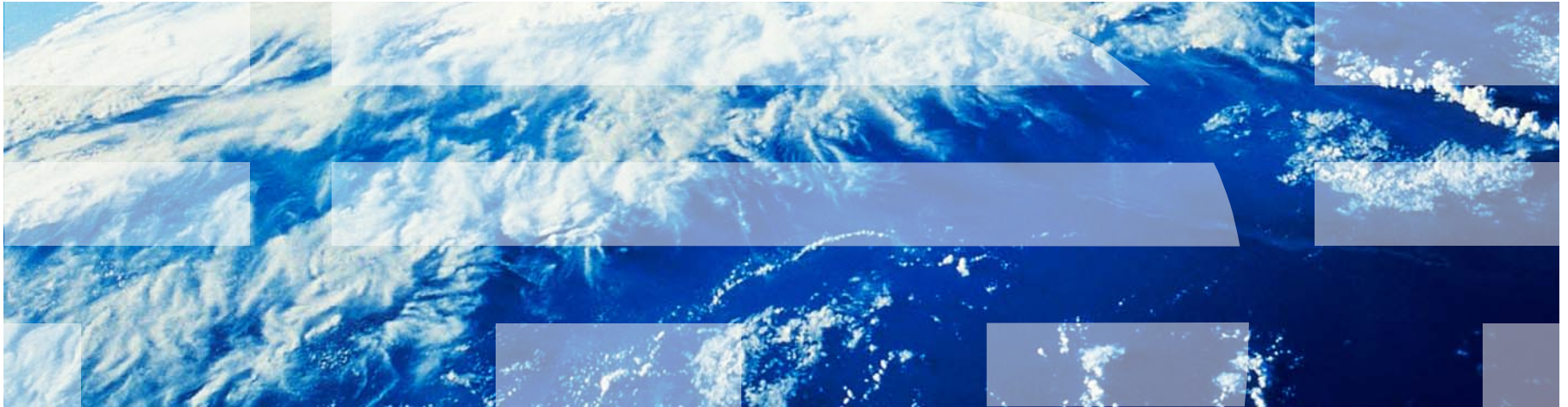


# ***IBM Worklight V6.1.0 Getting Started***

## **iOS shell development**



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# Agenda

- Overview
- Adding an iOS environment to a shell component
- Adding custom Objective C code to a shell component
- Using the NativeEmptyApp Project

# Overview

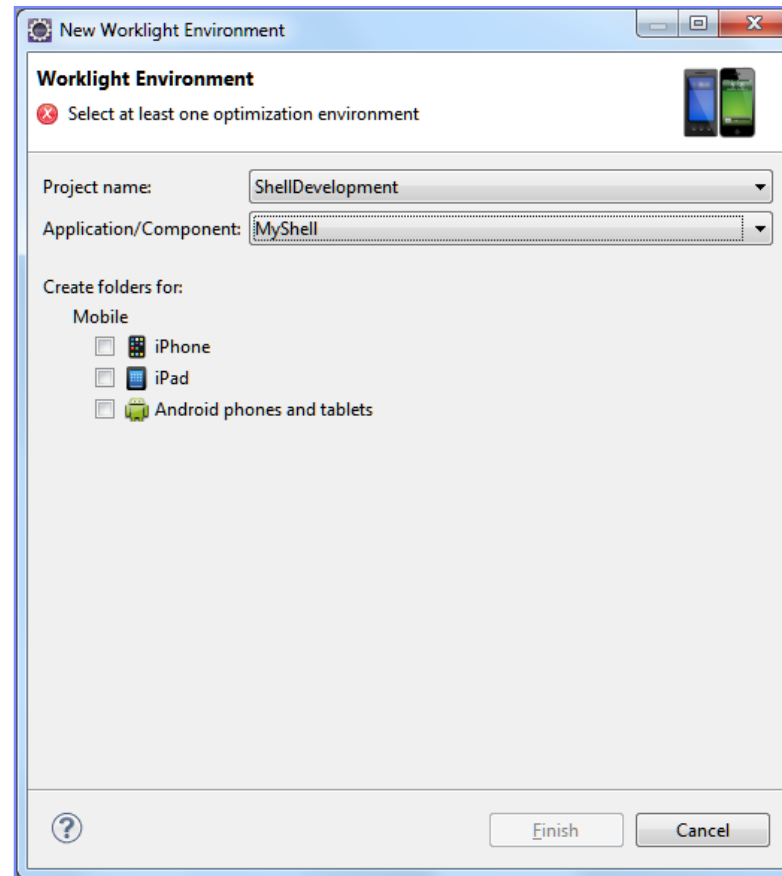
- This training module complements *Shell Development Concepts*.
- In this module, you learn how to add an iOS environment to your shell component, test application, and inner application.

