Rewriting Your First Project

The project you created in Chapter 3 is composed of just the default files generated by the Android build tools—you did not write any Java code yourself. In this chapter, you will modify that project to make it somewhat more interactive. Along the way, you will examine the basic Java code that comprises an Android activity.

**NOTE:** The instructions in this chapter assume you followed the original instructions in Chapter 3 in terms of the names of packages and files. If you used different names, you will need to adjust the names in the following steps to match yours.

The Activity

Your project’s src directory contains the standard Java-style tree of directories based on the Java package you used when you created the project (e.g., com.commonsware.android results in src/com/commonsware/android/). Inside the innermost directory you should find a pregenerated source file named Now.java, which is where your first activity will go.

Open Now.java in your editor and paste in the following code (or, if you downloaded the source files from the Apress web site, you can just use the Skeleton/Now project directly):

```java
package com.commonsware.android.skeleton;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import java.util.Date;
```
Dissecting the Activity

Let’s examine this Java code piece by piece, starting with the package declaration and imported classes:

```java
package com.commonsware.android.skeleton;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import java.util.Date;
```

Activities are public classes, inheriting from the `android.app.Activity` base class. In this case, the activity holds a button (`btn`):

```java
public class Now extends Activity implements View.OnClickListener {
    Button btn;

    @Override
    public void onCreate(Bundle icicle) {
        super.onCreate(icicle);
        btn=new Button(this);
        btn.setOnClickListener(this);
        updateTime();
        setContentView(btn);
    }

    public void onClick(View view) {
        updateTime();
    }

    private void updateTime() {
        btn.setText(new Date().toString());
    }
}
```

NOTE: Not every Java SE class is available to Android programs. Visit the Android class reference to see what is and is not available.

Since, for simplicity, we want to trap all button clicks just within the activity itself, we also have the activity class implement `OnClickListener`.