

Mobile App Development - Android

Course Introduction

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Agenda

- Understanding the course, its learning outcomes and requirements
 - Course Outline
 - Class plan
 - Classroom policies
 - Getting ready for course

What to expect from the session!!

- Content (Slides, tutorials, code)
 - Will be available on BB
 - Contain the overall structure of what we're learning
 - Not everything is on the slides, refer to books and your notes taken during class
- Hands-on
 - You will find lots of hands-on practice done during the session on all the concepts we are going to learn

Resources

- Material used for the course such as developer documents, tutorials, code labs, etc. will be provided periodically by the professor on Blackboard under the weekly session modules.
- You will also be provided by the source code created by prof on the Blackboard.

What is expected of you !!

- Come prepared by reading required material
- Take notes
- Complete in-class activities
- Pay attention
- Ask questions / clarifications whenever you don't understand
- Learn what is being taught

What is NOT expected of you !!

- Leaving your laptop unattended while in virtual classroom sessions
- Not paying attention to the ongoing virtual classroom activities
- Using online code that represents a significant portion of the completed work (even if it is properly attributed)
- Giving someone your program (or parts of it) so they can use it as guide. Includes posting your assignment in a public forum

What can you expect from me !

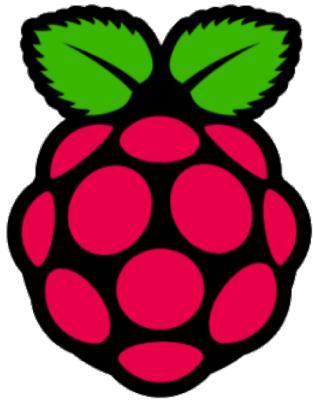
- On time and well prepared for the class
- To explain the technology the best I can
- Post the content for each session
- Post the code after the session ends
- Responsive to your requirements (Feel free to let me know any of your needs and/or concerns)
- Support and motivate you in a professional way
- Have fun n learn

What are we going to learn?

- Design and Development of iOS Apps
 - Multiscreen apps
 - Design Patterns and Architectures
 - Data Persistence
 - Camera features
 - Networking
 - and more



