DeepLearningKit

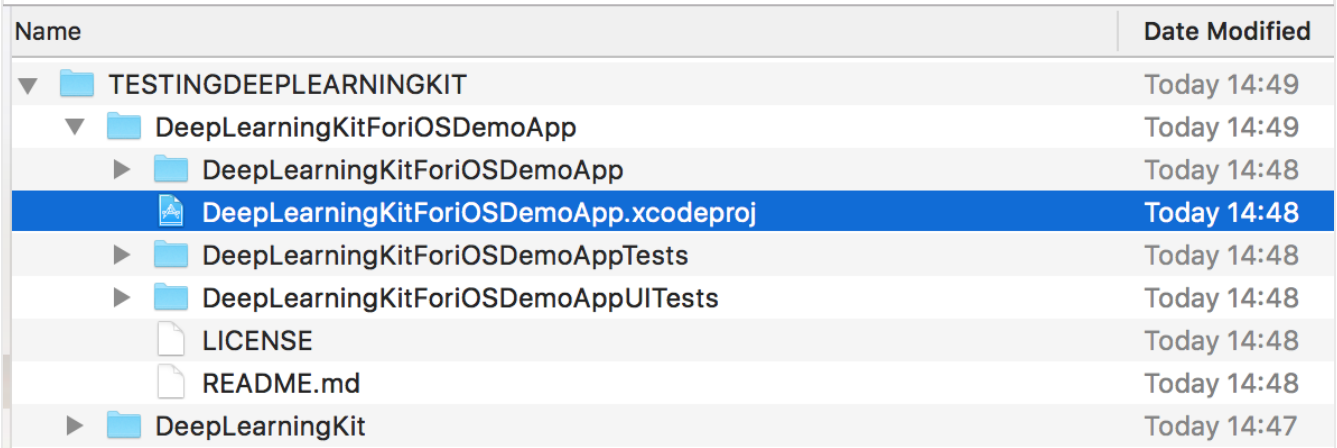
Open Source Deep Learning for iOS, OS X and tvOS

Tutorial – Using DeepLearningKit with iOS for iPhone and iPad

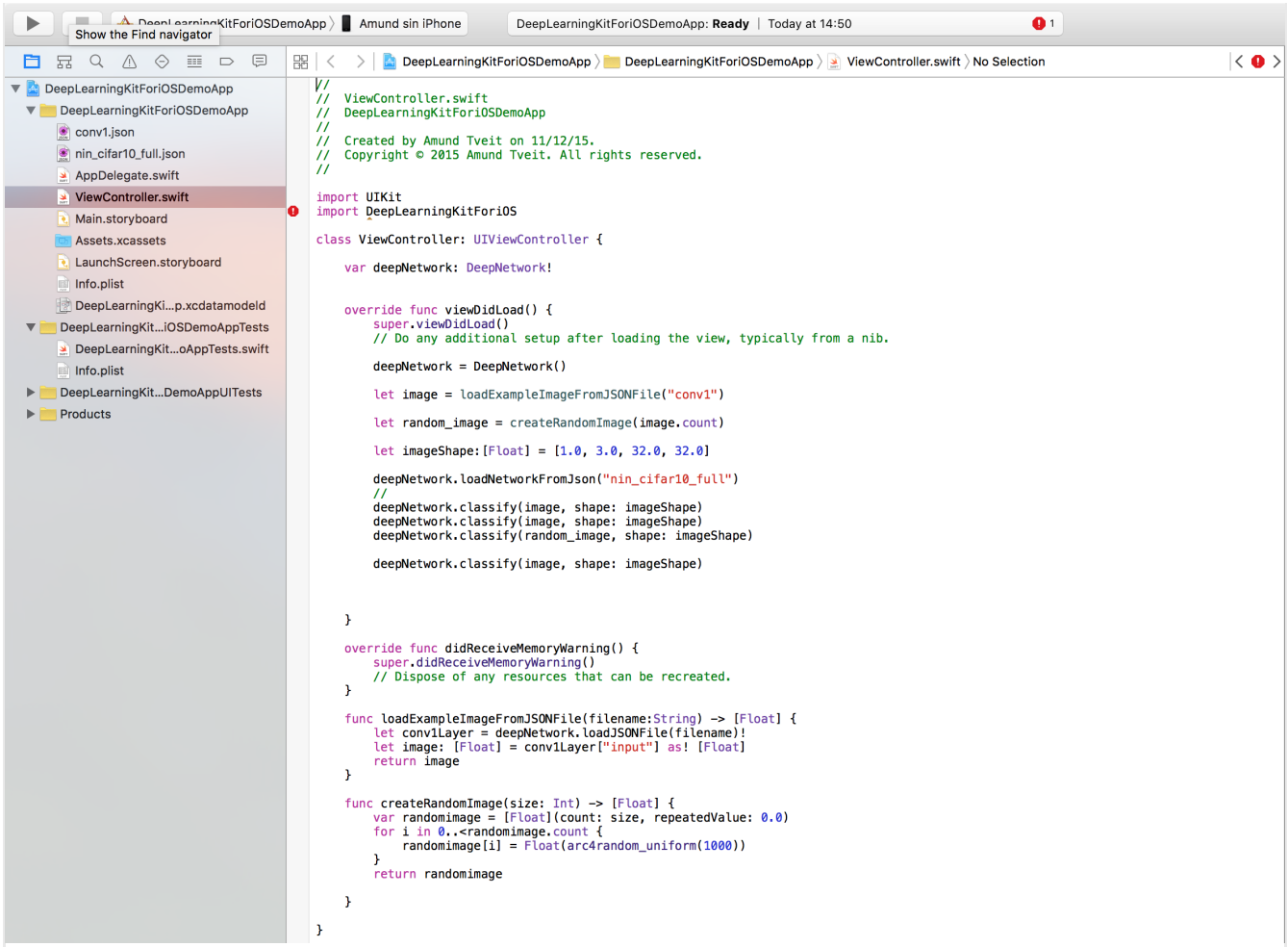
1. **Clone DeepLearningKit: git clone https://github.com/DeepLearningKit/DeepLearningKit.git**

