

Conclusion

Mobile Application Development in iOS

School of EECS

Washington State University

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Course Outcomes

- Proficient with iOS development environment
- Design, implement, test and deploy iOS app
- Able to use various iOS frameworks



Swift

- Optionals, optional binding, optional chaining (`?!`)

```
if let x = does?.this?.thing?.exist {  
    print("\(x) exists")  
}  
let y = this!.thing!.better!.exist!
```

- Closures

```
{  
    print("Hello. I am code.")  
    print("Send me anywhere.")  
}
```

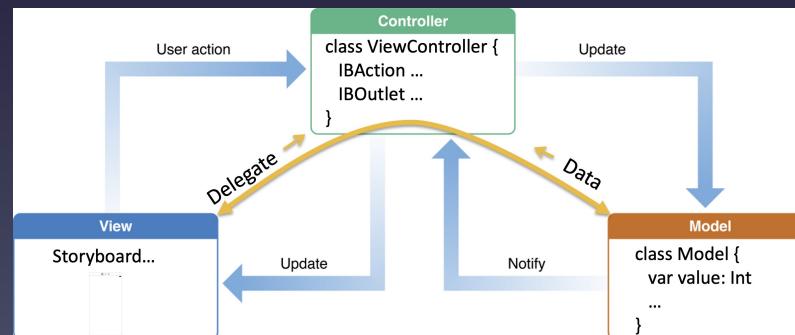
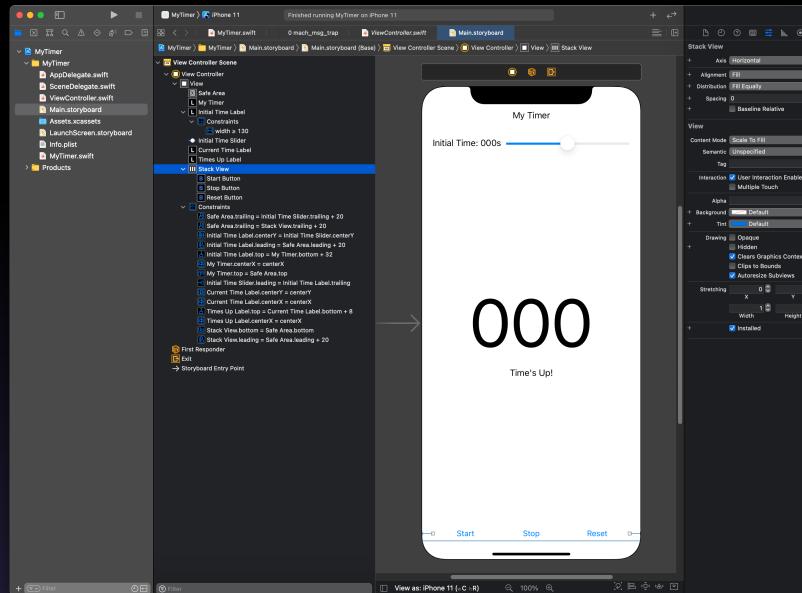
- Delegation

```
class ViewController: UIViewController, UITextFieldDelegate {  
    myTextField.delegate = self // In viewDidLoad  
    func textFieldDidEndEditing (_ textField: UITextField) {  
    }
```

