Test-Driving the Doodlz App from Android Studio

**Objectives**

In this online supplement, you’ll:

- Import an Android app’s Eclipse project into Android Studio.
- Launch an AVD from Android Studio.
- Run the **Doodlz** drawing app on an AVD from Android Studio.
1.1 Test-Driving the Doodlz Drawing App in an Android Virtual Device (AVD)

In this section, you'll run and interact with your first Android app. The Doodlz app, which you'll build in Chapter 7, allows you to drag your fingers on the screen to “paint.” You can control the brush sizes and colors using options provided in the app’s options menu.

The following steps show how to import the app’s project into Android Studio and how to test-drive the app in the Nexus 4 Android Virtual Device (AVD) that you set up in the Before You Begin section. The Eclipse version of this test-drive is located in the print book. Later in this section, we’ll also discuss how to run the app in a tablet AVD and on an Android device. When the app is running in an AVD, you can create a new painting by “dragging your finger” anywhere on the canvas—you “touch” the screen by using the mouse.

1.1.1 Running the Doodlz App on the Nexus 4 AVD

To test-drive the Doodlz app, perform the following steps:

1. Checking your setup. If you have not done so already, perform the steps specified in the Before You Begin section located after the Preface.

2. Opening Android Studio. Use the Android Studio shortcut ( ) on your operating system to launch the IDE. On Windows, the shortcut will be in your Start menu or Start screen. On OS X, it will be in your Applications folder. On Linux, the shortcut location will depend on your Linux version. The Welcome to Android Studio window appears (Fig. 1.1).
1.1 Test-Driving the Doodlz Drawing App in an Android Virtual Device (AVD)

3. **Importing the Doodlz app’s project.** If a project was developed in Android Studio, you can use the Open Project option to navigate to the project’s location and open it. Most Android apps developed in an IDE to this point were developed in Eclipse. For this reason, this step shows you how to import the Eclipse version of the Doodlz project into Android Studio. In the Welcome to Android Studio window, click Import Project to open the Select File or Directory to Import dialog (Fig. 1.2). Navigate to the book’s examples folder, select the Doodlz folder and click OK to display the Import Project dialog (Fig. 1.3). Ensure that Create project from existing sources is selected, then click Next. The dialog walks you through several steps showing what will be imported into the new project. Click Next for each step until the Finish button appears, then click Finish. The project now appears in the Project window (Fig. 1.4) at the left side of Android Studio. If the Project window is not visible, you can view it by selecting View > Tool Windows > Project.

![Fig. 1.2 | Select File or Directory to Import dialog.](image)
Chapter 1  Test-Driving the Doodlz App from Android Studio

Fig. 1.3  |  Import Project dialog.

Fig. 1.4  |  Project window.
1.1 Test-Driving the Doodlz Drawing App in an Android Virtual Device (AVD)

4. Launching the Nexus 4 AVD. For this test-drive, we’ll use the Nexus 4 smartphone AVD that you configured in the Before You Begin section. To launch the Nexus 4 AVD, select Tools > Android > AVD Manager to display the Android Virtual Device Manager dialog (Fig. 1.5). Select the Nexus 4 AVD and click the Start… button, then click the Launch button in the Launch Options dialog that appears. An AVD can take several minutes to load—you should not attempt to execute the app until the AVD finishes loading. When it’s done loading, the AVD will appear as shown in Fig. 1.6.

Fig. 1.5 | Android Virtual Device Manager dialog.

Fig. 1.6 | Nexus 4 AVD home screen when the AVD finishes loading.
Chapter 1  Test-Driving the Doodlz App from Android Studio

5. Launching the Doodlz app. In Android Studio, select Run > Run 'Doodlz'. This will execute Doodlz in the AVD that you launched in Step 4 (Fig. 1.7).

Both Android Studio and the Android SDK/ADT Bundle use the same Android emulator. Once the app is running in the AVD, you can continue with Step 7 in Section 1.9.1 of the book.

1.1.2 Running the Doodlz App on a Tablet AVD
To test the app on a tablet AVD, first launch the AVD by performing Step 4 in the preceding section, but select the Nexus 7 AVD, rather than the Nexus 4 AVD. Next, select Run > Run 'Doodlz' in Android Studio. If multiple AVDs are running when you launch an app, the Choose Device dialog (Fig. 1.8) appears so that you can choose the AVD on which to install and execute the app. In this case, both the Nexus 4 and Nexus 7 AVDs were running on our system, so there were two Android virtual devices on which we could possibly run the app. Select the Nexus 7 AVD and click OK. Figure 1.9 shows the app running in landscape orientation in the Nexus 7 AVD. You can change the AVD’s orientation by typing Ctrl + F12. On some keyboards the Ctrl key is labeled Control. On Mac OS X, use fn + control + F12.
1.1 Test-Driving the Doodlz Drawing App in an Android Virtual Device (AVD)

1.1.3 Running the Doodlz App on an Android Device

If you have an Android device, follow Steps 1–3 in Section 1.9.3 to configure the device for testing purposes. Then perform the following steps:

Fig. 1.8 | Choose Device dialog.

Fig. 1.9 | Drawing in the Nexus 7 AVD.
Chapter 1 Test-Driving the Doodlz App from Android Studio

1. Configuring the project to run on a device. In Android Studio, select Run > Edit Configurations... to display the Run/Debug Configurations dialog. Under Android Application and select Doodlz. On the General tab, under Target Device, select Show chooser dialog. When you run the app, this will display the Choose Device dialog (Fig. 1.8) so you can select from any running AVDs and any attached, debugging-enabled Android devices. You can also use the bottom half of the dialog to launch AVDs.

2. Running Doodlz on the Android device. In Android Studio, select Run > Run 'Doodlz', then select your connected device from the Choose Device dialog. If you do not have any AVDs open, but do have an Android device connected, the IDE will automatically install the app on your device and execute it.