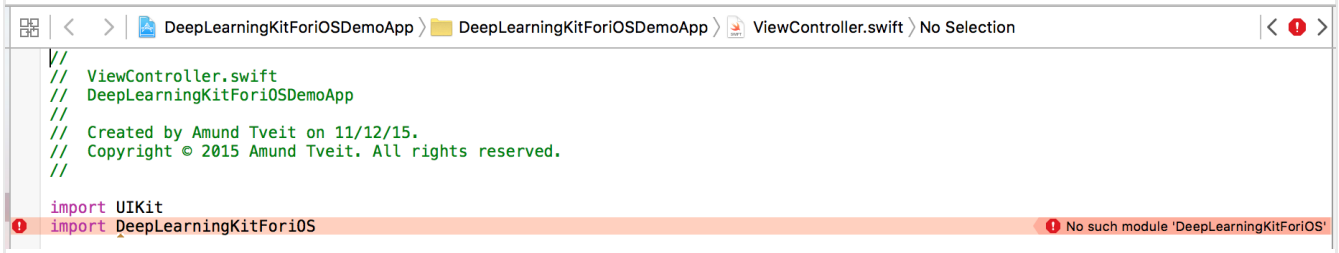
```
amund TESTINGDEEPLEARNINGKIT $ git clone https://github.com/DeepLearningKit/DeepLearningKit.git
Cloning into 'DeepLearningKit'...
remote: Counting objects: 77, done.
remote: Compressing objects: 100% (55/55), done.
remote: Total 77 (delta 22), reused 76 (delta 21), pack-reused 0
Unpacking objects: 100% (77/77), done.
Checking connectivity... done.
```

