

SESSION #1

WHAT WILL I LEARN IN THIS COURSE?

- MAIN GOAL IS DEVELOPING A REAL LIFE MOBILE APPLICATION
 - SWIFT PROGRAMMING LANGUAGE
 - IOS PLATFORM (UI, GRAPHICS, ANIMATION, NETWORKING, LOCATION, MEDIA, ...)
- DESIGN PATTERNS AND ARCHITECTURE OF MOBILE PROGRAMS
- DESIGNING USER INTERFACE/INTERACTION ON MOBILE DEVICES

PREREQUISITES

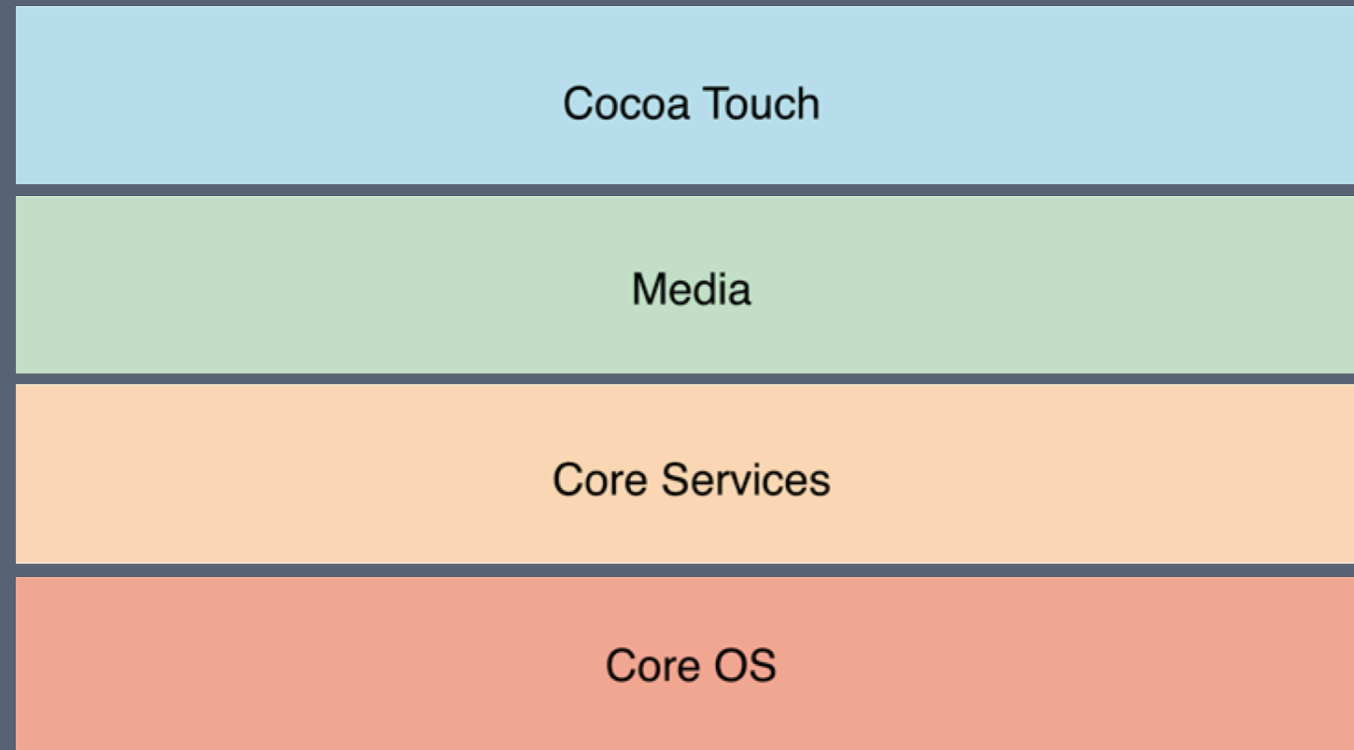
- PROGRAMMING BASICS
- OBJECT ORIENTED PROGRAMMING
- BEING INTERESTED IN MOBILE DEVELOPMENT
- ACCESS TO A MAC AND AN IPHONE/IPAD

