

About this course

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A long evolution...



2008

📍 July - SDK iPhoneOS (iOS 2)



2010

📍 January - project at Sorbonne Université (iOS 3)

📍 Falls - creation of the course (iOS 4)



2011

📍 Falls - on iTunesU (iOS 5)



2012

📍 January - on iTunesU (iOS 6)



2013

📍 Falls - on iTunesU (iOS 7)



2014

📍 Spring - MOOC (FUN) 10 weeks (iOS 7)

📍 Falls - on iTunesU (iOS 8)



2015

📍 Spring - 2 MOOCs (6 week) on FUN (iOS 8)



2016

📍 Falls - course on iOS 10 on Youtube



2017

📍 Spring - 2 MOOCs (6 week) on edx (iOS 10)



2018

📍 Falls - course on iOS 12

A long evolution...

Many innovations
classical, recorded, MOOCs,
off-line students



online courses + Labs @SU
Monday 14h00-16h00
Labs for remote students
Possibility of synchronized question sessions

2008

July - SDK iPh

2010

January - pro
Université (iOS 5)

Falls - creation of the course (iOS 4)

2011

Falls - on iTu (iOS 5)

2012

January - o

2013

Falls - on iTu

2014

(FUN) 10 weeks

2015

Spring - 2 MOOCs (6 week) on FUN (iOS 8)

2016

0 on Youtube


(week) on edx

Falls - course on iOS 12

Objectives of this course

3

Master programming on smart devices


-  Master the basics
 - ▶ Numerous needs these days
 - ▶ Only a few experts
 - ▶ Many new usages (smart cities, home automation, sport, etc.)

Navigate over the documentation

Navigate between technologies


-  iOS & Android
 - ▶ Many common concepts
 - ▶ Different processes

Practise

-  «flying hours» are important

Objectives of this course

Master programming on smart devices

 Master the basics

- ▶ Numerous needs these days
- ▶ Only a few experts
- ▶ Many new usages (e.g. social media, etc.)




Exercice(s) every week...

And a project for Android


Navigate over

Navigate between technologies

 iOS & Android

- ▶ Many common concepts
- ▶ Different processes


Practise

 «flying hours» are important

Contents

Part I (11 weeks)

Fabrice Kordon

 iOS 12 + WatchOS 5


- ▶ Xcode 10
- ▶ Update of the courses (as usual)

 Mostly Swift (4.2)

- ▶ A bit of Objective-C
 - Play with memory management in embedded systems
 - Because it is still useful

Part II (3 weeks)

Etienne Renault

 Android (Mostly «Oreo», a bit of «Pie»)

- ▶ Differential presentation from iOS



About evaluation



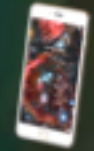
Final exam, 65%

- Concerns iOS only
- On computer
- Limited time (2 hours)
- Individual



Labs, 10%

- Over the weeks



Android (mostly project), 25%

- Concerns Android only

About evaluation

Final exam, 65%

- Concerns iOS only
- On computer
- Limited time (2 hours)
- Individual

Labs, 10%

- Over the

Android

- Concerns



Mac available @SU

«salle SAR» + «salle 409»

You may use your own
Individual licence for iOS

Important!!!

Code retrieval on the web

Nice but dangerous..

- 1) *it is better to understand the code*
- 2) *«web code» may become incorrect rapidly*

And no connection during the exam


Hardware available (@ SU)

iOS

- iPods 6th generation
 - ▶ Small terminals
- iPad mini retina & iPad 4+
 - ▶ Large terminals
- Some iPad pro + pencil and phones + watch
 - ▶ When involved in Labs

Android

- Nexus 5 (telephone)

 **Involved students are responsible for the material**



Interested?

Contact me
(borrow document to be signed)

Main pedagogical choices

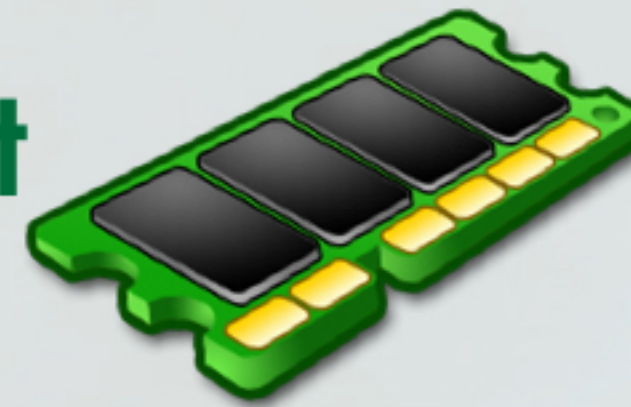
I — construction of user interfaces

- We will mention several ways
- We will deeply explore and use the «programming mode»



II — memory management

- Delicate in embedded systems
- Automated (ARC introduced since iOS 5)
- Explicit management will be investigated



▶ **When dealing with Objective-C**

III — Language

- Swift and (a bit of) Objective-C



More about choice III

Objective-C is stable

- 🎧 Syntactically (but convention changes)

Swift is becoming stable

- 🎧 1.0β (june 2014)
- 🎧 1.0 (september 2014)
 - ▶ **1.1 to 1.2 later with numerous changes**
- 🎧 2.0β/2.0 (june 2015)
 - ▶ **2.1 to 2.2 later**
- 🎧 3.0β (june 2016)
- 🎧 3.0 (september 2016)
 - ▶ **3.1 to 3.4 later**
- 🎧 4.0 (september 2017)
 - ▶ **4.1 and 4.2 (should be in Xcode 10 final)**


Unstable!

Toward stability

Mature and quite stable

More about choice III

Objective-C is stable


 Syntactically (but convention cl




Remind...


sources on the web vary a lot for Swift do no forget APIs too

Swift is becoming stable


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▶ 1.1 to 1.2 later with numerous changes


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Unstable!

Toward stability

Mature and quite stable

Concluding remarks



Some advice

- Practice regularly (and intensively)
 - ▶ Experience increase understanding
 - ▶ More efficient navigation (concepts & documentation)
 - ▶ Acquire reflexes and confidence
- Please complete your exercises
 - ▶ A large variety of Applications will be proposed



Good luck for your trip