2. Open DeepLearningKitForiOSDemoApp.xcodeproj in xcode (e.g. from Finder)

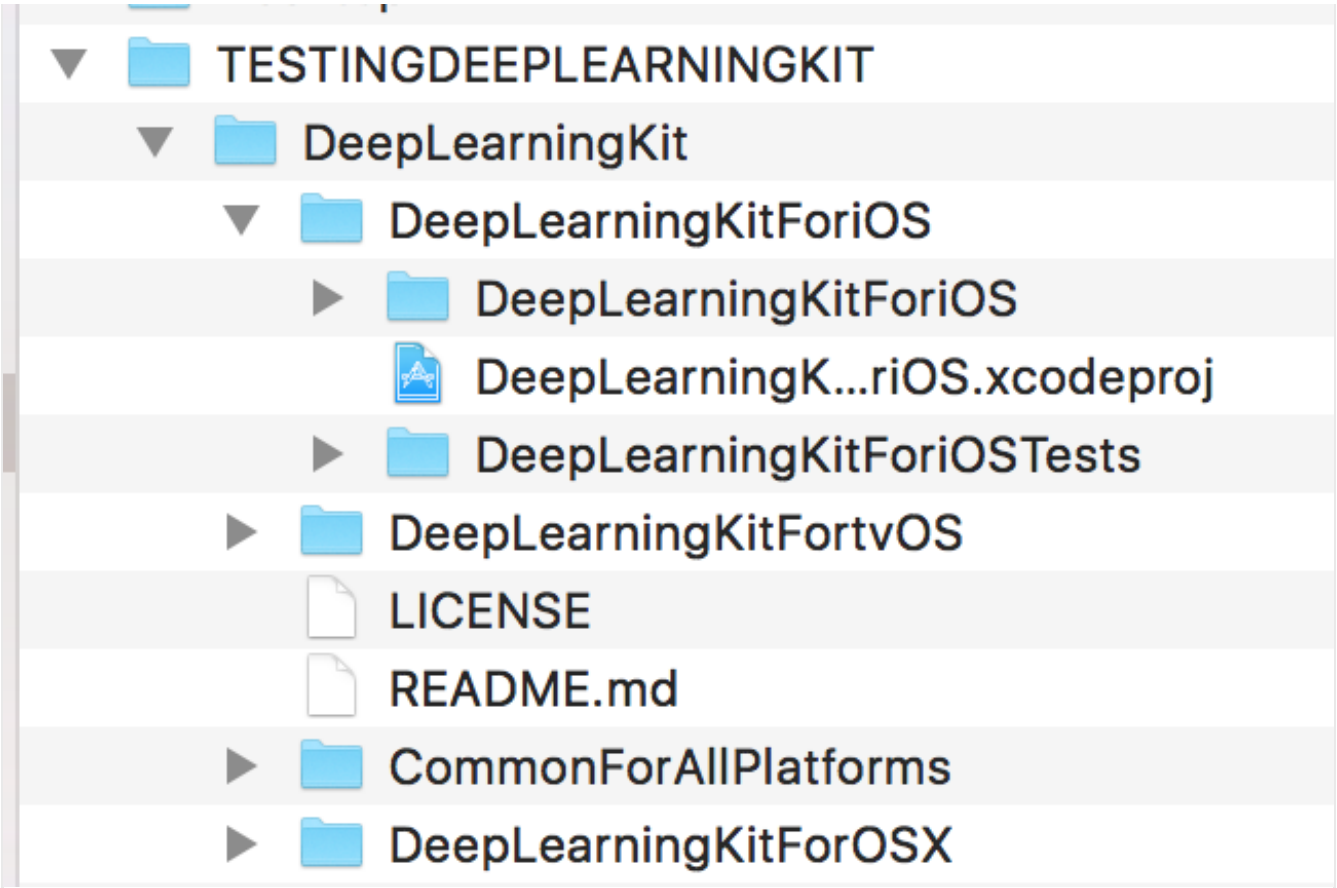


3. Have a look at ViewController.swift – notice that import