Ubiquitous and Mobile Computing
CS 4518: *ClassMate*

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Problem Statement

- In a survey, 9% of college students continuously struggle with time management

- Incoming students can have difficulty navigating campus and adapting to a unique schedule

- Content in courses is often distributed across different platforms

- Scheduling group time to study is difficult for new students

- Existing communication platforms between students, staff, and professors are one-way
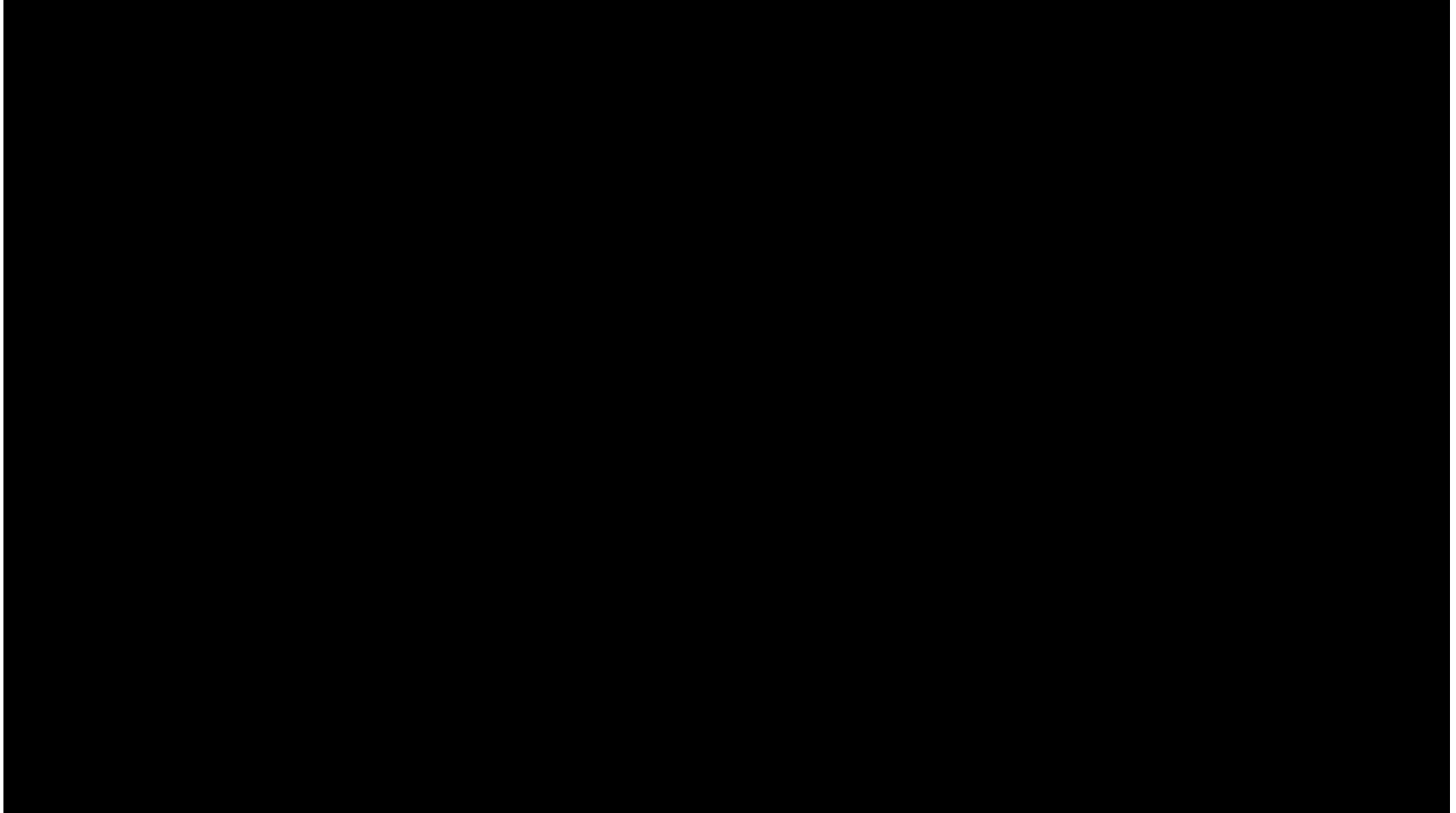
Solution

