

Oracle Banking Digital Experience

**Mobile Application Builder Guide – iOS
Release 18.3.0.0.0**

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Mobile Application Builder Guide – iOS
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Table of Contents

1. Preface	4
1.1 Intended Audience	4
1.2 Documentation Accessibility	4
1.3 Access to Oracle Support	4
1.4 Structure.....	4
1.5 Related Information Sources.....	4
2. OBDX Servicing Application	5
2.1 Pre requisite	5
2.2 Create Project	5
2.3 Adding UI to workspace	5
2.4 Open project in Xcode.....	6
2.5 Generating Certificates for Development, Production and Push Notifications	8
2.6 Removal of iMessage Extension and WatchKit Extension	12
3. Archive and Export	15
4. OBDX Authenticator Application	17
4.1 Authenticator UI (Follow any one step below) Using built UI	17
4.2 Building UI manually	17
4.3 Authenticator Application Workspace Setup	20
4.4 Building Authenticator Application.....	25
5. Adding Custom Cordova Plugin	26

1. Preface

1.1 Intended Audience

This document is intended for the following audience:

- Customers
- Partners

1.2 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=accandid=docacc>.

1.3 Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=accandid=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=accandid=trs> if you are hearing impaired.

1.4 Structure

This manual is organized into the following categories:

Preface gives information on the intended audience. It also describes the overall structure of the User Manual.

The subsequent chapters describes following details:

- Configuration / Installation.

1.5 Related Information Sources

For more information on Oracle Banking Digital Experience Release 18.3.0.0.0, refer to the following documents:

- Oracle Banking Digital Experience Licensing Guide

2. OBDX Servicing Application

2.1 Pre requisite

- Download and Install node js as it is required to run npm and cordova commands.
- XCode to be download from Mac App Store

2.2 Create Project

1. Extract iOS workspace from installer and place in a folder.
2. The workspace by default contains framework for running on devices. Hence to run the application on simulator, delete and copy the 4 frameworks (OBDXExtensions.framework, OBDXFramework.framework, OBDXWatchFramework.framework and Cordova.framework) from installer/simulator to zigbank\platforms\ios directory.

2.3 Adding UI to workspace

Use any 1 option below

- a. Building un built UI (required in case of customizations)

Extract unbuilt UI and traverse to **OBDX_Installer/installables/ui/channel/_build** folder and perform below steps

Windows –

```
npm install -g grunt-cli
npm install
set OBDX_IS_GRUNT=true
node render-requirejs/render-requirejs.js mobile
grunt --max_old_space_size=5120 mobilebuild --platform=ios
```

Linux -

```
sudo npm install -g grunt-cli
sudo npm install
export OBDX_IS_GRUNT=true
node render-requirejs/render-requirejs.js mobile
node --max_old_space_size=5120 grunt mobilebuild --platform=ios
```

- b. Using built UI (out of box shipped with installer)

- i. Unzip dist.tar.gz for android from installer and copy folders(components,extensions,framework,images,json,lzn,pages,partials,resource, index.html, build.fingerprint) to workspace (platforms/ios/www/)

Delete originations folder inside images (images/originations) and ensure webhelp folder is not copied.

2.4 Open project in Xcode

Open Xcode by clicking ZigBank.xcodeproj at zigbank/platforms/ios/

1. Adding URLs to app.plist (ZigBank/Resources)
 - a. FOR NONOAM (DB Authenticator setup)

SERVER_TYPE	NONOAM
KEY_SERVER_URL	http://mum00chx.in.oracle.com:3333
WEB_URL	http://mum00chx.in.oracle.com:3333
PinnedCertificateName	Name of SSL certificate without extension of OBDX App Server

- b. OAM Setup (Refer to installer pre requisite documents for OAuth configurations)

SERVER_TYPE	OAM
KEY_SERVER_URL	Eg. http://mum00chx.in.oracle.com:8003 (This URL must be of OHS without webgate)
WEB_URL	Eg.http://mum00chx.in.oracle.com:3333
KEY_OAUTH_PROVIDER_URL	http://mum00aon.in.oracle.com:14100/oauth2/rest/token
APP_CLIENT_ID	<Base64 of clientid:secret> of Mobile App client
APP_DOMAIN	OBDXMobileAppDomain
WATCH_CLIENT_ID	<Base64 of clientid:secret> of wearables
WATCH_DOMAIN	OBDXWearDomain
SNAPSHOT_CLIENT_ID	<Base64 of clientid:secret> of snapshot
SNAPSHOT_DOMAIN	OBDXSnapshotDomain
LOGIN_SCOPE	OBDXMobileAppResServer.OBDXLoginScope
PinnedCertificateOAMName	Name of SSL certificate without extension of OAM Server
PinnedCertificateName	Name of SSL certificate without extension of OBDX App Server

- c. IDCS Setup

SERVER_TYPE	IDCS
-------------	------

KEY_SERVER_URL	Eg. http://mum00chx.in.oracle.com:8003 (This URL must be of OHS without webgate)
WEB_URL	Eg. http://mum00chx.in.oracle.com:3333
KEY_OAUTH_PROVIDER_URL	http://obdx-tenant01.identity.c9dev0.oc9qadev.com/oauth2/v1/token
APP_CLIENT_ID	<Base64 of clientid:secret> of Mobile App client
WATCH_CLIENT_ID	<Base64 of clientid:secret> of wearables
SNAPSHOT_CLIENT_ID	<Base64 of clientid:secret> of snapshot
LOGIN_SCOPE	obdxLoginScope
OFFLINE_SCOPE	urn:opc:idm:___myscopes___offline_access

2. Adding chatbot support to mobile application (Optional)

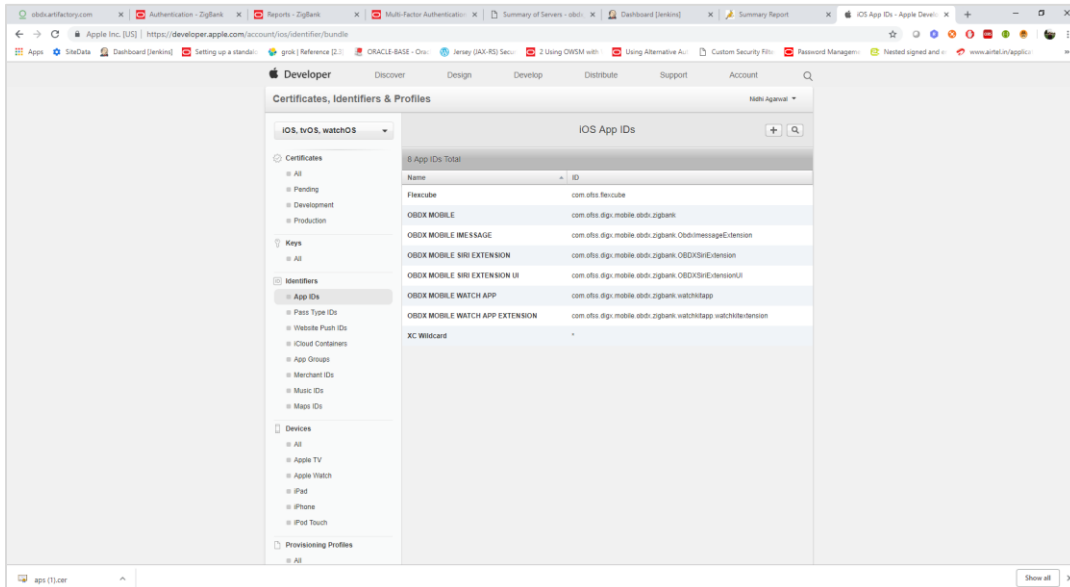
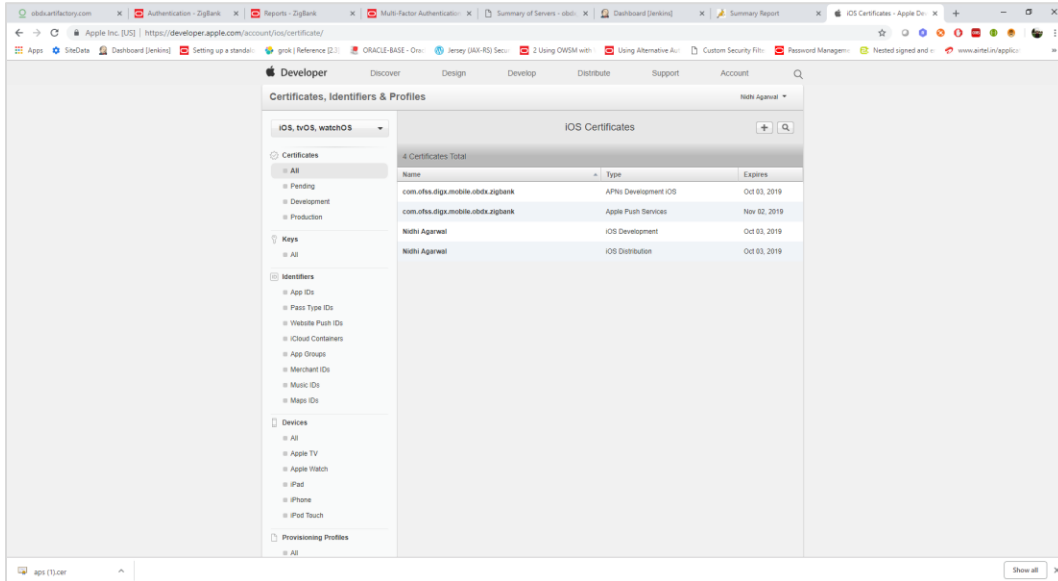
CHATBOT_ID	The tenant ID
CHATBOT_URL	The web socket URL for the ChatApp application in IBCS

