

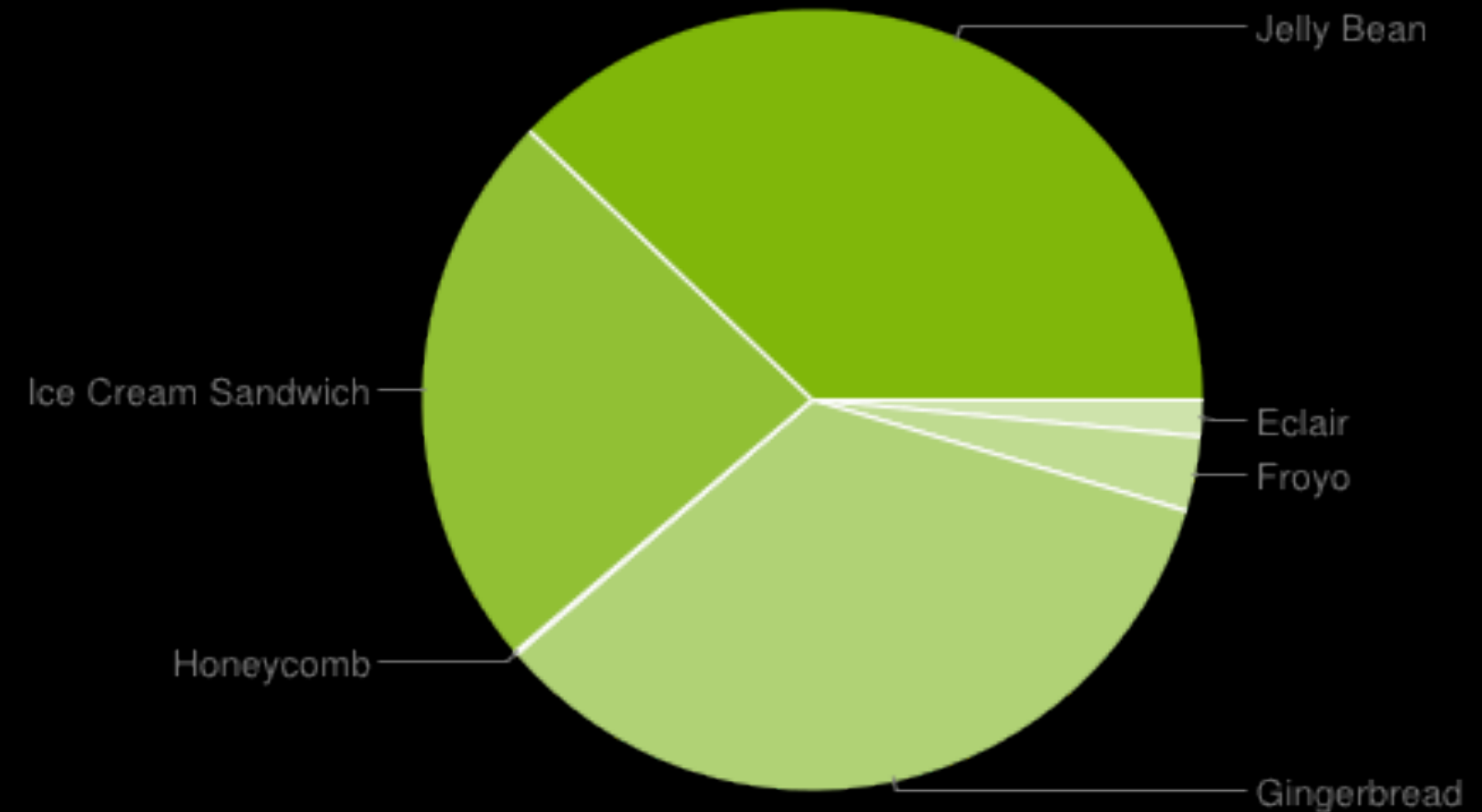
Computer Science S-76

Android Development

