Native App Generation Exercise
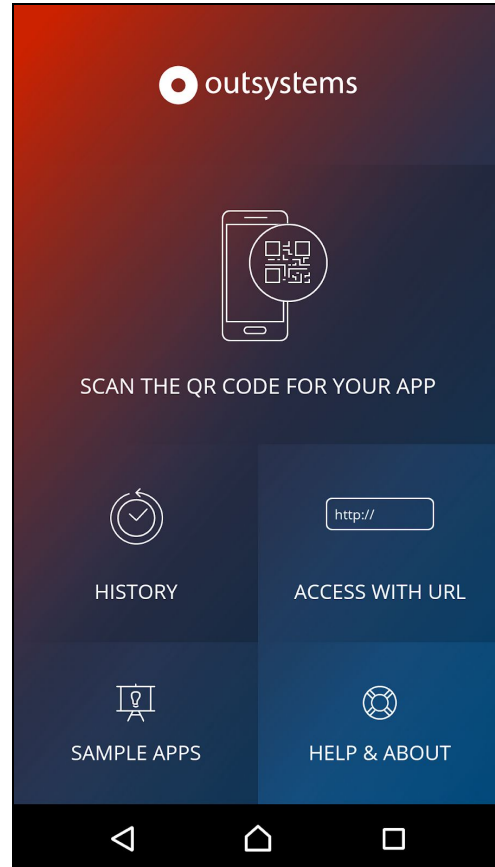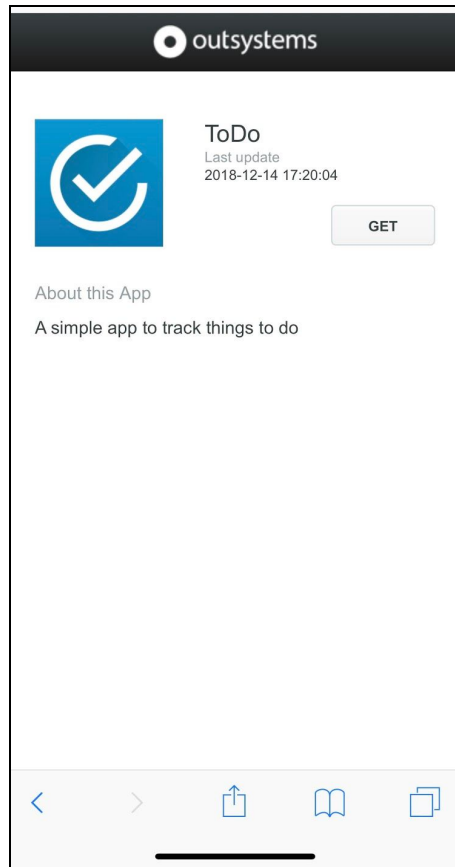
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Introduction

In this exercise lab, we will move away from the browser emulator for the first time, and test the mobile application in our device.

This lab runs in a different fashion than the others. This lab has three sections, but we only do one of them, depending on the device that we have.

The first section has the instructions for generating the native app for iOS, which requires an Apple Developer certificate.

The second section has the same instructions but for Android, which can be done for free (if chosen the Debug mode).

Finally, the last section has the instructions to allow testing the app on the device using the OutSystems Now emulator. This can be a good alternative for iOS device users, without the developer certificate.

As a summary, in this specific exercise lab, we will:

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

Generate and Install iOS App

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

As an alternative, try to test the application with **OutSystems Now**, available in the Android or iOS stores.

1) Generate the iOS app for the ToDo application.