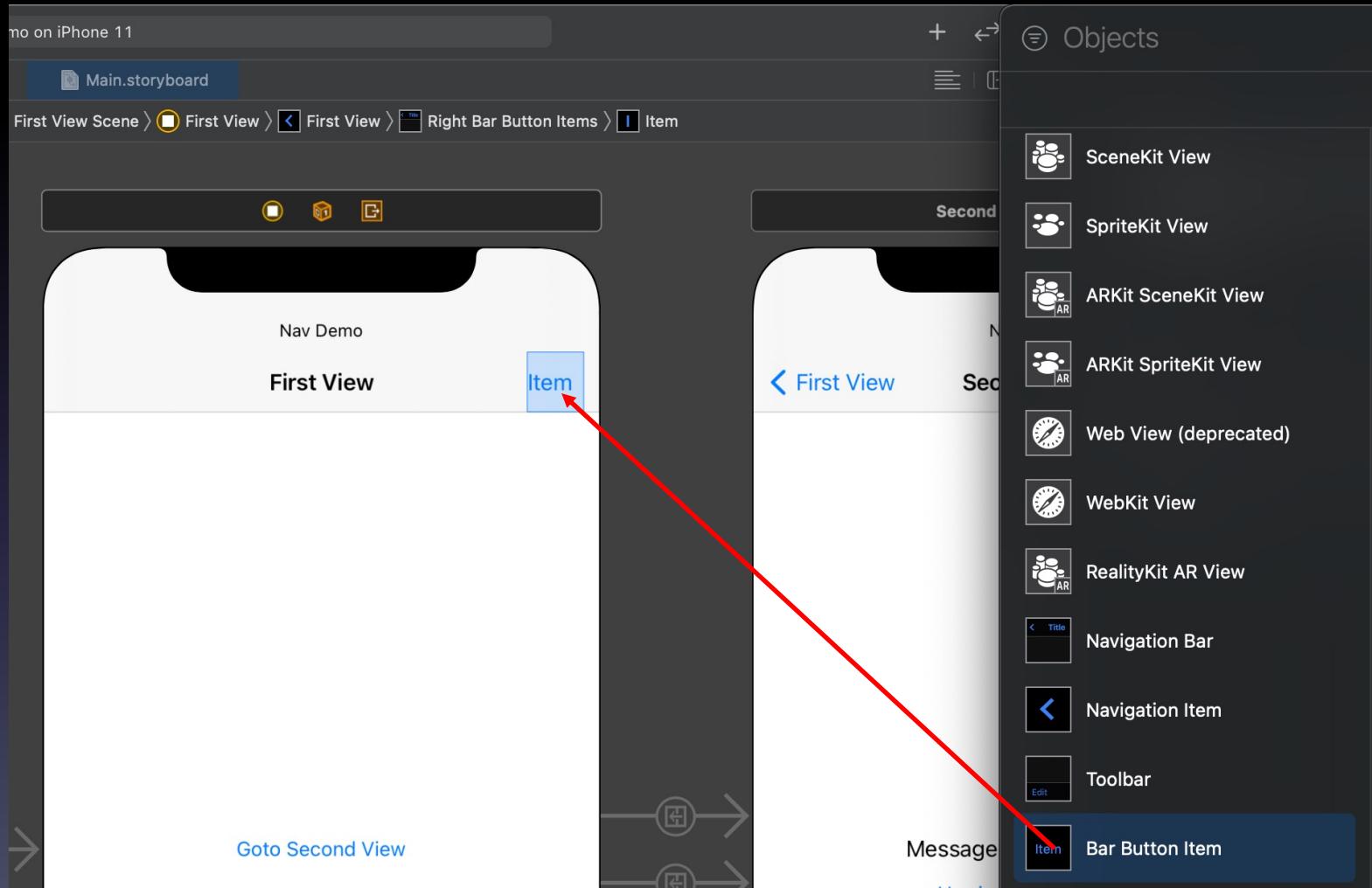


Design

- Storyboard
 - Auto-layout
- SwiftUI?
- Model-View-Controller (MVC) paradigm

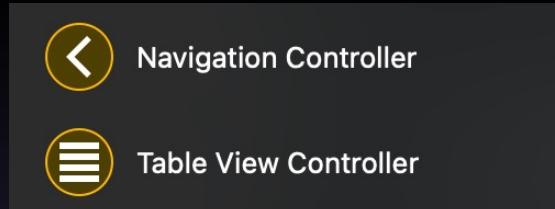


Navigation and Segues

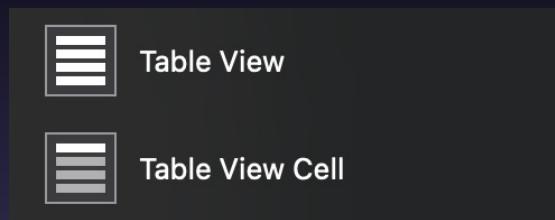


Tables

- Table View Controller



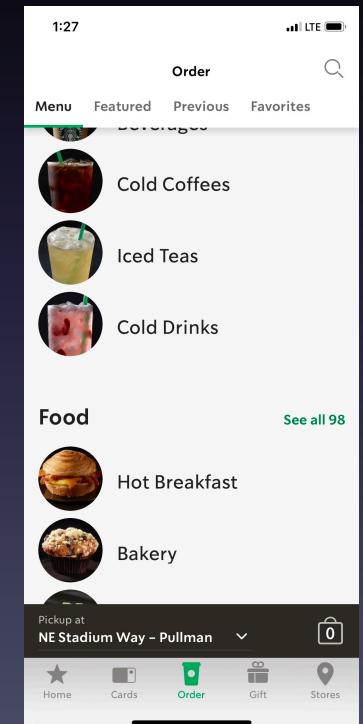
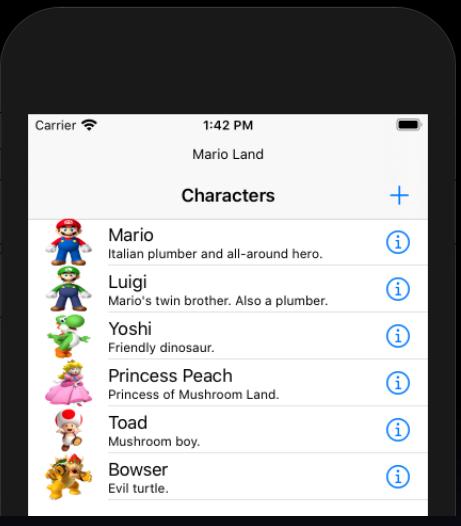
- Table View



