See

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
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
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
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