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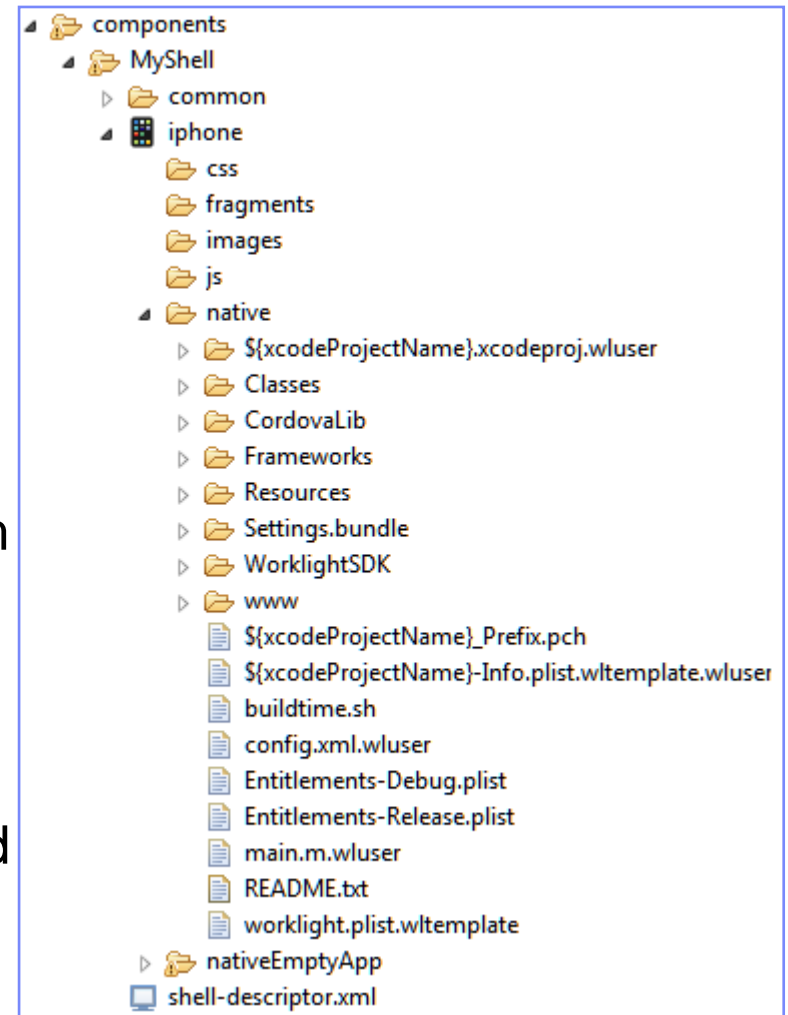
## Adding an iOS environment to a shell component

- Start by adding a iPhone environment to your shell component by following the same procedure as for a standard Worklight® application.



