



# Android TDD

Test drive your next Android project.

Chuck Greb

# Why TDD?

(Test-Driven Development)

Red -> Green -> Refactor

# Testing Approaches

- F@#% It!
- Manual
- Android Testing Framework
- JUnit + POJO
- Robolectric
- Other

# Testing Approaches

- F@#% It!
- Manual
- Android Testing Framework
- JUnit + POJOs
- Robolectric
- Other



# Android Testing Framework

# HelloAndroidActivityTest

```
public class HelloAndroidActivityTest extends ActivityUnitTestCase<HelloAndroidActivity> {  
  
    private HelloAndroidActivity helloAndroidActivity;  
  
    public HelloAndroidActivityTest() {  
        super(HelloAndroidActivity.class);  
    }  
  
    public void setUp() throws Exception {  
        super.setUp();  
        startActivity(new Intent(), null, null);  
        helloAndroidActivity = getActivity();  
    }  
  
    public void testText() {  
        TextView textView = (TextView) helloAndroidActivity.findViewById(android.R.id.text1);  
        assertEquals("***HelloAndroid***", textView.getText());  
    }  
}
```



Compile, dex, package, and install two applications with instrumentation on emulator or device.





JUnit + POJOs

# HelloAndroidActivityJUnitTest

```
public class HelloAndroidActivityJUnitTest {  
  
    private HelloAndroidActivity helloAndroidActivity;  
  
    @Before  
    public void setUp() {  
        helloAndroidActivity = new HelloAndroidActivity();  
        helloAndroidActivity.onCreate(null);  
    }  
  
    @Test  
    public void testText() {  
        TextView textView = (TextView) helloAndroidActivity.findViewById(android.R.id.text1);  
        assertEquals("***HelloAndroid***", textView.getText());  
    }  
}
```



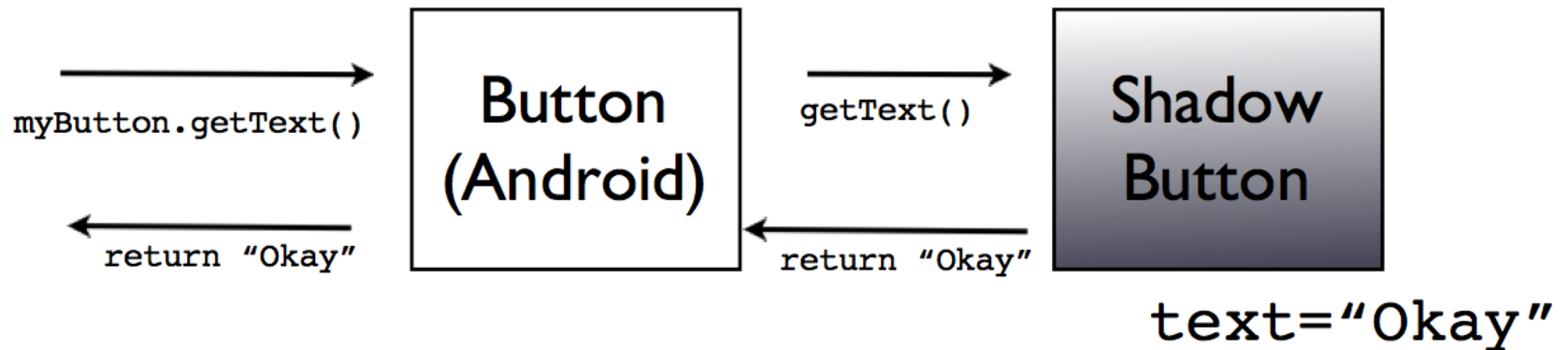
```
java.lang.RuntimeException: Stub!  
    at android.content.Context.<init>(Context.java:4)  
    at android.content.ContextWrapper.<init>(ContextWrapper.java:5)  
    at android.view.ContextThemeWrapper.<init>(ContextThemeWrapper.java:5)  
    at android.app.Activity.<init>(Activity.java:6)  
    at com.example.HelloAndroidActivity.<init>(HelloAndroidActivity.java:8)  
    at com.example.HelloAndroidActivityJUnitTest.setUp(HelloAndroidActivityJUnitTest.java:15)
```



Robolectric



# Shadow Objects



# HelloAndroidActivityRobolectricTest

```
@RunWith(RobolectricTestRunner.class)
public class HelloAndroidActivityRobolectricTest {

    private HelloAndroidActivity helloAndroidActivity;

    @Before
    public void setUp() {
        helloAndroidActivity = new HelloAndroidActivity();
        helloAndroidActivity.onCreate(null);
    }

    @Test
    public void testText() {
        TextView textView = (TextView) helloAndroidActivity.findViewById(android.R.id.text1);
        assertEquals("***HelloAndroid***", textView.getText());
    }
}
```





Test-Drive your Android code in the JVM.



# Chuck Greb

@ecgreb

chuck@howaboutwe.com

Full Length Slides

Short Version

Sample Project