outsystems

DEVELOPING OUTSYSTEMS MOBILE APPS

App Generation

Introduction

Over the course of this set of exercise labs, you will create a mobile application. The application will focus on creating and managing To Dos. The To Dos will be persisted in a database so they can be accessed from and shared across multiple devices. To Dos will have attributes such as category, priority (low, medium or high), due date and they can be marked as important (starred) by the user.

Users of the To Do application will be able to access all of this information regardless of whether the device is online or offline. When offline, users will still be able to keep interacting with the application and changes will be saved locally in the device local storage. When the device returns to online mode, changes made while offline will automatically be synced to the server.

You constantly will be expanding your application, publishing it to the server and testing it in your mobile device. Throughout the process, you will be learning and applying new OutSystems concepts.

At the end of this set of exercise labs, you will have a small, but well-formed application, spanning multiple screens and concepts that you can easily access from your mobile device.

In this specific exercise lab, you will:

- Generate and install an iOS application
- Generate and install an Android application
- Install the OutSystems Now application and test your application

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Part 1: Generate and Install iOS App

In this part of the exercise, you will generate the **ToDo** application for iOS and then you will install it in a device. In order to build the iOS application, it is required that you have an Apple Developer account and your own certificate and provisioning profile. Check https://developer.apple.com/ for more information about the Apple Developer Program.

As an alternative, you may try to test your application with **OutSystems Now**, that you can download from Android or iOS store.

1. Generate iOS app.

a) Switch to the applications tab in Service Studio, then open the **ToDo** application.

b) Open the **Native Platforms** tab.

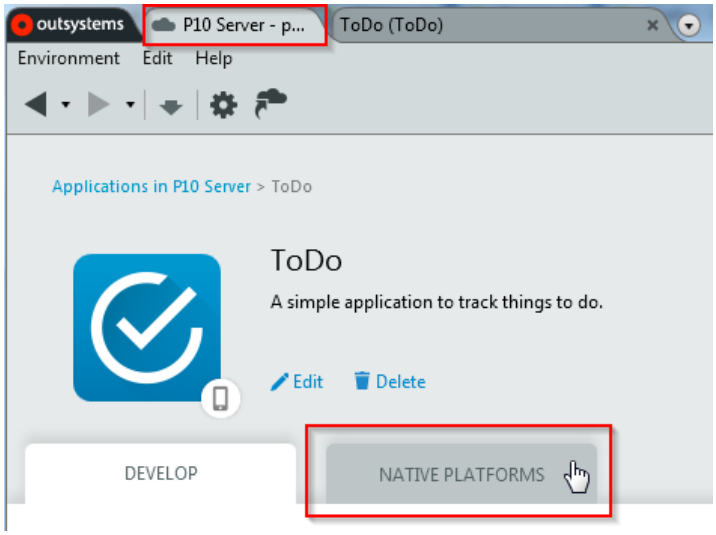

Figure 1. Native Platforms tab

c) Click the 'Configure iOS app' button to set up the build configurations.

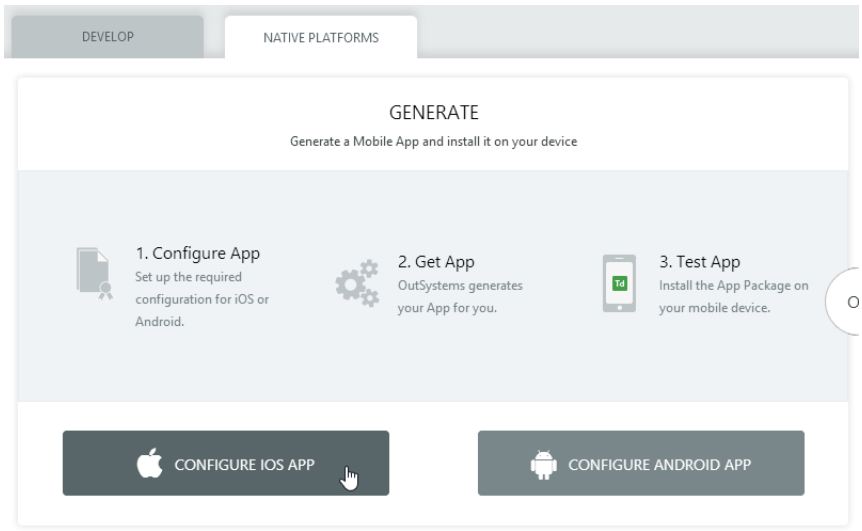

Figure 2. Configure iOS app

d) Set the **Build Type** according to the certificate and profile that you have from your Apple developer account.

e) Set the App identifier to the one of your choice, e.g., com.outsystems.training.ToDoMobile.

f) Click the **Select** button near the **Certificate** field and select your '.p12' certificate, then set the password for the certificate.

g) Click the **Select** button near the **Provisioning profile** and select your '.mobileprovision' profile file.

h) Click the **Generate App** button.