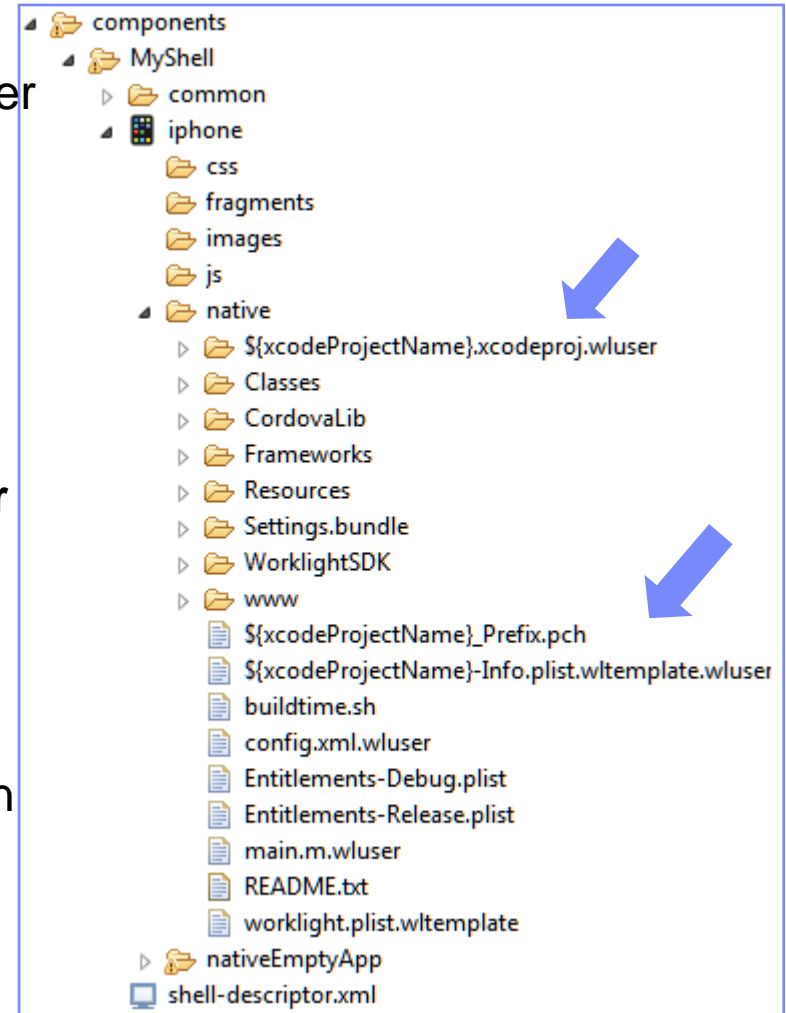
## Adding an iOS environment to a shell component

- The following folder structure is created:
  - **css, images, fragments** and **js** contain resources that override or extend resources from the Shell component **common** folder.
  - The **native** folder contains an application template to be used when you create an iOS project from an inner application.
  - The **nativeEmptyApp** folder contains an application that is built from the shell component and an empty inner application as described in the *Shell Development Concepts* module.



# Adding an iOS environment to Shell component

- The files in the **native** folder are template that are going to be used to create the inner application iOS project
- Some of the folder and file names contain placeholder elements that are populated during the build.
- For example:
  - **`${xcodProjectName}.xcodproj.wluser`** placeholder will be populated with a package name used in the application.
  - **`${xcodProjectName}-Info.plist.wltemplate.wluser`** placeholder will be populated with the application name, thus creating the main application `plist` file.
- Files with the `.wluser` extension are template files that shell developers can modify.