- Created an application that combines educational resources in one place
  - Mobile application can be used anywhere with an internet connection
  - Sending pictures or images needed for work is easy through the use of the camera
  - In 2015, 66% of Americans own a smartphone

Solution

- Scheduler
  - Plan and view group meetings with classmates
- Map
  - Find study sessions on campus
- Discussion
  - Get answers to questions from the professor, TAs, and other students

Video App Demo

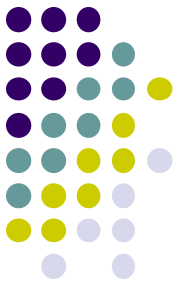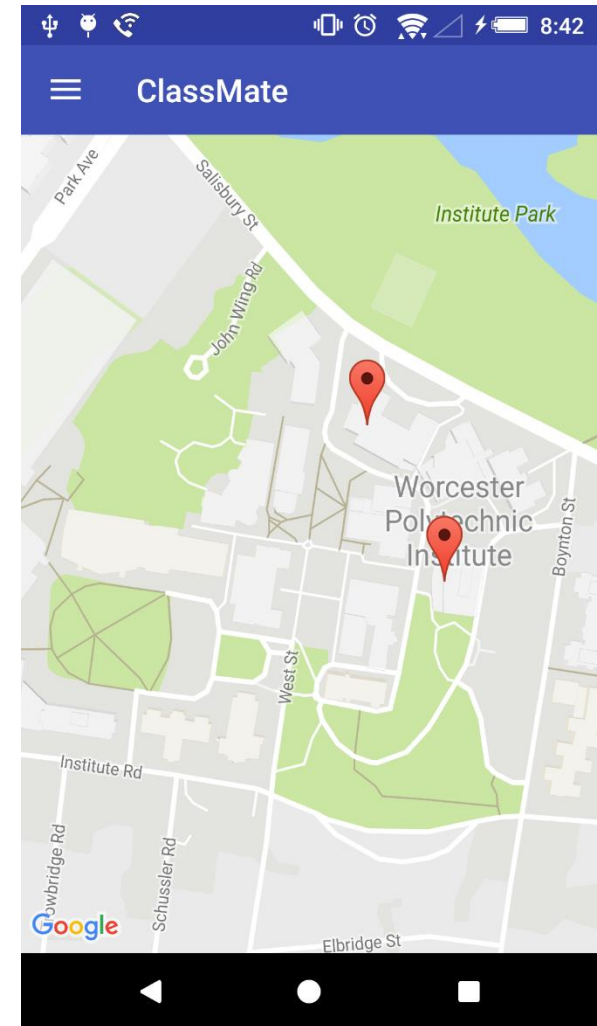https://www.youtube.com/watch?v=Byi9zbTIXQE

Implementation

- Maps
  - Google API

- Discussion Board
  - ExpandableListAdapter

- Scheduler
  - Calendar Intent, Date/Time Pickers, Google Places API

- Server
  - Node.js server that handles HTTP GETs and POSTs
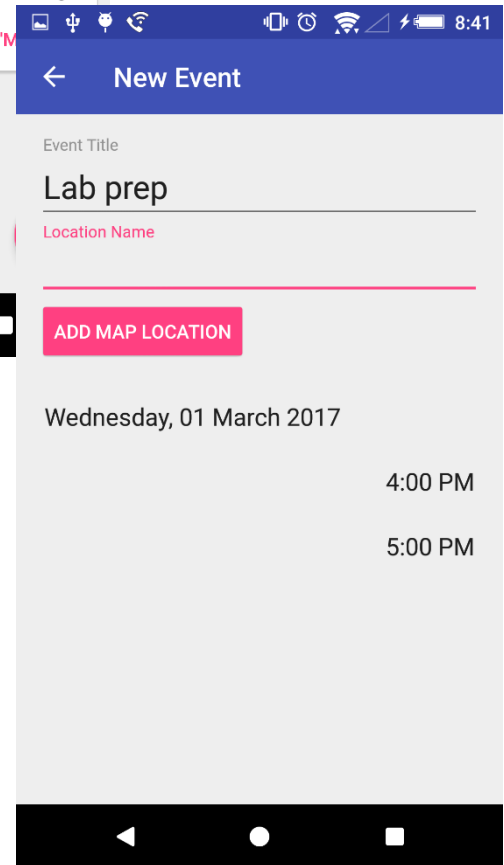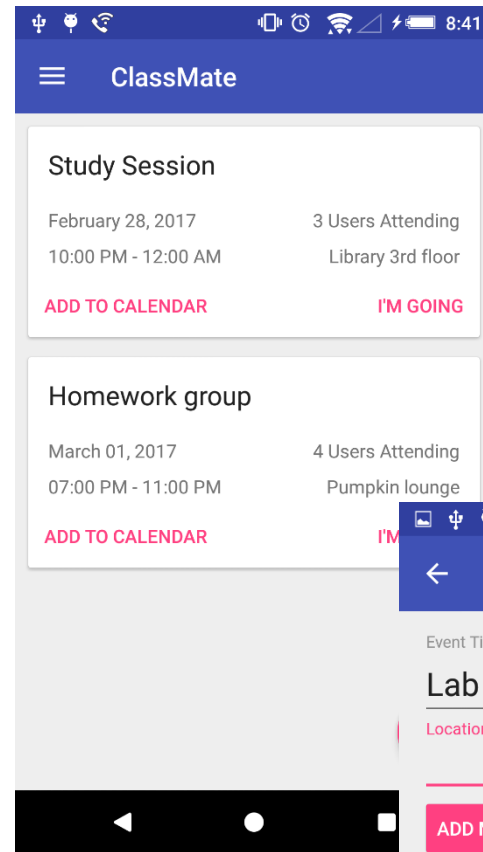 - Android requests through Volley