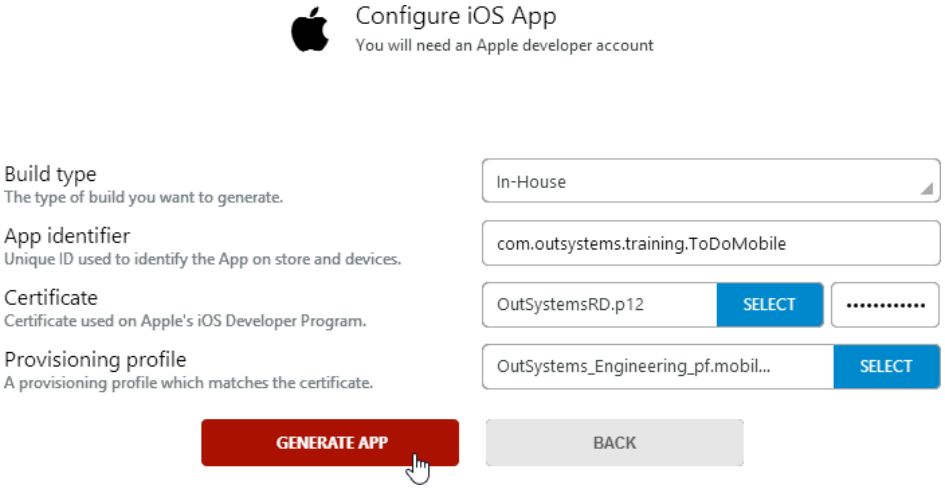

Figure 3. Generate app for iOS

i) You should see the progress of the app generation.

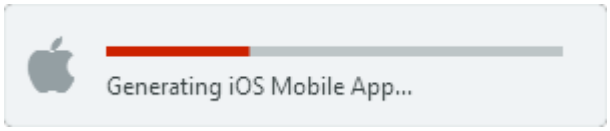

Figure 4. iOS generation progress

j) When the generation process is complete you should see a QR Code.

Figure 5. QR Code

2. Install the generated iOS app.

a) Using a QR Code scanner in your iOS device, scan the QR Code shown in the **Native Platforms** tab. This should open your browser.

> **NOTE:** Optionally you can click the installation link below the QR Code. You may open the link in your computer browser, download the iOS application IPA file and open it using iTunes to install using a USB cable.

b) Click the **Get** button in the web page and then click the **Install** button in prompt dialog.

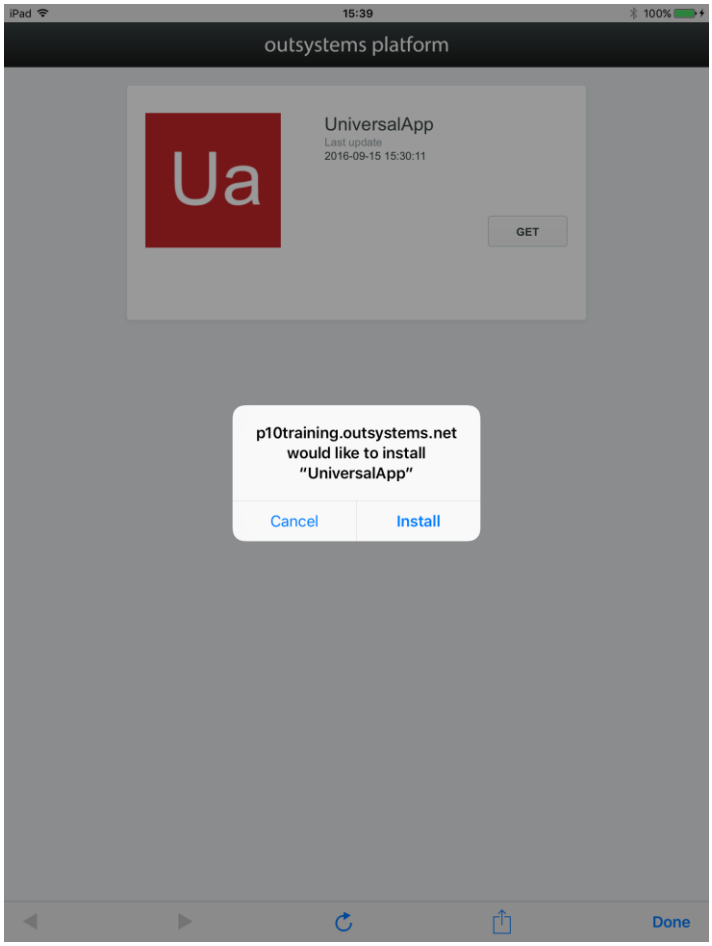

Figure 6. iPad install app

c) Click the **Home** button and locate your application from the Applications list, and then open it.