EVALUATION

- (49%) A REAL LIFE IOS APPLICATION AT THE END OF SEMESTER
 - (41%) SOME SHORT CODING TASKS DURING THE SEMESTER
 - (10%) FINAL EXAM

WHAT IS IOS

LAYERS OF IOS

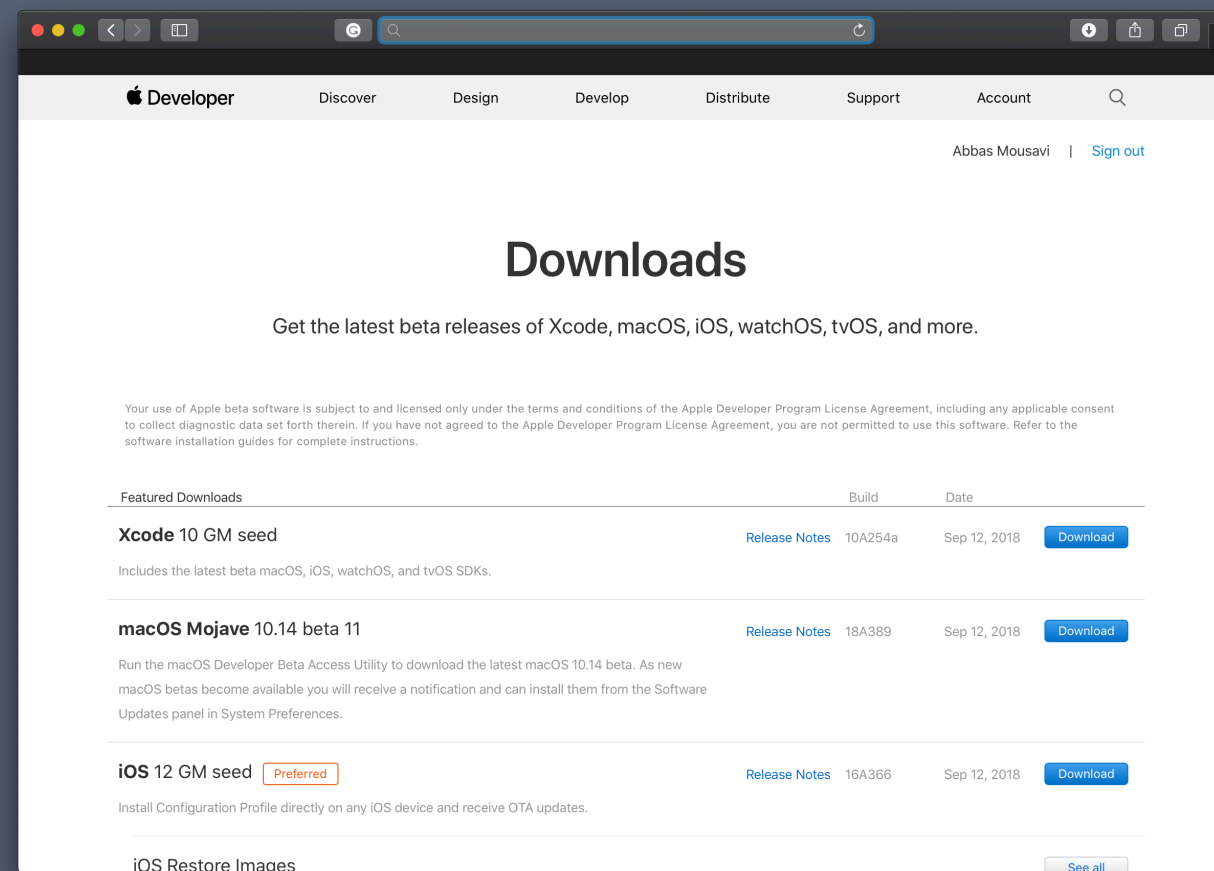