Maps

- Provides a visual guide to locations on campus
  - Easier to find groups for newer students
- Can select a marker on the map to show a detail view
- Shows information for an event all in one place
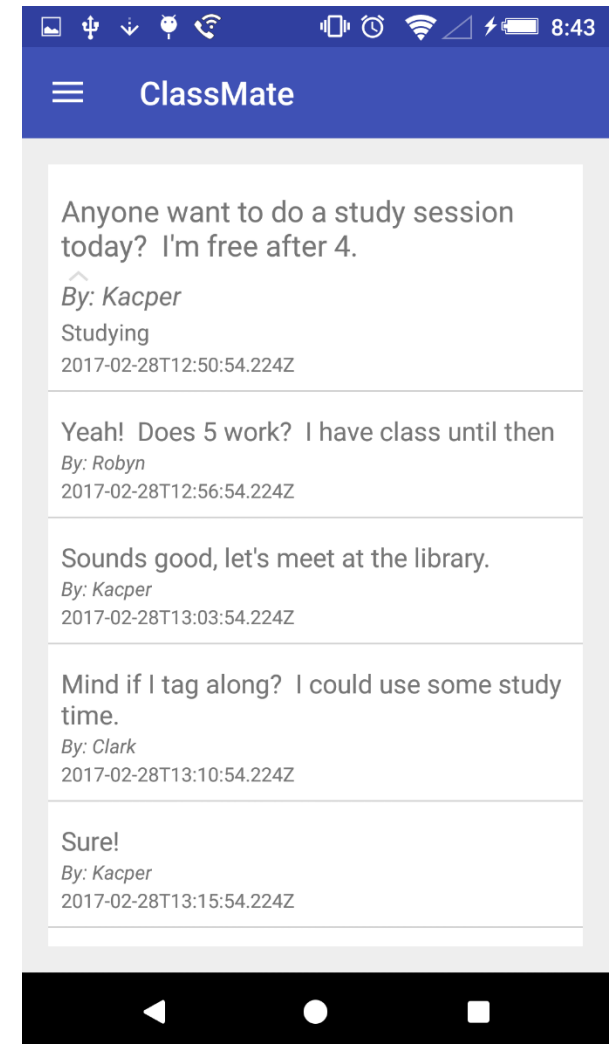 - Can pick meetings based on the descriptions given

Scheduler

- Allows the creation of scheduled events
- Locations can be linked to events so they appear on the map
- Users can add events to their device's calendar application

Discussion Board

- Provides two-way communication between students, staff, and professors

- Displays threads and comment responses

- Practical for group communications, asking a public question, or posting information about course content

Future Extensions

- Media uploading/hosting within the Discussion Board

- User Authentication through Bannerweb/Third Party

- Multiple class support

- Easier management of events and location
  - Users could check in to a location when they arrive
  - Users could list an event occurring now based on current location

References

- *Hopper, Carolyn H. 2016. Practicing College Learning Strategies, 7th ed. Boston, MA: Cengage Learning.*

- *Smith, A. (2015, April 01). U.S. Smartphone Use in 2015. Retrieved March 02, 2017, from http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/*