CSULB Friend Finder

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Overview Of Business Issue

- Students have difficulties reaching their friends on campus
- New students are unfamiliar with building locations and therefore can't meet up
- Friends are not able to reply (i.e. in class)
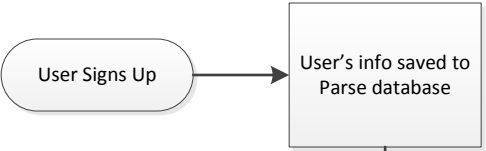
Solution: CSULB Friend Finder

Features

- Login/Registration/Recovery
- Facebook integration
- Status
- Poke service
- Adding friends
- Profile view(map location, status, last updated, navigate)
- Map view with friend locations
- Augmented Reality
- Privacy mode
- Automatic and manual location updates

Swim-lane: Application Flow

CSULB Friend Finder

Phase

Login/Signup

User Signs Up → User's info saved to Parse database

Main IOS Application

Display friend 'X''s profile

Displays main tabs → Which tab? —Friends List tab selected→ Display list of friends → Add friends → Which friend? —Friend 'X' was selected→ Display friend 'X''s profile → Which profile view button? —"Find your friend" selected→ Segue to navigation view

Yes

Navigation

Display Augmented Reality View → Was "back" button selected?

No: Update GPS Location
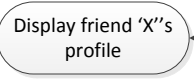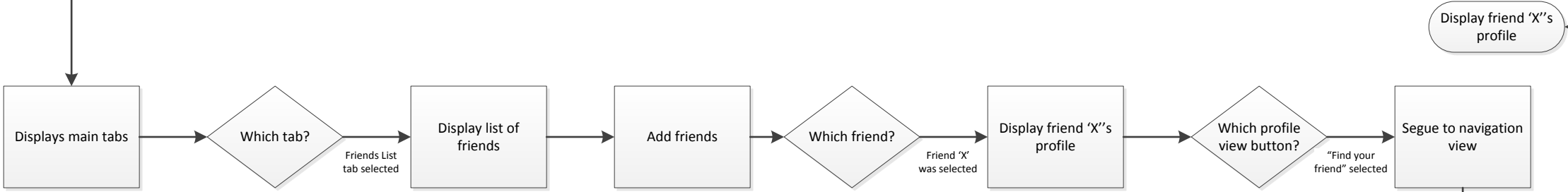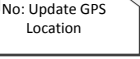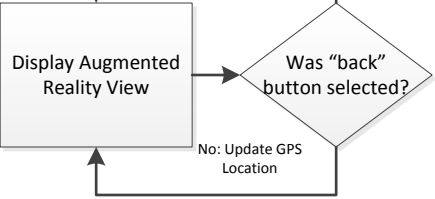
Technical Overview

- CSULB FF is an iOS application written in Objective-C
- Backend implemented on Parse framework
- View comprising:
  - Parse Convenience Views (for displaying data)
  - Manually written
  - View from Facebook framework for iOS
  - View from Augmented Reality framework
- Application organized with tabs

Source Code Overview

Login/ Registration	Main Tabs	Secondary Tabs	Parse GeoTools
Login	Tab Bar	Update Status	GeoPoint Annotation
User Info	Profile	Navigation	Location Translation
Recommended Friends	Map	Change password	
	Friends List Table	Change email	
	Settings	Add friend	

```
                        Navigation View
                        (A dummy view loaded
                         by iOS at startup)
                                │
                                ▼
          Upon signup    Login View
        ┌───────────────(Loads Parse Login/
        │                Signup controllers)
        ▼                        │
   User Info View                │
   (Prompts for First            │
   Name, Last Name,              │
   Email)                        │
        │                        │
 If signing up                   │ If logging in
 through Facebook                 │ (existing user)
        ▼                        │
   Recommended Friends           │
   View                          │
   (Displays Facebook ──Signup completed──┐
   friends who also use                    │
   CSULB FF)                                ▼
                              Tab Bar View Controller
                              (Controls the four main
                                       tabs)
        ┌──────────────┬──────────────┼──────────────┐
        ▼              ▼              ▼              ▼
  Home Tab         Friends List    Map Tab        Settings Tab
  Controller       Tab             Controller     Controller
  (Displays        Controller      (Displays      (Displays Settings
  Profile View     (Displays       Map View)      View)
  for current      Friends List
  user)            View)
        │              │                              │
        │              ▼                              │
        │         Friends List View                  │
        │         (Displays textual list of          │
        │          CSULB FF friends)                 │
        │              │                              ▼
        │              │          Map View    Settings View
        │              │          (Displays   (Privacy Mode, Log Out,
        │              │          friends as  Change Email, Change
        │              │          pins on     PW)
        │              │          CSULB map)       │
        ▼              ▼                        ┌───┴───┐
  Profile View    Add Friend View               ▼       ▼
  (Displays       (Lists all CSULB FF     Change Email  Change Password
  either current  users. Click a name     View          View
  user's or       to send request)
  friend's
  profile)
  ┌──────┴──────┐
  ▼             ▼
(For home     (For friend profile)
 profile)
  ▼             ▼
Update Status  Navigation (Augmented
View           Reality) View
(Update 140-   (Displays camera with moving
char text      label representing friend)
status and
location)
```

Application Walk-Through

Testing

- All testing was done manually
- Unit testing: Registration, Login, Account recovery, Facebook authentication, App Navigation, GeoLocations, Augmented Reality
- Regression testing as the above were implemented/edited

Test Case Number	AugmentedReality1
Test Item	Segue to navigation view
Pre-conditions	Clicking on the "Find Your Friend" Button. The destination view controller is initialized and passed a valid detailItem object.
Post-conditions	The segue is performed to the destination view controller.
Input Specifications	[dest setDetailItem:friend]
Output Specifications	The view will change to the augmented reality view, so that the user can start navigating
Pass	Upon clicking the "Find Your Friend" button, the user is segued to the augmented reality view.
Fail	If detailItem is invalid, an error message displays directing the user to try navigation later.
Assumptions/constraints	Assume there is an Internet connection. Assume the detailItem object is valid.
Dependencies	None

Test Case Number	AugmentedReality2
Test Item	Initialize PRARManager
Pre-conditions	Location manager is initialized and starting to update location.
Post-conditions	Camera layer is successfully initialized.

Input Specifications	call [[PRARManager alloc]
	   initWithSize:self.view.frame.size
	   delegate:self
	   showRadar:true]

Output Specifications	A valid camera layer is returned.
Pass	The camera layer appears on the current view.
Fail	The screen remains blank (white) if the camera session fails to add video input from the AVCaptureDevice.
Assumptions/constraints	Assume there is an Internet connection. Assume the device has a working camera and the user has given permission to use it.
Dependencies	AugmentedReality1 passes.

Q&A