Hello World iOS app using PubNub library in 10 minutes

This HOWTO will walk you through in setting up a simple “Hello World” application using PubNub library. Its a simplified walkthrough which utilizes existing code to get you running quickly.

A more elaborate PubNub iOS example for iPad is available at **https://github.com/pubnub/objective-c/tree/master/iOS/iPadDemoApp**.

The first step is to clone the PubNub objective-c repo:

$ git clone https://github.com/pubnub/objective-c.git

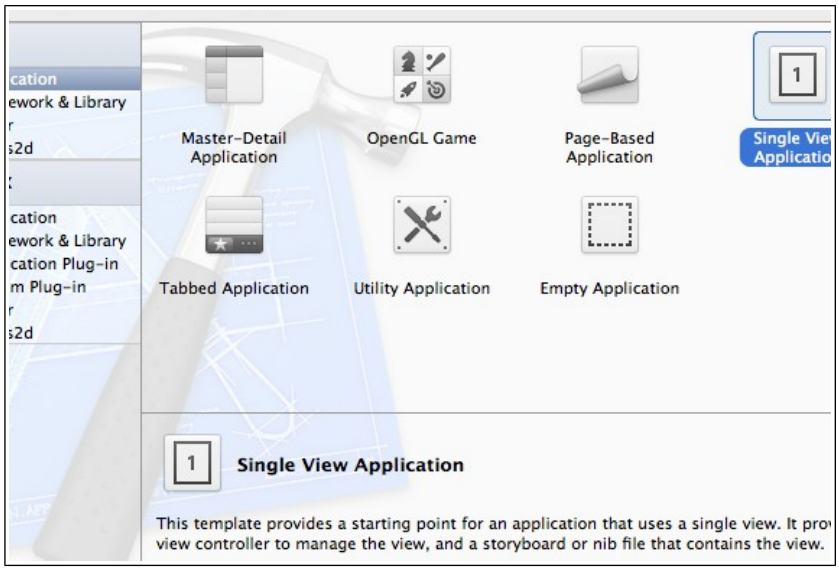
This will create the PubNub repo within a subdirectory called “objective-c” in the same directory where you run the command. We will use these files later in the demo.

Create a new PubNubDemo XCode Project

Lets first start with a new blank Xcode project. To create the new project:

1. Open Xcode
2. Select **File -> New -> Project** from the menu.

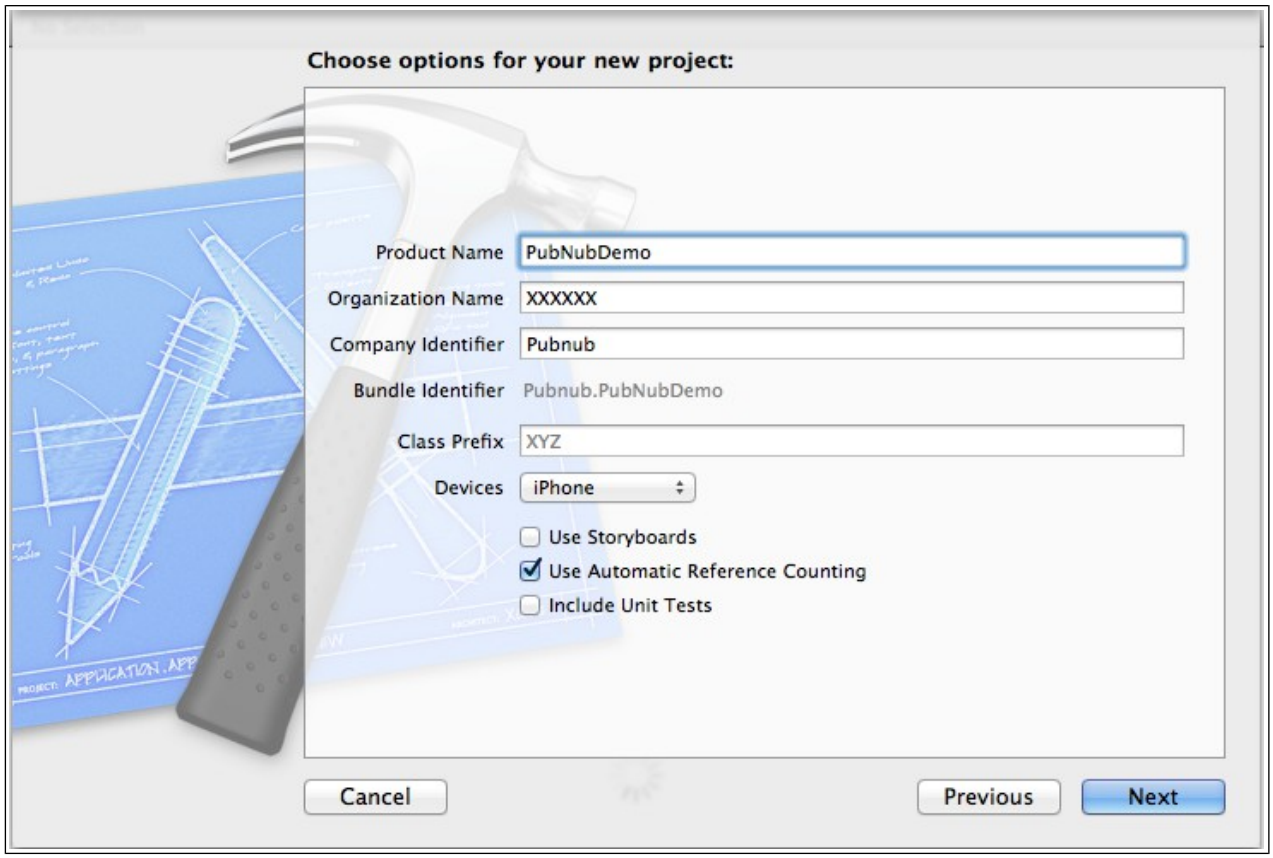
The “**Choose a template for your new project**” dialog will appear.