DeepLearningKitForiOS gives an error (in red)

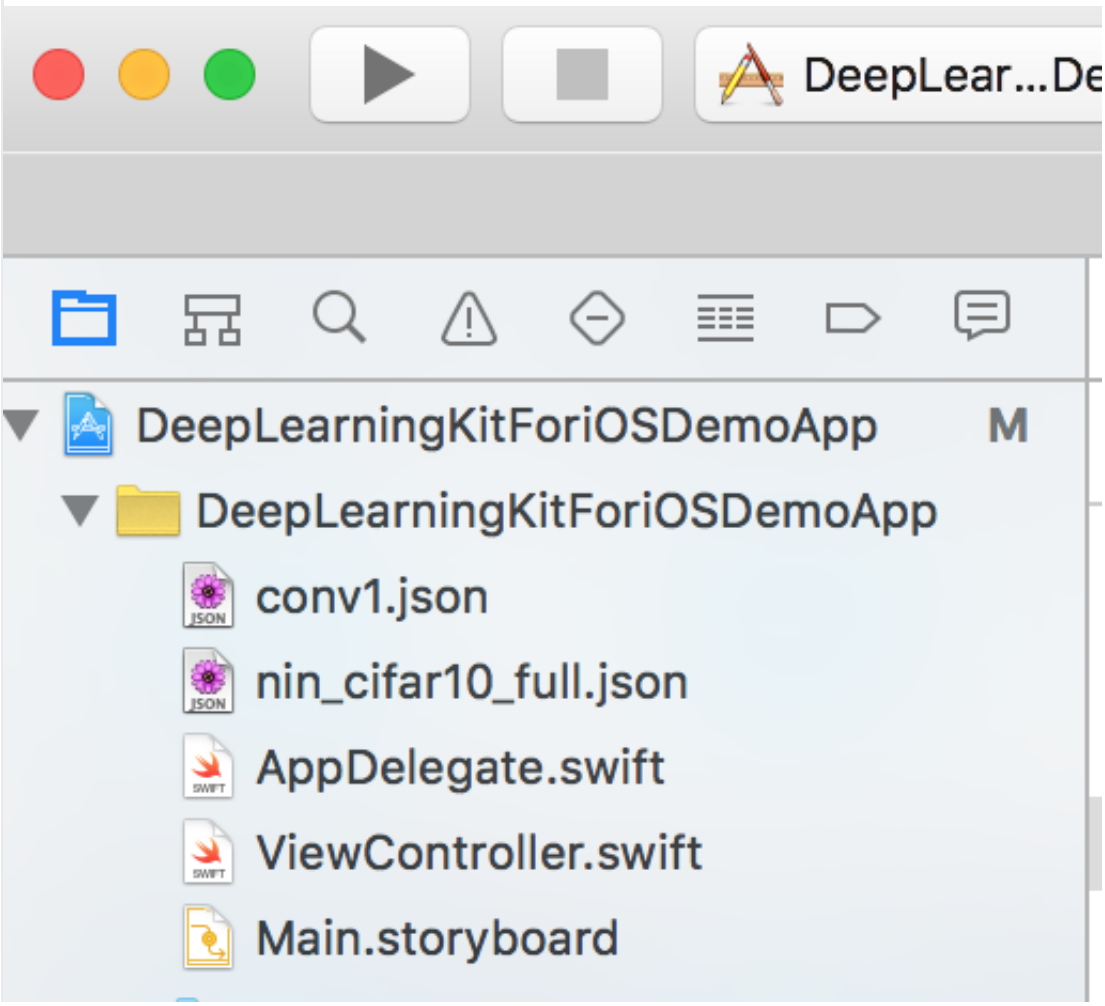


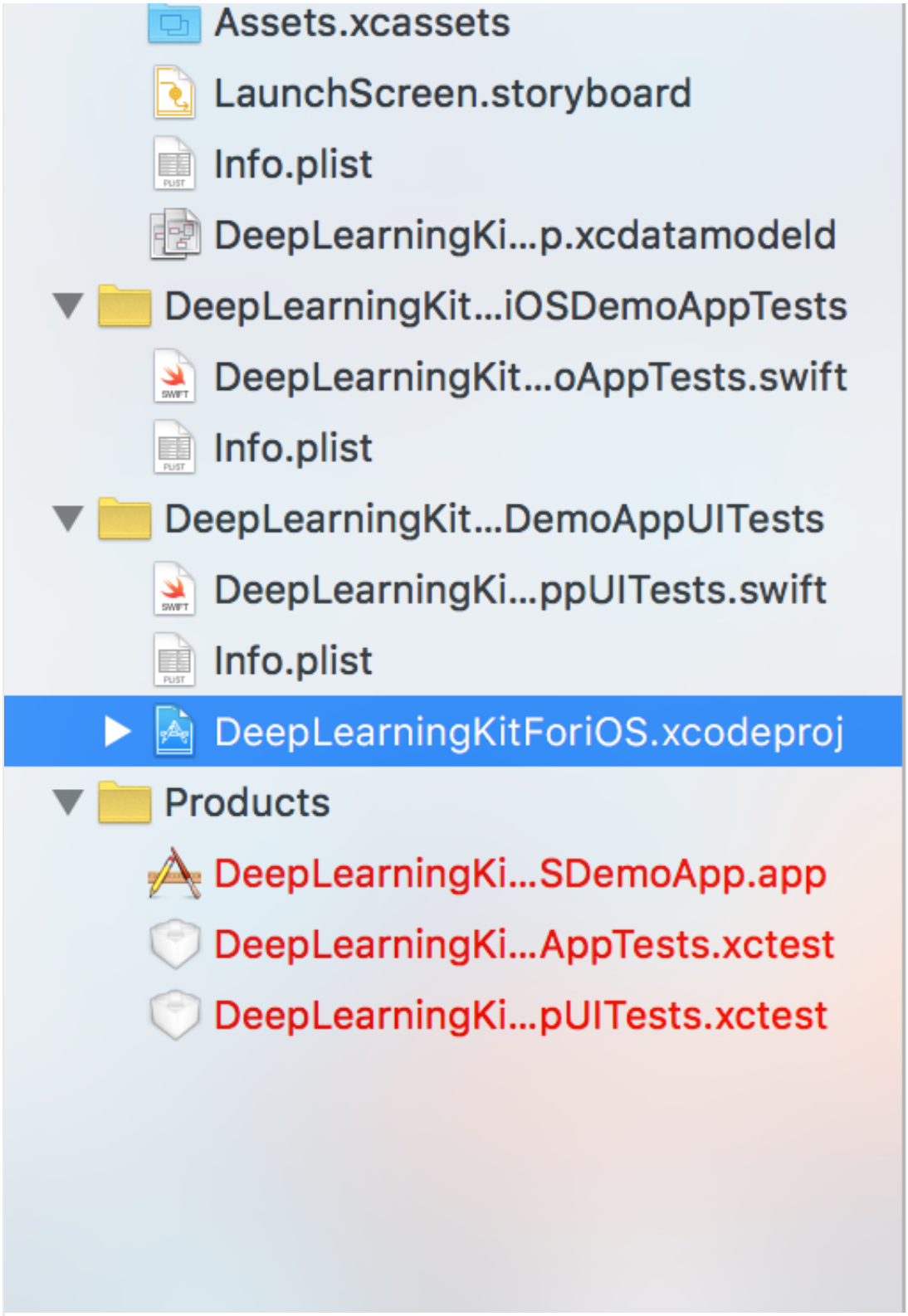


4. Open Finder and Drag DeepLearningForiOS.xcodeproj