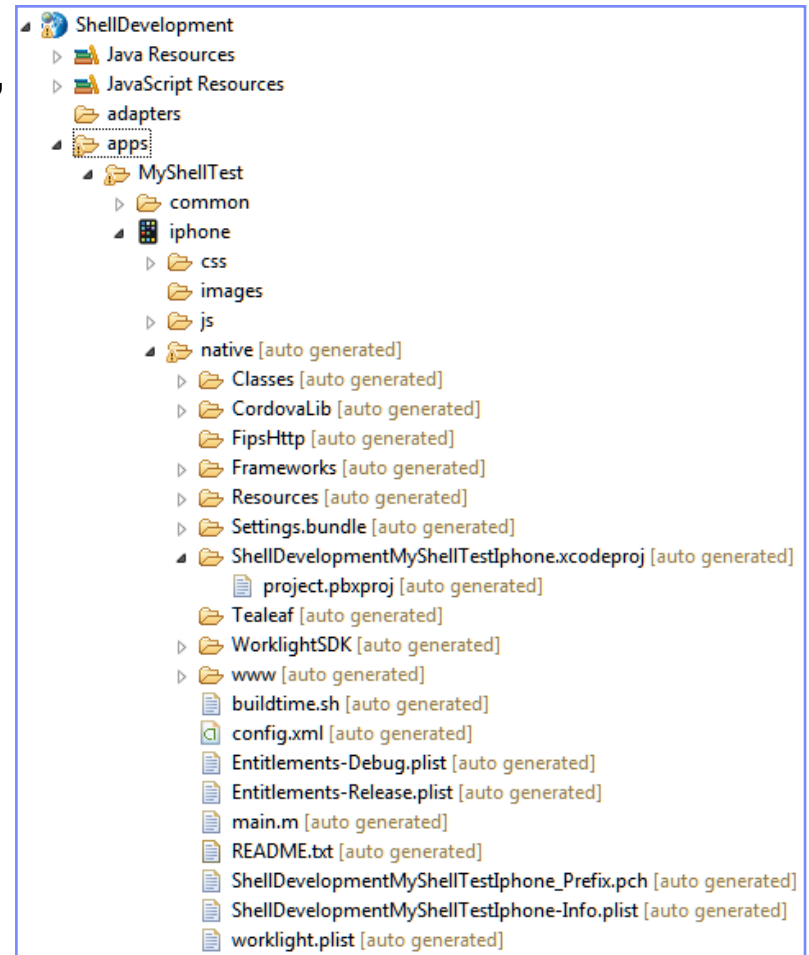


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# Adding custom Objective C code to Shell component

- Because the `iphone\native` folder of a Shell component is not an iOS project, advanced features such as auto-complete are not provided when you work on it directly.
- The solution is to use the iPhone environment of the test application to create, modify, and debug the Objective C code.
- The generated iOS project is created under the test application `native\` folder.
- Use it to work with your Objective C code.



## Adding custom Objective C code to a Shell component

- Open the generated iOS project in Xcode.
- Add an Objective C MyCustomAlert class in the Classes folder.
- Add a method signature to MyCustomAlert.h, and method implementation to MyCustomAlert.m files:

```
#import "MyCustomAlert.h"

@implementation MyCustomAlert
+ (void)showUIAlert:(NSString *)text{
    UIAlertView *alert = [[UIAlertView alloc] initWithTitle:@"Native Alert"
                                                       message:text
                                                       delegate:nil
                                                       cancelButtonTitle:@"Close"
                                                       otherButtonTitles:nil];

    [alert show];
    [alert release];
}
@end
```

- Import MyCustomAlert.h and call this method from the viewDidLoad method of the application ViewController:

```
- (void)viewDidLoad
{
    [super viewDidLoad];
    [MyCustomAlert showAlert:@"Hello from native iOS Shell"];
}
```

# Adding custom Objective C code to a Shell component

- Run your application to see the implemented functions.