3. Select **iOS -> Application -> Single View Application**.
4. Click “**Next**”.

The "**Choose options for your new project**" dialog will be shown next.

NOTE: In order to make this HOWTO as easy as possible to follow, these following values are suggested:



NOTE: "**XYZ**" is the default "Class Prefix", it will be displayed as a grayed out text. You need to leave the field blank.

5. Click the "**Next**" button to proceed.
6. Select the folder which to save the project.
7. Click the "**Create**" button.

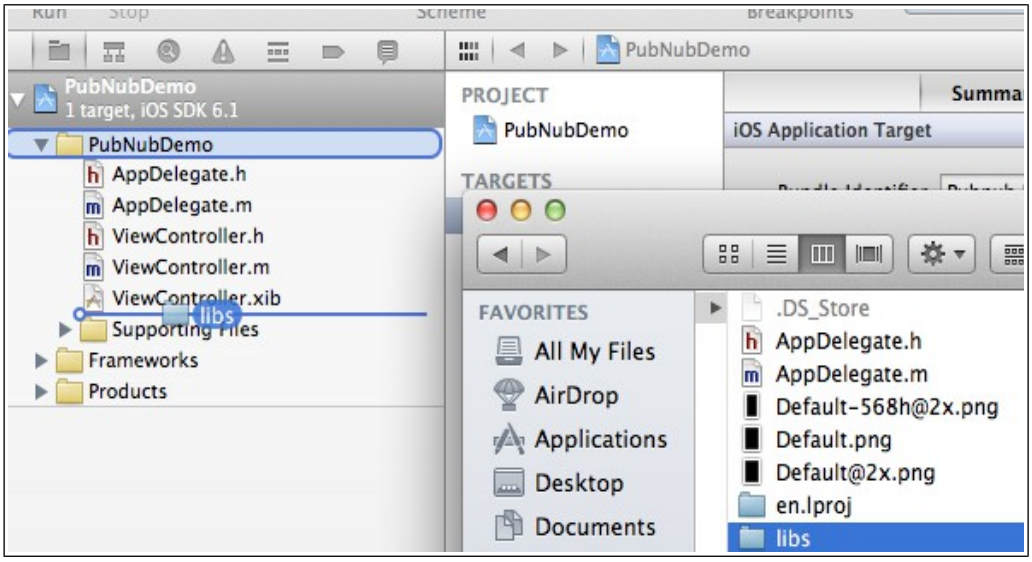
The template project is now created!