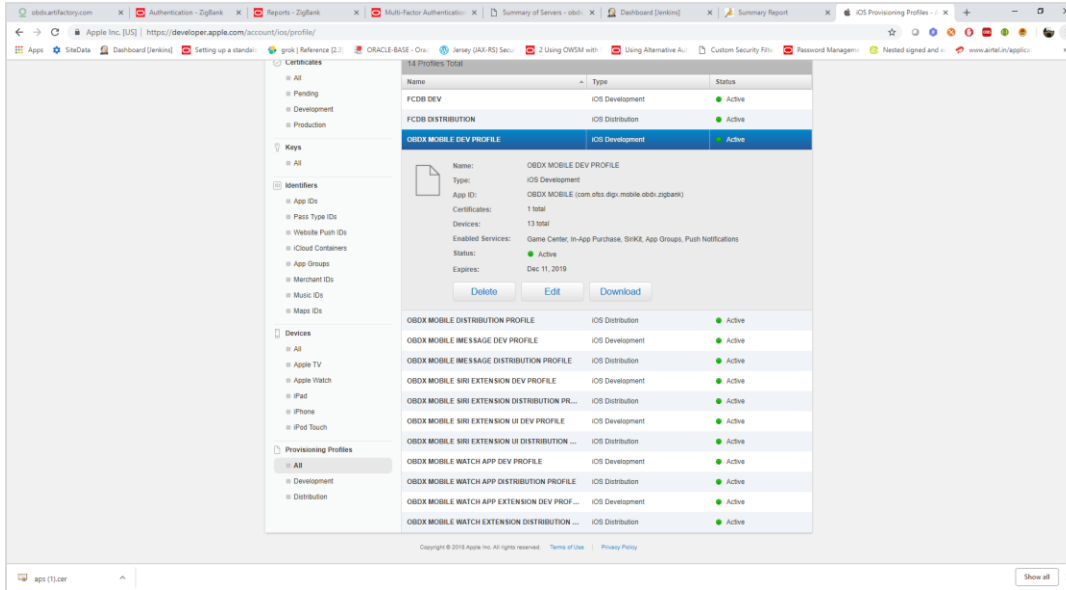
3. Common Configurations

PaymentPurpose	Payment purpose code for Siri Payments
CurrencyCode	Currency code for Siri Payments
PaymentPurposeRequiredFlag	Payment purpose required for Siri payments
SUITENAME	Group identifier for sharing keystore information. Same as given in app groups
BankName	Name of bank to be shown on touch id / face id popup
CertificateType	Extension of SSL Pinned certificates (Eg cer/der)

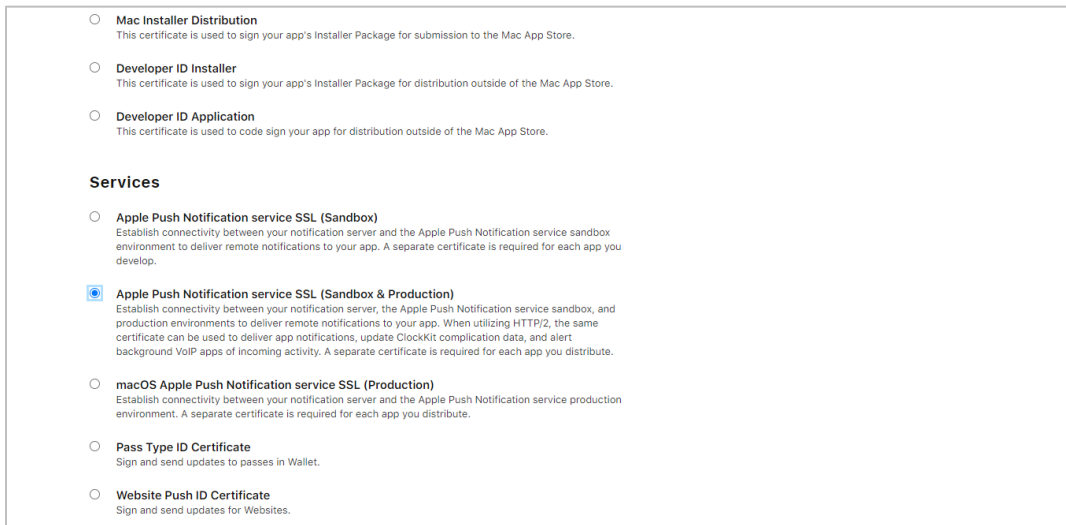
2.5 Generating Certificates for Development, Production and Push Notifications

Create all certificates (by uploading CSR for keychain utility), provisioning profiles and push certificates as shown below by login in developer console. For development add device UUIDs and add same to provisioning profiles. Add capabilities as shown below and ensure the bundle identifier matches the one of the application in Xcode

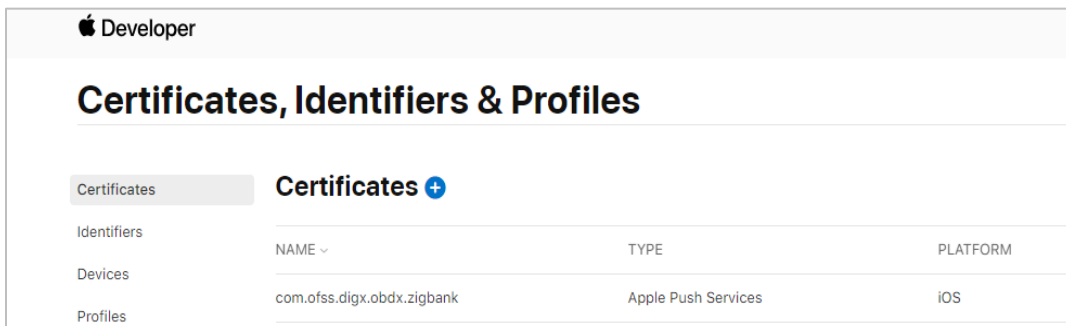




Ensure AppGroups capability is added to all profiles and for mobile profile SiriKit, App Groups, Push Notifications must be added.



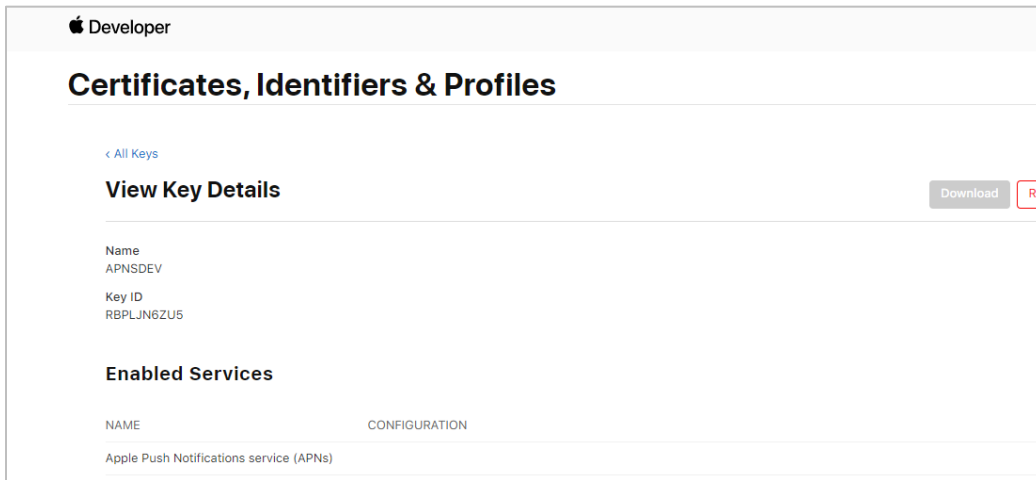
Note the certificate/bundle name



Note the Team ID from top right corner

Navigate to the “Keys” section and create APNS key

Note APNS key and download the .p8 file. Copy the .p8 to config/resources\mobile

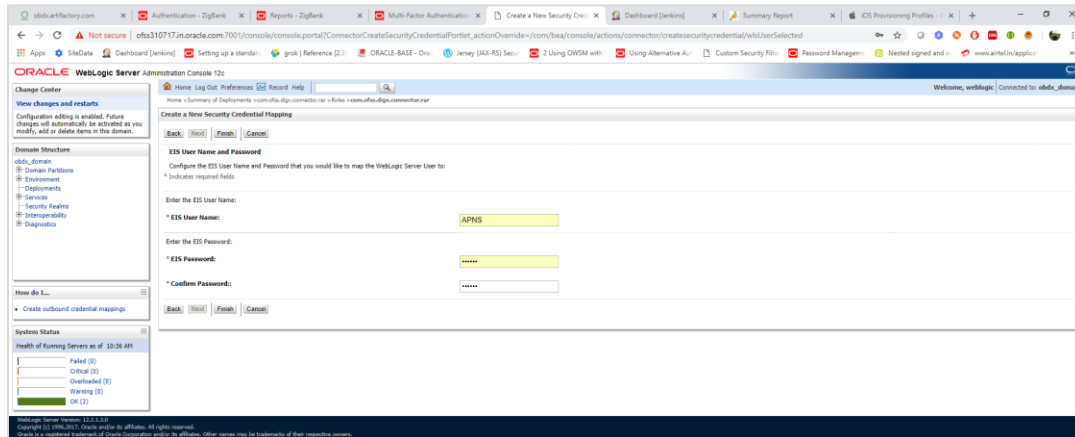


Update the password as shown below –

Sr. No.	Table	PROP_ID	CATEGORY_ID	PROP_VALUE	Purpose
1	DIGX_FW_CONFIG_ALL_B	ios_cert_path	DispatchDetails	resources/mobile/AuthKey_RBPLJN6ZU5.p8	Update the certificate path/name if required. Should be relative to config directory
2	DIGX_FW_CONFIG_ALL_B	APNS	DispatchDetails	<Password> Eg - RBPLJN6ZU5	Provides id of .p8 certificate
3	DIGX_FW_CONFIG_ALL_B	APNSKeyStore	DispatchDetails	DATABASE or CONNECTOR	Specifies whether to pick certificate password from database or from connector. Default DB (No change)
4	DIGX_FW_CONFIG_ALL_B	Proxy	DispatchDetails	<protocol,proxy_address>	Provides proxy address, if any, to be provided while connecting to APNS server. Delete row if proxy not required. Example: HTTP,148.50.60.8:80
5	DIGX_FW_CONFIG_ALL_B	CERT_TYPE	DispatchDetails	For dev push certs add row with value 'dev'	For prod push certificates this row is not required
6	DIGX_FW_CONFIG_ALL_B	APNS_BUNDLE	DispatchDetails	Eg. com.ofss.digx.obdx.zigbank	Bundle Name