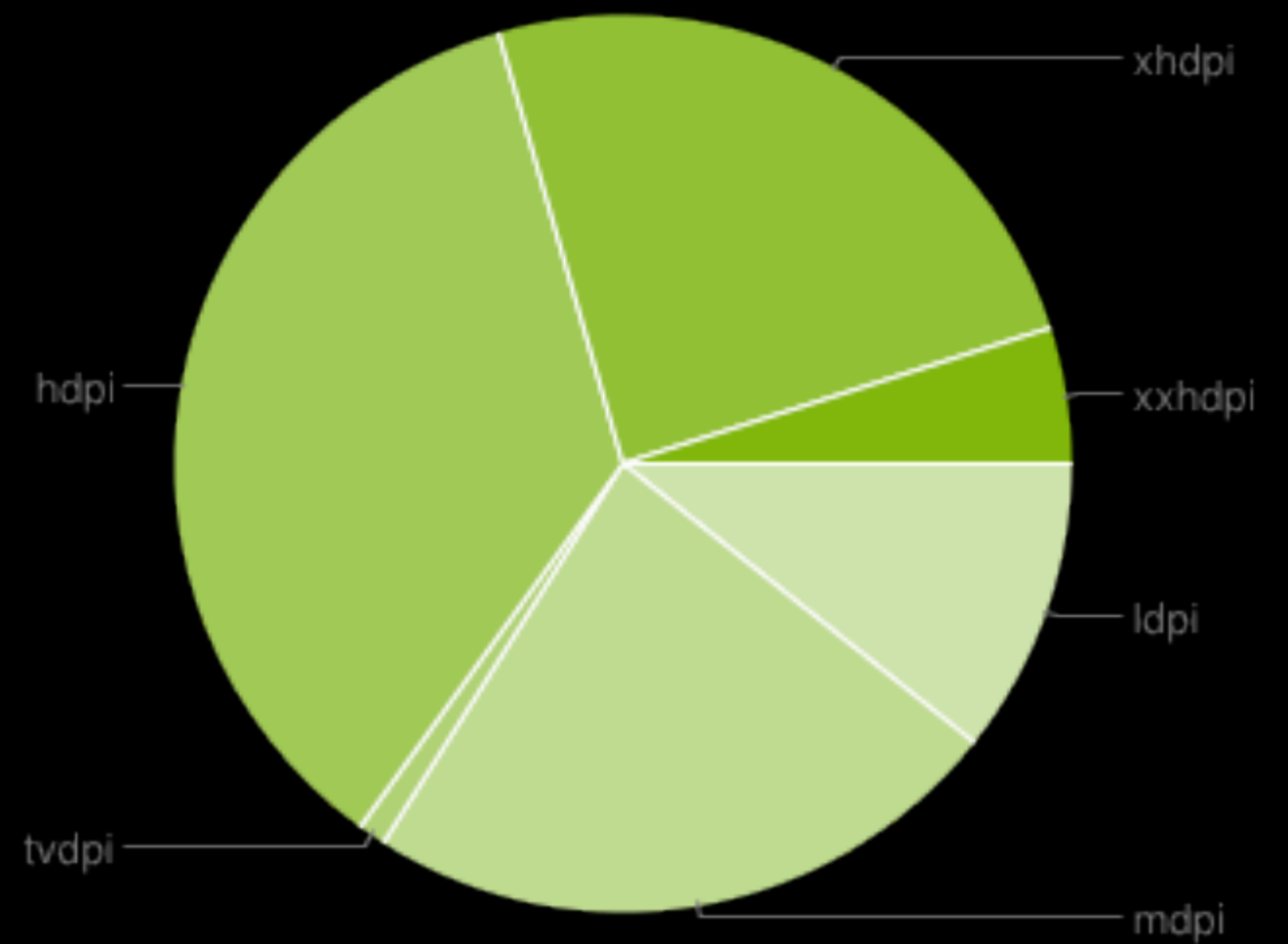
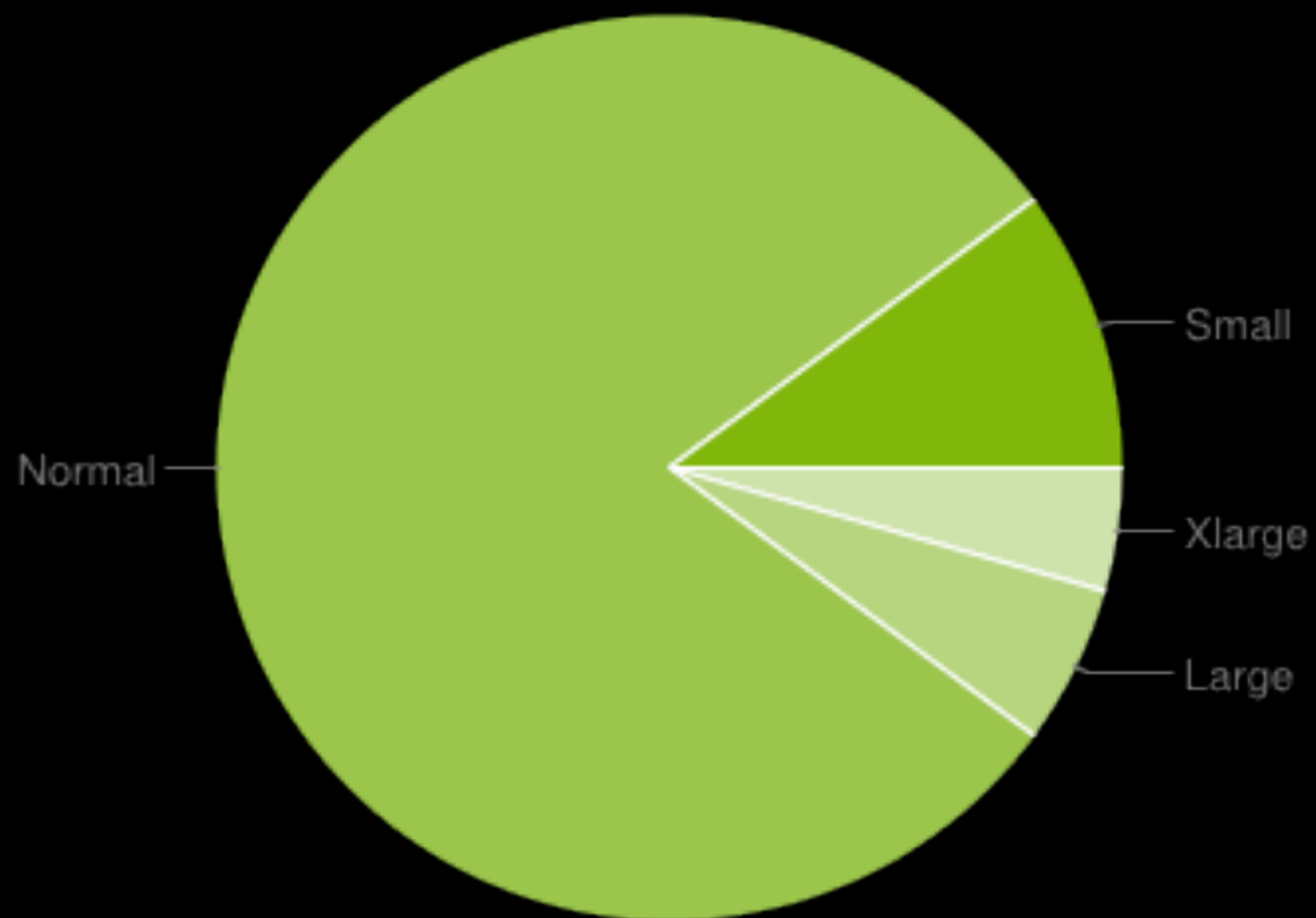
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Versions