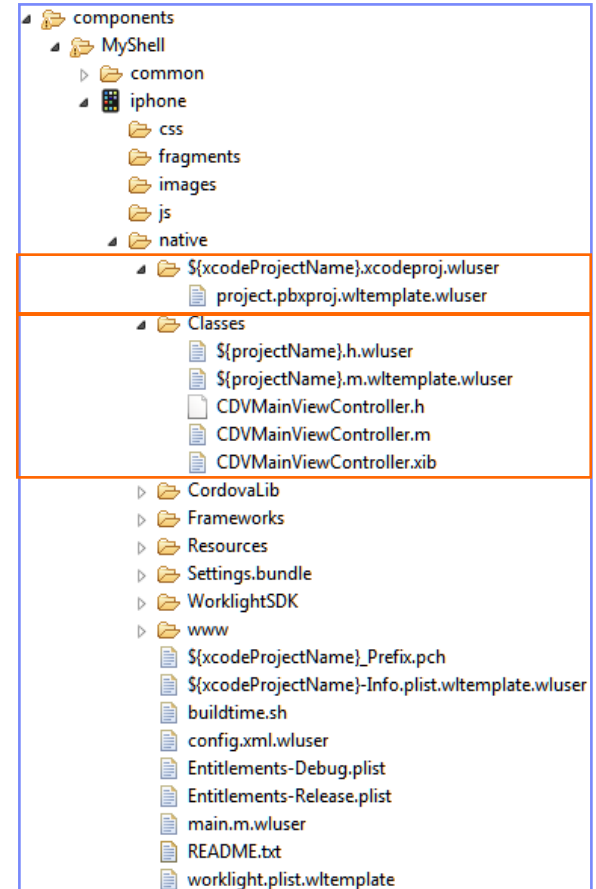
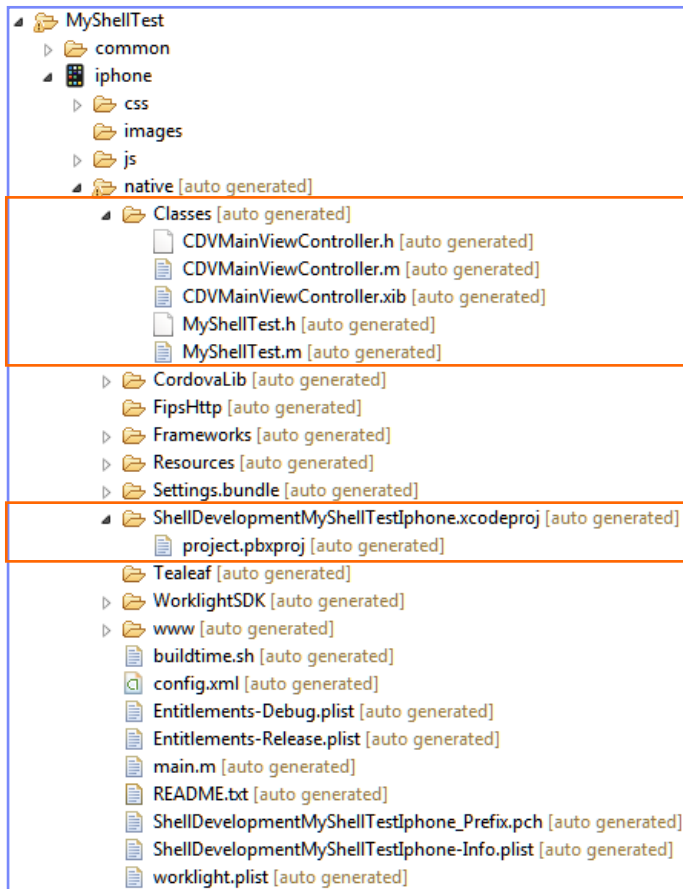
This figure shows the JavaScript™ alert that you implemented in the *Shell Development Concepts* module



This figure shows the **MyCustomClass** alert that you implemented as native Objective C code in the previous slides.

