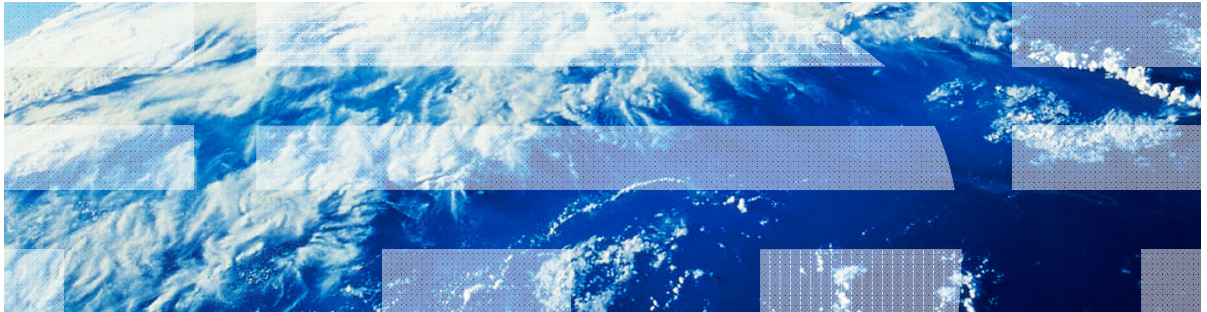


IBM Worklight V5.0.5 Getting Started

Module 31.2 – 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 Module 31 – **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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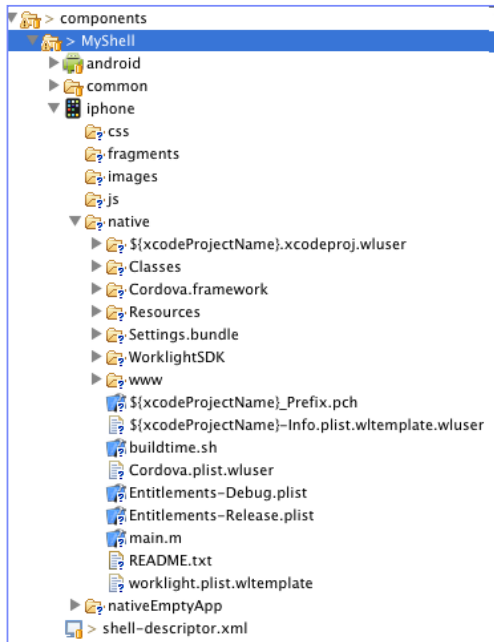
Adding an iOS environment to a shell component

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



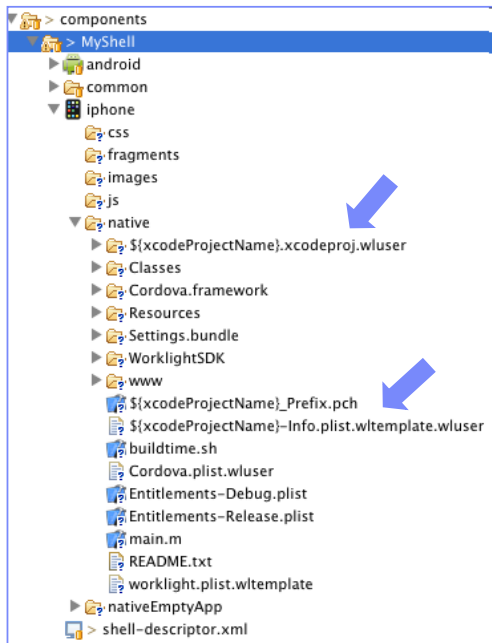
Adding an iOS environment to a shell component

- 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 **Module 31 – Shell Development Concepts**.



Adding an iOS environment to Shell component

- The files in the **native** folder are template files that you use 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:
 - **`${xcodeProjectName}.xcodeproj.wluser`** placeholder will be populated with a package name used in the application.
 - **`${xcodeProjectName}-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.