- Table Cells

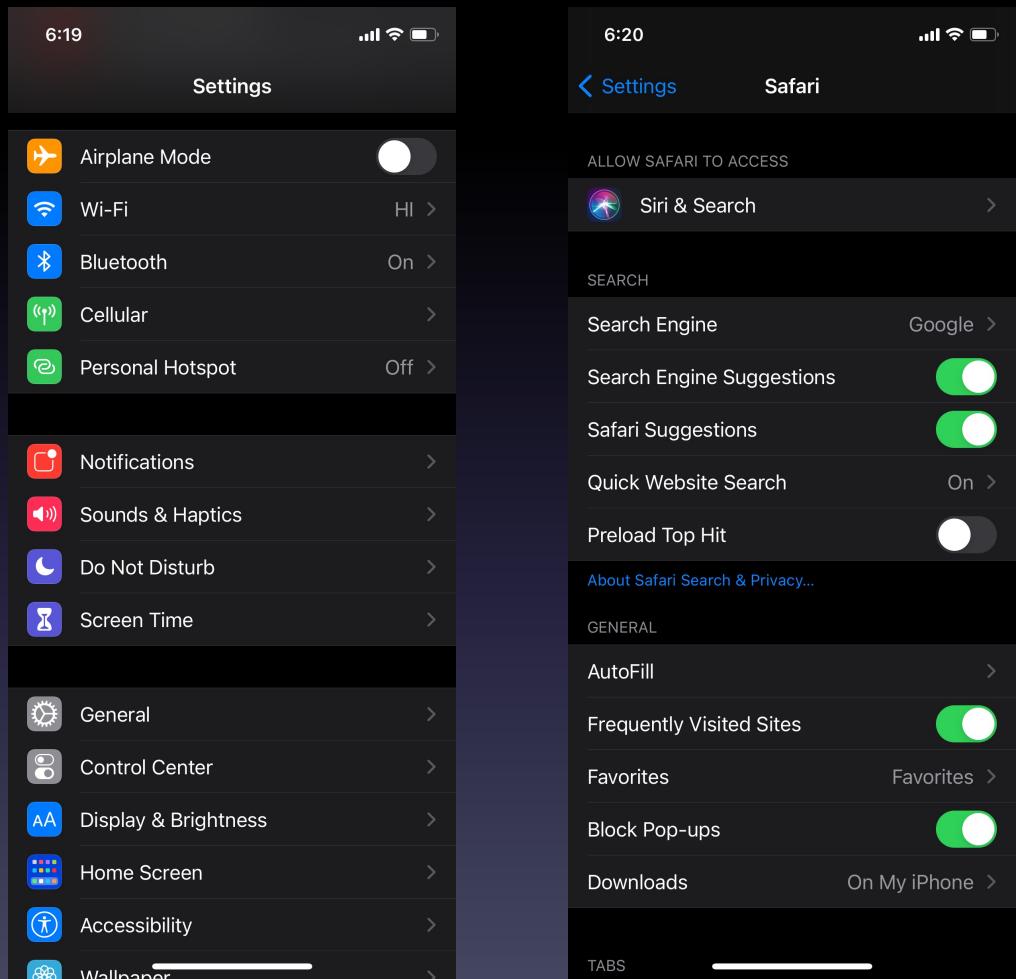


- Cell interaction



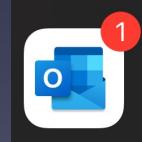
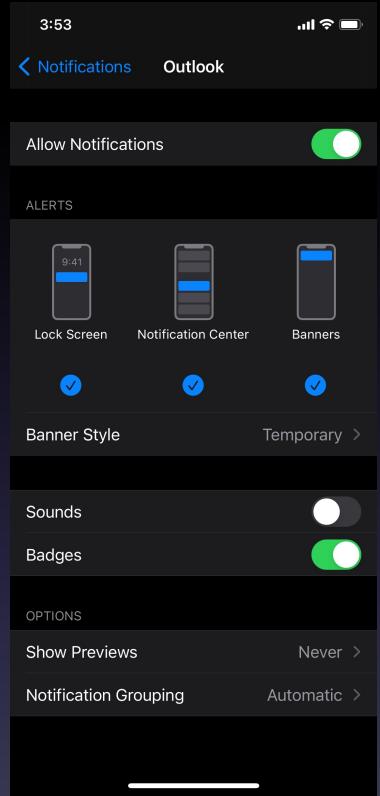
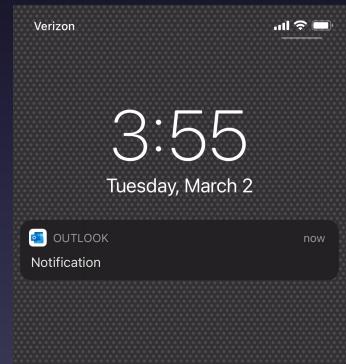
