Hello Android

Adam Porter
Derek Juba

Hello Android

- See
  - http://developer.android.com/resources/tutorials/hello-world.html

Create an Android Virtual Device

- AVD is a configuration of emulator options
- Each AVD includes
  - Hardware
  - Platform
  - Other options
    - e.g., Skin, Screen dimensions, SD card size
  - Storage area
  - Can be created in Android SDK and AVD manager

Hello Android

- Create a new Android project
  - Project name: HelloAndroid
  - Application name: Hello, Android
  - Package name: edu.umd.cs.cmsc436
  - Create activity: HelloAndroid
  - Min SDK: 13

Hello Android

```
package edu.umd.cs.cmsc436;

import android.app.Activity;
import android.os.Bundle;
import android.widget.TextView;

public class HelloAndroid extends Activity {
   /** Called when the activity is first created. */
   @Override
   public void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       TextView tv = new TextView(this);
       tv.setText("Hello, Android");
       setContentView(tv);
   }
}
```

Hello Android

- Running in Eclipse starts Android emulator
- Note that the emulator can take several minutes to start
- Once the emulator is loaded, you can leave it running while you test different versions of your code
- You may need to unlock the emulator

Debugging

- Now insert a bug in the code

```
package edu.umd.cs.cmsc436;

import android.app.Activity;
import android.os.Bundle;
import android.widget.TextView;

public class HelloAndroid extends Activity {
   /** Called when the activity is first created. */
   @Override
   public void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      TextView tv = new TextView(this);
      tv.setText("Hello, Android");
      Object o = null;
      o.toString();
      setContentView(tv);
   }
}
```

Debugging

- Try running the modified application
- You should get an error message with a “Force Close” button

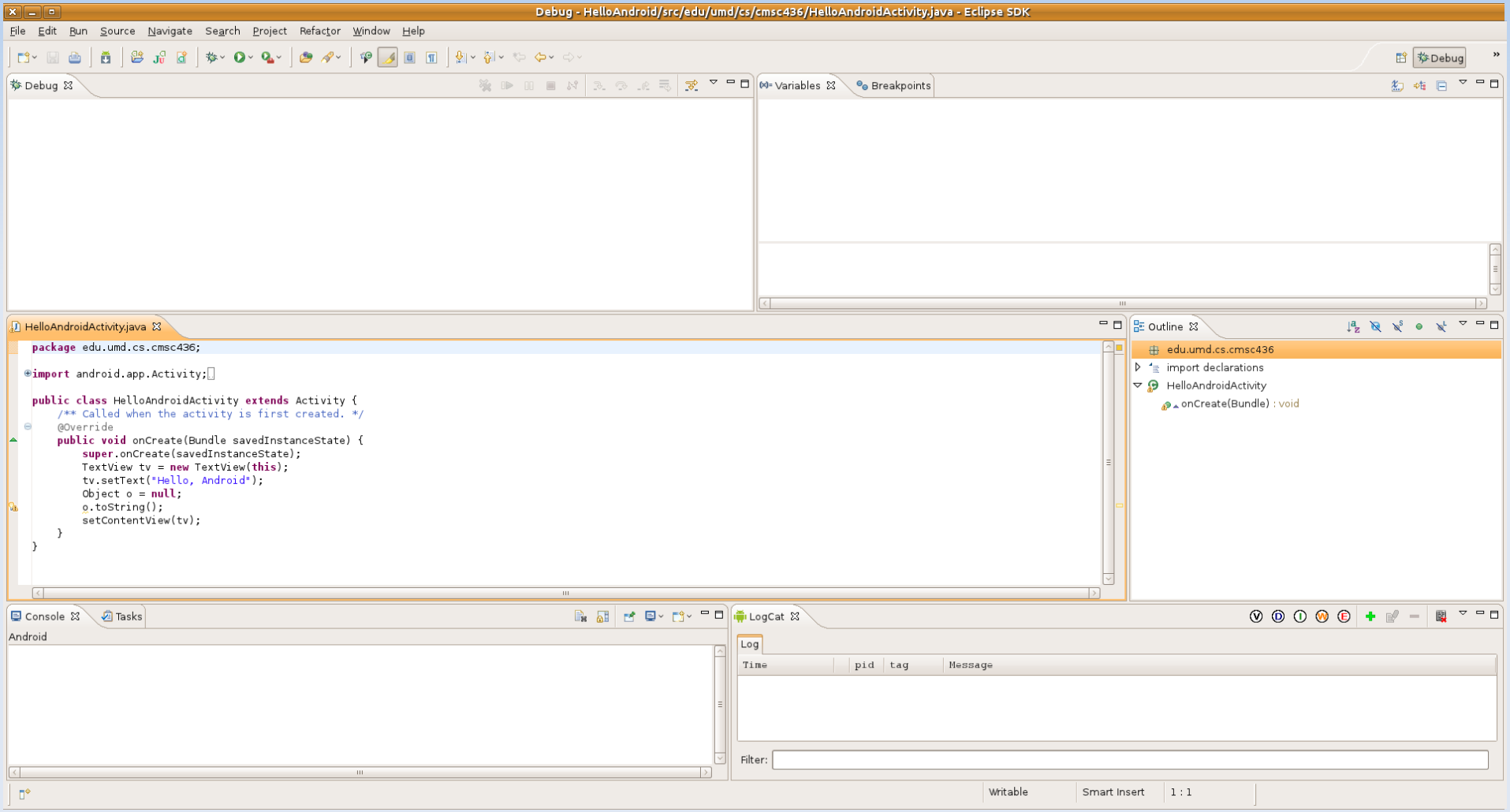
Debugging

- Now add a breakpoint in the code
- Run the application in the debugger- when it stops, you can step through the code in Eclipse as normal

Debugging

- To find out where an exception occurred in your code, you can look at the LogCat window in the Debug perspective
- After the application closes, scroll down to find the exception message

Debugging


Debug - HelloAndroid/src/edu/umd/cs/cmsc436/HelloAndroidActivity.java - Eclipse SDK
File Edit Run Source Navigate Search Project Refactor Window Help
Debug
Debug
Variables
Breakpoints
HelloAndroidActivity.java
package edu.umd.cs.cmsc436;
import android.app.Activity;
public class HelloAndroidActivity extends Activity {
/** Called when the activity is first created. */
@Override
public void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
TextView tv = new TextView(this);
tv.setText("Hello, Android");
Object o = null;
o.toString();
setContentView(tv);
}
}
Outline
edu.umd.cs.cmsc436
import declarations
HelloAndroidActivity
onCreate(Bundle) : void
Console
Tasks
Android
LogCat
Log
Time
pid
tag
Message
Filter:
Writable
Smart Insert
1 : 1