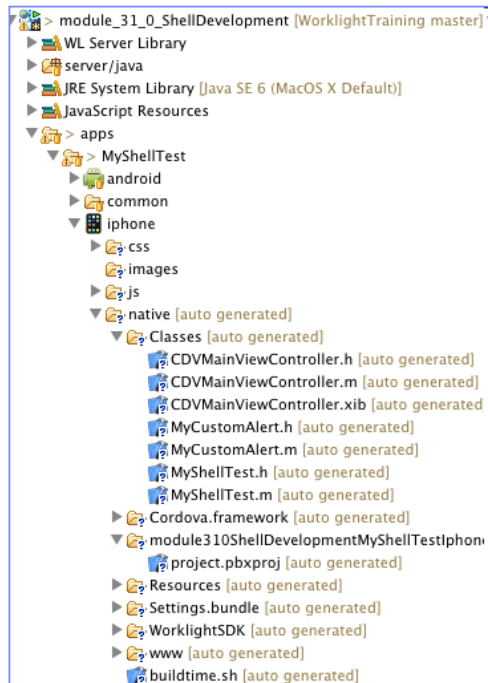


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Adding custom Objective C code to Shell component

- 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 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 showUIAlert:@"Hello from native iOS Shell"];
}
```

Adding custom Objective C code to a Shell component

- Run your application to see the implemented functions.



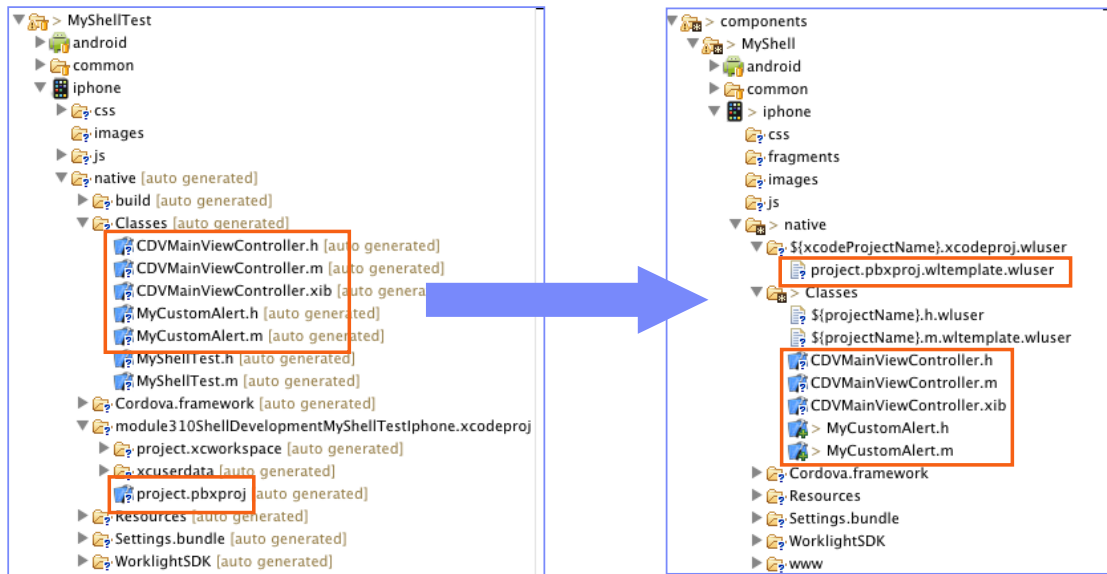
This figure shows the JavaScript alert that you implemented in the Module 31 – Shell Development Concepts



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

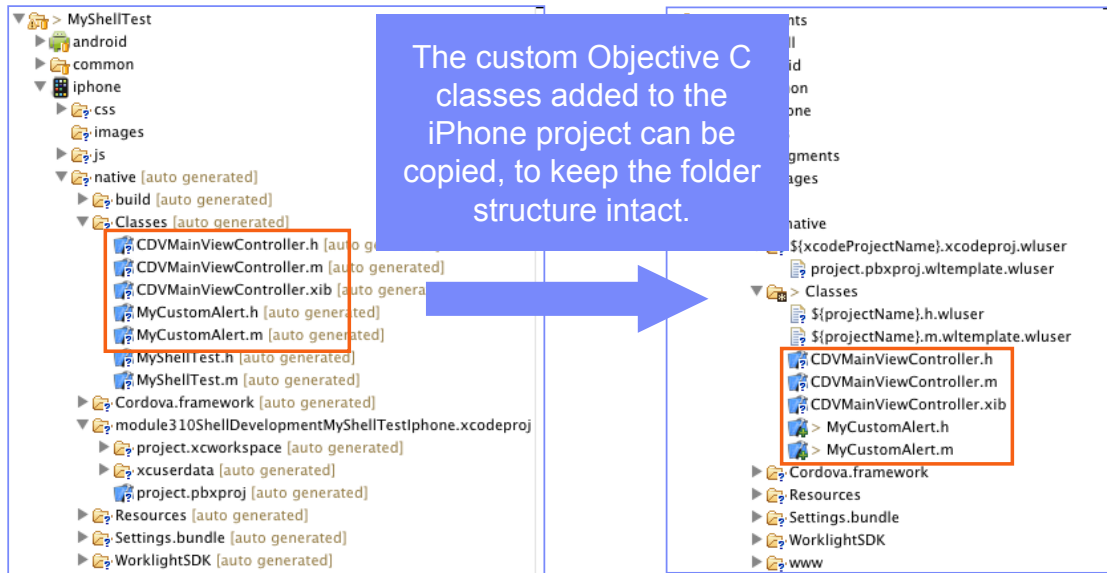
Adding custom Objective C code to a Shell component

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



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Adding custom Objective C code to a Shell component

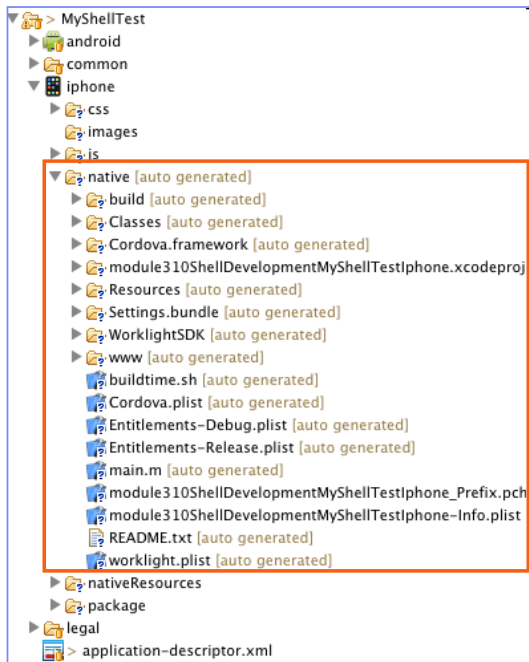