Part 2: Generate and Install Android App

In this part of the exercise, you will generate the **ToDo** application for Android, and then you will install it. For it to work, you need to have the Android version 4.4, at least, in your device.

1. Generate Android app.

a) Switch to the applications tab in Service Studio, then open the **ToDo** application.

b) Open the **Native Platforms** tab.

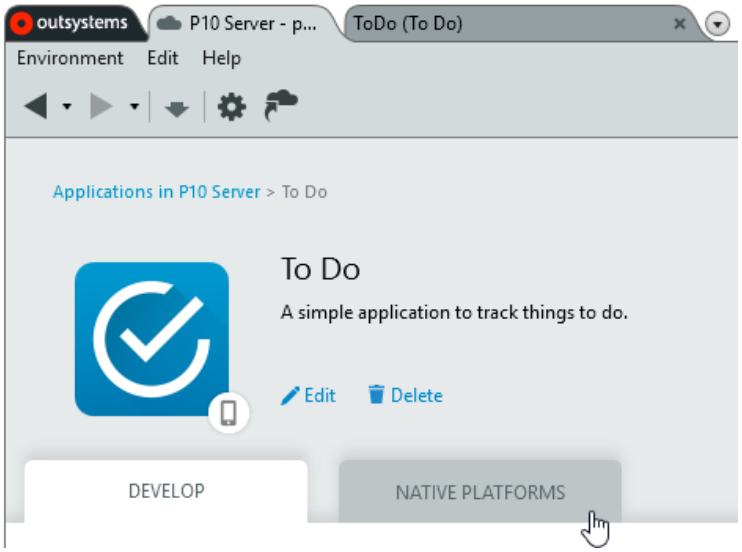

Figure 7. Native Platforms tab

c) Click the 'Generate Android App' button.

d) Set the **Build Type** to 'Debug', then define the **App identifier**, e.g., com.outsystems.training.ToDoMobile.

e) Click the **Generate App** button to start generating the mobile app.

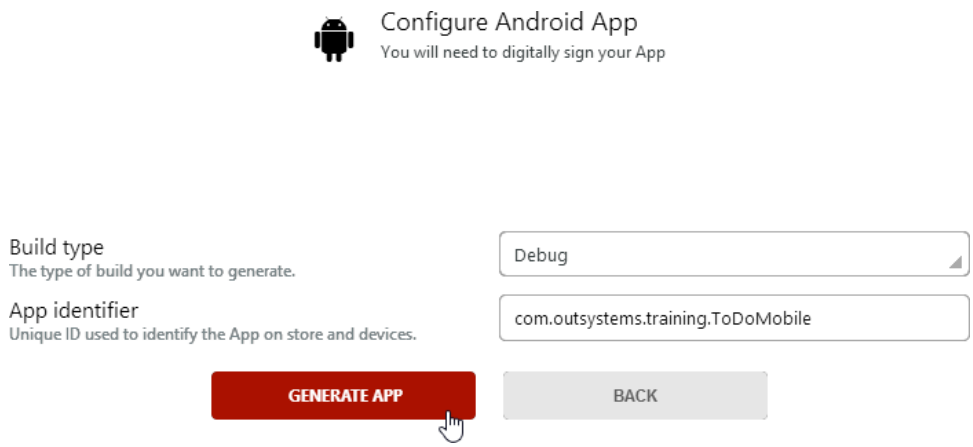

Figure 8. Generate app for Android

f) You should see the progress of the app generation.

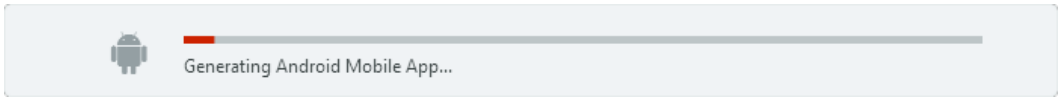

Figure 9. Android app generation progress

g) When the generation process is complete you should see a QR Code.

Figure 10. QR Code

2. Install the generated Android app.

a) In the device, open the **Settings** application, then open the **Security** section.

b) Enable the Unknown sources.

c) Using a QR Code scanner in your Android device, scan the QR Code shown in the **Native Platforms** tab, this should open your browser.

> **NOTE:** Optionally you can click the installation link below the QR Code. Then, you may open the link in your computer browser, download the Android application APK file and transfer it to the device using a USB cable.

d) Click the **Get** button in the web page to download the APK file.

Figure 11. Download Android app

e) When the download is complete, open the APK file to install the application.

f) Accept to install the application, and then open it.

Part 3: OutSystems Now

In this part of the exercise, you will download and install the **OutSystems Now** application and then you will use it to open the **ToDo** application. This requires that you have the **OutSystems Now** component installed on your environment.