7	DIGX_FW_CONFIG_ALL_B	APNS_TEA_MID	DispatchDetails	Eg. 3NX1974C93	Team ID of Apple developer account
---	----------------------	--------------	-----------------	----------------	------------------------------------

If CONNECTOR is selected in Step 2 update certificate id as below



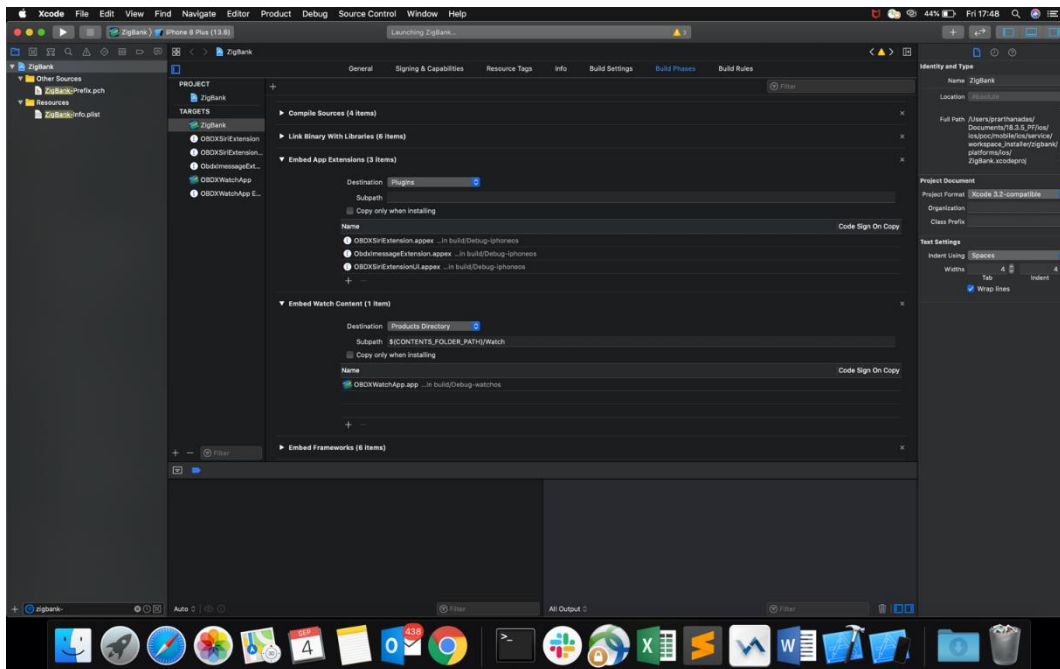
Adding Bundle Identifiers

Bundle identifiers need to be added in the Info.plist of each of the frameworks along with the Signing Capabilities tab in Xcode. For example, the bundle identifier used is abc.def.ghi.jkl. The steps to be followed are,

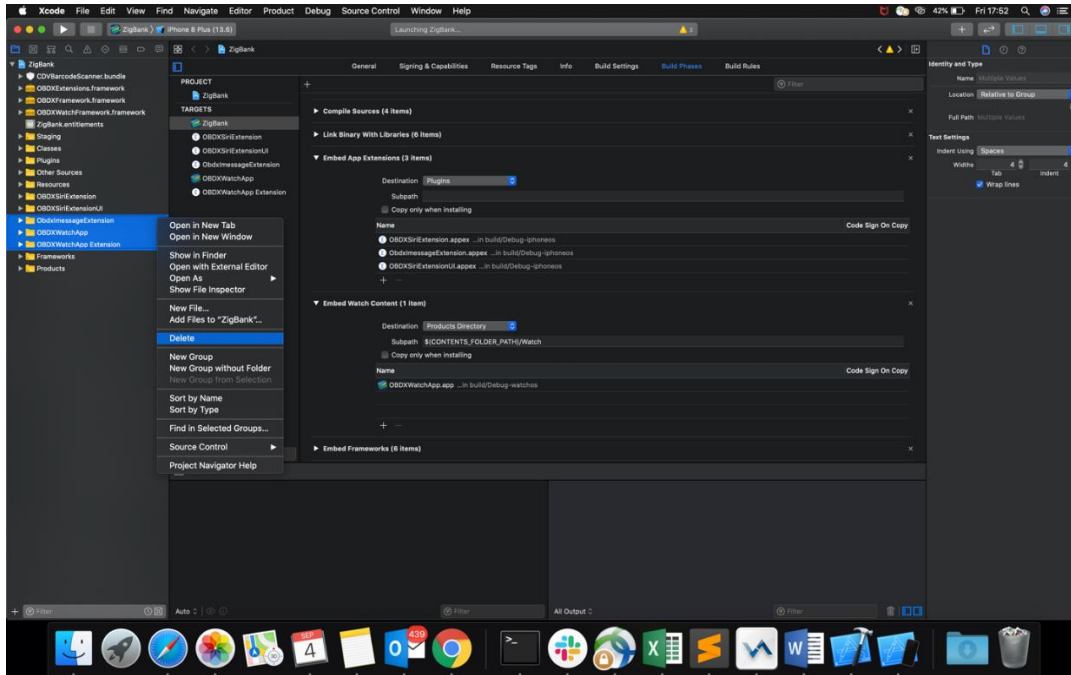
- Right click on OBDXFramework.framework (in Xcode's Project Navigator) -> Show in Finder
- When the finder directory opens the right click OBDXFramework.framework -> Show package contents.
- Open Info.plist and set Bundle identifier as abc.def.ghi.jkl.OBDXFramework
- Repeat the steps for the other three frameworks as well, with the following values:
 - Bundle identifier for Cordova.framework : abc.def.ghi.jkl.Cordova
 - Bundle identifier for OBDXExtensions.framework : abc.def.ghi.jkl.OBDXExtensions
 - Bundle identifier for OBDXWatchFramework.framework : abc.def.ghi.jkl.OBDXWatchFramework

2.6 Removal of iMessage Extension and WatchKit Extension

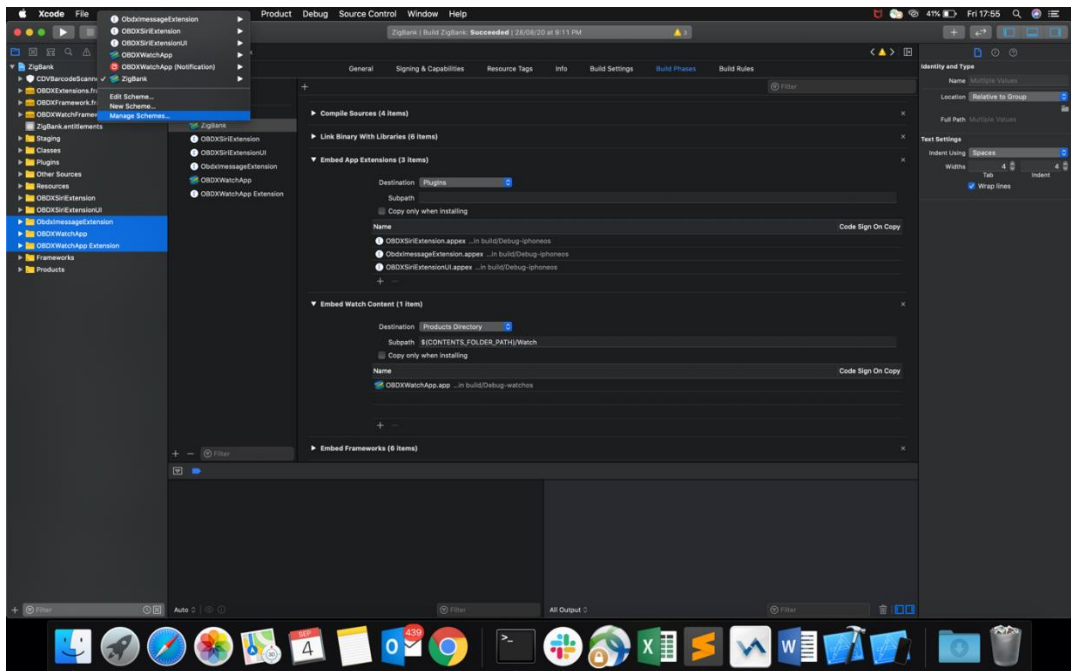
- a. Remove the iMessage extension from "Target Dependencies"
 - To go to Target Dependencies: in the project navigator, click the project file. Then click the target of the iPhone app. Go to the Build Phases tab.
 - Go to "Embed App Extensions". Remove the iMessage extension entry from the list Embed App Extensions
- b. For removal of WatchKit Extension, click on the corresponding x(cross button) of "Embed Watch Content"



