CSC780 - Application Development for Mobile Devices, Spring 2022
Final Project Proposal by
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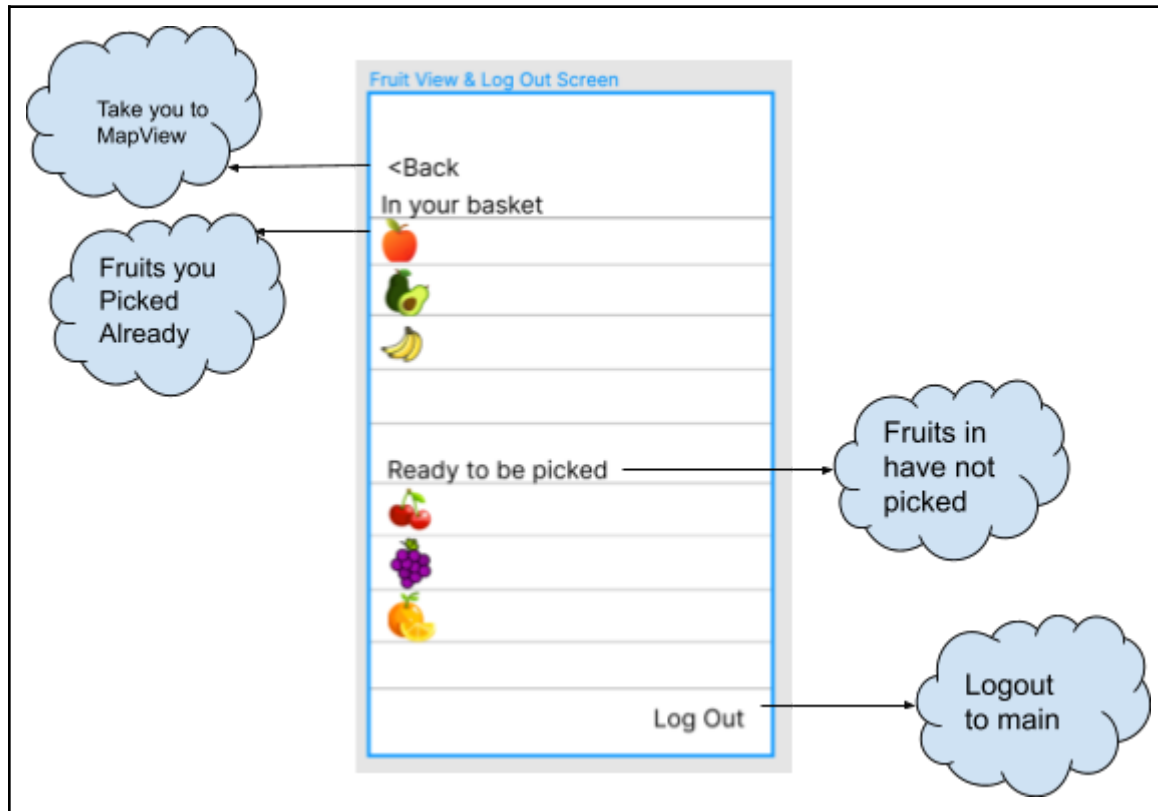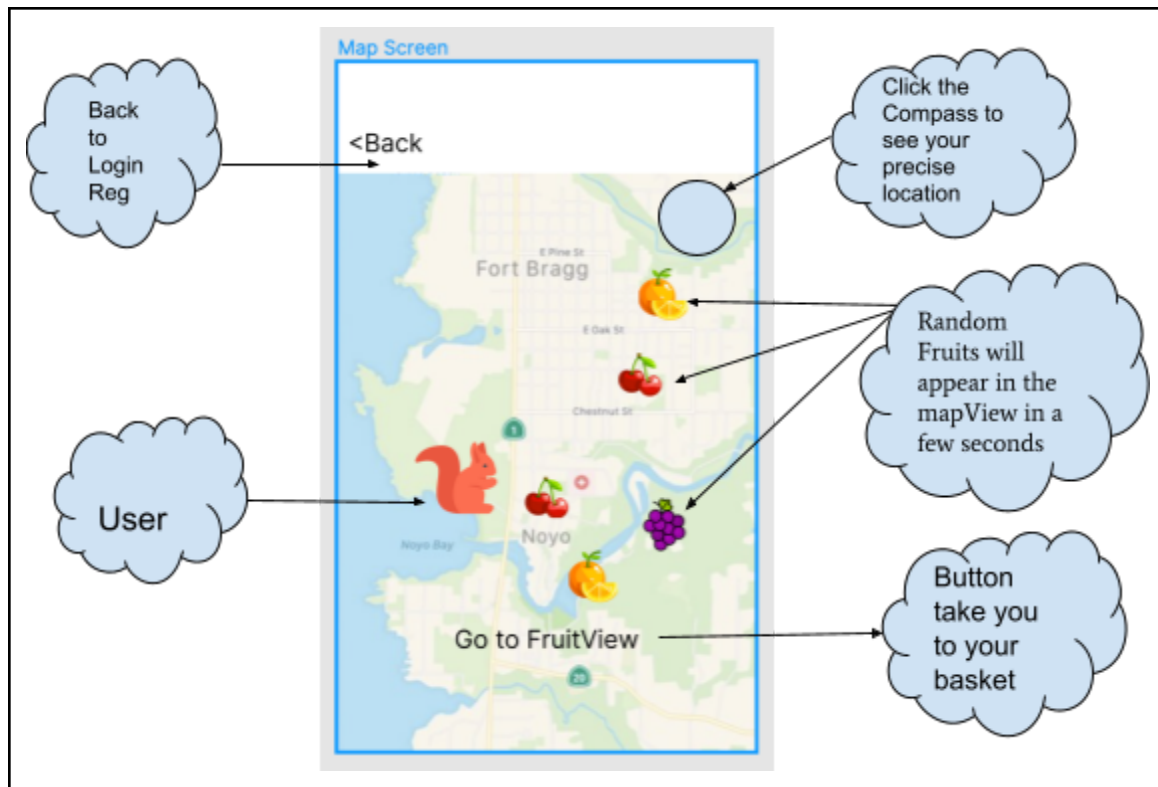
Project Name: CherryPick (An iOS Application)