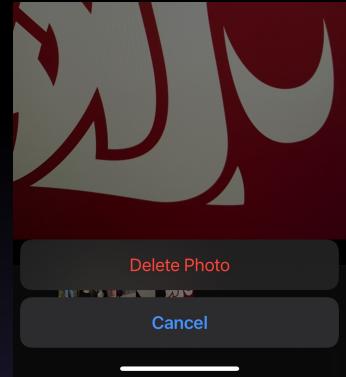
Settings

- In-app settings
 - UserDefaults
- Device settings
 - Settings Bundle

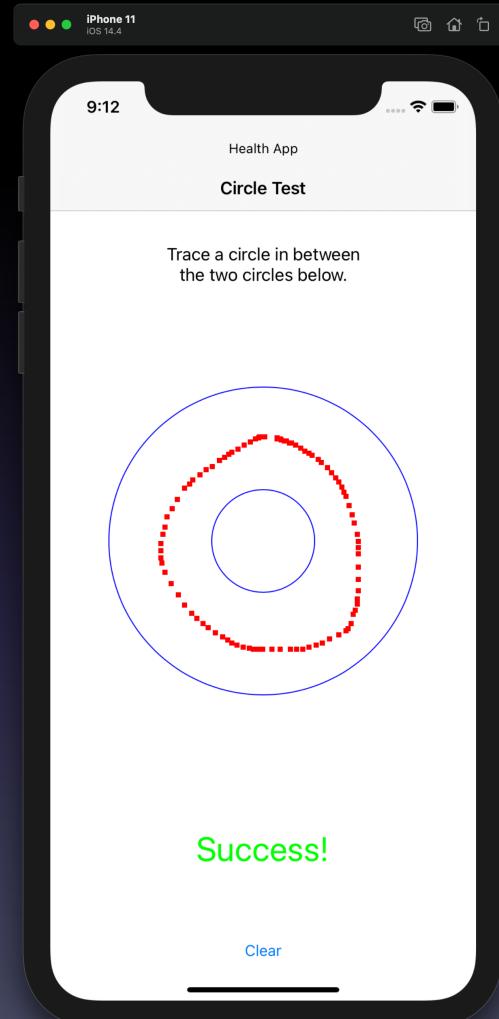
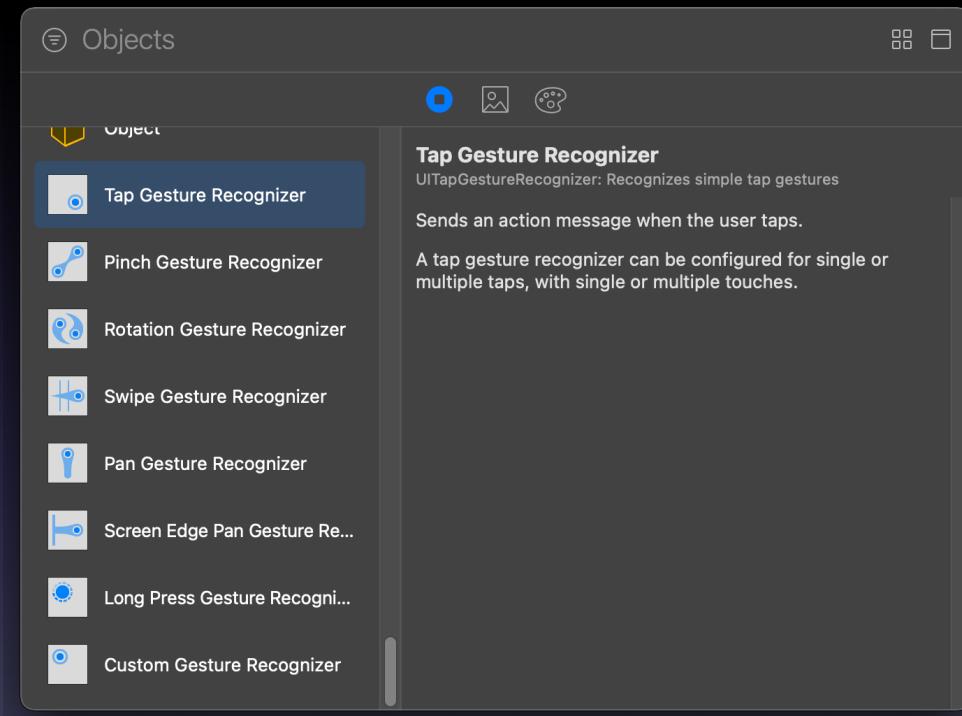