Mobile OS

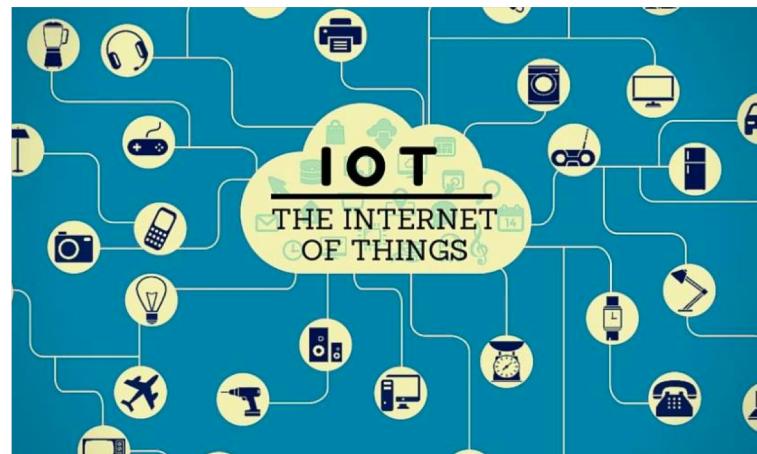


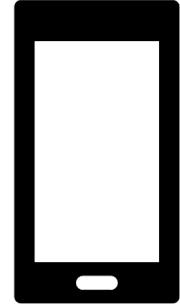
RaspberryPi

android
things

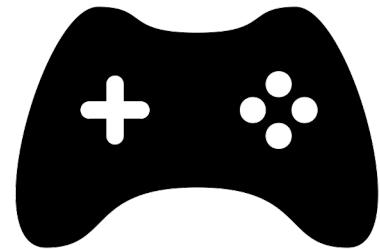


iBeacon





Supported Devices





Objective-C



Swift



Types of Mobile Apps

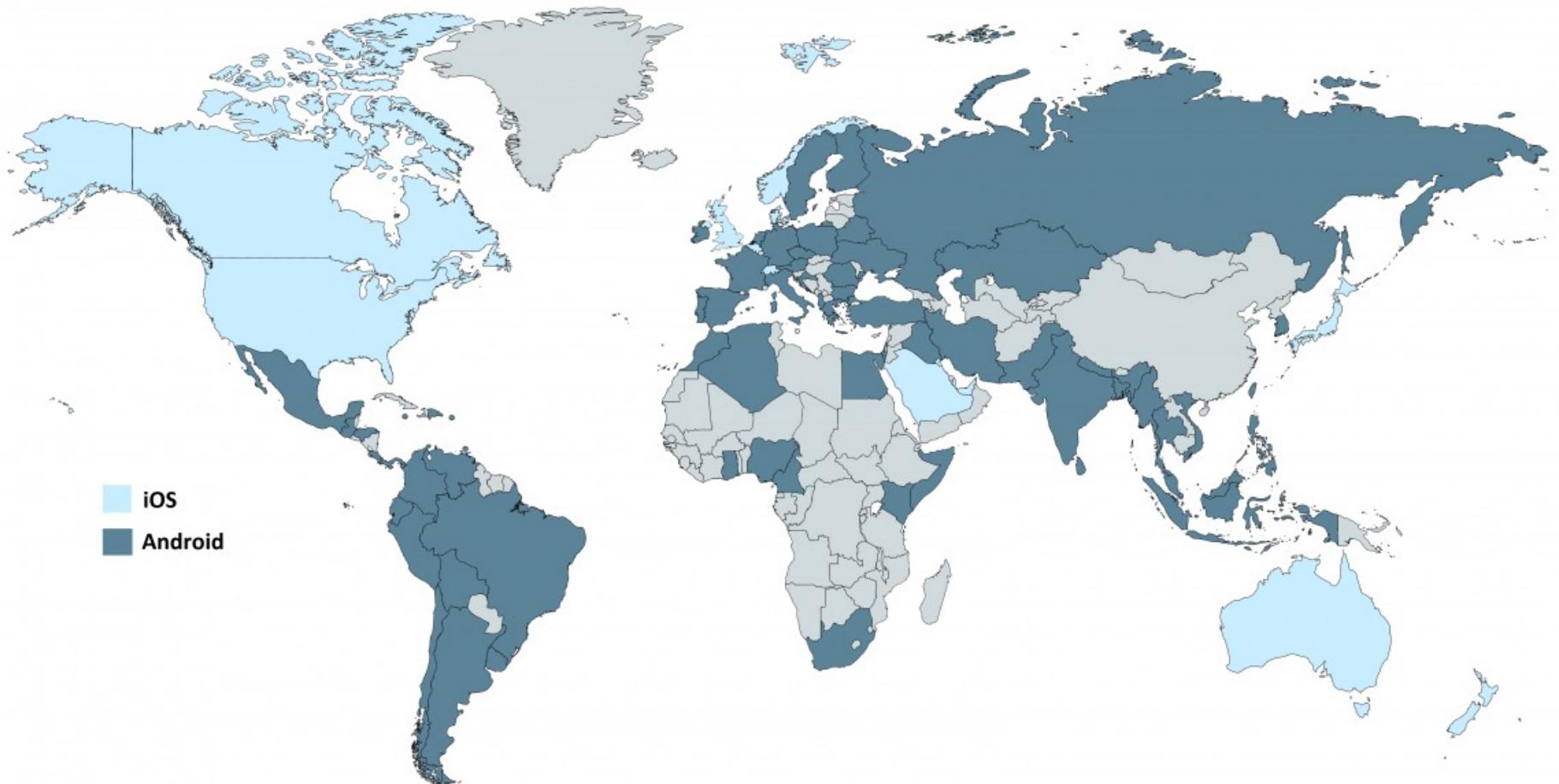
Native Mobile Apps

- Programmed in the recommended language for a specific operating system
- Google: Android, Java, Kotlin, Android Studio
- Apple: iOS, Swift, XCode
- Compatible with the device's hardware and features
- Faster and more efficient performance
- Native UI/UX
- Needs to create different apps for different mobile device platforms

Hybrid Mobile Apps

- Developed using HTML, CSS, JavaScript
- Xamarin, Titanium, React Native, Flutter etc.
- Can create compelling apps quickly
- Cross-platform
- limited access to the device's hardware features
- Performance could be an issue for some apps compared to native apps

Android vs iOS



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Image Source: <https://deviceatlas.com/blog/android-v-ios-market-share>

Development Requirements

- Android Studio

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