Next, we'll import and configure the PubNub libraries we obtained from the git clone performed earlier.

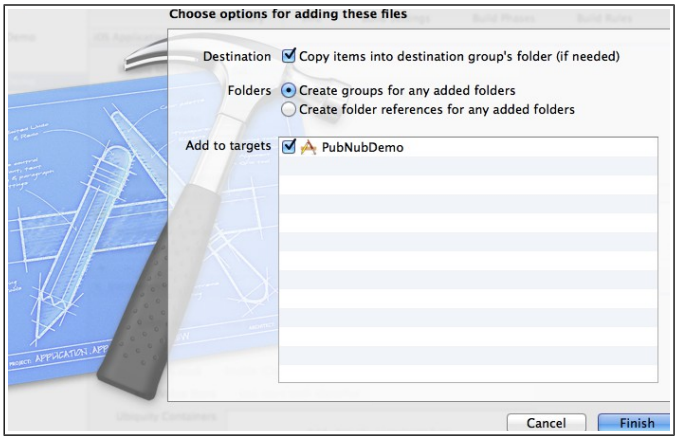
Import and Configure the PubNub Libraries

1. Open a Finder window to the directory created by the previous "git clone", and select the **objective-c/iOS/HOWTO/HelloWorld/pubnubDemoExample/libs** directory.

2. Drag the **libs** directory from the Finder window to just below the file **ViewController.xib** in your Xcode project's Project view.



The "**Choose options for adding these files**" dialog will appear.



3. Select "**Destination: Copy items into destination group's folder**" and "**Add to targets**"
4. Click **Finish**.

NOTE: Be sure "**Copy items into destination groups folder**" and "**Add to targets**" is selected for "PubNubDemo" when copying **any** files from the Finder into the project.

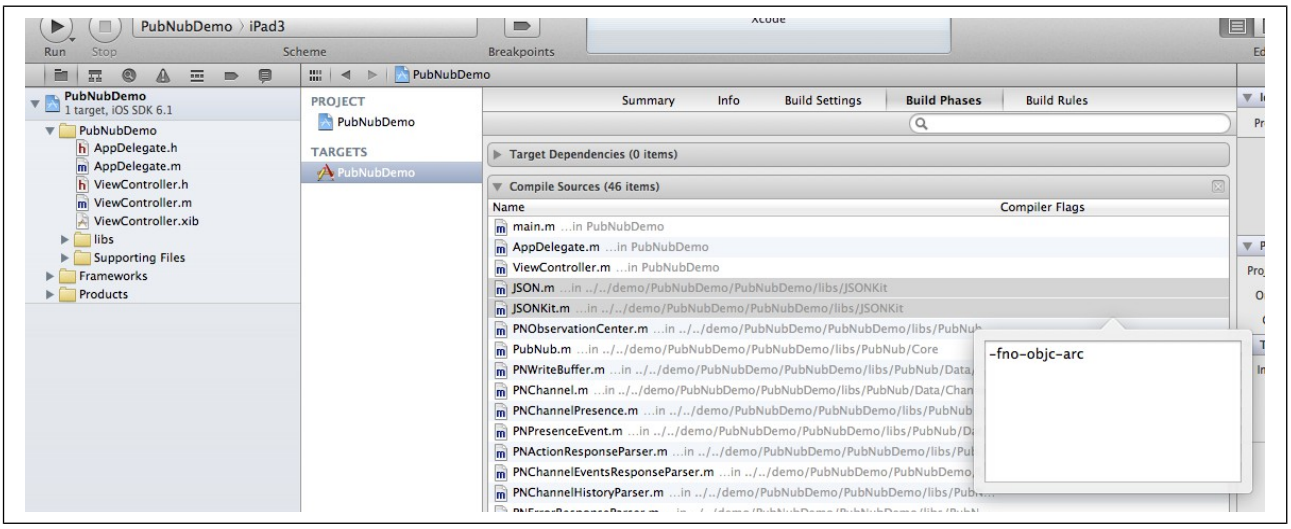
5. Next, we'll add the import statement to import "PNImports.h" in the **PubNubDemo-Prefix.pch** file.
6. In the project navigator expand "**Supporting Files**"
7. Open the **PubNubDemo-Prefix.pch** file.
8. In this file add the line `#import "PNImports.h"` before the `#endif`

```
4
5  #import <Availability.h>
6
7  #ifndef __IPHONE_4_0
8  #warning "This project uses features only available in iOS SDK 4.0 and later."
9  #endif
10
11 #ifdef __OBJC__
12     #import <UIKit/UIKit.h>
13     #import <Foundation/Foundation.h>
14     #import "PNImports.h"
15 #endif
16
```