1. Install **OutSystems Now** app from store.

a) Open the Play Store (Android) or the App Store (iOS) and search for 'OutSystems Now'.

b) Install the application.

c) When the installation is complete, open the application.

d) Select 'Scan the QR code for your app'.

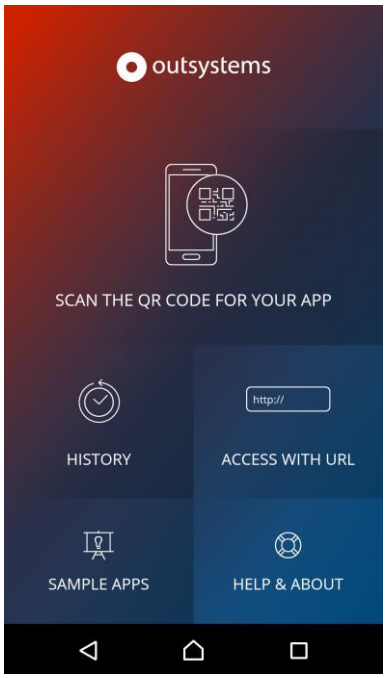

Figure 12. OutSystems Now

e) Inside Service Studio, switch to the Environment tab.

Figure 13. Environment tab

f) If not opened already, open your application and then click on the Native Platforms tab and click on 'Test in OutSystems Now'.

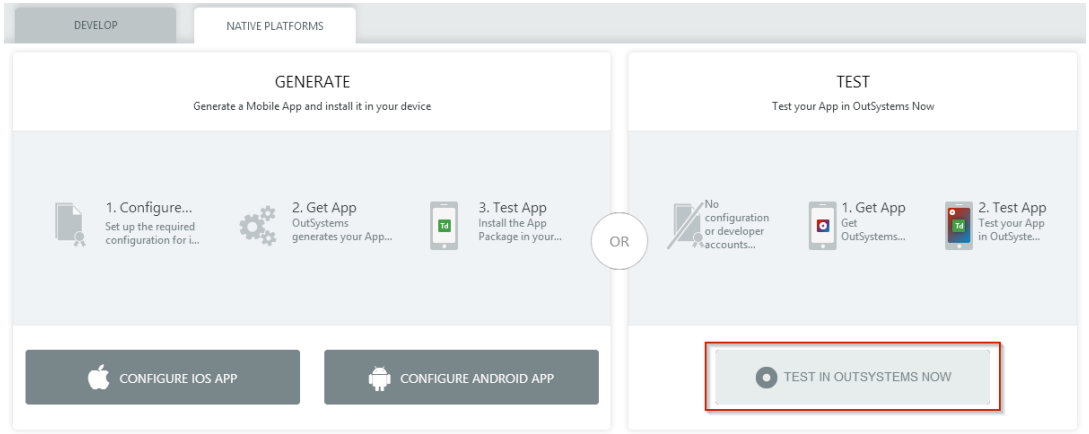

Figure 14. Test in OutSystems Now

g) Scan the QR code in your screen, with your mobile phone.

h) You should now see the **ToDo** application. Enter your username and password and click **Login**.

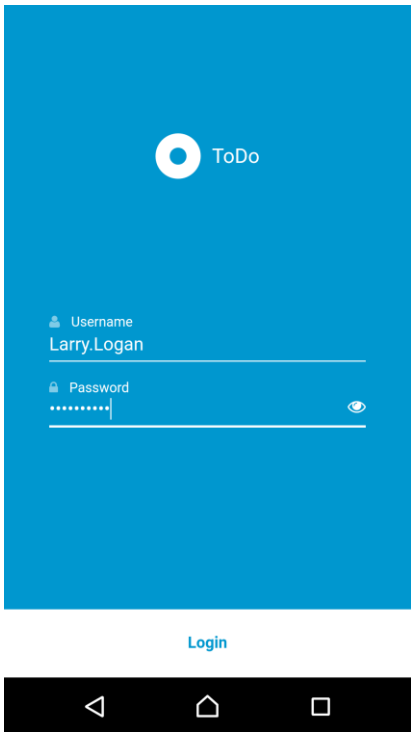

Figure 15. OutSystems Now Server

End of Lab

In this exercise, you generated and install the **ToDo** application in two different operating systems: iOS and Android. You have also learned how to test your application using **OutSystems Now** in your mobile phone.

In most occasions, the users of your mobile app will not have to update it manually after installing it in their devices, since OutSystems will automatically push the updates to their devices when you publish a new mobile app version. However, in some situations (e.g. application name or icon changed, plugins modified) the users will have to install a new mobile app package. Check https://success.outsystems.com/Documentation/10/Delivering_Mobile_Apps/Mobile_App_Update_Scenarios for more information.

List of Figures

Here is the list of screenshots and pictures used in this exercise.