Alerts and Notifications

- Alerts
- Internal notifications
- Local notifications

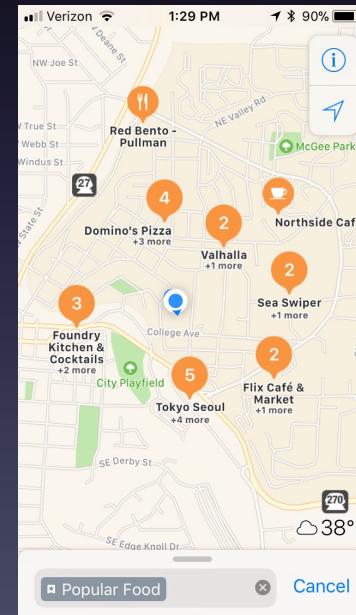
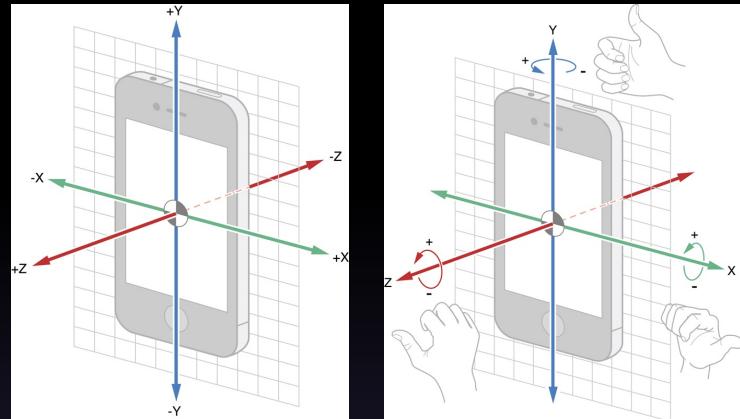