Disable ARC for Global JSON Support

The PubNub library needs the JSONKit library to perform JSON serialization and deserialization. Since JSONKit library is a non-arc library, we need to tell Xcode to compile these files without ARC.

1. From *Project Navigator* (the 1st vertical Xcode pane), click on the project name **PubNubDemo**
2. In the 2nd pane, click *PubNubDemo* under "**Targets**"
3. In the 3rd pane, from the top horizontal tab menu, click *Build Phases*
4. Expand *Compile Sources*
5. Command-click **JSON.m** and **JSONKit.m**
6. Press **Enter** to open a flags textfield
7. Paste in the string **-fno-objc-arc**



8. Press **Enter** when done.

Next, we need to define the additional framework support required to run our PubNub application. From the current *Build Phases* screen:

9. Close (un-expand) the *Compile Sources* dropdown.
10. Expand *Link Binary With Libraries* dropdown.

11. Click the + button
12. Add **CFNetwork.Framework**
13. Add **libz.dylib**
14. Add **SystemConfiguration.Framework**

Add the App Delegate files

The app delegate logic handles many of the PubNub actions, from low level PubNub initialization and observer registration, to higher level duties, such as displaying a messages as they are received and handling server response code as message are published.

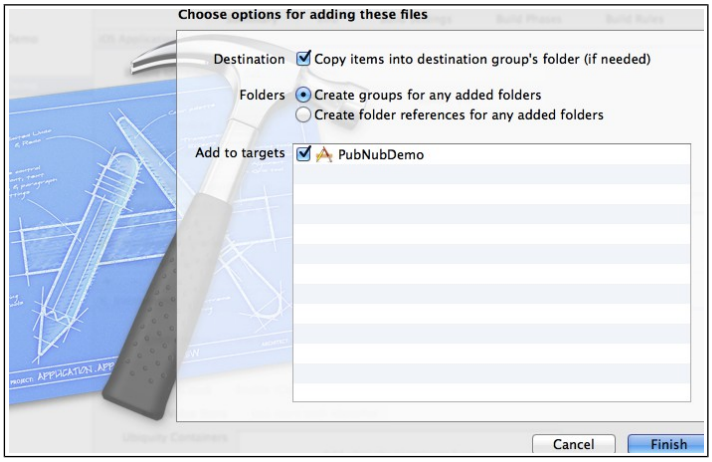
This functionality lies within the **AppDelegate.*** files. We'll now replace them with the files from the **HelloWorld/pubnubDemoExample** folder.

1. Delete **AppDelegate.*** from the path *PubNubDemo* in Project Navigator.

The "**Move To Trash**" dialog appears.

2. Select "**Move to Trash**"
3. Drag the **objective-c/iOS/HOWTO/HelloWorld/pubnubDemoExample/AppDelegate.* (.m** and **.h)** to *PubNubDemo* in Project Navigator

The "**Choose options for adding these files**" dialog will appear.



4. Select "**Destination: Copy items into destination group's folder**" and "**Add to targets**"
5. Click **Finish**.

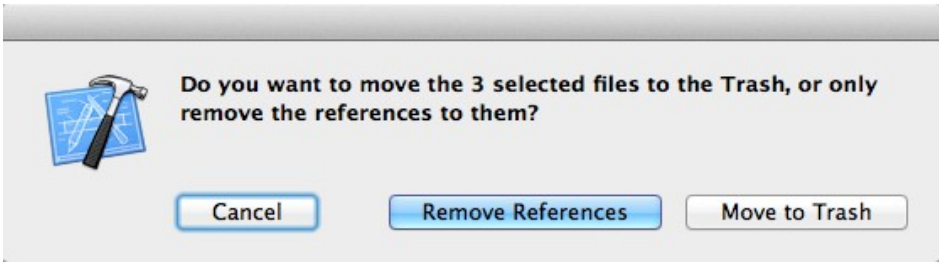
NOTE: Be sure "**Copy items into destination groups folder**" and "**Add to targets**" is selected for "PubNubDemo" when copying files from the Finder into the project.

