

# Fall Progress Report

## LeetLoot

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# Purpose

- eBay would like to make use of recently released public APIs in order to explore the eSports market and target new customers.
- Currently, there aren't any known products that make it easy for eSports fans to find merchandise and receive updates about their favorite games.
- The purpose of the eBay iOS eSports project is to develop an application that contains useful information about eSports and allows customers to discover eSports merchandise being sold on eBay.

# Goals

- Develop a technical roadmap for the rest of the year in order to satisfy the needs of our client.
- Define the problem we are trying to solve, outline requirements, research relevant technologies, and create a design plan.
- Create a user interface design mockup to inform the visual aspect of our project as we begin development next term.

Week 1

# Actions

- Learned the process and rules of this three-part senior capstone class.
- Reviewed and researched different project opportunities.
- Created our OneNote pages with biography and shared it with our instructors
- Submitted project preferences and justifications for our choices
- Requested to work with Luther Boorn on the iOS eSports application.

Week 2

# Actions

- Met with team members, exchanged contact information, and set up a weekly meeting time for the team, and weekly meetings with the TA.
- Set up a slack channel to communicate with our client.
- Scheduled meeting to get acquainted with client and discuss the goals of the project.
- Assigned problem statement which details our project from a ten-thousand foot overview and outlines the purpose of our project.

# Problems and Solutions

## Problems

- Meeting scheduled with client Thursday of Week 3 after the rough draft due date.
- Not enough information on capstone website for a complete problem statement.

## Solutions

- Requested an extension, but decided to do our best and make changes after the initial meeting with the client.



# Problems and Solutions

## Problems

- Remote teammate unable to make it to Corvallis each week for weekly TA meetings.

## Solutions

- TA meetings will be conducted via video conferencing software each week.

Week 3

# Actions

- Set up project GitHub repository and shared it with our instructors.
- Met with client via video conference call and discussed the problem statement
- Worked together to combine our problem statements into a final draft.

# Problems and Solutions

## Problems

- Not everyone in the group has access to a mac computer or iPhone

## Solutions

- Researched cloud solutions such as “macincloud”.
- Luther also suggested the possibility of using an eBay computer

Week 4

# Actions

- Send problem statement to Luther for feedback and signature
- Begin to follow Swift tutorials on Coursera and Udemy
- Set up the Xcode development environment for those team members machines who have Macbooks
- Set up a time to meet with Luther at the eBay Portland office

# Problems and Solutions

## Problems

- Two team members are still lacking Macbooks
- Issue with remote TA meeting on WebEx

## Solutions

- Speak to Instructor about borrowing Macbooks
- Use Google Hangouts rather than WebEx for meetings

Week 5



# Actions

- Assigned sections for the requirements document to be done
- Met with our client in Portland
  - Discussed high-level application requirements
  - Spent time drafting user interface sketches as a group
  - Tour of the eBay office

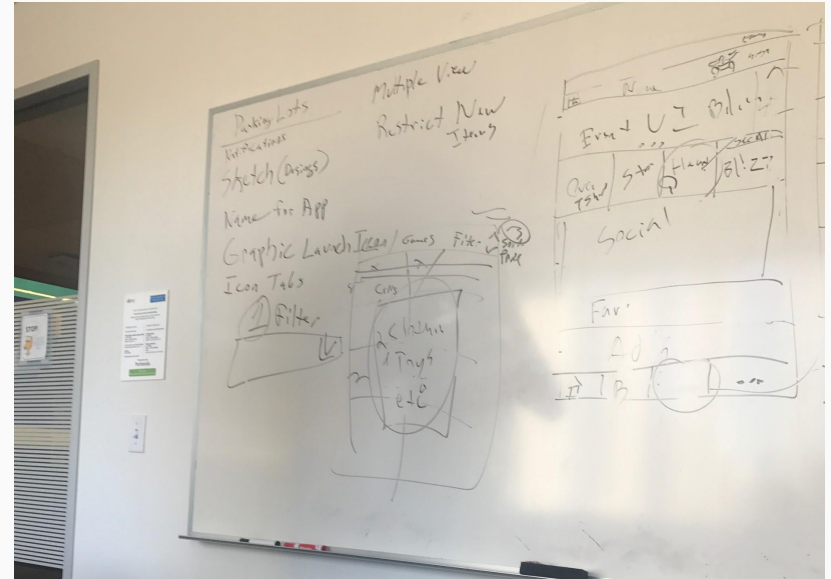
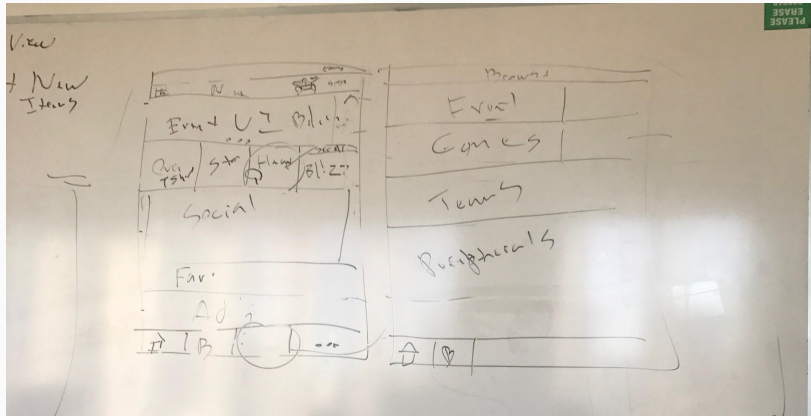
# Functional Requirements

