specific clubs.
R15. System will update upcoming events automatically

Non-Functional Requirements

NFR1. The interface must be easy to access and simple to use.
NFR2. Users should only be notified of events based on their GPS location if they allow their location to be used.
NFR3. The application must be able to run in the background on the operating system.
NFR4. The interface's theme should reflect UT Dallas's theme

Tech Stack

Frontend: React Native
Backend: Spring Boot
Database: MySQL
Testing Tools: Expo Go
Environment Control: Docker

Hardware Requirements
An Android/IOS smartphone with internet connectivity
PC/Mac computers with internet connectivity
Tentative virtual machine for dedicated server

Software Requirements

Visual Studio Code, MySQL Server, Java SDK, Android SDK, Spring Boot, React Native, Expo Go, Docker, Github, Git, draw.io, Postman

Project Timeline

Week 0 - [1 Week: Feb 6 - 12] Team Leader Jonathan

- Brainstorming
- Initiating Contact
- Setting up communications channels and file sharing
- Project Proposal

Project Planning - [1 Week: Feb 13 - 20] Team Leader Jonathan

- Requirements listed
- Use Cases
- UML Class Diagram
- ERD (database schema)
- UI (wireframes)
- Actor-System Interaction (for skeleton trace especially)

Development Phase - [8 Weeks: Feb 20 - April 16] - break into individual weeks

Note: when coding, each team member will create a few test cases for regression testing.

[1st Week: Feb 20 - Feb 26] - Team Leader: Gaurav Sanger
- Setting up Development/Testing Software
    - Docker
    - ReactNative (Front-end team)
        - directories
        - dependencies
    - Spring Boot (Back-end team)
        - directories
    - MySQL Database (Back-end team)
        - Creating all tables
    - Walking skeleton (Database, Back-end, Front-end)
        - Database/Spring Boot integration achieved
        - Spring Boot/React integration achieved
        - One form in frontend, one method in backend, and communication successfully stores test data in database
        - Android emulator

[2nd Week: Feb 27 - March 5] - Team Leader: Gaurav Sanger

- GPS functioning
  - Able to recognize the location of the mobile device
    - functionality to store the devices current location (for setting event location)
  - Detect if near ongoing event
- Notifications Pushed Successfully
  - Have customizable settings for notifications (tentatively interact with native notification settings)
- Spring Boot
  - Methods to store and retrieve location data

[3rd Week March 5 - 12] - Team Leader: Robert Dohm

- Features
  - Login capabilities
  - Account Creation
- Frontend
  - Login/Account creation forms
  - Calling backend APIs for each form
- Backend
  - Classes created for accounts (user, admin, club leader)
  - CRUD methods for accounts
- User walks near ongoing/recent/upcoming even

[4th Week March 12 - 19] - Team Leader: Robert Dohm

- Features
  - Creating/Editing clubs (admin, club leader)
    - Admin promotes user to club leader
    - Club leader can edit club profile (club leader)
  - Viewing clubs
    - List of clubs
    - Club page
  - Creating events (club leader, user)
    - List of events on club page
    - Main page listing events for week?
    - Club leader manually creates a new event
- Frontend
  - Club creation form (admin)
  - Club page editing (club leader)

- - Event creation form (club leader, user)
    - Admin Promotion interface(admin)
  - Backend
    - Club controller and CRUD methods
    - Event controller and CRUD methods

Spring Break (March 11 - 17)

[5th Week March 19 - 26] - Team Leader: Landin Kasti

- Features
  - User clicks button to access settings page
  - User selects to silence specific notifications
  - User edits account/profile details
  - Recommender system or matching system
  - User clicks "Map"

[6th Week March 26 - April 2] - Team Leader: Landin Kasti

- Features
  - User clicks "favorite" button for a club
  - User views favorited clubs
  - User RSVPs to an event

[7th Week April 2 - 9] - Team Leader: Charles Eaton

- Features
  - Password Recovery
  - Email integration for validation

[8th Week April 9 - 16] - Team Leader: Charles Eaton

- Features
  - User enters Schedule
  - User wants to share a photo of an event
  - User clicks button to view event photo gallery

Testing Phase - [1 Week: April 16 - April 23] - Team Leader:

- Input Validation
- Functionality Testing

Presentation Phase - [2 Weeks: April 23 - May 3] (April 26, project script, poster, slide due, demo)

- Script
- Single Slide
- Poster
- Final Report
- Oral Presentation

Project Team

Team Member	Role(s)
Robert Dohm	Back-end, Database
Charles Eaton	Front-end
Landin Kasti	Full stack, Back-end
Jonathan Lam	Back-end, Database
Gaurav Sanger	Front-end

Links:

GitHub will serve as both our versioning tool and Agile board.

Currently private, but shared with Darshil.

Link: https://github.com/sanger96/Happenings_Team-5_UTD_Senior_Design_Project