   a) Switch to the applications tab in Service Studio, then open the **ToDo** application.
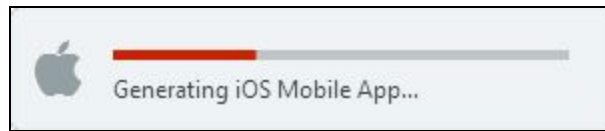
   b) Open the **Native Platforms** tab.
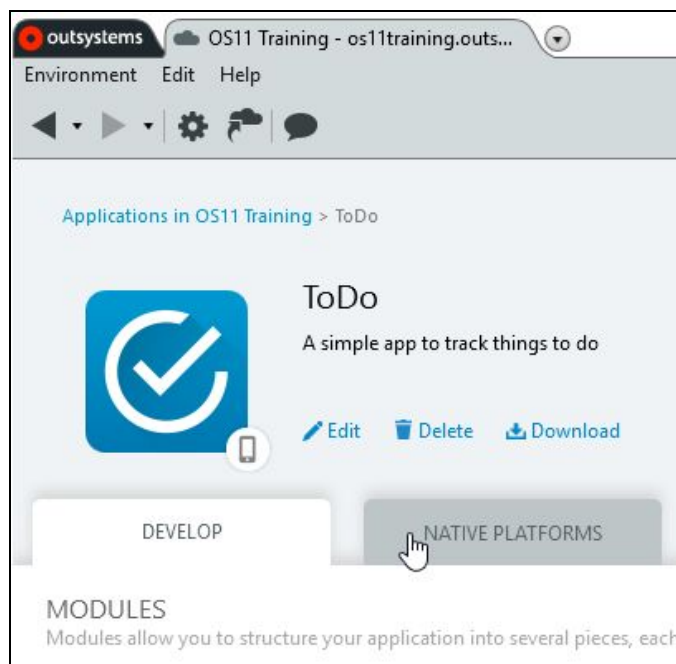
   c) Click the **Configure iOS** app button to set up the build configurations.
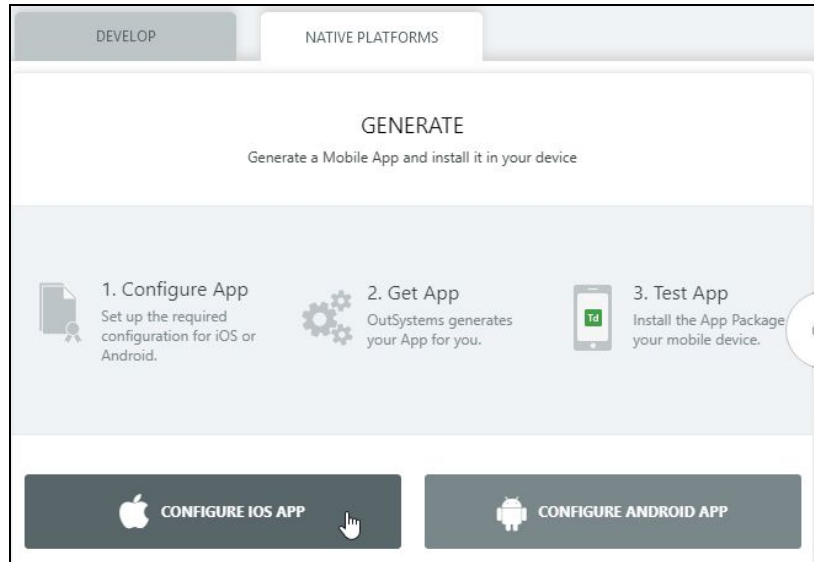
d) Set the **Build Type** according to the certificate and profile that you have from your Apple developer account.

e) Set the App identifier to the one of your choice, e.g:

>   *net.outsystems.os11training.ToDo*

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.

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

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

2) Install the generated iOS app in the device.

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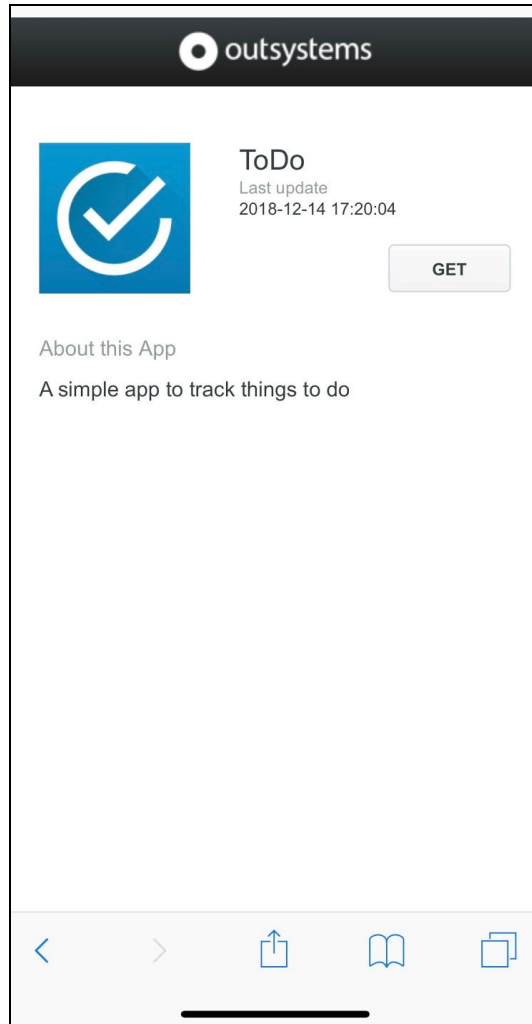
c) Click the **Home** button and locate your application from the Applications list, and then open it.
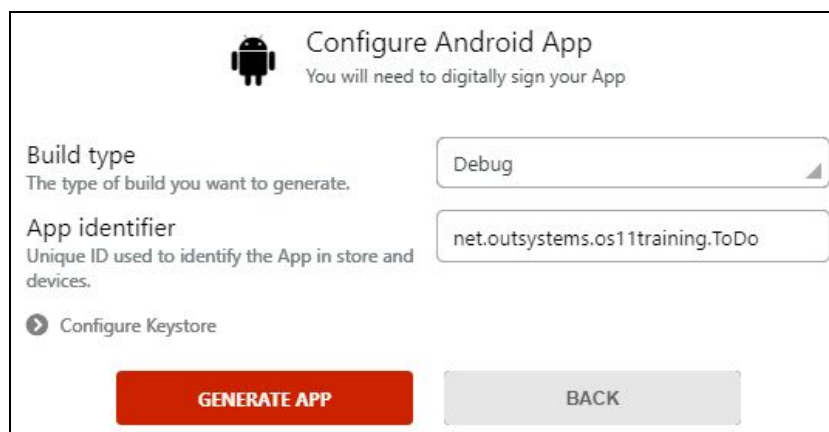
Generate and Install Android App