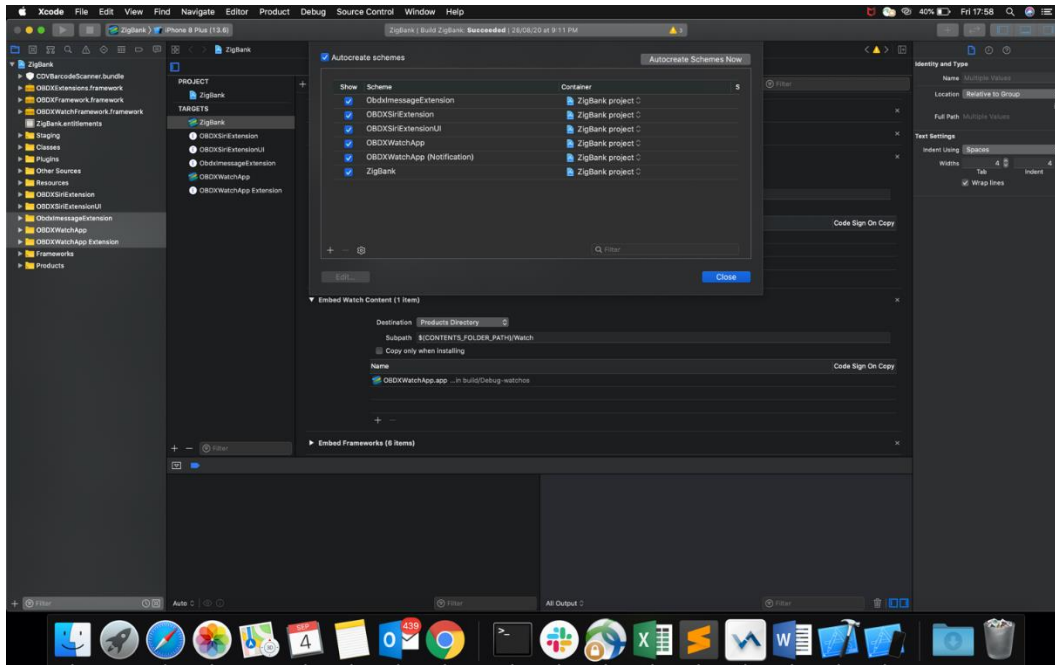
- c. Remove the targets ObdxImessageExtension, OBDXWatchApp and OBDXWatchApp Extension under Targets section of Project.
- d. Select ObdxImessageExtension, OBDXWatchApp and OBDXWatchApp Extension folders and OBDXWatchFramework.framework under Project Navigator; Right Click then select Delete; select Remove References when prompted. The said folders and framework should be deleted from the Finder as well.



e. Select “Manage Schemes”



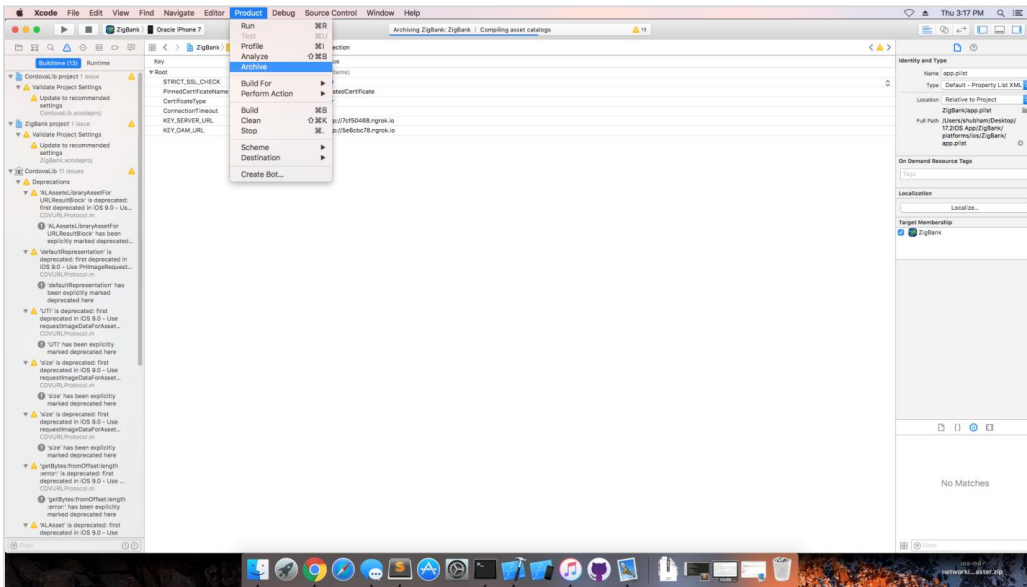
f. Remove the schemes for Watch and iMessage



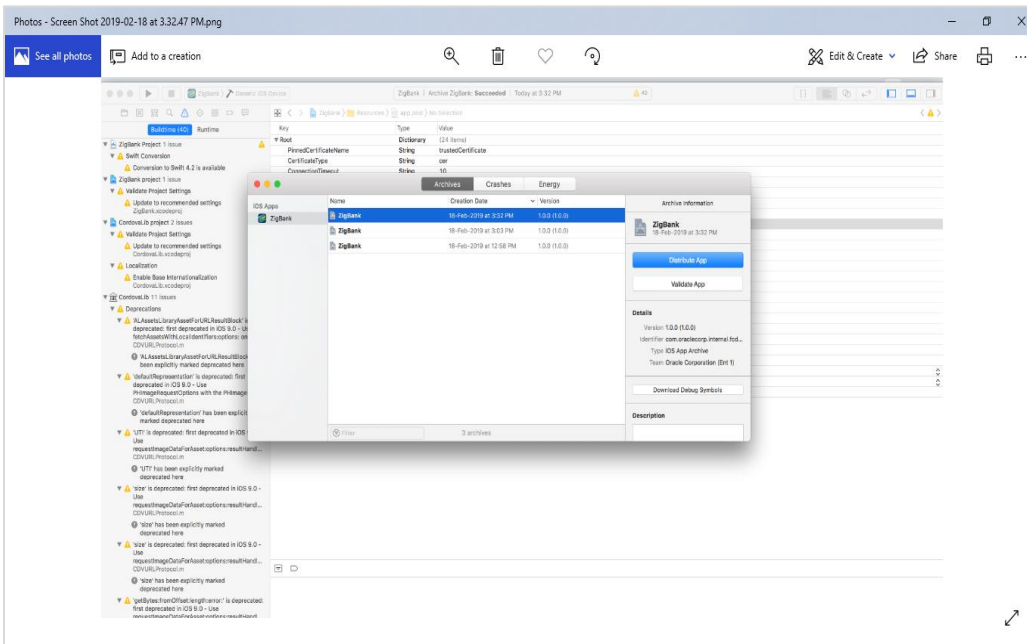
g. OBXWatchFramework.framework should be removed from the simulator folder shipped.