Version	Name	Distribution
2.2	Froyo	3.1%
2.3.3-2.3.7	Gingerbread	34.1%
4.0.3-4.0.4	Ice Cream Sandwich	23.3%
4.1.x	Jelly Bean	32.3%
4.2.x		5.6%



Screen Size and Density



Resources

- Application resources stored in a `res` folder
- `res/drawable`: bitmap or XML graphics
- `res/layout`: XML-based layout definitions
- `res/menu`: XML-based menu definitions
- `res/values`: application strings (e.g., for internationalization)

Android Manifest

- Package Name
- Minimum API level
- Permissions
- Components

```
<?xml version="1.0" encoding="utf-8"?>
<manifest [...]
    package="net.cs76.lectures.activity01">

    <uses-sdk android:minSdkVersion="7" />

    <application [...]>

        <activity [...]>
            <intent-filter>
                [...]
            </intent-filter>
        </activity>
    </application>
</manifest>
```

Components

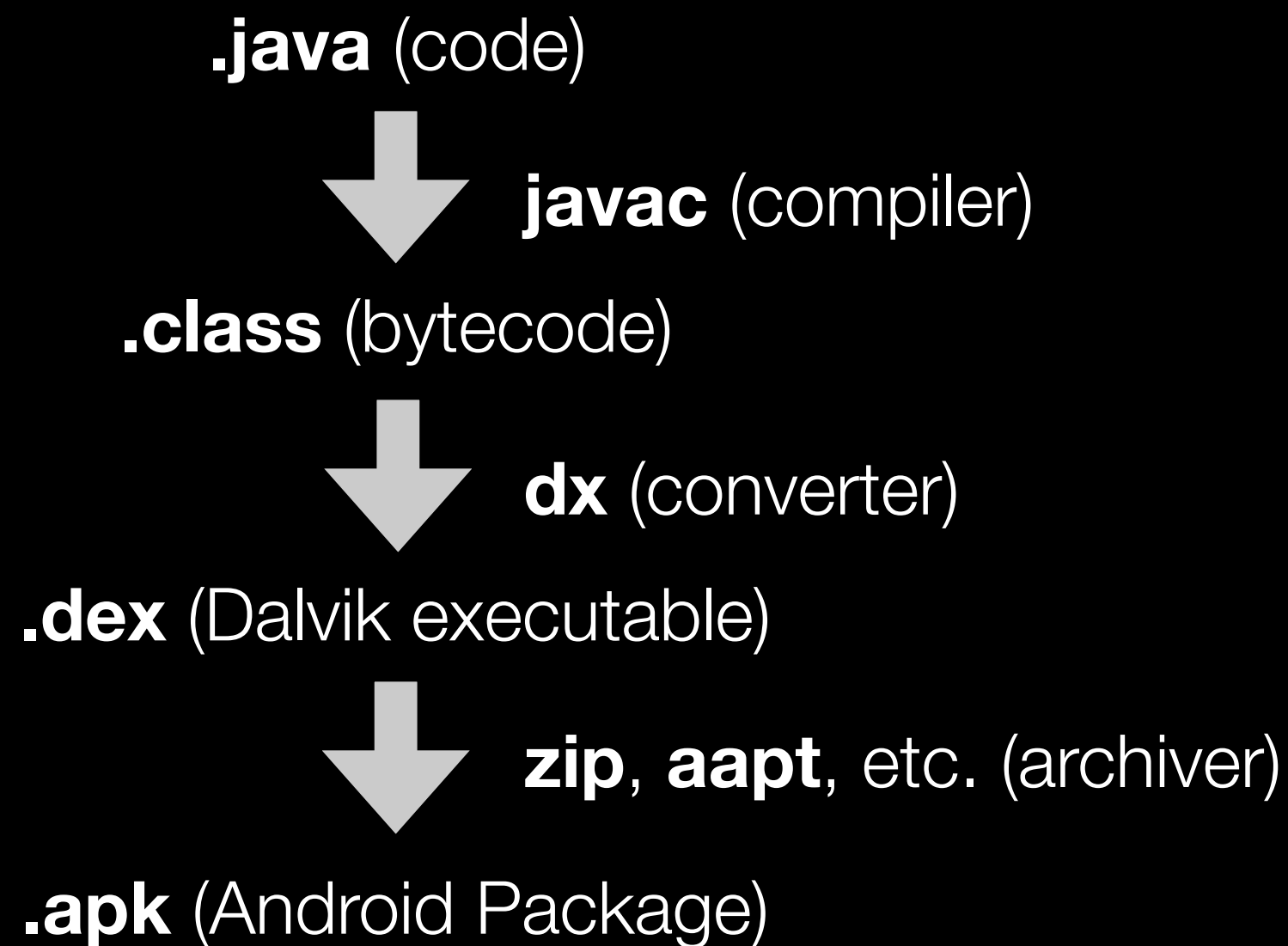
- Activities: a single screen with a user interface
- Services: a background task for lengthy operations
- Content Providers: a standard interface for tasks to retrieve or store other app's data
- Broadcast Receivers: respond to system-wide announcements



<http://developer.android.com>

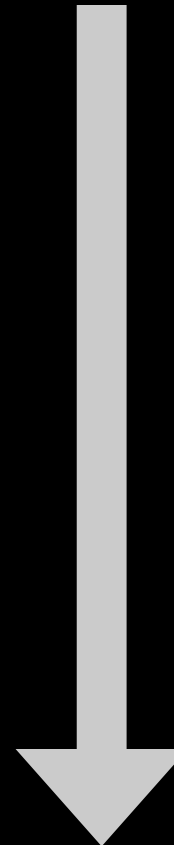
SDK and NDK

Building an Android app



Building an Android app

.java (code)



Eclipse (IDE) +
Android Plug-in

.apk (Android Package)

Getting Started

- Visit: <http://developer.android.com/sdk/index.html>
- Click "Download the SDK"
- Install on your location machine.

Hello, World!

```
package com.android.helloworld;

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

public class HelloWorld 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, World!");
        setContentView(tv);
    }
}
```