over to the demo app in xcode

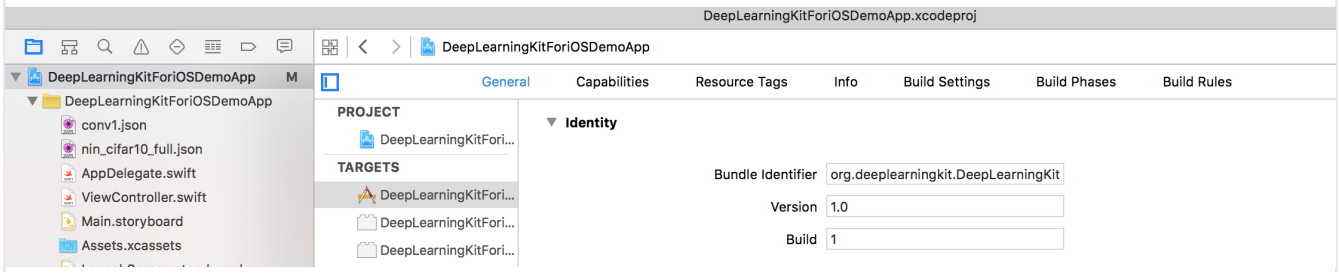


5. Highlighted line below shows how the framework DeepLearningForiOS.xcodeproj can be included