3. Archive and Export

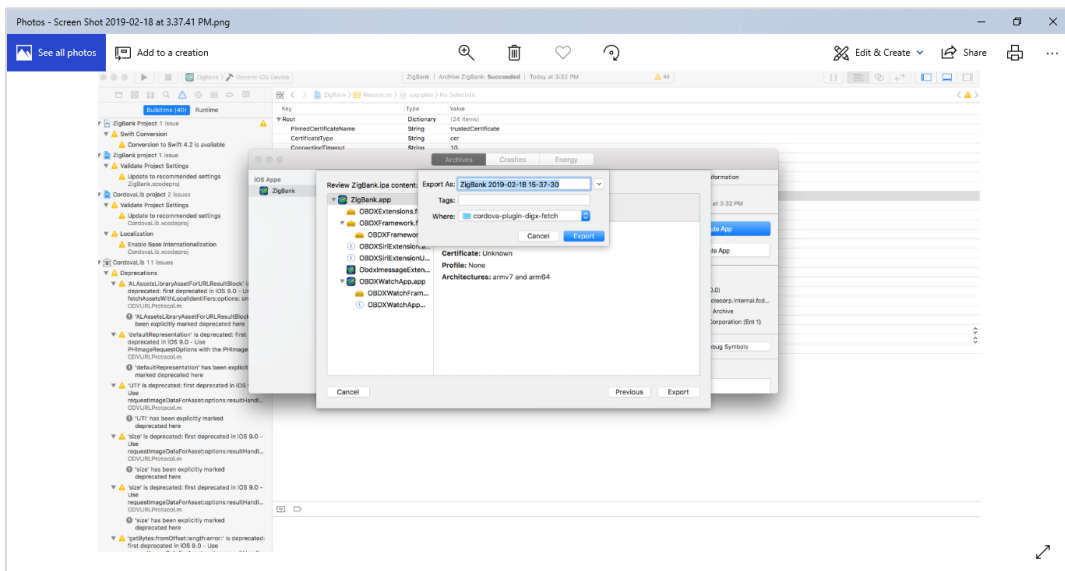
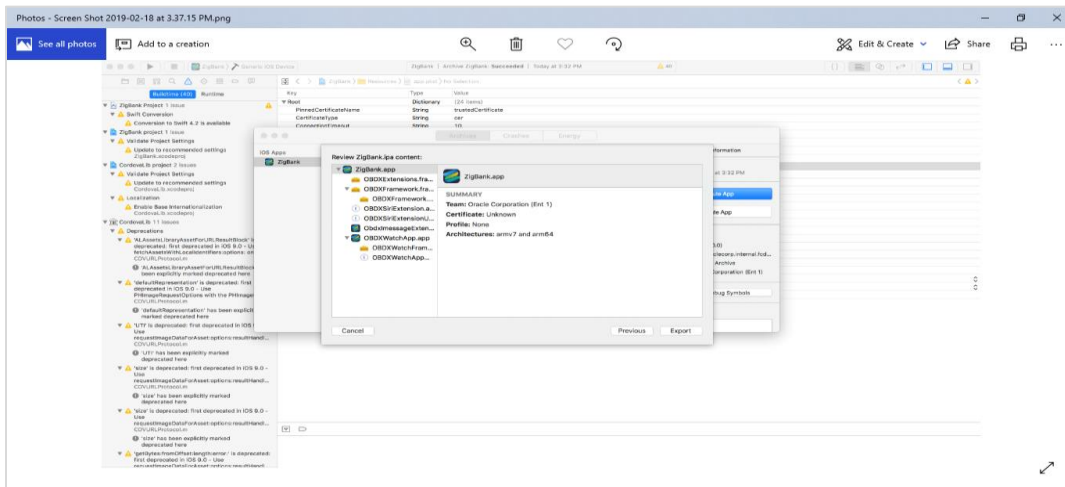
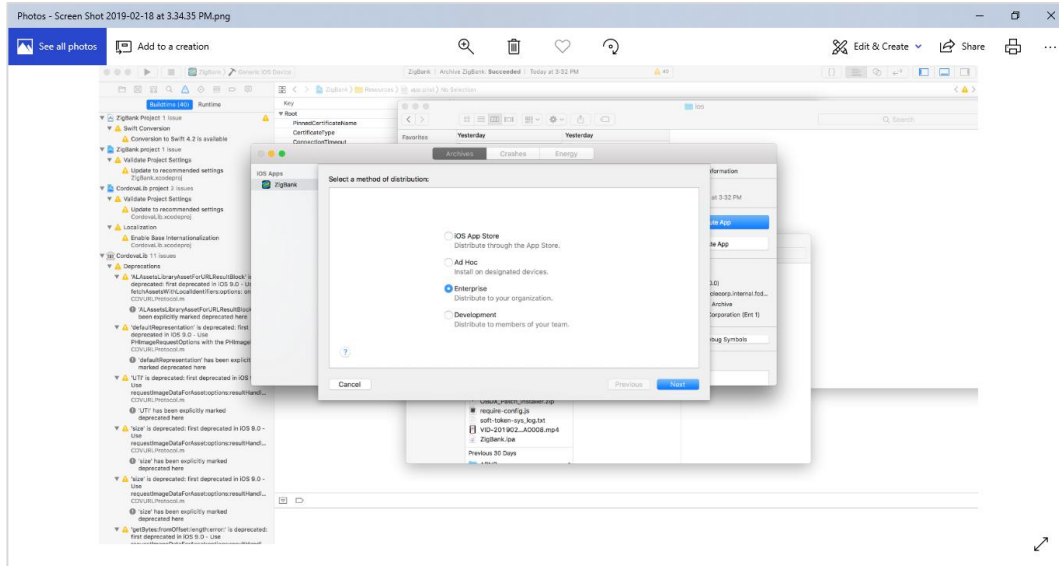
a. In the Menu bar click on **Product -> Archive (Select Generic iOS Device)**



b. After archiving has successfully completed. Following popup will appear



c. Click on **Distribute App** in the right pane of the popup -> select the **Method of Distribution -> Choose Provisioning Profile** according to the method of distribution -> select **Next -> Review the contents and click on Export -> Export** and generate the .ipa



4. OBDX Authenticator Application

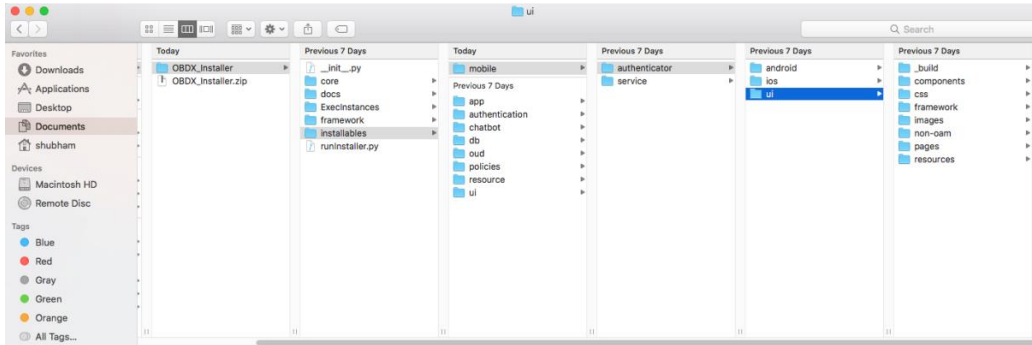
4.1 Authenticator UI (Follow any one step below) Using built UI

For Non-OAM - Unzip dist.tar.gz directory from OBDX_Patch_Mobile\authenticator\NON-OAM

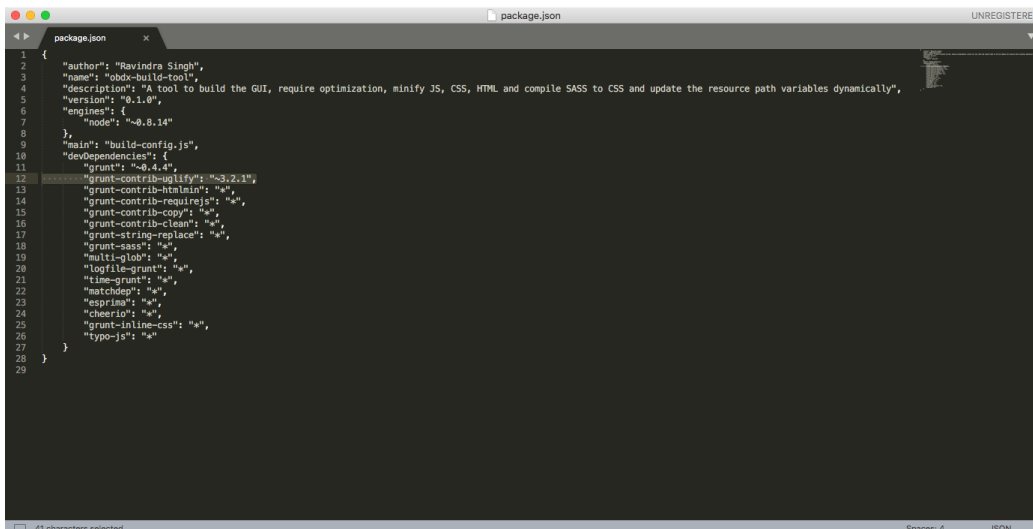
For OAM - Unzip dist.tar.gz directory from OBDX_Patch_Mobile\authenticator\OAM

4.2 Building UI manually

1. Extract OBDX_Installer.zip. It contains **OBDX_Installer/installables/mobile/authenticator/ui** folder. The folder structure is as shown :



2. Go to **OBDX_Installer/installables/mobile/authenticator/ui/_build** and open package.json and edit line no. 12 by replacing * with **~3.2.1**



3. Build UI based on selected Authentication mechanism.

(a) OAM based Authentication

1. Open Terminal at “_build” level.
2. Run following command :

```

sudo npm install -g grunt-cli

sudo npm install

node render-requirejs/render-requirejs.js

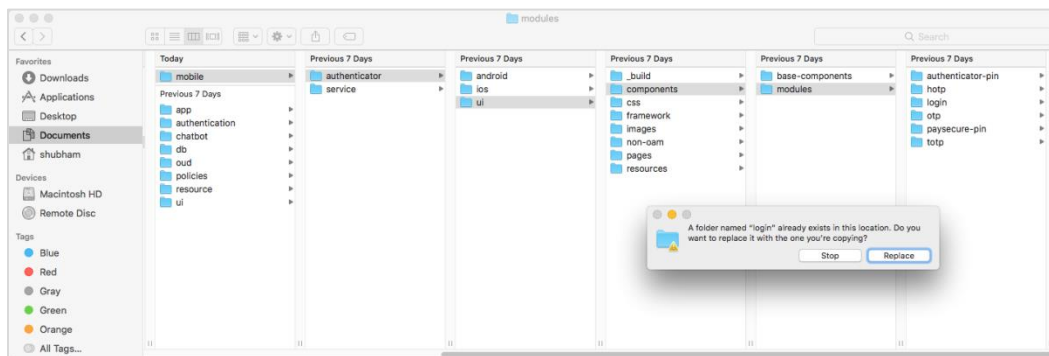
grunt authenticator --verbose

```

3. After running above commands and getting result as “Done, without errors.” a new folder will be created at “_build” level with name as “dist”.

(b) NON-OAM Based Authentication

1. Copy “non-oam/login” folder and Replace it at location “components/modules” [in ui folder] location. This will replace existing “login” folder.