- **Executive Summary:**

  The mobile application 'CherryPick' has been developed with GPS direction where users can play a fruit picking game using location from anywhere in the world. Users will be able to have more fun playing the game while visiting various places.

- **Basic wire-frames for Functional Features (Prototyping in Figma):**

LogIn Screen

CherryPick

email

password

Log In

New Player Sign up here!

SignUp Screen

CherryPick

email

password

Sign Up

Exsisting Player LogIn here

Map Screen

Back to Login Reg

<Back

Click the Compass to see your precise location

Random Fruits will appear in the mapView in a few seconds

User

E Pine St
Fort Bragg

E Oak St

Chestnut St

Noyo

Noyo Bay

Go to FruitView

Button take you to your basket

Take you to MapView

Fruit View & Log Out Screen

<Back

In your basket

Fruits you Picked Already

Ready to be picked

Fruits in have not picked

Log Out

Logout to main

- **Functional Features(Must have)**
  1. Users shall be able to LogIn, Register & Logout for the mobile application.
  2. Registration & Login shall include emailId and password fields.
  3. Users shall receive alerts pop up about the invalid emailId & password length.
  4. Users shall be able to view real-time Map directions and trace their location.
  5. Users shall be able to pick fruits at a specific/nearby distance.
  6. Users shall be able to switch between screens via the back button.
  7. Users shall be able to see a list of fruit items including both picked and unpicked.
  8. Users shall be able to turn on the location only when playing the game.
  9. Google analytics shall be used.
  10. Firebase Authentication shall be used in Login, and Registration process.

- **Non Functional Features(Nice to have)**
  1. Multiple players shall be competing.
  2. The language used shall be localized.

- **High-level system architecture and Technology stack:**

Operating System: macOS Monterey 12.3.1	Language: Swift
Mapping Technology: Apple Maps	UI Frameworks: UIKit
Architecture Pattern: MVC	Framework: CoreData
Testing/Debugging: iOS Simulator	IDE: Xcode
Version Control System: Github	Backend: Firebase
Dependency Management: CocoaPods pod 'FirebaseAnalytics', pod 'FirebaseAuth'	

- **Resources :**
  1. **https://firebase.google.com/docs/ios/setup**
  2. **https://github.com/firebase/quickstart-ios/blob/3daa18206fb9438a2e5ee 1c9f1996d5224a9792a/authentication/LegacyAuthQuickstart/Authentic ationExampleSwift/EmailViewController.swift#L173-L184**

3. https://www.youtube.com/watch?v=LE-wTJbMugA&list=WL&index=19
4. https://www.youtube.com/watch?v=l-8S_8hPhbg
5. https://www.youtube.com/watch?v=9fKcNpOiMFY&t=3s
6. https://www.youtube.com/watch?v=f6xN2MuHv1s
7. https://stackoverflow.com/questions/37943616/firebase-sign-out-not-working-in-swift
8. https://stackoverflow.com/questions/54966240/createnewuser-firebase-method-is-returning-nil-in-the-closure-for-user-uid
9. https://stackoverflow.com/questions/67119084/how-do-i-fix-cannot-find-firebaseapp-in-scope
10. https://stackoverflow.com/questions/69352212/you-may-have-encountered-a-bug-in-the-ruby-interpreter-or-extension-libraries
11. https://stackoverflow.com/questions/27785467/black-screen-after-presenting-modal-view-controller-in-current-context-from-uita
12. https://stackoverflow.com/questions/64073811/authorizationstatus-for-cllocationmanager-is-deprecated-on-ios-14