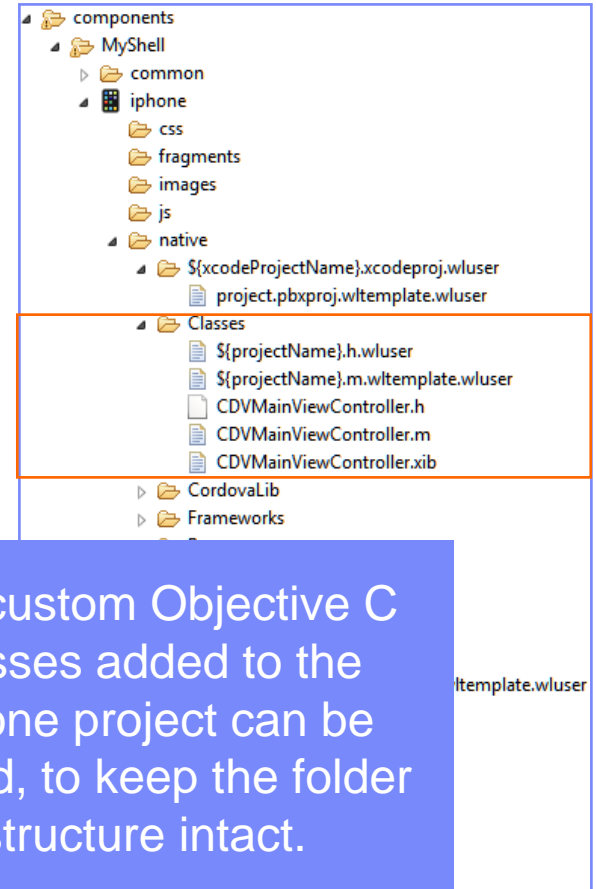
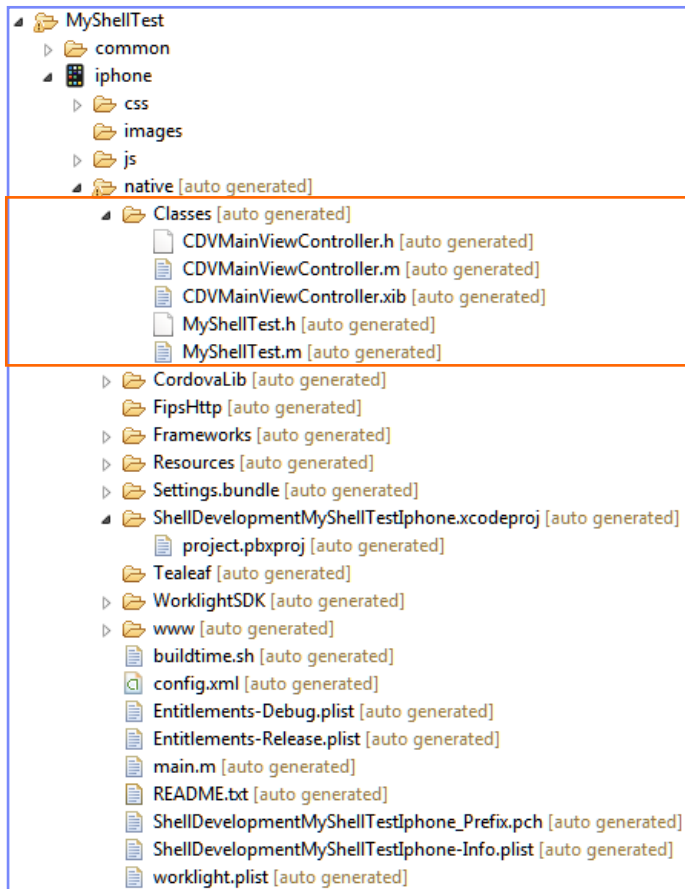
# Adding custom Objective C code to a Shell component

- Finally, copy your Objective C code from the iPhone project that you used to develop it back to the shell component.