2. Open Terminal at “_build” level.
3. Run following command :

```

sudo npm install -g grunt-cli

sudo npm install

node render-requirejs/render-requirejs.js

grunt authenticator --verbose

```

4. After running above commands and getting result as “Done, without errors.” a new folder will be created at “_build” folder level with name as “dist”.

```

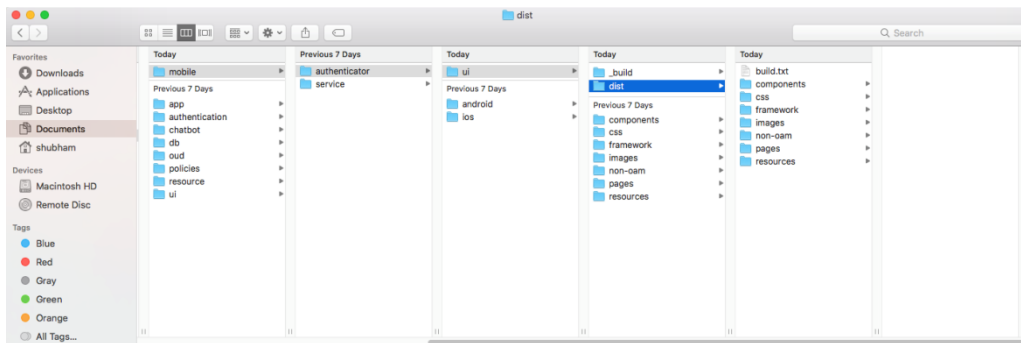
Running "add-cordova" task
Reading ../dist/framework/js/pages/require-config.js...OK
Writing ../dist/framework/js/pages/require-config.js...OK

Done, without errors.

Execution Time (2017-07-24 15:04:08 UTC+5:30)
loading tasks          10.2s ██████████ 49%
clean:preBuildCleanUp  11ms  0%
copy:main              6.4s ██████████ 31%
sass:dist             12ms  0%
htmlmin:min           98ms  0%
inlinescss:main       3ms   0%
uglify:updatedBuild   1.7s ██████  8%
string-repla...eplacements 25ms  0%
require               1ms   0%
requirejs:compile     2.2s ██████ 11%
clean:postBuildCleanUp 151ms 1%
authenticator-tasks   7ms   0%
add-cordova           7ms   0%
Total 20.9s

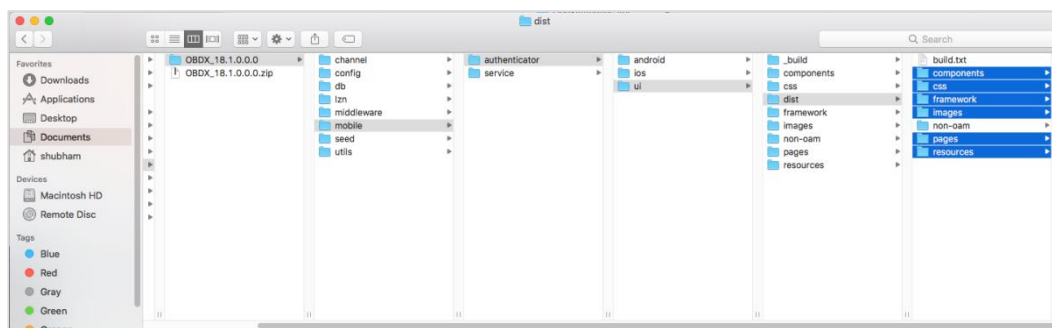
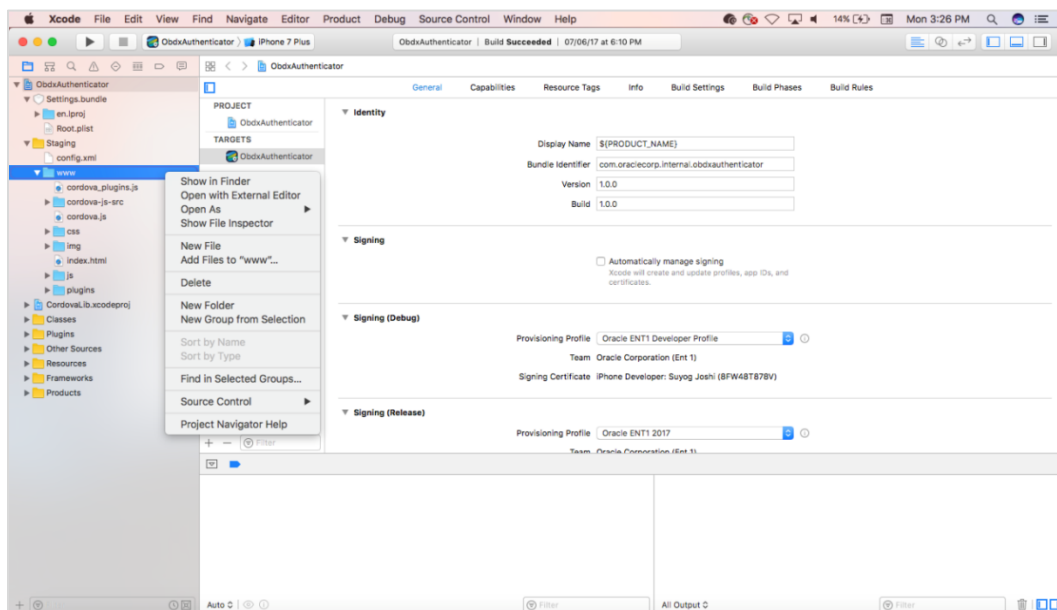
dhcp-in-ofss-10-180-59-57:_build obdxuser$

```

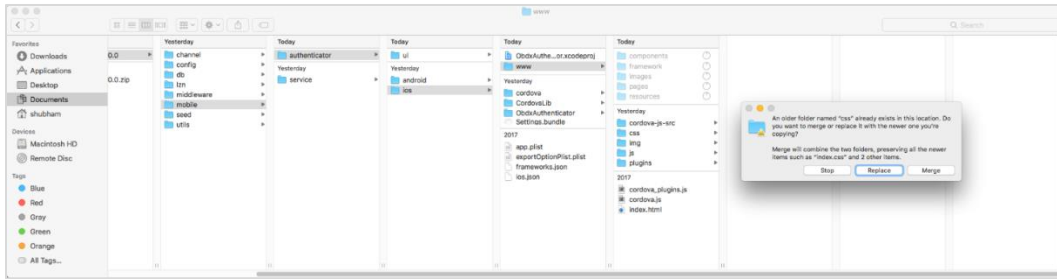


4.3 Authenticator Application Workspace Setup

1. Unzip and navigate to iOS workspace as shipped in installer
2. Open the “**OBDX_Installer/installables/mobile/authenticator/ui/ios/www**” folder in the finder and paste and replace the following generated UI files from “**ui/dist**” folder :
 - components
 - css
 - framework
 - images
 - pages
 - resources



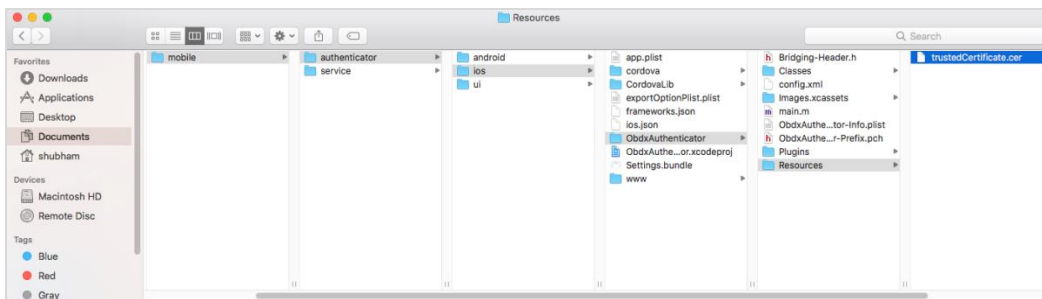
Finally the **OBDX_Installer/installables/mobile/authenticator/ui/ios/www** folder must look like:



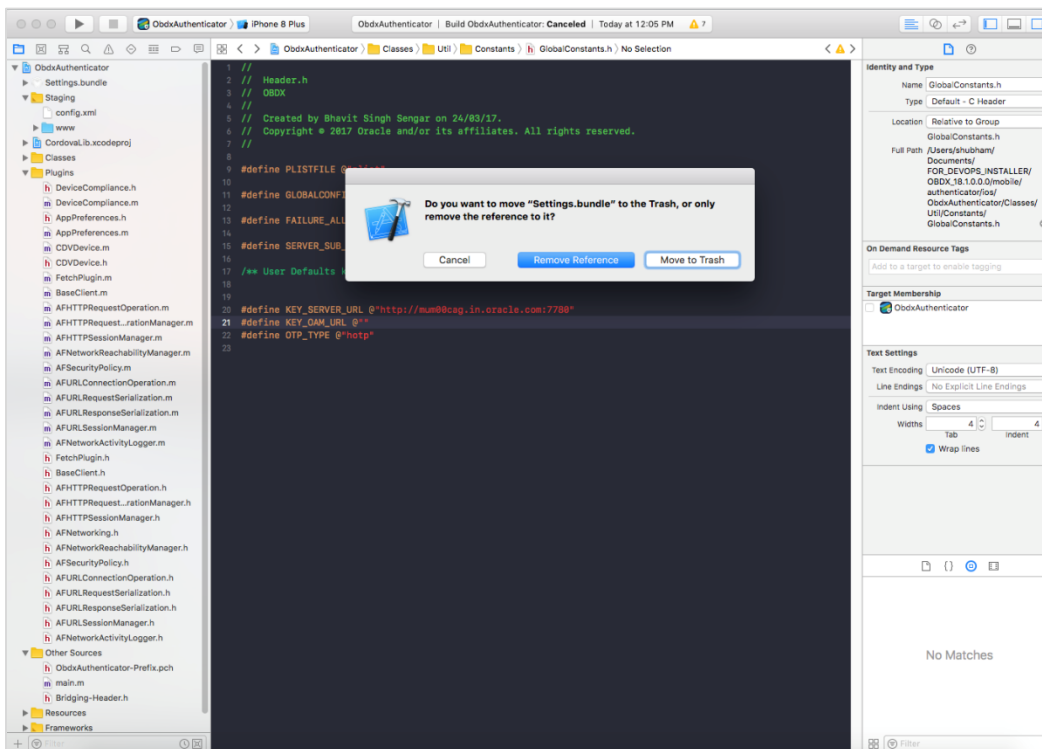
3. Generate a certificate(.cer) for your server and rename it to **trustedCertificate.cer**