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 the Android app for the ToDo application.

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

   b) Open the **Native Platforms** tab.
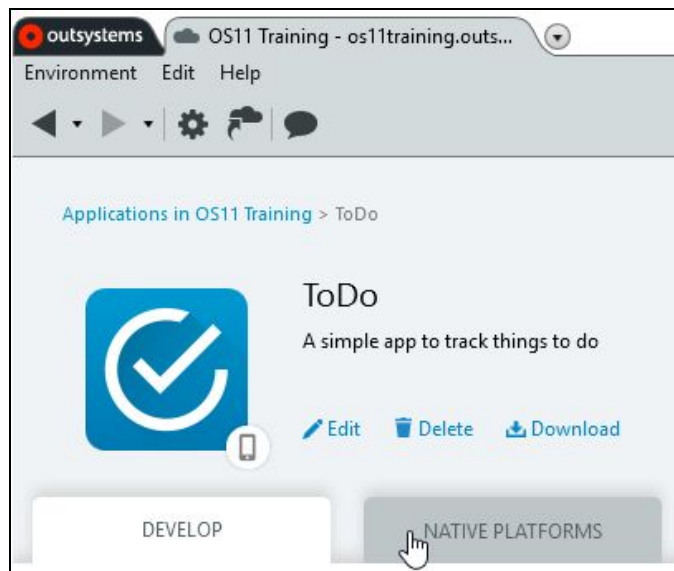
   c) Click the **Configure Android** App button.

   d) Set the **Build Type** to *Debug*, then define the App identifier, e.g: *net.outsystems.os11training.ToDo*

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

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


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

2) Install the generated Android app on the device.

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 we can click the installation link below the QR Code. Then, we may open the link in the 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.
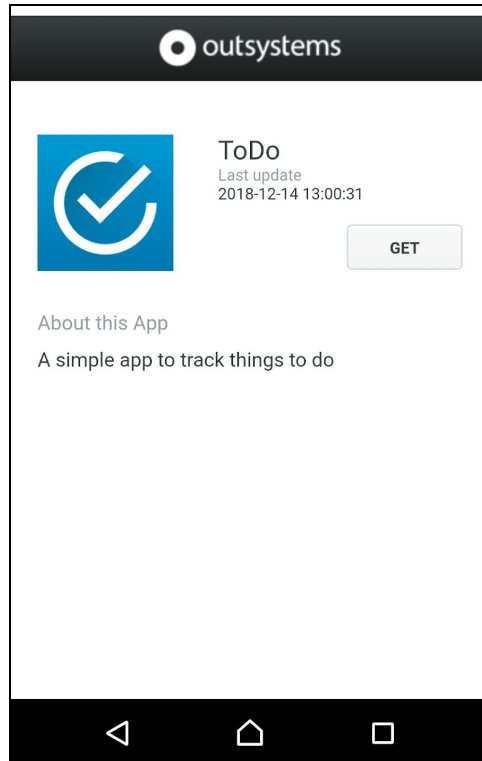
e) When the download is complete, open the APK file to install the application.