Gestures



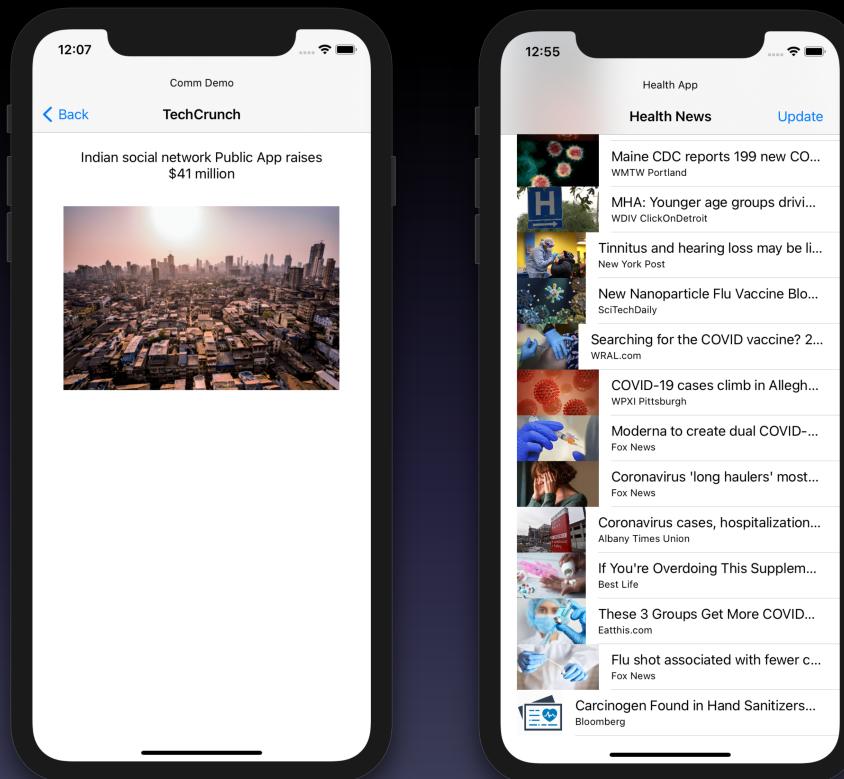
Sensors

- Sensor types
- Sensor availability
- Accessing sensor data
 - CoreMotion
 - CoreLocation
- MapKit



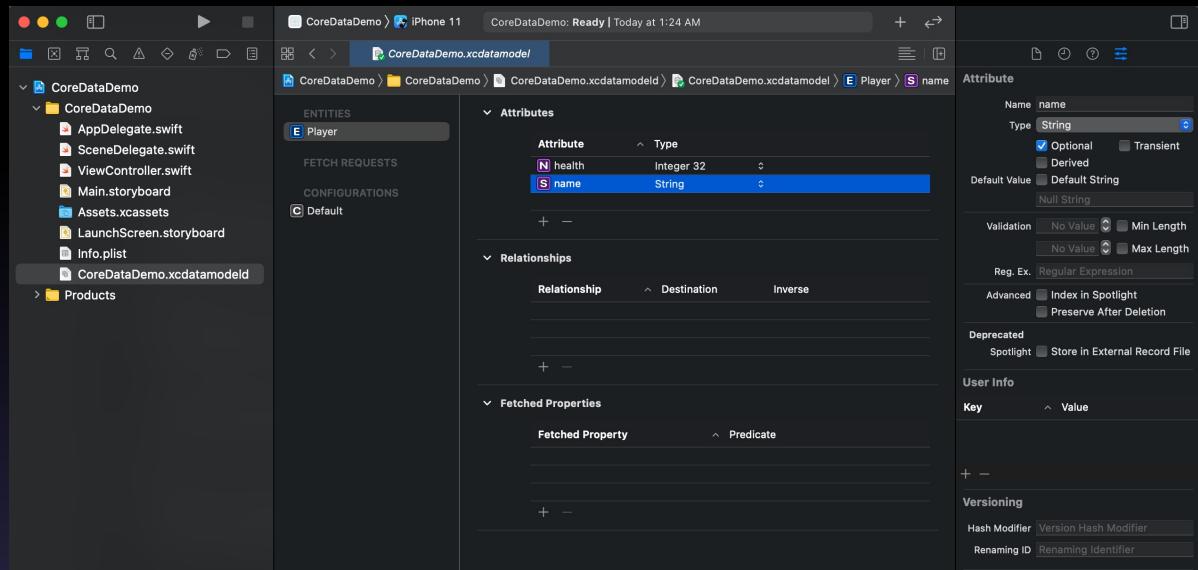
Communications

- URLSession
- WebKit



Storage

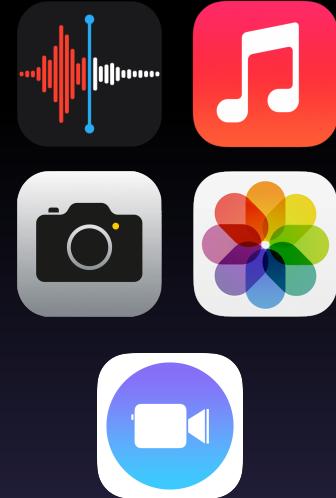
- File I/O
- Core Data
- Firebase



A screenshot of the Firebase Cloud Firestore console. The left sidebar shows the project overview and navigation to the Firestore section. The main area displays a collection named 'players' with several documents. One document is expanded, showing fields 'name' (value "Larry") and 'health' (value 100).