- iOS 11 support only
- iPhone support is our main goal, iPad support is a stretch goal
- Orientation support for landscape and portrait
- English language only
- App will be coded in Swift
- Google's Firebase will be used for the database and user authentication
- Utilize eBay public buying APIs for merchandise

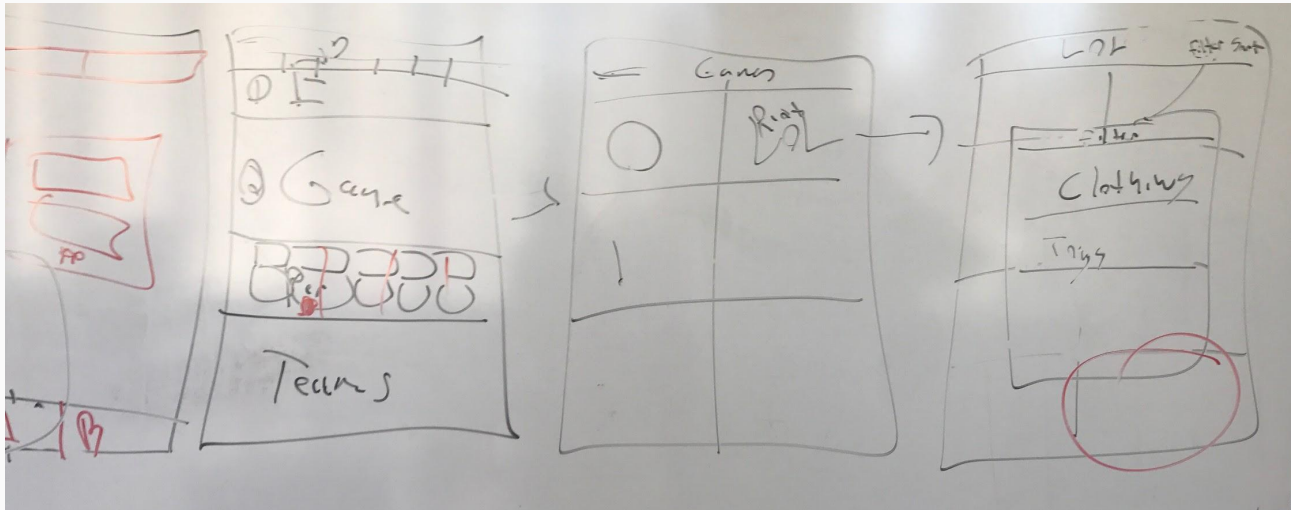
# Application Functions

- User can browse eSports events and games to find related merchandise sold on eBay
- User can favorite games to have merchandise appear on home screen
- User will be able to see the next upcoming eSports event on home screen
- User can sort merchandise results by low to high price
- User can filter merchandise results from different categories, including toys and clothes
- User can purchase merchandise
- The application should have a social component, using Twitter or Facebook

# Designing the User Interface



# Designing the User Interface



# Problems and Solutions

## Problems

- Requirements document rough draft due date

## Solutions

- We re-wrote and finished the requirements document after our meeting with the client

Week 6

# Actions

- Begin to create UI mockups using Sketch
- Finished up the requirements document using feedback received
- Got extension for requirements document signature
- The team members that had Macs all finished getting Xcode on their machines