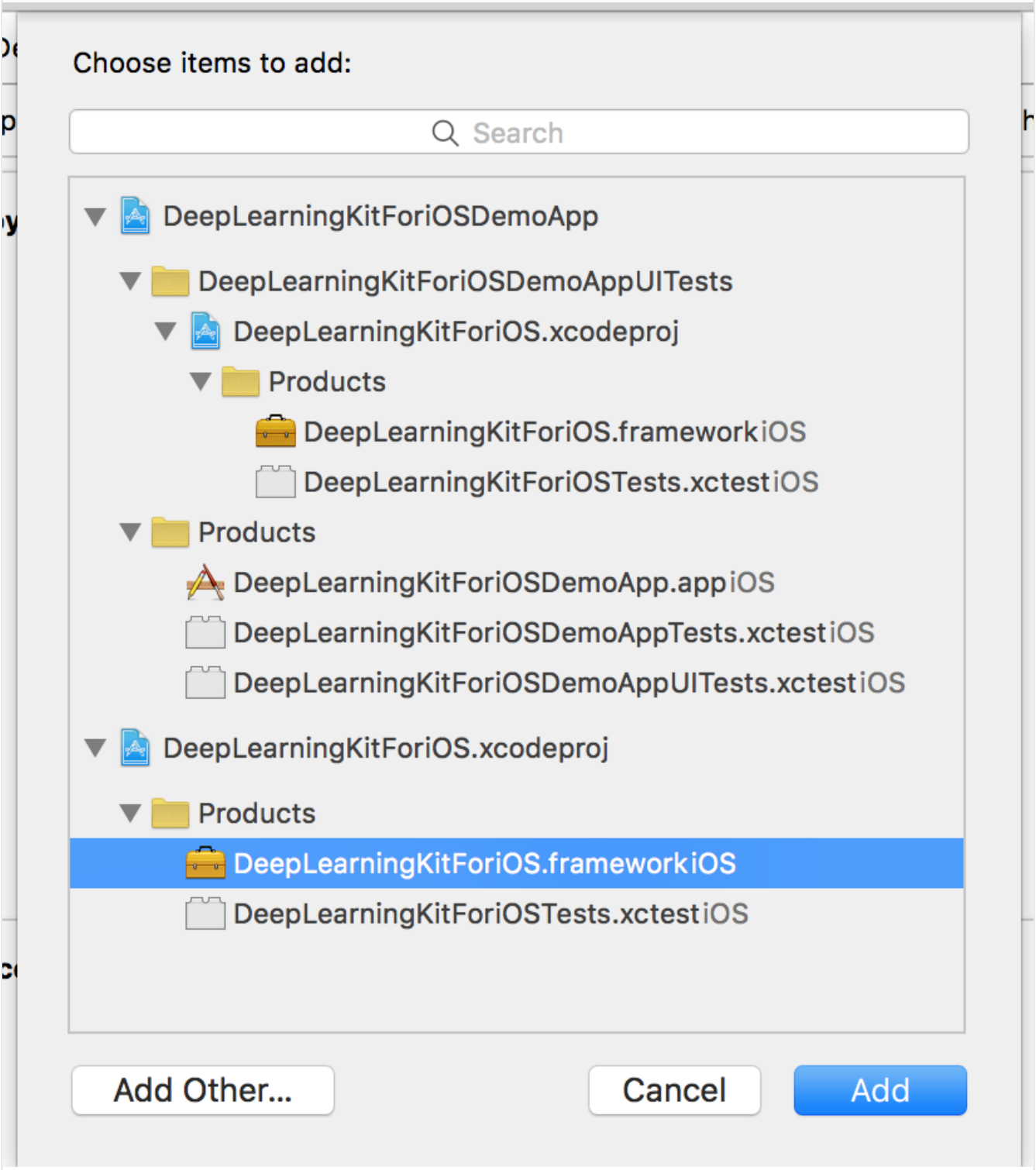




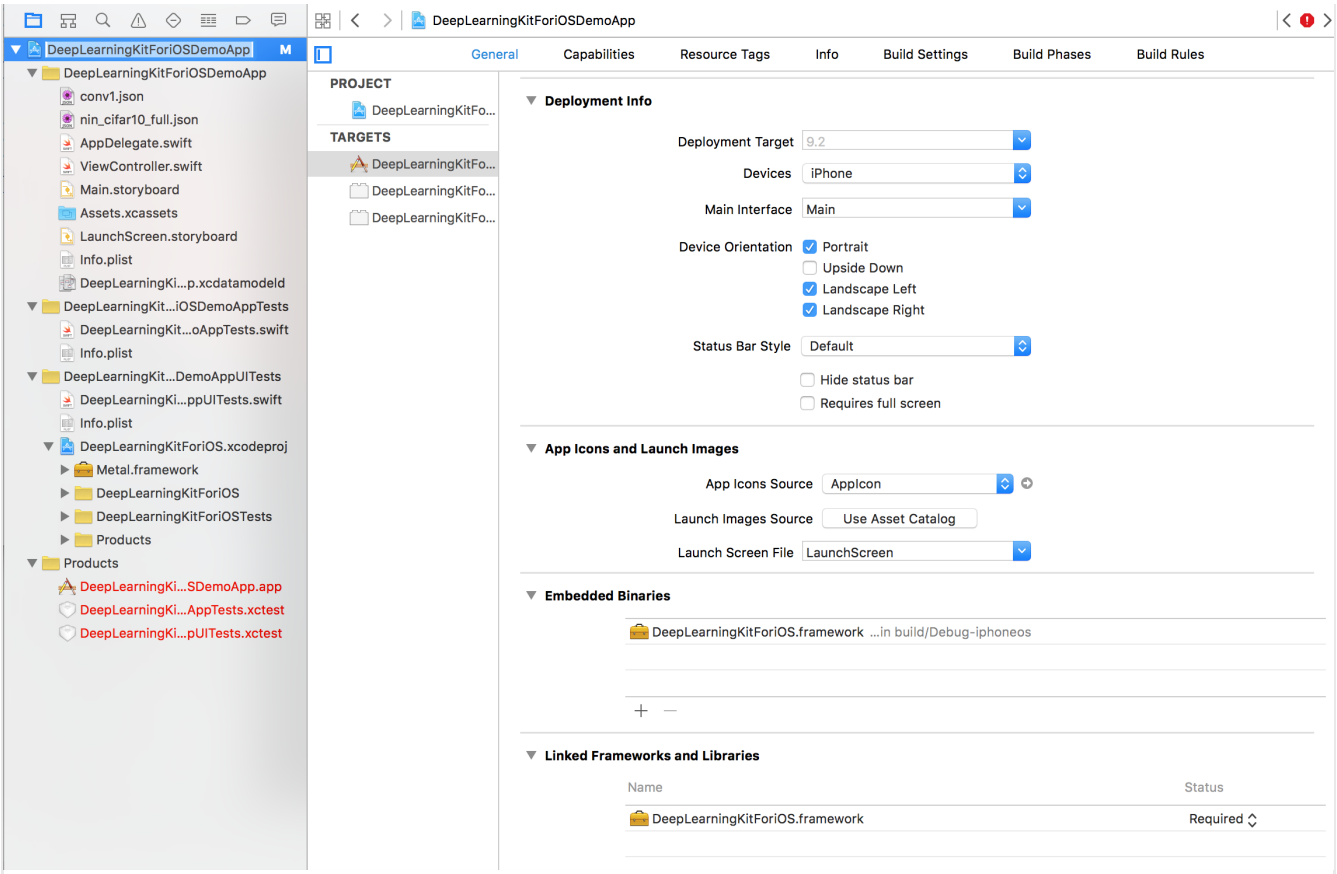
6. Click on app settings (highlighted line in left part of Xcode) and go the General tab on the right