# Adding custom Objective C code to a Shell component

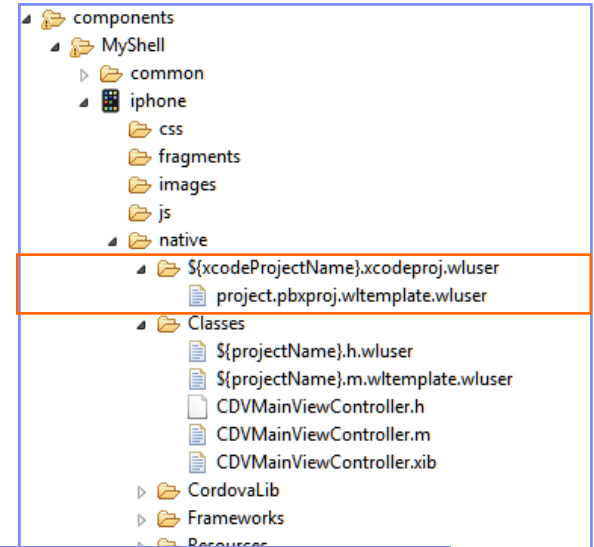
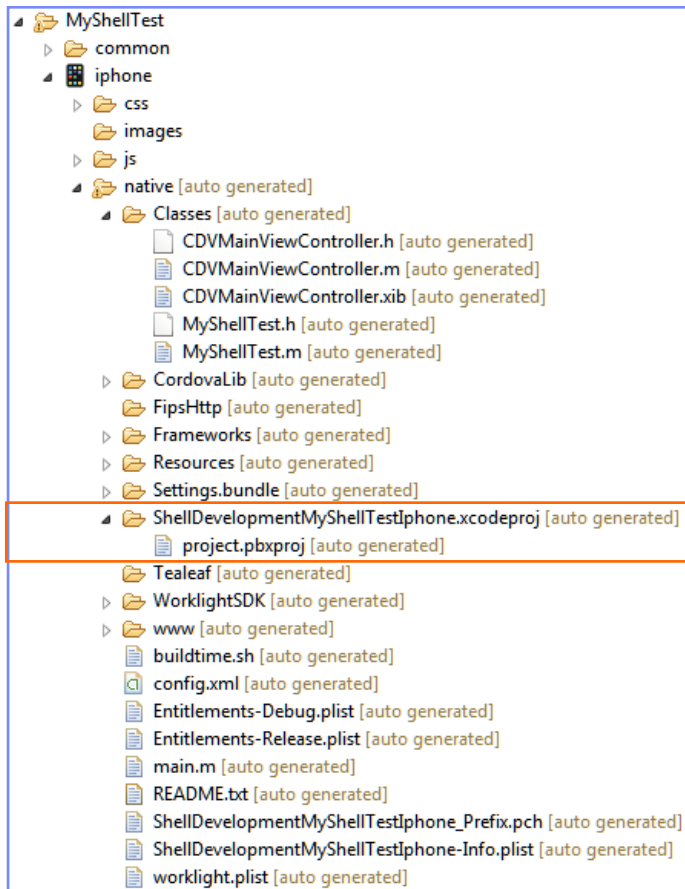
- Finally, copy your Objective C code from the iPhone project that you used to develop it back to the shell component.



The custom Objective C classes added to the iPhone project can be copied, to keep the folder structure intact.