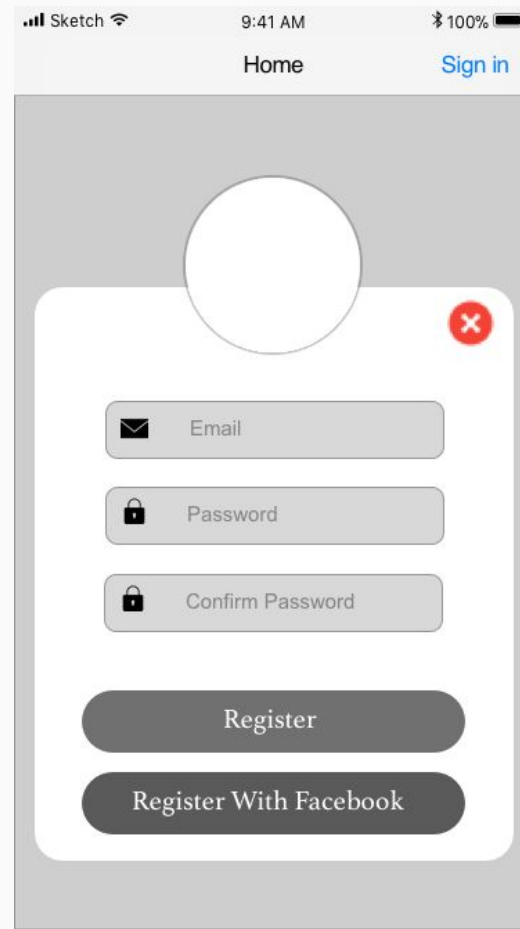
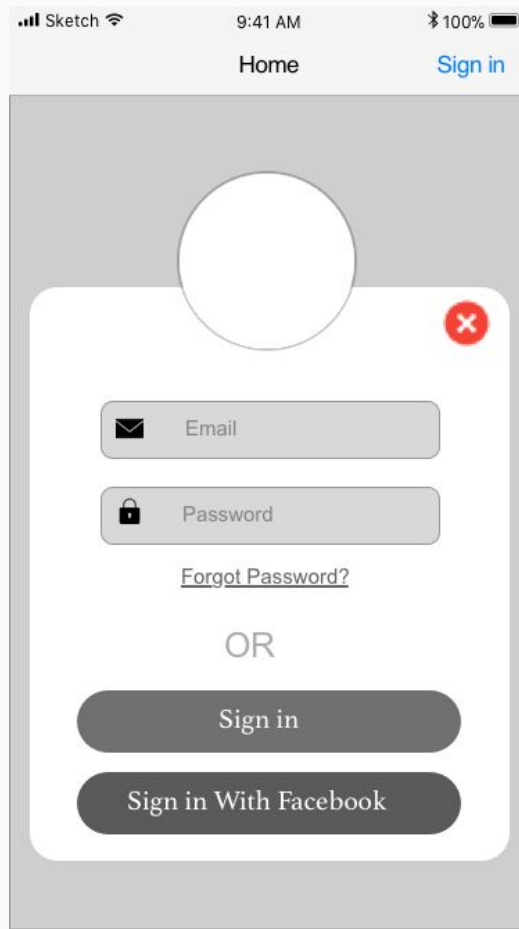
# Problems and Solutions

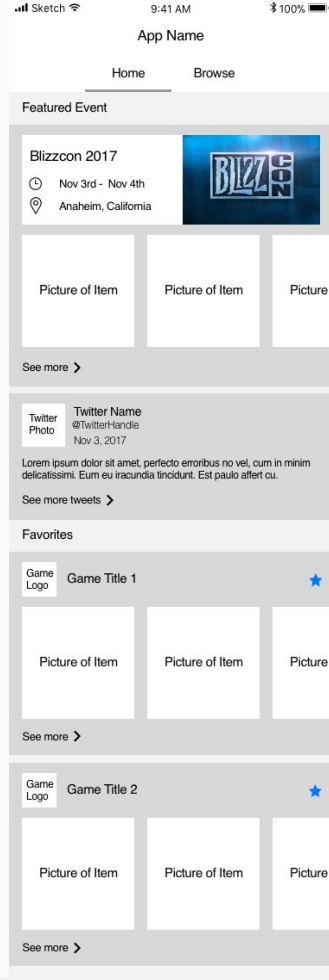
## Problems

- Luther was only able to meet with us on the due date of the requirements document rough draft and would not have time to review it before the due date
- Xcode not working on one team member's machine

## Solutions

- Emailed and asked for an extension until that next Monday, giving Luther the weekend to review the document
- Meet as a group to help out the team member