7. Scroll down to embedded binaries in General tab and add DeepLearningKitforiOS.frameworkiOS

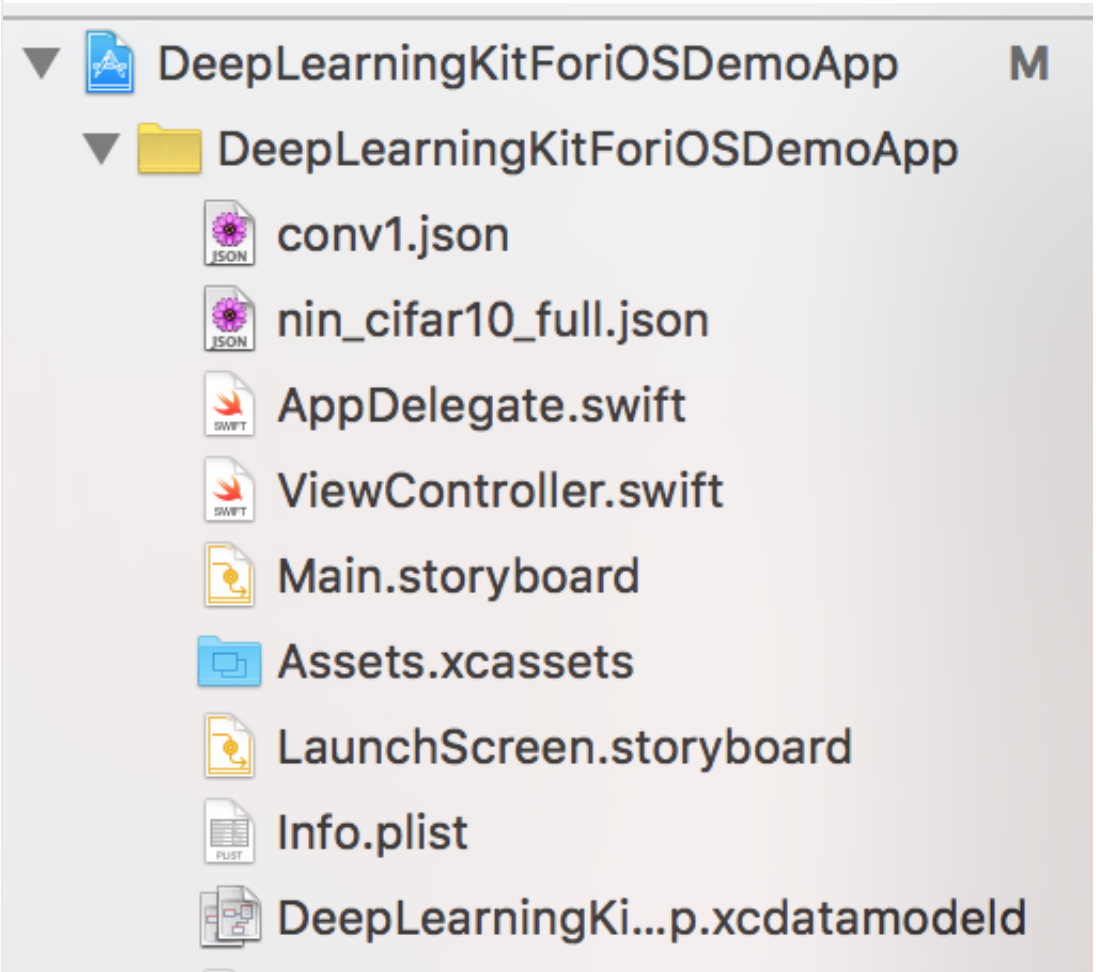


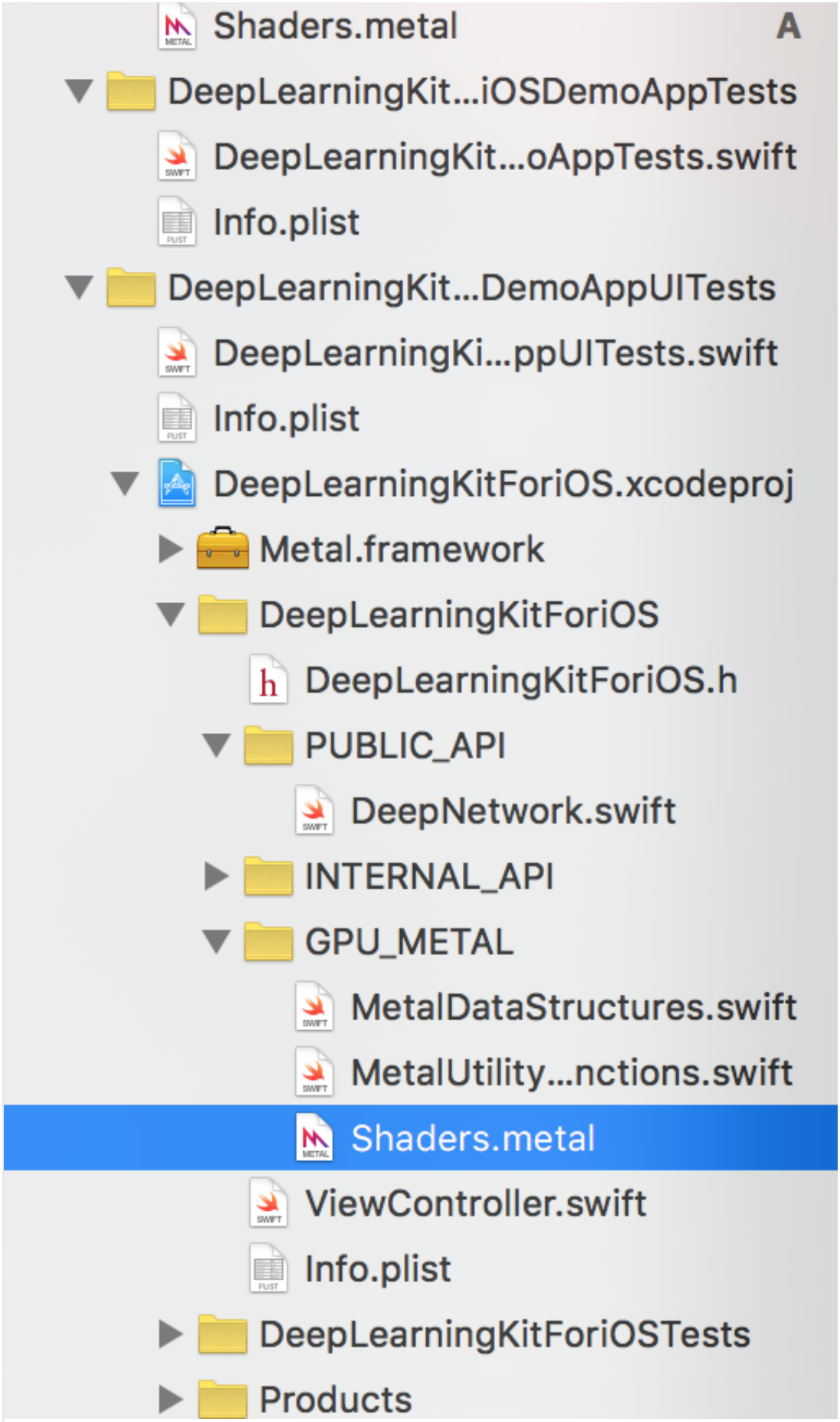
8. Result afterwards should look something like this – embedded binaries down to the right