- Finally, copy your Objective C code from the iPhone project that you used to develop it back to the shell component.

The image shows two Xcode project views. The left view shows the 'MyShellTest' project structure, with 'project.pbxproj' highlighted in a red box. A large blue arrow points from this file to the right view. The right view shows the 'components' project structure, with 'project.pbxproj.wltemplate.wluser' highlighted in a red box. A blue text box at the bottom contains the following text:

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 re-created from a shell component, erase it in the test application, and then build and deploy the application.

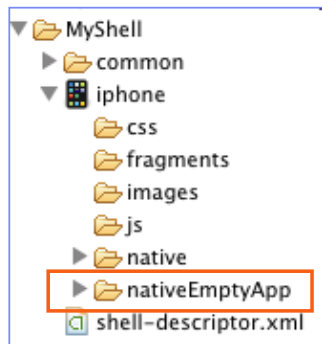


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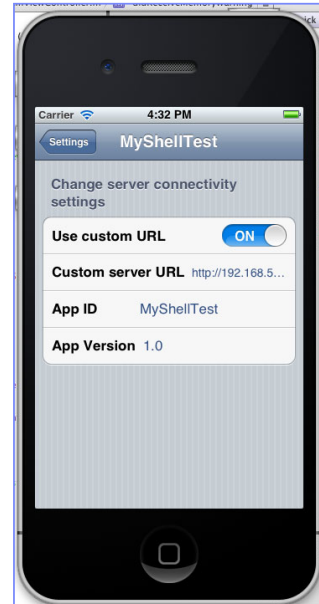
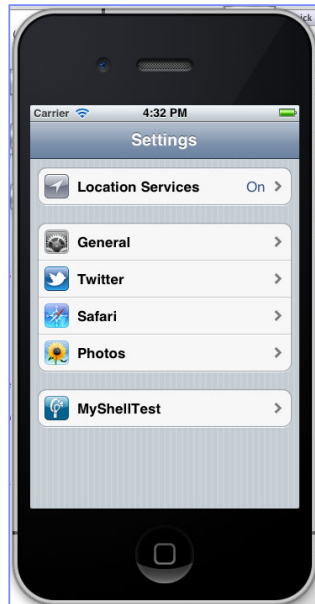
Using the NativeEmptyApp Project

- 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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