App Name

Home

Browse

Events

Games

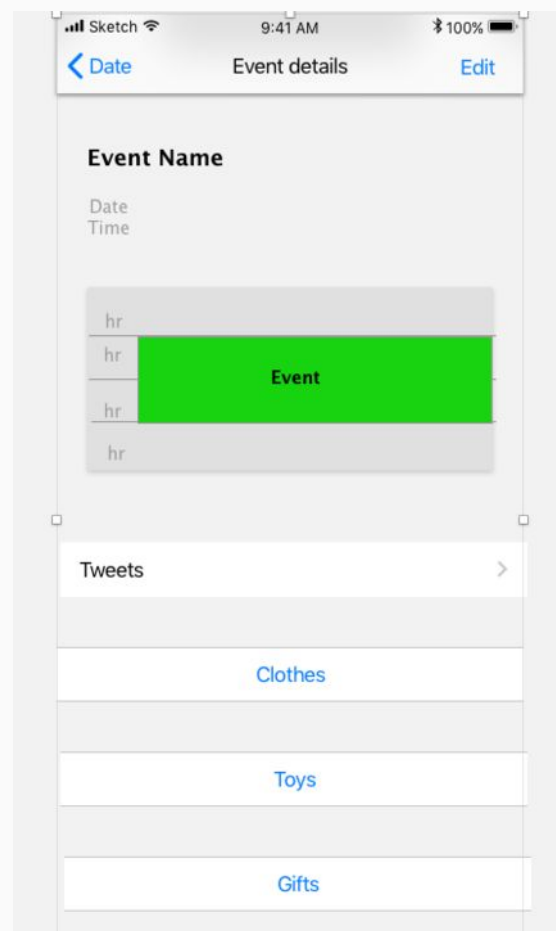
Game

Game

Game

See more >

Teams






Image of Item

Purchase

\$00.00

### Item Title

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Donec quam felis, ultricies nec, pellentesque eu, pretium quis, sem. Nulla consequat massa quis enim. Donec pede justo, fringilla vel, aliquet nec, vulputate eget, arcu.

# Requirements Document



# Summary of Requirements Document

## System Features

- Log in
- Log out
- Home
- Twitter
- Favorites
- Browse
- Checkout

## Stretch Goals

- Cart
- Publishing to iTunes Store
- Teams as a category
- Peripherals as a category
- Facebook API Intergration

Weeks 7 & 8

# Actions

- Tech Reviews Assigned
- Determine pieces for tech review
- Divide up pieces for tech review
- Read Swift Documentation
- Divide up screens for the user interface
- Updates for Xcode
- Obtain signature from client on requirements document
- Meet 4 mentors through slack

# Problems and Solutions

## Problems

- Discovery that one of our group member's Macintosh OS was not compatible with the version of Xcode that we need for the project.
- Coming up with pieces for tech review

## Solutions

- Get a new Mac laptop for that team member
- Research
- Talking with client
- Talking with mentors
- Talking with Instructor

Weeks 7 & 8

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# Technology Reviews



# Pieces-Meagan

- Platform
  - iOS
  - Android
  - Windows
- Framework
  - Objective C
  - Xamarin
  - Swift
- Navigation
  - Hamburger Menu
  - Tab Bars
  - Tabs

# Pieces-Kia

- Database
  - Firebase
  - MySQL
  - Realm
- Data Persistence(Offline Capabilities)
  - Core Data
  - Firebase Offline Data
  - Realm Offline Data
- eBay Browse Items HTTP Call
  - iOS URL session
  - Alamofire
  - HTTP

# Pieces-Katherine

- User Authentication
  - Firebase
  - Facebook
  - Google
- eCommerce Options
  - Redirect to eBay.com
  - Checkout in application with eBay order API
  - Checkout in application with Apple Pay
- Displaying Multiple Merchandise Results
  - Scrolling Item List View
  - Scrolling Item Grid View
  - Swiping Single Item View