Now copy and paste this trustedCertificate.cer to

OBDX_Installer/installables/mobile/authenticator/ui/ios/ObdxAuthenticator/Resources/ directory

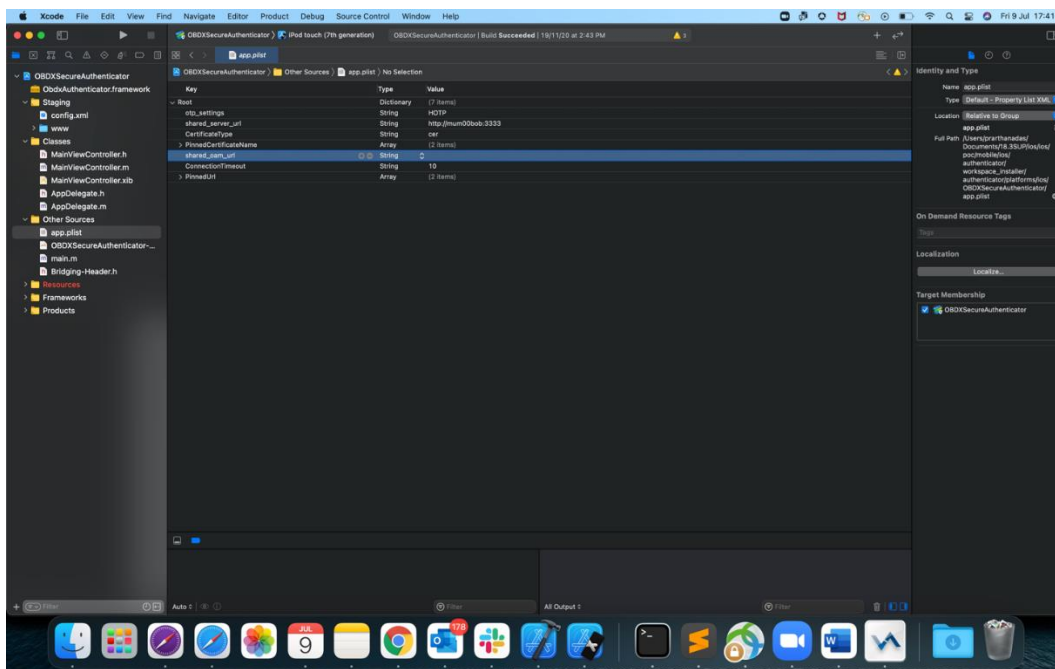


4. In xcode navigator, right click on Settings.bundle -> Delete -> Move to Trash

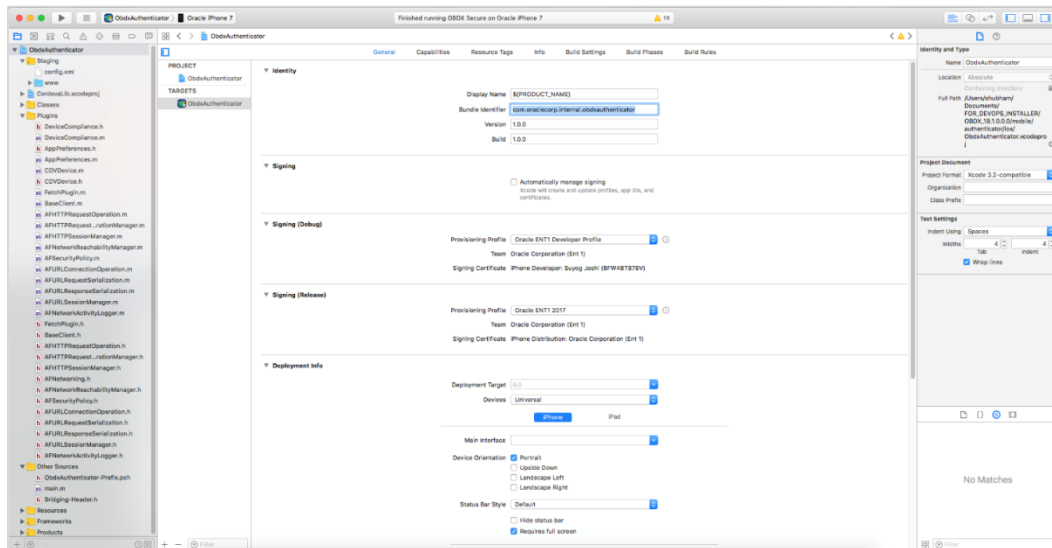
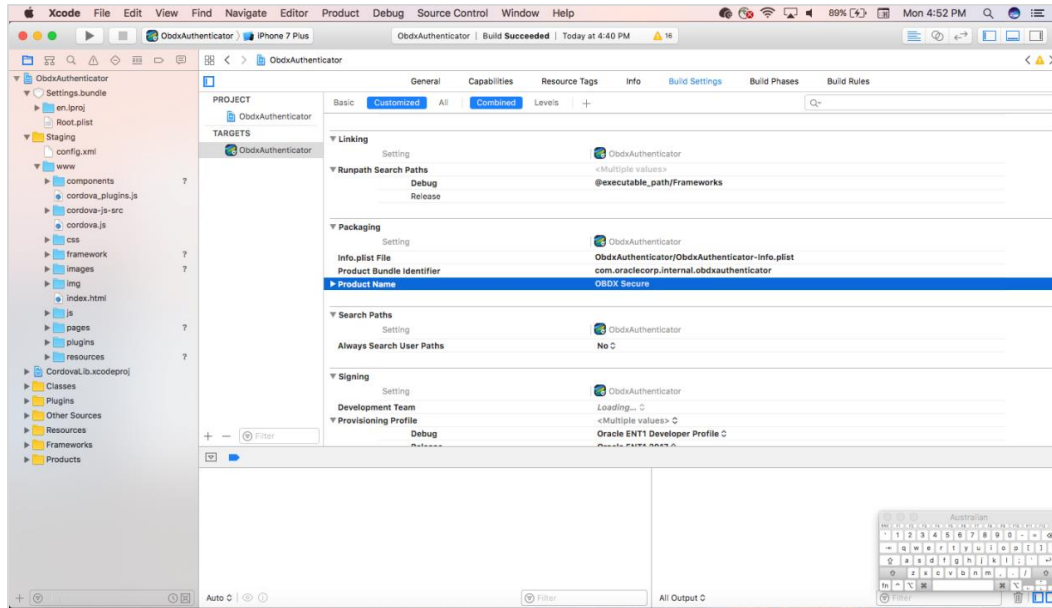


- To change the **OAM URL / SERVER URL / OTP_TYPE**,
Go to the **app.plist** in Xcode navigator and set the values.
Values for OTP_TYPE will be either **HOTP** or **TOTP**

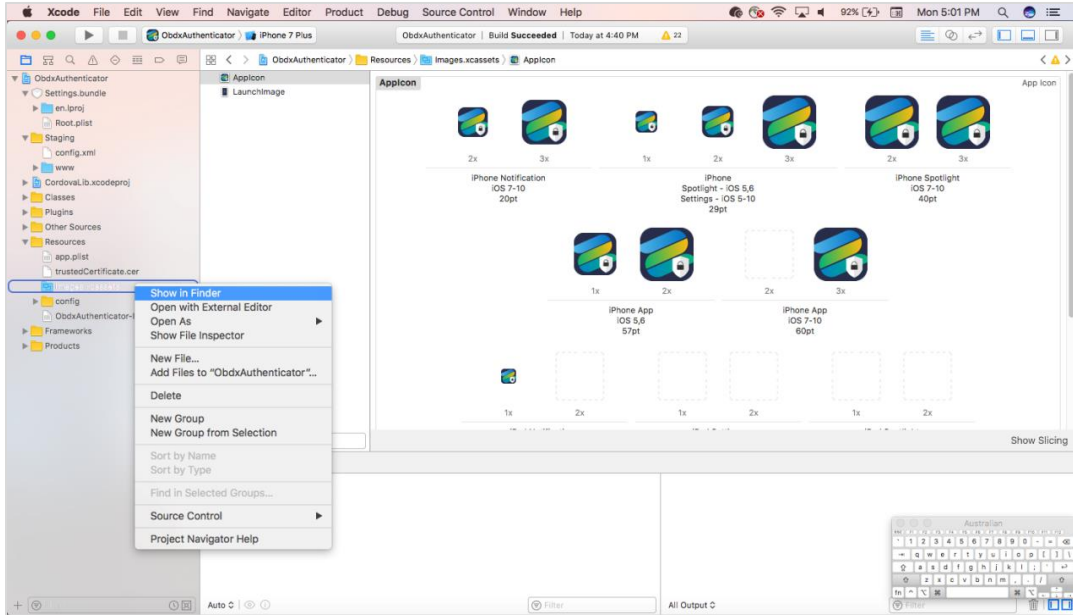
Note: For NONOAM/DB authenticator setups leave OAM URL blank and set the Server url/OTP_TYPE (example shown below for NONOAM/DB Authenticator/LDAP setups)