- > CORE OS: FREE BSD UNIX
- > CORE SERVICES: ARC, GCD, SQLITE, ACCOUNTS, ADDRESS BOOK, NETWORK, CODE DATE, CORE FOUNDATION, CORE LOCATION, CORE MEDIA, CORE TELEPHONY, EVENT KIT.
- > MEDIA: CORE GRAPHICS, CORE ANIMATION, METAL, MEDIA PLAYER, CORE AUDIO, CORE VIDEO
- > COCOA TOUCH: UIKIT, GAMEKIT, MAPKIT, MESSAGE UI, EVENT UI, ADDRESSBOOK UI

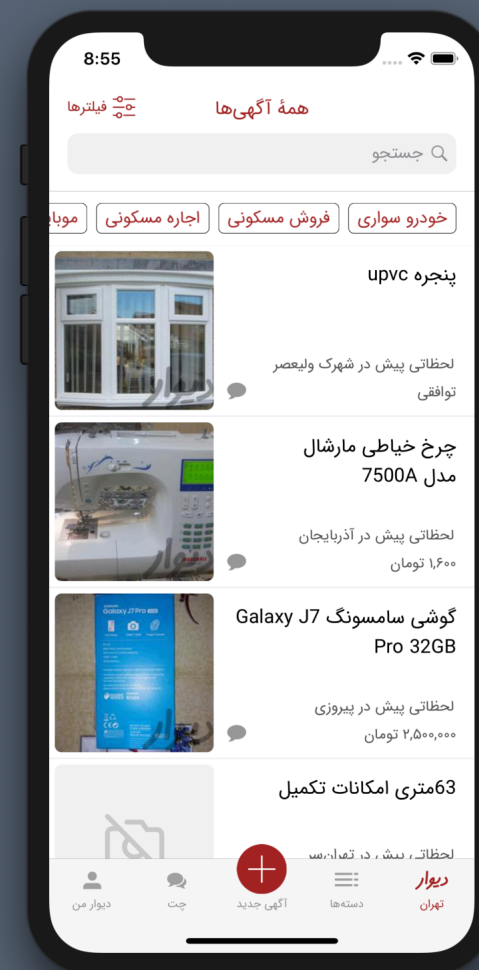
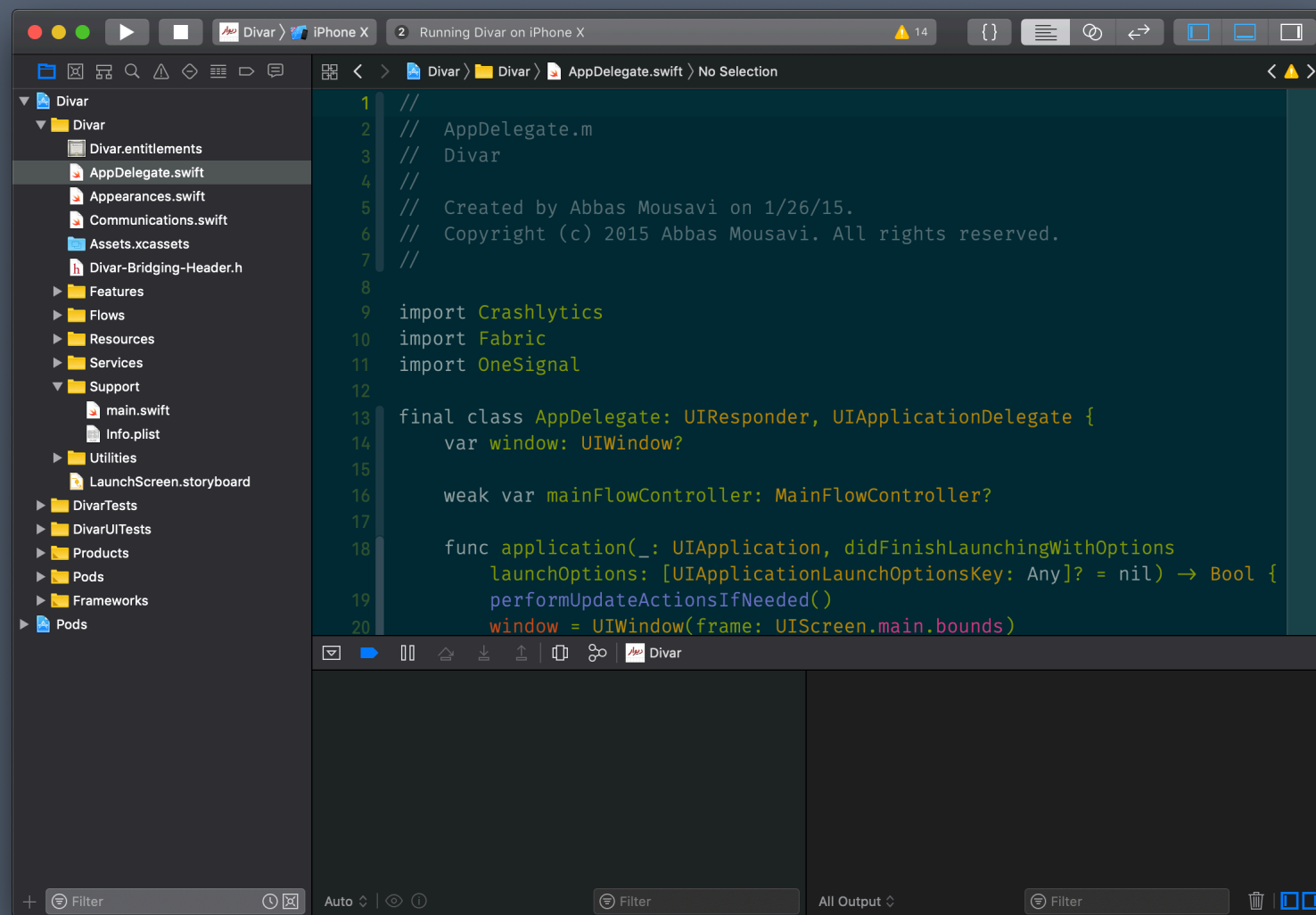
TOOLS