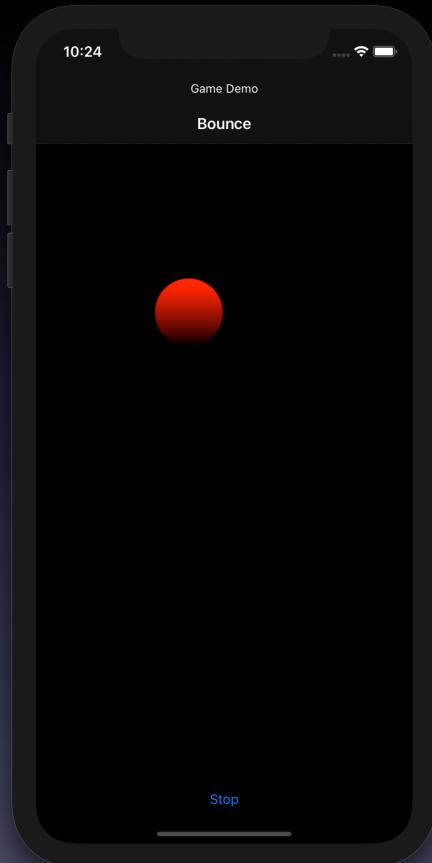
Multimedia

- Audio recording, access, and playback
- Image capture, access, and display
- Video recording, access, and playback

