Creating Applications and Activities

Before you start writing Android applications, it's important to understand how they're constructed and have an understanding of the Android application life cycle. In this chapter, you'll be introduced to the loosely coupled components that make up Android applications (and how they're bound together using the Android manifest). Next you'll see how and why you should use external resources, before getting an introduction to the Activity component.

In recent years, there's been a move toward development frameworks featuring managed code, such as the Java virtual machine and the .NET Common Language Runtime.

In Chapter 1, you learned that Android uses this model, with each application running in a separate process with its own instance of the Dalvik virtual machine. In this chapter, you'll learn more about the application life cycle and how it's managed by the Android run time. This will lead to an introduction of the process states that represent the application priority, which, in turn, determines the likelihood of an application's being terminated when more resources are required.

Mobile devices now come in many shapes and sizes and are used internationally. In this chapter, you'll learn how to give your applications the fl exibility to run seamlessly on different hardware, in different countries, and using multiple languages by externalizing resources.

Next you'll examine the Activity component. Arguably the most important of the Android building blocks, the Activity class forms the basis for all your user interface screens. You'll learn how to create new Activities and gain an understanding of their life cycles and how they affect the application lifetime.

Finally, you'll be introduced to some of the Activity subclasses that wrap up resource management for some common user interface components such as maps and lists.