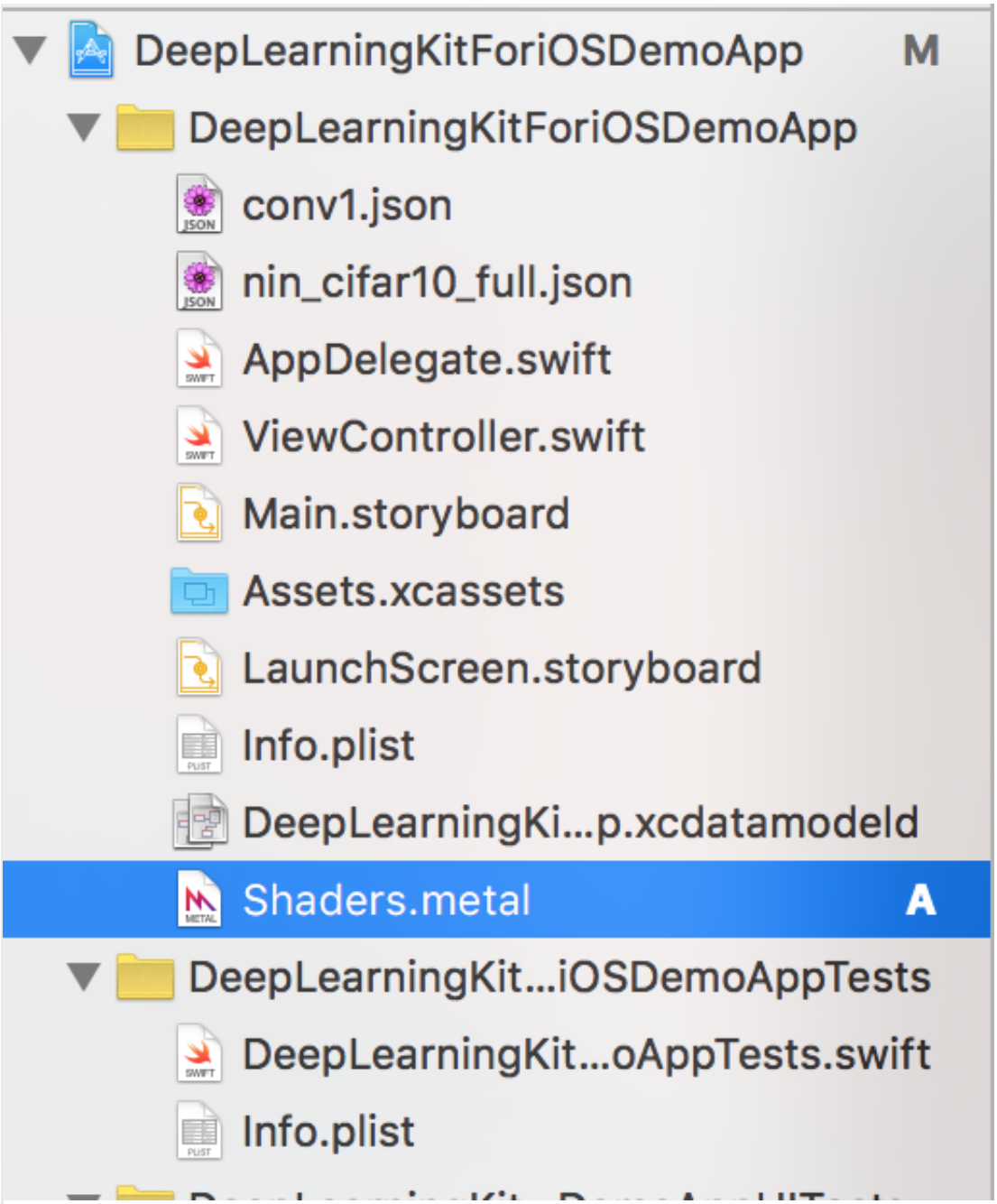


9. Drag the Shaders.metal file from DeepLearningKitForiOS into top project

(not quite sure why this needs to be done, but anyway)




Shaders.metal
DeepLearningKit...iOSDemoAppTests
DeepLearningKit...oAppTests.swift
Info.plist
DeepLearningKit...DemoAppUITests
DeepLearningKi...ppUITests.swift
Info.plist
DeepLearningKitForiOS.xcodeproj
Metal.framework
DeepLearningKitForiOS
DeepLearningKitForiOS.h
PUBLIC_API
DeepNetwork.swift
INTERNAL_API
GPU_METAL
MetalDataStructures.swift
MetalUtility...nctions.swift
Shaders.metal
ViewController.swift
Info.plist
DeepLearningKitForiOSTests
Products



10. Connect iPhone to your Mac (e.g. iPhone 6S), compile and run, should get something like this

```
Time to set up network: 0.059262990951538l
Time to run network: 0.0925900340080261
2015-12-28 15:27:58.826
DeepLearningKitForiOSDemoApp[11957:5480614] pool3
[17.9334, 14.5326, 27.2729, 55.7025, 42.3135, 41.0913, 32.9254,
22.6775, 13.4947, 17.5156]
maxValue = 55.7025, indexofMaxValue = 3
```