INTRODUCTION
Programming Handheld Systems—iOS

CMSC 436
Spring 2020

COURSE NUTS & BOLTS

- https://sedna.cs.umd.edu/ios
- Office hours:
  - IRB 5234 Open Area (open area across from IRB 5234)
  - Times TBD
- Grading:
  - 2 reading homeworks: 10% (5% each)
  - 4 individual projects: 30% (6%, 7%, 8%, 9%)
  - 1 large group project: 20%
  - 2 mid-terms (2/27, 4/16): 20% (10% each)
  - take-home timed final exam: 20%
- It’s all curved:
  - Median is B-/C+ boundary (approximately)
  - stdev up and down for each full letter (approximately)
  - grade divisions locked in
TODAY

- What is this class all about?
  - Why am I here?
- Prerequisites
  - You must be a strong object-oriented programmer
  - You must have access to a mac
- iOS Overview
  - What’s in iOS?
- A new language: swift

WHAT WILL I LEARN?

- How to build cool apps
  - Easy to build even very complex applications
  - Result lives in your pocket or backpack.
  - Very easy to distribute your application through the AppStore
  - Vibrant development community
- Real-life object-oriented programming
  - The heart of Cocoa Touch is 100% object-oriented
  - Application of MVC design model
  - Many computer science concepts applied in a commercial development platform:
    - Databases, graphics, multimedia, multithreading, animation, networking, and much more
  - Numerous students may go on to sell products on the AppStore
WHAT’S IN IOS?

Core OS:
- OSX Kernel
- Mach 3.0
- BSD
- Sockets
- Security
- Power Management
- Keychain Access
- Certificates
- File System
- Bonjour

WHAT’S IN SWIFT?

- Write code for phones, devices, desktops, servers…
- Modern
  - Closure support
  - String support
  - Optionals and chaining
  - Values types
  - Protocol-oriented programming
  - Memory management
  - Xcode development
  - Extensions, Protocols & Generics