# Adding custom Objective C code to a Shell component

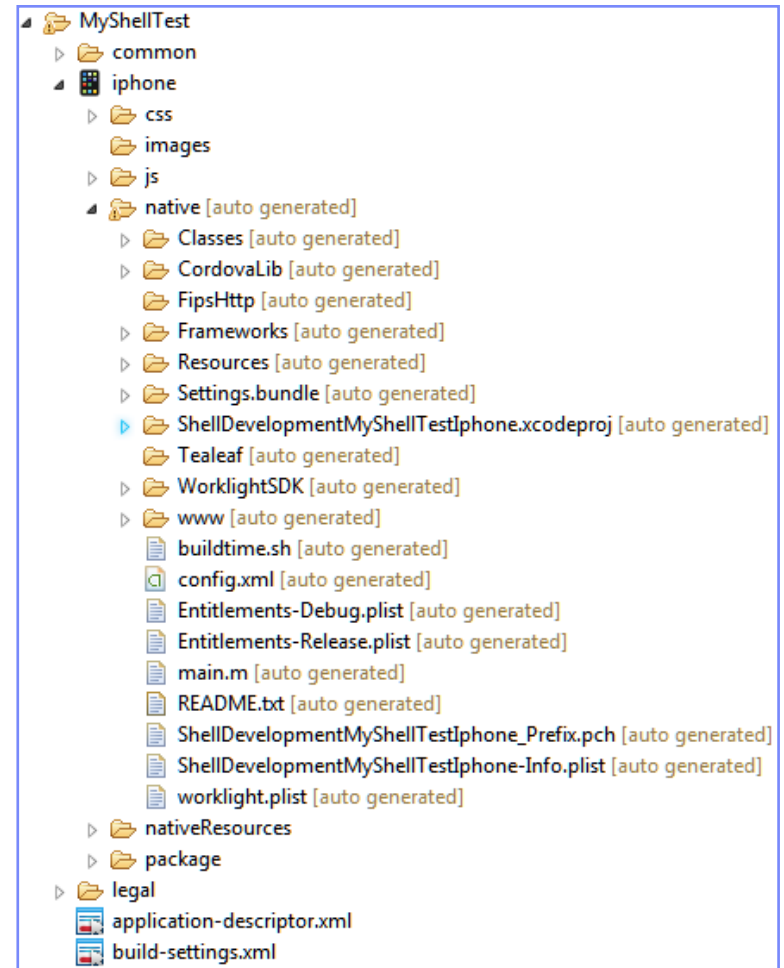
- Finally, copy your Objective C code from the iPhone project that you used to develop it back to the shell component.



Xcode stores its own project structure in a **project.pbxproj** file. Therefore, the content of this file must also be copied from the test application to the shell component.

# Adding custom Objective C code to a Shell component

- The `native` folder of the test application is not being rebuilt from the shell component each time you build the iOS application.
- Doing so avoids overwriting the test application native code with the one in the shell component on each build, thus allowing shell developers to debug their code conveniently.
- If you want your native folder to be fully recreated from a shell component, erase it in the test application, and then build and deploy the application.



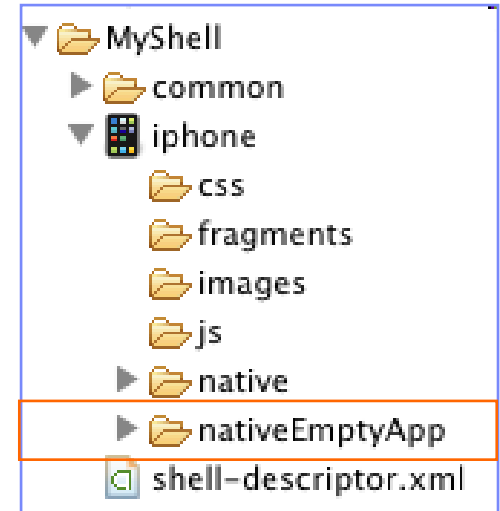


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## Using the NativeEmptyApp Project

- **NativeEmptyApp** is a native application project that uses the shell component, and has an empty Inner application.
- This project can be built as an APK or IPA by a shell developer, and sent to inner application developers to use for debugging their applications.
- After the NativeEmptyApp is installed on the device, an inner application developer can specify the URL of the Worklight Server to load the Inner application from.
  - Doing so helps inner application developers to test their code without the need to have native SDKs installed.
  - For example: to develop and test an iPhone application without a Mac.
- To use the NativeEmptyApp, open it as an Xcode project.



## Using the NativeEmptyApp Project

- When the application is built and deployed to an iOS device, go to **Settings** to change the URL that this inner application content is loaded from.



## *Using the NativeEmptyApp Project*

- **Important:**
  - NativeEmptyApp cannot load a remote inner application that has the device provisioning enabled.
  - NativeEmptyApp can be used only in the development environment.

## ***Sample***

- The sample for this training module can be found in the Getting Started page of the IBM Worklight documentation website at <http://www.ibm.com/mobile-docs>

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