XCODE

https://developer.apple.com

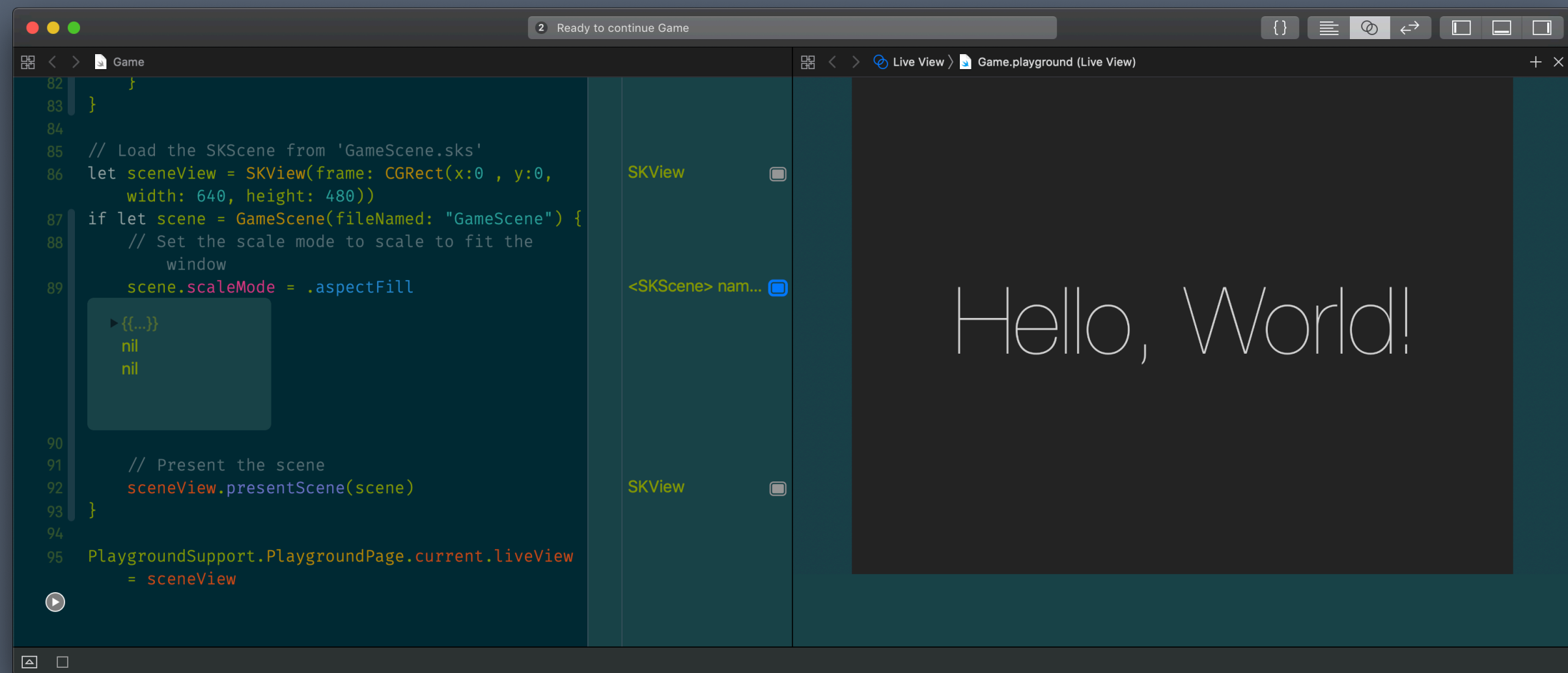


XCODE



iPhone X - 12.0

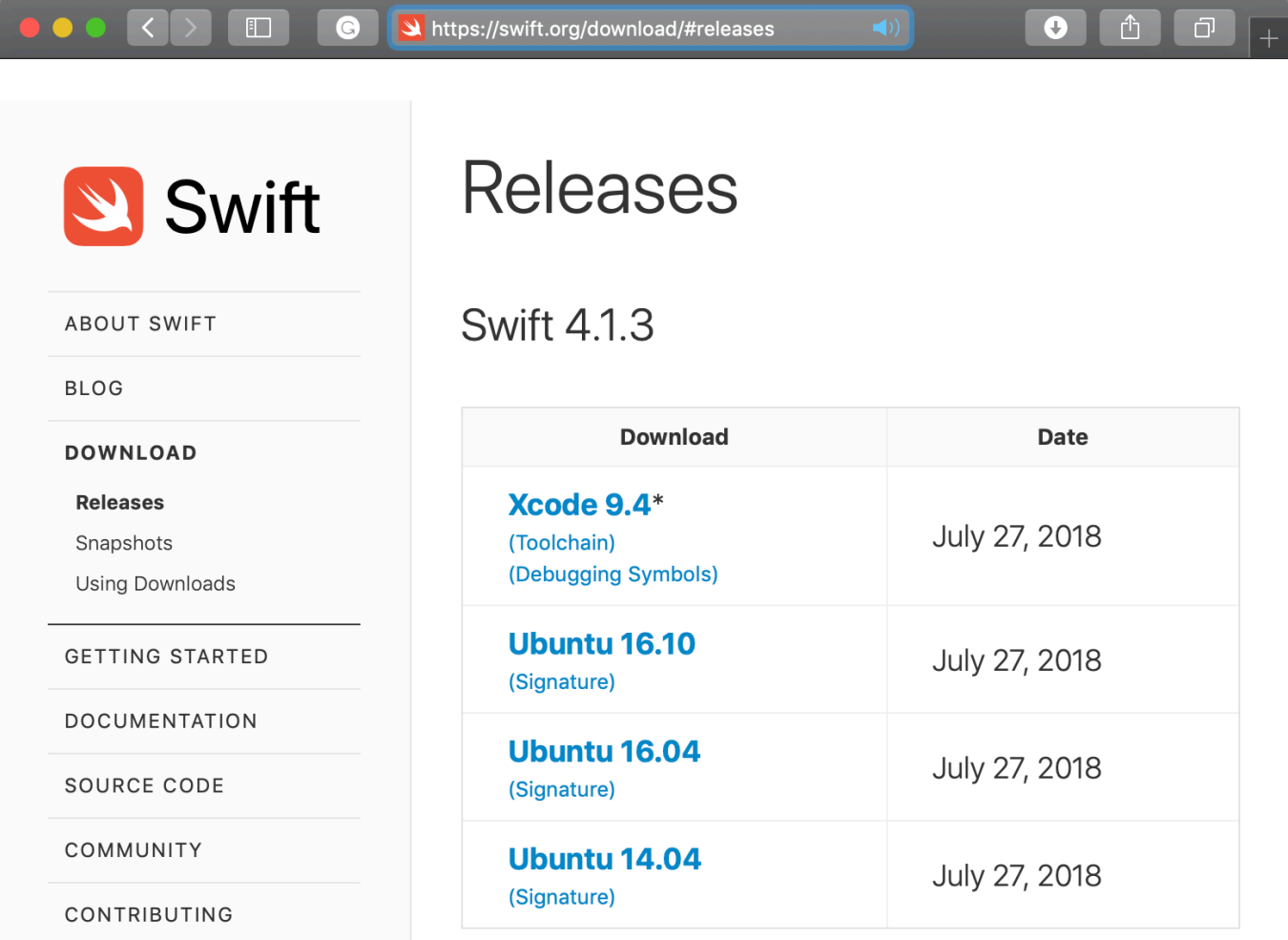
XCODE PLAYGROUND



REPL, ON LINUX, BASH SCRIPT OR COMPILED

```
abbasmousavi — lldb --repl=-enable-objc-interop -sdk /Applications/Xcode-beta...
Last login: Thu Sep 13 20:48:35 on ttys000
[~]$ swift
Welcome to Apple Swift version 4.2 (swiftlang-1000.0.36 clang-1000.0.4). Type :help for assistance.
[1> func timesTwo(value: Int) → Int {
[2.     return value * 2
[3. }
[4> timesTwo(5)
error: repl.swift:4:10: error: missing argument label 'value:' in call
timesTwo(5)
      ^
      value:

[4> timesTwo(value:5)
$R0: Int = 10
5>
```



The screenshot shows the Swift.org website's 'Releases' page. On the left is a sidebar with navigation links: ABOUT SWIFT, BLOG, DOWNLOAD (with sublinks for Releases, Snapshots, and Using Downloads), GETTING STARTED, DOCUMENTATION, SOURCE CODE, COMMUNITY, and CONTRIBUTING. The main content area is titled 'Releases' and shows 'Swift 4.1.3'. Below this is a table with two columns: 'Download' and 'Date'. The table lists four download options, all dated July 27, 2018.

Download	Date
Xcode 9.4* (Toolchain) (Debugging Symbols)	July 27, 2018
Ubuntu 16.10 (Signature)	July 27, 2018
Ubuntu 16.04 (Signature)	July 27, 2018
Ubuntu 14.04 (Signature)	July 27, 2018

SOURCES

- THE SWIFT PROGRAMMING LANGUAGE:

<https://docs.swift.org/swift-book/>

- APPLE DEVELOPER DOCUMENTATION:

<https://developer.apple.com/documentation/>

- APP ARCHITECTURE BOOK

- HUMAN INTERFACE GUIDELINE:

<https://developer.apple.com/design/human-interface-guidelines/>