

BYOB TUTORIAL

BYOB = BUILD YOUR OWN BROWSER

This tutorial is my version of how to build a browser in XCode 3.2.1. We're going to create a very simple web browser:



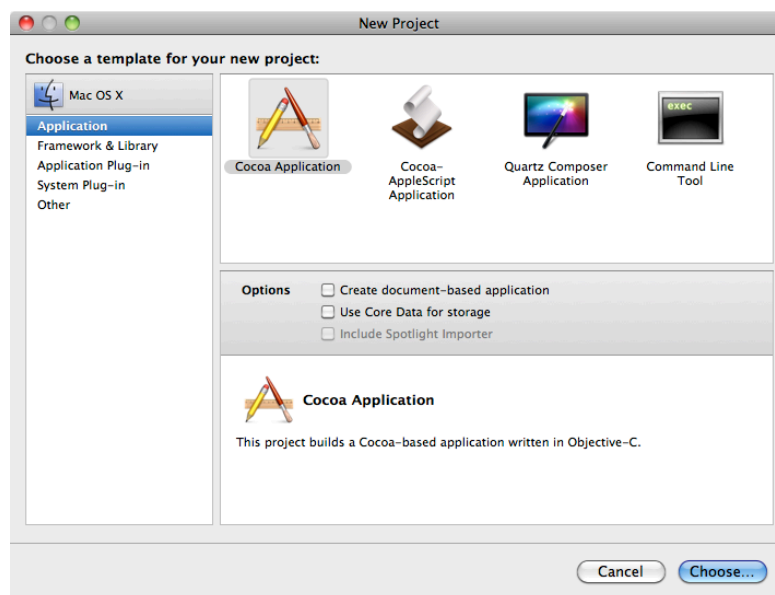
The tutorial is modeled after: <http://macdevcenter.com/pub/a/mac/2004/05/28/webkit.html?page=2>

All errors are mine and I hope you'll let me know if you are not able to follow the recipe. And of course if you don't understand how/why this all works, I'll be happy to explain a little more. You are also welcome to VNC to my computer for a live demo.

I think the design of XCode and InterfaceBuilder is not intuitive. I hope this little application will bring you some understanding. At the end of the tutorial, I've listed some suggestions for enhancements. One day I might extend the tutorial to show how those additions can be easily implemented.

1) Get the Wizard to generate a BYOB starter app

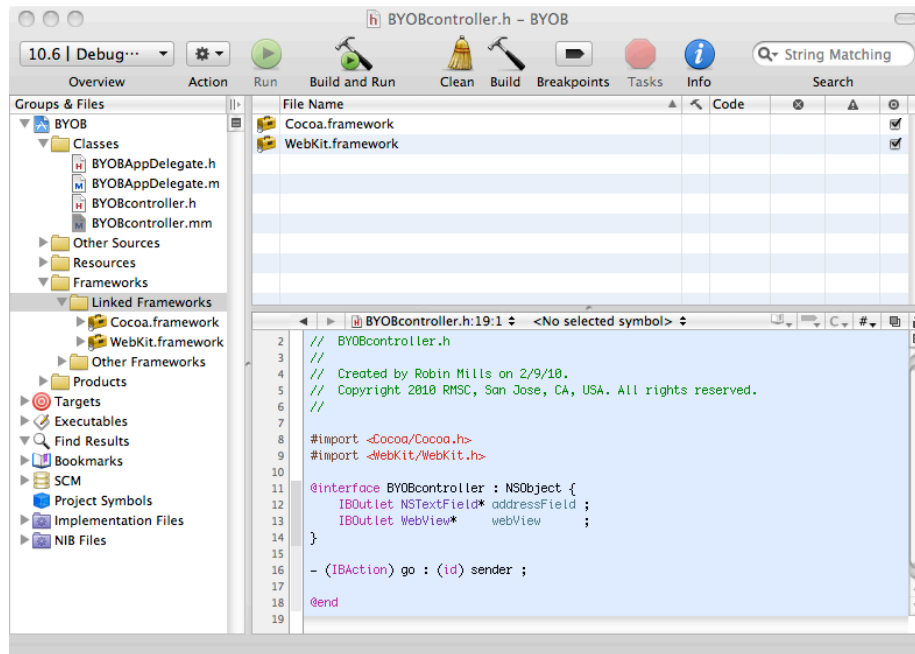
- Start with a new Cocoa App BYOB (no Document, no Core Data)
- just a vanilla application that brings up a window.
- Build and run the application. It's boring of course and simply displays a window. Well that's a good start.



2) Define the class BYOBcontroller to manage the BYOB window

I'm going to have a textField (the URL), a button (Go) and a webView (a web browser)

- Add a file BYOBcontroller.mm (and .h) based on NSObject (the code is listed later in this tutorial)
- in BYOBcontroller.h, add IBOutlet addressField, and webView and IBAction go : (id) sender
- in BYOBcontroller.h add #import <WebKit/WebKit.h>
- In XCode, Link the WebKit framework (***** don't forget *****)



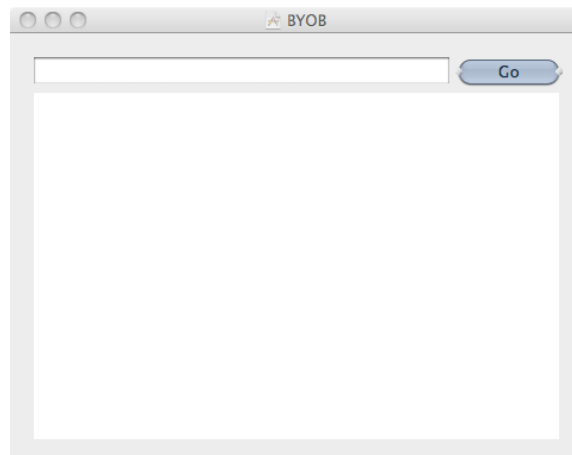
3) Add an instance of BYOBcontroller to the NIB in Interface Builder

Open the MainMenu.xib in InterfaceBuilder (you'll find him in Resources - double click him to launch IB).