# Pieces-Will

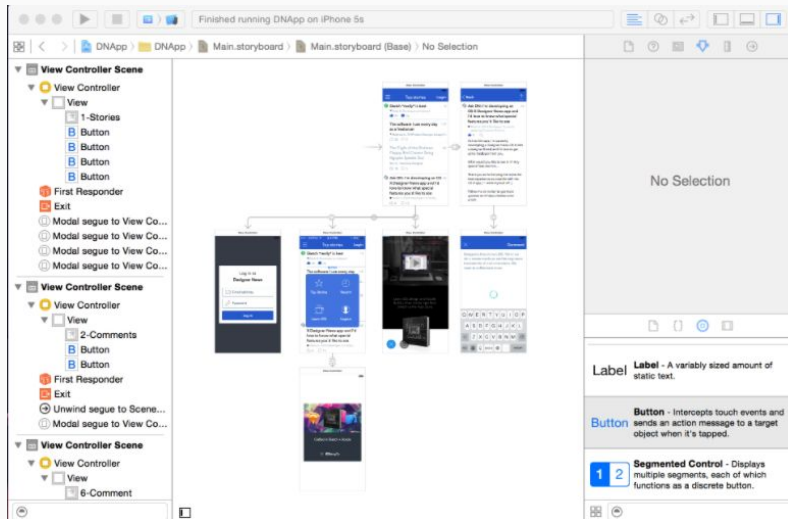
- **Generating Twitter Data**
  - Twitter Kit for iOS
  - Scraping HTML data with SwiftSoup
  - Manually adding tweets to Firebase
- **Generating event Data**
  - Tournament Data
  - Abios API
  - Manually adding events to Firebase
- **Converting JSON**
  - Apple Foundation Framework
  - Swifty JSON library
  - Gloss Library

Week 9

# Actions

- Technology review final draft submission
- Figuring out whether to implement our UI components using Storyboards Vs. Programmatically

# Developing the UI



Storyboard

```
view.addSubview(image)

image.topAnchor.constraint(equalTo: view.topAnchor).isActive = true
image.leadingAnchor.constraint(equalTo: view.leadingAnchor).isActive = true
image.trailingAnchor.constraint(equalTo: view.trailingAnchor).isActive = true
image.bottomAnchor.constraint(equalTo: view.bottomAnchor).isActive = true
```

Programmatically

Week 10



# Actions

- Complete our design document for submission
- Send tech reviews to client for signature and feedback
- Begin working on the progress report presentation
- Worked on the UI mock ups to make them look more consistent throughout the application

# Design Document

# Firestore Auth

- Create an Account
  - `Auth.auth().createUser(withEmail: email, password: password) { (user, error) in }`
- Log in
  - `Auth.auth().signIn(withEmail: email, password: password) { (user, error) in }`

# Firestore Data Storage

**db.collection("Users")**

**.addDocument(data: user.infoDic) { error in }**    Write To Database

**.getDocuments() { querySnapshot, error in }**    Read From The Database

**.whereField("Name", isEqualTo: "Kia").addSnapshotListener { querySnapshot, error in }**

Get Updates

# Twitter API

- GET statuses/user\_timeline
  - This will be our primary API call to retrieve tweets from the targeted accounts.
- The user will not be able to favorite modify or delete tweets

## Example:

GET [https://api.twitter.com/1.1/statuses/user\\_timeline.json?screen\\_name="someName"&count=2](https://api.twitter.com/1.1/statuses/user_timeline.json?screen_name='someName'&count=2)

# eBay Browse API

- GET item\_summary/search
  - Search for Items by Keyword will be used by making a GET request to retrieve data

## **Example:**

[https://api.ebay.com/buy/browse/v1/item\\_summary/search?q="Leage+of+Legends&limit=3](https://api.ebay.com/buy/browse/v1/item_summary/search?q=)

# URLSession

```
import UIKit

let keyWord: String = "SomeKeyWord"
let fetchLimit: Int = 10
if let baseURL = URL(string: "https://api.ebay.com/buy/browse/v1/item_summary/search?q=\(keyWord)\(fetchLimit)|") {
    URLSession().dataTask(with: baseURL) {
        (data, response, error) in
        if error != nil {
            //Error Handling
            return
        }

        //Parse JSON
    }.resume
}
```

# Retrospective



# Things we did well

- Communication with clients and each other
- Organization
- Inclusiveness and involvement of everyone in group
- Being understanding of each other's busy schedules
- Helping each other out in jams

# Changes

- Dividing up work sooner
- Starting work early in case people run into issues
- Listening to other teammates when they make suggestions
- Meeting over video conference more often so communication is more clear

# Going Forward

- Make sure we do enough planning before jumping straight into individual parts
- Figure out work assignments earlier in the process
- Make sure to be courteous of other team members by making a priority to get group-related work done as early as possible before the due date
- Open to communication when conflicts arise
- Use video conferencing more often to solve problems

# Current State of Project

- Working on combining the prototypes that we started this term and finish our high fidelity prototypes
- Learning more about iOS development as we begin implementation
- Plan to begin development over break