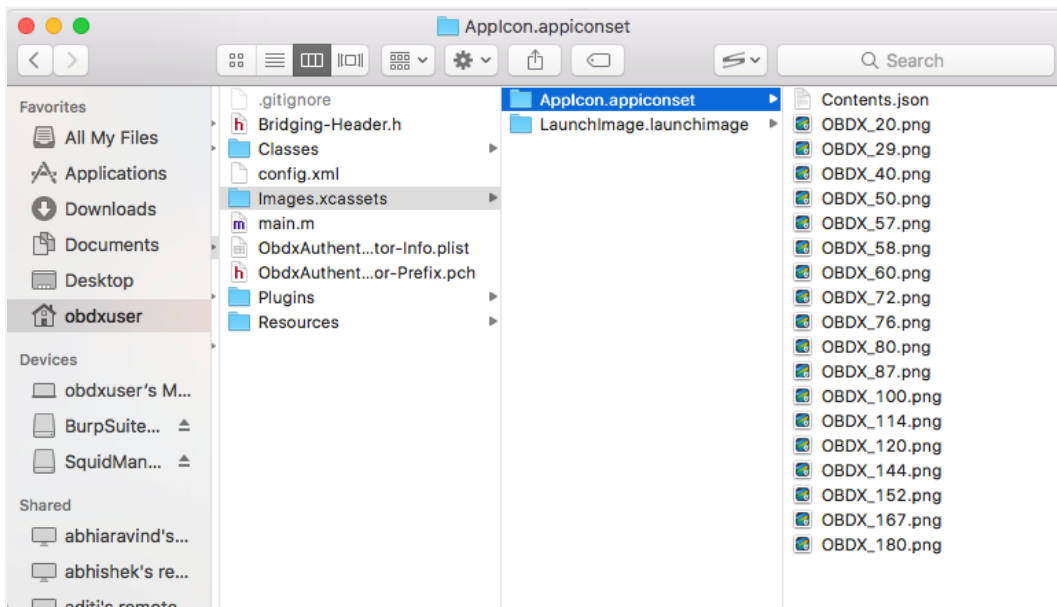
- Now, again go to the Xcode and run the project either in Simulator or device
- To update Application name, Click on the project in Xcode, then under **Targets -> Build Settings -> Packaging -> Product Name** and update the Application Name to the desired one.
To change the package name, Change the Bundle Identifier.



- To update Application icon/ Launch Image go to *Resources -> Image.xcassets* and show in *Finder*.

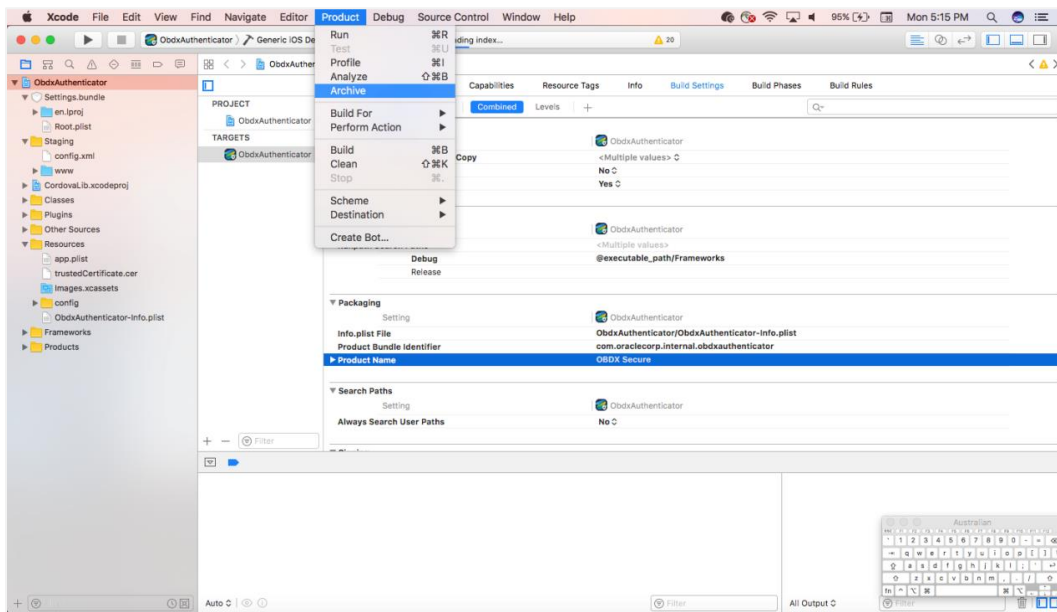


9. Replace the images with icons/launch Images of the choice of each dimension of the icon/launch Image already present.

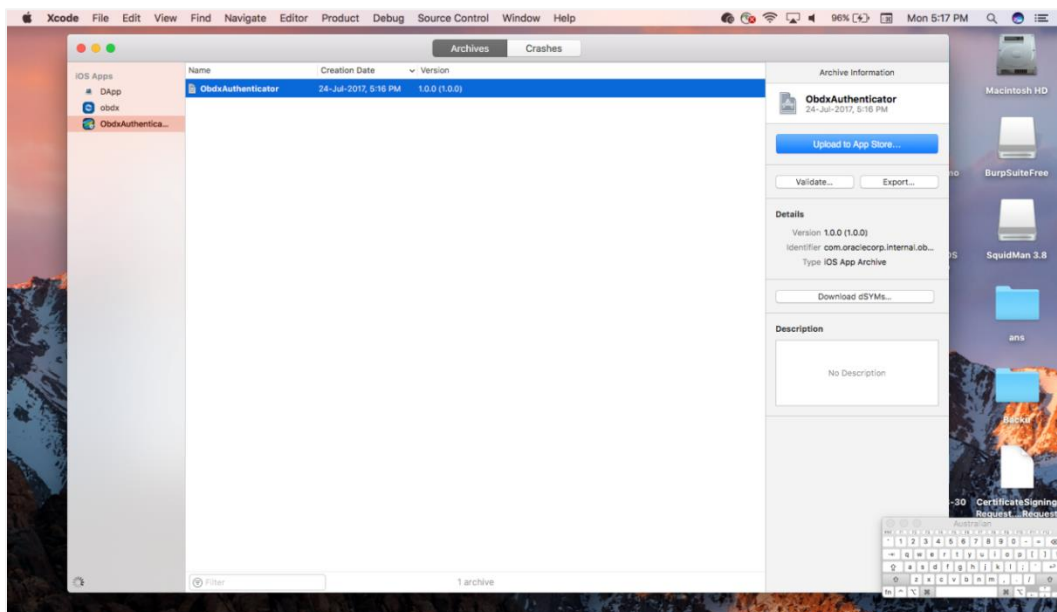


4.4 Building Authenticator Application

1. Set the simulator to *Generic iOS* device. Then go to *Product -> Archive*.



2. Choose your Archive and then click "Export". .ipa file will be generated



5. Adding Custom Cordova Plugin

1. Create a **plugin** folder named cordova-plugin-getdirection under plugins folder of www (zigbank\platforms\ios\www\plugins) and create a www folder inside newly created folder and a .js file with the name mentioned in step-2 and it's contents as stated below.

For example,

```
cordova.define("cordova-plugin-getdirection", function(require, exports, module) {
var exec = cordova.require('cordova/exec');
exports.navigate = function(args, successCallback, errorCallback) {
cordova.exec(successCallback, errorCallback, "GetDirectionMapPlugin", "direction", [args]);
};
});
```

Here,

cordova-plugin-getdirection.getDirectionPlugin -> user defined id from cordova_plugins.js(zigbank\platforms\ios\ www\cordova_plugins.js)

GetDirectionMapPlugin: name of Objective-C/Swift plugin class

direction: function to be called

navigate: this can be use in .js file to trigger this “direction” function

2. Make entry of plugin in cordova_plugins.js(zigbank\platforms\ios\www) as the following:

For example,

```
{
"cordova-plugin-getdirection.getDirectionPlugin": user defined id
"file": "plugins/cordova-plugin-getdirection/www/mapgetdirection.js", : path of plugin js file
"pluginId": "cordova-plugin-getdirection",
"clobbers": [
"window.getDirection": this can be used in any .js file to call plugin
]
}
```

3. Make entry of plugin class in config.xml(zigbank\platforms\ios\Zigbank) file of app as stated below:

For example,

```
<feature name="GetDirectionMapPlugin">
```

```
<param name="ios-package" value="GetDirectionMapPlugin" />
</feature>
```

The feature's name attribute should match what you specify as the JavaScript exec call's service parameter. The value attribute should match the name of the plugin's Objective-C/Swift class. The <param> element's name should always be ios-package. If you do not follow these guidelines, the plugin may compile, but Cordova may still not be able to access it.

4. Plugin invocation from any .js file:

For example,

```
window.getDirection.navigate({
  originLatLng: origin,
  destinationLatLng: location
})
```

window.getDirection : clobber defined in the cordova_plugin.js file

navigate: name of the function defined in plugin js file