- Drag BYOBcontroller.h (from XCode) onto the InterfaceBuilder MainMenu.xib pane.
- Drag an NSObject (a Blue Cube) from Interface Builder/Library onto the MainMenu.xib pane
- Select the new NSObject and set its class to BYOBcontroller (IB will rename him Bcontroller)

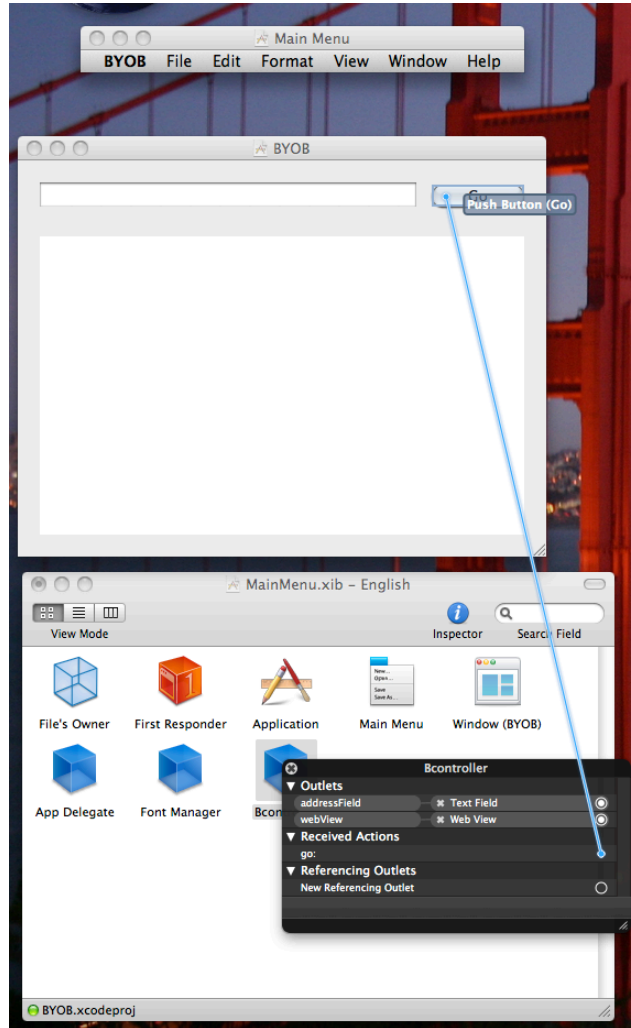
4) Layout the UI in Interface Builder

- Drop a NSTextField, WebKit, and NSButton (renamed as Go) from the library onto the BYOB Window in InterfaceBuilder.



5) Connect the UI widgets to your code

- Right click on the Bcontroller object in the MainMenu.xib pane
- attach outlets addressField to the TextField and webView to the WebView
- attach the go Action to the 'Go' Button
- Save MainMenu.xib in interface builder.



6) In XCode update your code in BYOBcontroller.mm (the code is given below)

- awakeFromNib gives your addressField an initial value
- go tells the WebView to display the URL from the address

7) Compile and run

- When you hit the "Go" button, you should see clanmills.com
- Change the address (to http://apple.com) and press Go.

I hope it works for you. When it works, Congratulations. I know you'll tell me where you are stuck.

Code

```
//
// BYOBcontroller.h
//
// Created by Robin Mills on 2/9/10.
// Copyright 2010 RMSC, San Jose, CA, USA. All rights reserved.
//

#import <Cocoa/Cocoa.h>
#import <WebKit/WebKit.h>

@interface BYOBcontroller : NSObject {
    IBOutlet NSTextField* addressField ;
    IBOutlet WebView*    webView      ;
}

- (IBAction) go : (id) sender ;

@end

//
// BYOBcontroller.mm
//
// Created by Robin Mills on 2/9/10.
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//

#import "BYOBcontroller.h"

@implementation BYOBcontroller

- (void) awakeFromNib {
    [ addressField setStringValue:@"http://clanmills.com"] ;
}

- (IBAction) go : (id) sender
{
    NSString* address = [ addressField stringValue] ;
    [[webView mainFrame] loadRequest:
    [NSURLRequest requestWithURL:[NSURL URLWithString: address ]
    ]];
}

@end
```

Challenges and Suggestions

- 1) Fix the dynamic sizing of the user interface.
- 2) Add an About box and your own icon.
- 3) Add Forward and Back buttons. Add Navigation to the BYOB menu. Add hot keys for Go/Forward/Back.
- 4) Add a visit history (as a drop down list).
- 5) Add a progress bar to show the page loading. Set the Window title from the HTML <title>.
- 6) Show browser status at the bottom of the screen.
- 7) Add a preference panel (to say "Show Status", "Show History" etc) and store users preferences in persistent storage.



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Revision History

20100408	Added my business card at the end
20100210	General Overall. Additional details. Fixed typing errors.
20100209	Initial version