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

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 on the device from iOS or Play Store.

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

   b) Install the application on the device.

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

2) Using **OutSystems Now**, test the application on the device.

   a) Inside Service Studio, switch to the Environment tab.
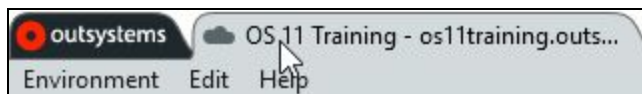
   b) If not opened already, open your application and then click on the Native Platforms tab and click on Test in OutSystems Now.
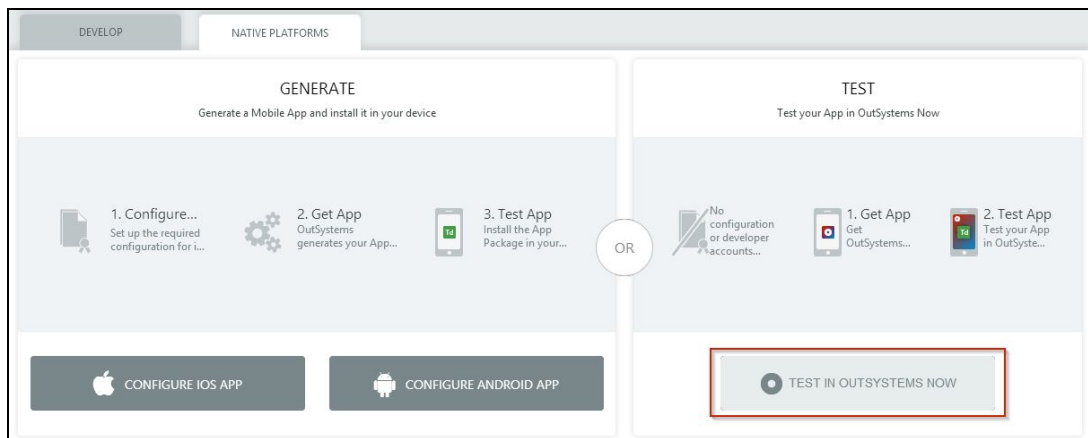
   c) Scan the QR code in your screen, with your mobile phone. For that, select **Scan the QR code for your app**.
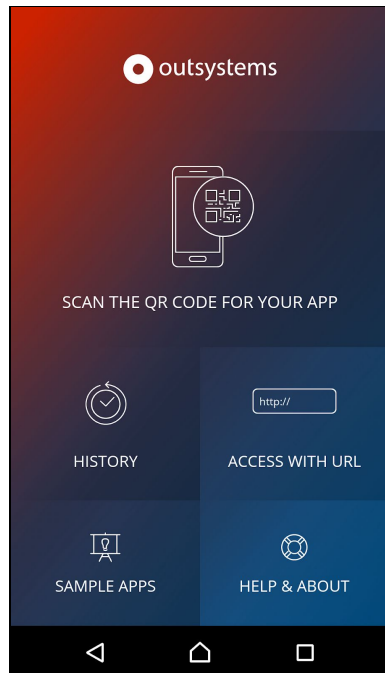
d) You should now see the **ToDo** application. Enter your username and password and click **Login**.
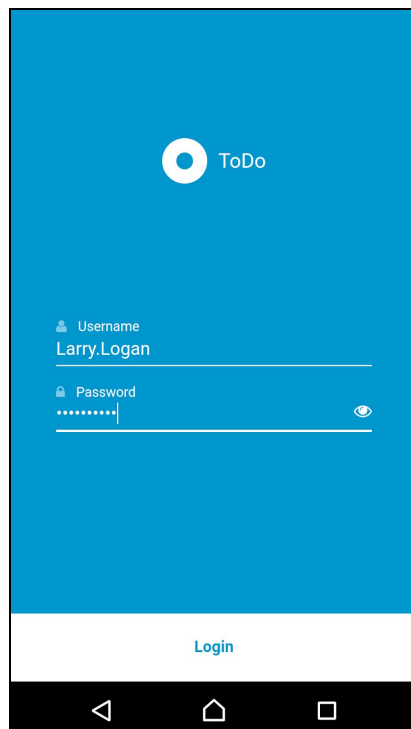
End of Lab

In this exercise, we generated and installed the **ToDo** application in Android or iOS, by doing a couple of clicks in Service Studio. This enables us using the native app in our devices.

If not possible to generate the native app, we were able to test the application in the devices by using OutSystems Now.

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 OutSystems documentation for more information.