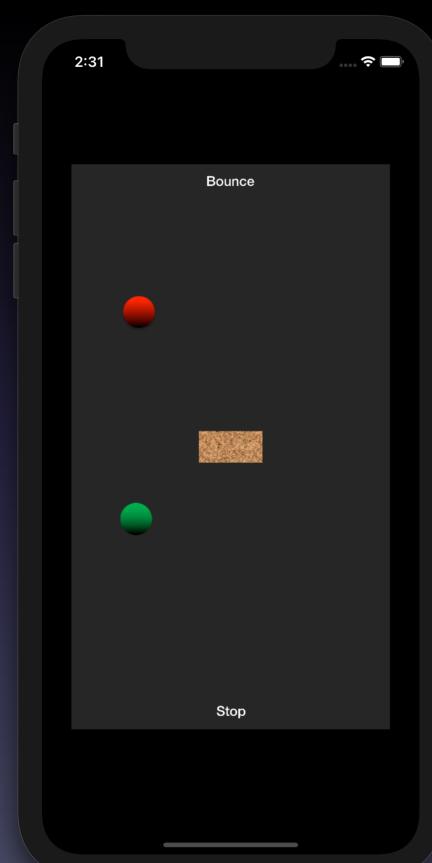


Graphics and Animation

Core Graphics

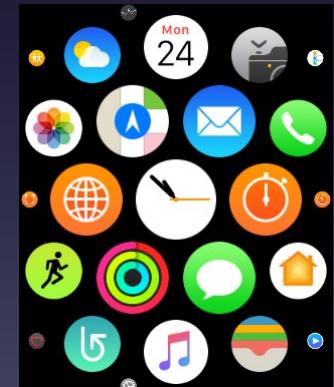


SpriteKit



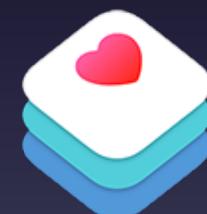
Apple Watch

- Xcode configuration
- WatchKit
- Notifications
- Complications
- Sensors



iOS Frameworks

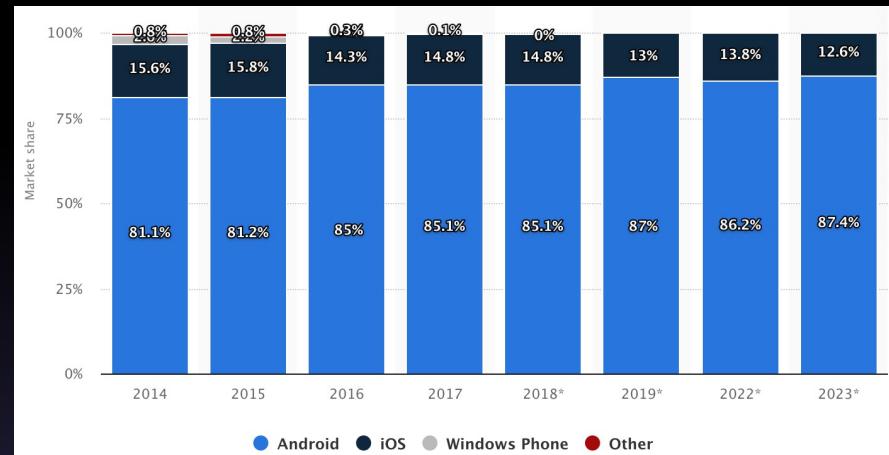
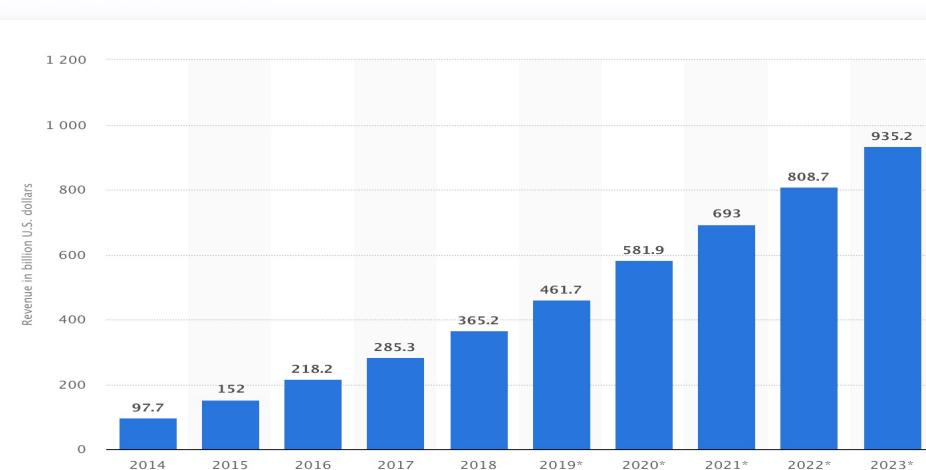
- ARKit
- CloudKit
- HealthKit
- HomeKit
- GameKit
- MapKit
- SceneKit
- MusicKit
- WebKit
- UIKit
- CoreData
- CoreLocation
- CoreMotion
- CoreML
- WatchOS/WatchKit
- Over 50 more...



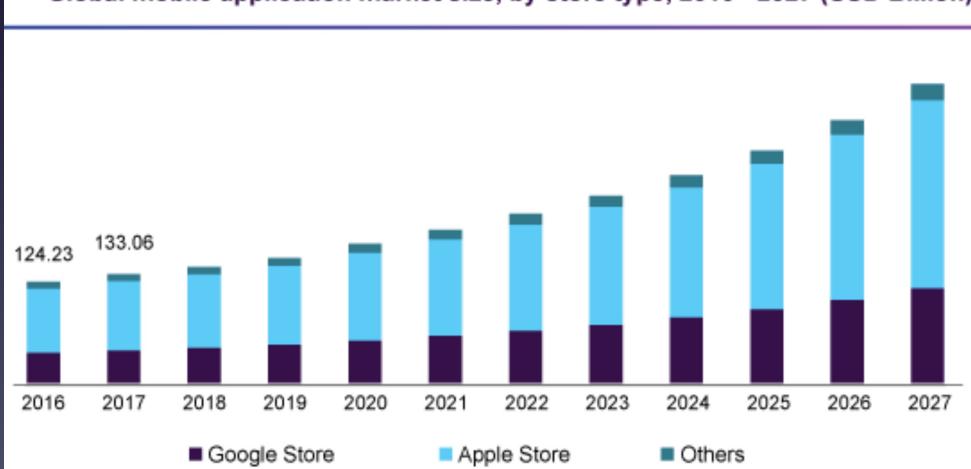
Mobile App Development

Worldwide mobile app revenues in 2014 to 2023

(in billion U.S. dollars)



Global mobile application market size, by store type, 2016 - 2027 (USD Billion)



Mobile App Development

Thank you!

- Please fill out your Course Evaluation!
- Blue Course Evaluations on my.wsu.edu