



Laboratorio di Applicazioni Mobili (LAM 2014)

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**Dipartimento di Informatica – Scienza e Ingegneria
Alma Mater Studiorum - Università di Bologna**



General course considerations

❖ Preliminary considerations: YES, In ENGLISH!

- This is a NEW course activated with some initial problems and ongoing adaptation process
 - People, support, devices and **labs**, material, numbers...
- Motivations (...you know why you are here, but...)
 - Enabling potential for students and course collocation in CdS organization
 - Projects and app development towards research themes: IoT, M2M, pervasive apps, etc.... More interesting stuff with Android than iOS, however... why not a flavor of iOS?
- We need you help to make it evolve into something better year by year
 - Be patient, be patient, be patient...
 - Be constructive, be constructive...
 - Be ambitious



Programming with iOS: Module Overview

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iOS ... Why?

GOALS OF THE MODULE:

- Introduce the iOS architecture
- Implement simple iOS applications
- Get familiar with Xcode and ObjectiveC



iOS considerations

❖ Preliminary considerations:

- iOS 7.0 programming requires a MAC (Intel based, Mavericks 10.9 or better)
 - Limited lab facilities in Ranzani Lab
 - Reference is iOS7 (*) (some remarks on differences with iOS5, iOS6, iOS6.1)
 - SDK (free download) needed. No need to join a “program”.(*)
 - No HW required (but better to have it): emulation possible for our apps. For running on device or app store you must join a program (not for free. University programs possible. We will discuss this).
 - Raise up your hands: how many of you feel the iOS interest?
 - How many have a MAC or iOS device?
 - How many played with iOS (<7.0), Xcode, Interface Builder and objective C?
- (*) issue with the lab: Mountain Lion installed will be updated to Mavericks to support Xcode 5



iOS considerations

- ❖ Prerequisites: Object-Oriented Programming
- ❖ ...you should be familiar (how many are?) with:
 - Object-Oriented Terms
 - Class (description/template for an object)
 - Instance (manifestation of a class)
 - Message (sent to objects to make them act)
 - Method (code invoked by a Message)
 - Instance Variable (object-specific storage)
 - Inheritance (code-sharing mechanism)
 - Superclass/Subclass (Inheritance relationships)
 - Protocol (non-class-specific method declaration)



iOS considerations

- ❖ ...logistic of lessons is complicated:
 - Frequent absence due to EU projects and missions
 - Interleaving of classes between iOS and Android
 - **Monday**: Android/iOS, **Wednesday**:Android/iOS, **Thursday**: Android/iOS
 - Important to have a mailing list for urgent communications
 - Creation and collection of names – emails: lam2014
 - Twitter account: @profBononi
 - Important to always check for last minute problems with lessons on the same day (morning check recommended)
 - Course website and mailbox. Newsgroup needed?
 - <http://www.cs.unibo.it/~bononi/> > courses > Lab Applicaz. Mobili
 - Marco and Luca reference URLs will be communicated.



iOS considerations

- Typical Lessons calendar:
 - Monday, 10.30-12.30 Aula E2
 - Wednesday, 15.30-17.30 Aula VII Piano
 - Thursday, 15.30-17.30 Aula VII Piano

- Today: just a welcome and course introduction.
- Next lesson Wednesday February 26 (with iOS)



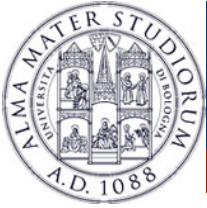
iOS considerations

- However: for people having difficulties to attend lessons there is a great option (only for iOS part):
 - Our lessons are mainly based on Stanford Fall 2013 classes available online (a subset will be illustrated for time reasons)
 - <https://itunes.apple.com/us/course/developing-ios-7-apps-for/id733644550>
 - **DO NOT CONTACT STANFORD PEOPLE TO ASK QUESTIONS! They are not our online reference manual. Contact me in case of questions or problems.**
 - If you want to see the excellent illustration of Stanford's course contents you can access iTunes U and remotely download material and attend classes (in english):
 - Previous years available, e.g. Developing Apps for iOS (Fall 2010) – basis for iOS4, Fall 2011 material is about iOS5, Fall 2012 (iOS6), Fall 2013 (iOS7).
 - You are free to go further our lessons on iTunesU (if you are interested) covering the full course potential.



iOS considerations

- Course exam and projects:
- Exam:
 - discussion of the project with presentation and questions (oral)
 - When? When you are ready (more or less, due to high numbers)... we are clustering exams in time windows or “exam days” with open participation of your colleagues. There will be multiple project submission deadlines!
- Course Project:
 - individual (max 2 persons)
 - Preliminary agreed (and officially assigned) by me or Marco/Luca (written consent)
 - List will be supplied... but we are open to your initiative and interests... sky’s limit.
 - Natural binding with thesis work (for those interested), specifically in vehicular and IoT apps.
 - Best projects selected for department initiatives (best project award and show up)
 - Credentials for jobs... disclaimer: this course is not a certification! (too short) It is an introduction to the context of iOS and Android mobile apps development.



iOS considerations

■ References (iOS)

- Apple on-line documentation
 - <http://developer.apple.com>
- My website will contain all lessons' material:
 - <http://www.cs.unibo.it/bononi/LAM2014/>
- books (in italian): Bill Dudney, Chris Adamson, **“Sviluppare applicazioni con iOS SDK”**, Apogeo, Febbraio 2013, ISBN: **978-88-503-1594-9** (riferimento SDK iOS 6.0). New version available for iOS 7.0.



iOS considerations

Questions?