Add the User Interface, Properties, and Actions, and View Controller

In this demo app we will demonstrate connect, subscribe, unsubscribe and publish.

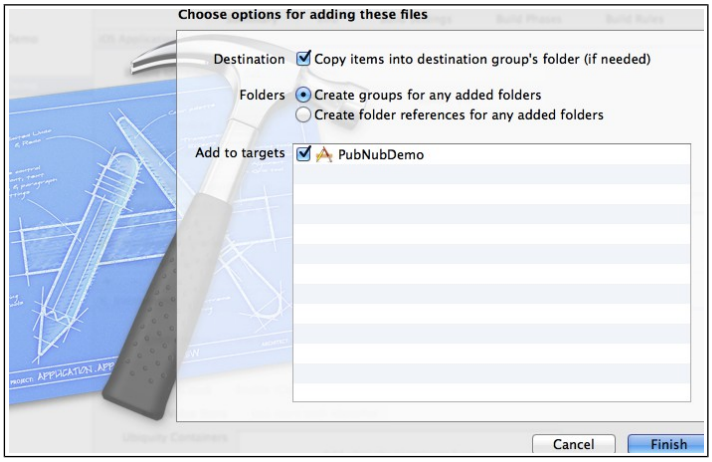
1. Delete **ViewController.xib,** add the **ViewController.* files** under the *PubNubDemo* in Project Navigator.

The "**Move To Trash**" dialog appears.



2. Select "**Move to Trash**"
3. Drag the files **ViewController_iphone.xib** and **MainViewController_iPhone.xib** from the folder **objective-c/iOS/HOWTO/HelloWorld/pubnubDemoExample/en.lproj** to *PubNubDemo* in Project Navigator

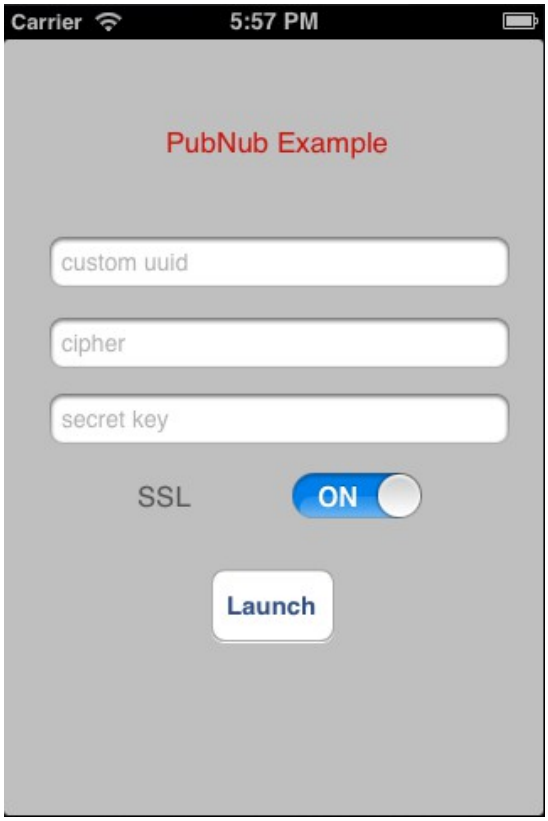
The "**Choose options for adding these files**" dialog will appear.

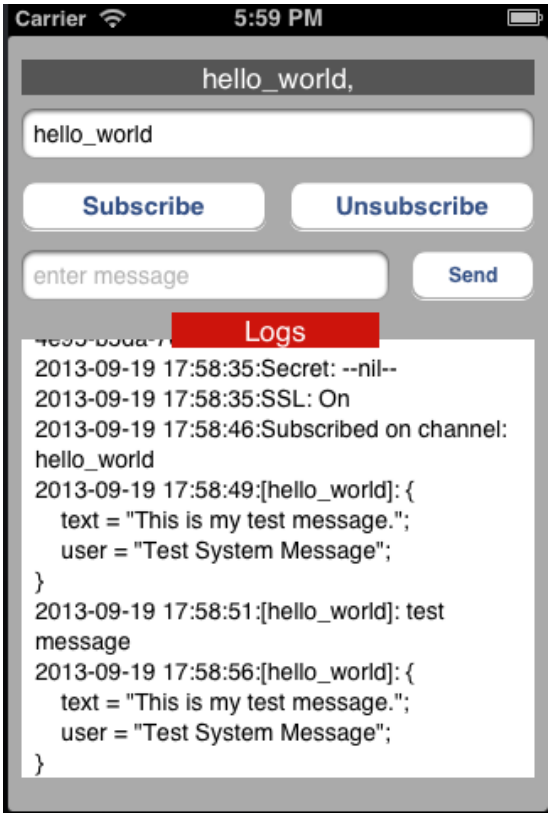


4. Select "**Destination: Copy items into destination group's folder**" and "**Add to targets**"
5. Click **Finish**.

NOTE: Be sure "**Copy items into destination groups folder**" and "**Add to targets**" is selected for "PubNubDemo" when copying files from the Finder into the project.

You've now added the UI to the application!





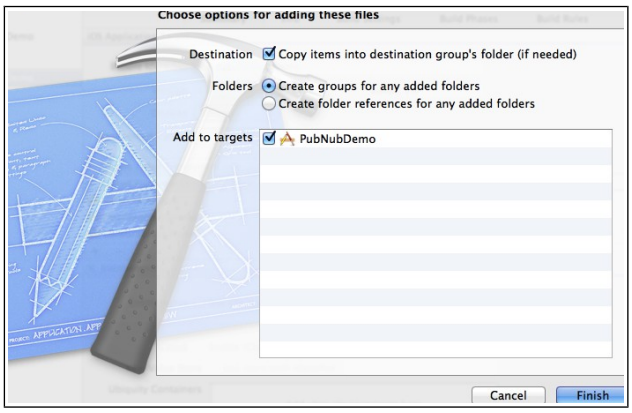
The final step is to add the ViewController files which are responsible for handling all of the app's UI

interaction. We'll define properties, button actions, and links to the UI via these files.

6. Drag the files
    - **MainViewController.h**
    - **MainViewController.m**
    - **ViewController.h**
    - **ViewController.m**

    from the folder **objective-c/iOS/HOWTO/HelloWorld/pubnubDemoExample** to *PubNubDemo* in Project Navigator

The "**Choose options for adding these files**" dialog will appear.



7. Select "**Destination: Copy items into destination group's folder**" and "**Add to targets**"
8. Click **Finish**.

NOTE: Be sure "**Copy items into destination groups folder**" and "**Add to targets**" is selected for "PubNubDemo" when copying files from the Finder into the project.

You have now completed the HOWTO!

Go ahead and run the app! The app by default will connect using "**demo**" as the PubNub publish and subscribe key.

On the launch screen you will be asked to enter

- Custom UUID (optional)
- Cipher key (optional)
- Secret key (optional)
- SSL (On by default)

On touching Launch you will be taken to the second screen. You can subscribe / unsubscribe to a channel and publish a message to a channel. You can see the logs of the actions in the text view titled "Logs"

- In order to subscribe to a PubNub channel you need to enter the channel name and then touch the subscribe button. When the channel is subscribed you will see the "channel connected" logs.

Also on the top you will see the connected channels. You can connect to another channel by following the same process.

- To publish a message you need to enter a channel name, then a message to publish and touch the send button. If you are subscribed to the same channel you will be able to see the message in the logs.
- In order to unsubscribe from a PubNub channel you need to enter the channel name and then touch the unsubscribe button. When the channel is unsubscribed you will see the “channel unsubscribed” logs. The channel will be removed from the connected channels displayed on the top most label. You can unsubscribe from other channels by following the same process.

You may also to connect a web browser to http://www.pubnub.com/console to publish and subscribe for testing purposes.