

Android Developer Fundamentals V2

Testing, debugging, and using support libraries

Lesson 3



3.3 The Android Support Library

Contents

- What are the Android support libraries?
- Features
- Selected libraries
- Setting up and using support libraries

What are the Android support libraries?

- More than 25 libraries in the Android SDK that provide features not built into the Android framework

Features

Support library features

Support libraries provide:

- Backward-compatible versions of components
- Additional layout and UI elements, such as RecyclerView
- Different form factors, such as TV, wearables
- Material design and other new UI components for older Android versions
- and more....

Backward compatibility

Always use the the support library version of a component if one is available

- No need to create different app versions for different versions of Android
- System picks the best version of the component

Support libraries versions

- Libraries for Android 2.3 (API level 9) and higher
- Recommended you include the [v4 support](#) and [v7 appcompat](#) libraries for the features your app uses

Libraries

v4 Support Libraries

- Largest set of APIs
- App components, UI features
- Data handling
- Network connectivity
- Programming utilities

v4 Support Libraries

- compat—compatibility wrappers
- core-utils—utility classes (eg., AsyncTaskLoader)
- core-ui—variety of UI components
- media-compat—back ports of media framework
- fragment—UI component

v7 Support Libraries

- Backwards compatibility
- TV-specific components
- UI components and layouts
- Google Cast support
- Color palette
- Preferences

v7 Support Libraries

- appcompat—compatibility wrappers
- cardview— new UI component (material design)
- gridlayout—rectangular cell (matrix) Layout
- mediarouter—route A/V streams
- palette—extracting color from an image
- recyclerview—efficient scrolling view
- preference—modifying UI settings

v7 appcompat library

- ActionBar and sharing actions
- You should always include this library and make [AppCompatActivity](#) the parent of your activities

`com.android.support:appcompat-v7:27.1.1`

Complete list of libraries

- ... and many more
- For latest libraries and versions of libraries
 - [Support Library Features documentation](#)
 - [API Reference](#) (all packages that start with android.support)

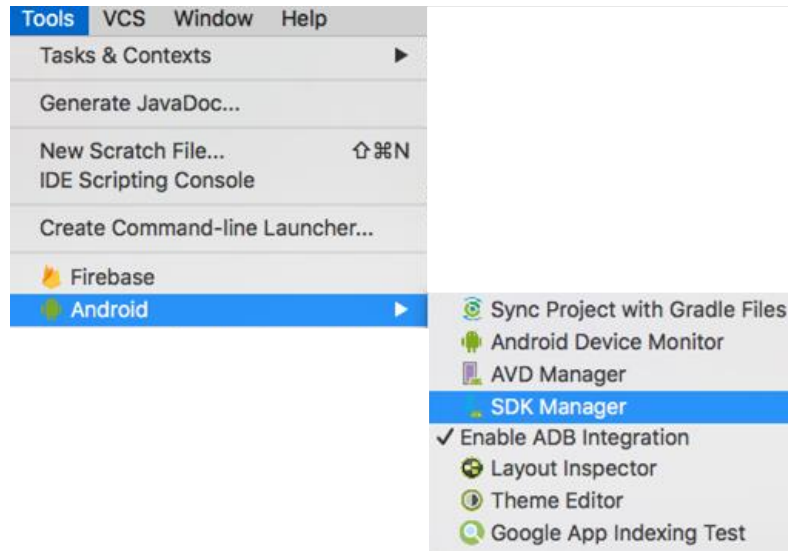
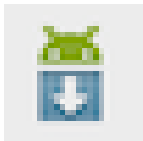
Using support libraries

Support libraries

- Part of Android SDK and available through SDK Manager
- In Android Studio, locally stored in Android Support Repository
- Include in build.gradle of module to use with your project

Start SDK Manager in Android Studio

1. Tools > Android > SDK Manager

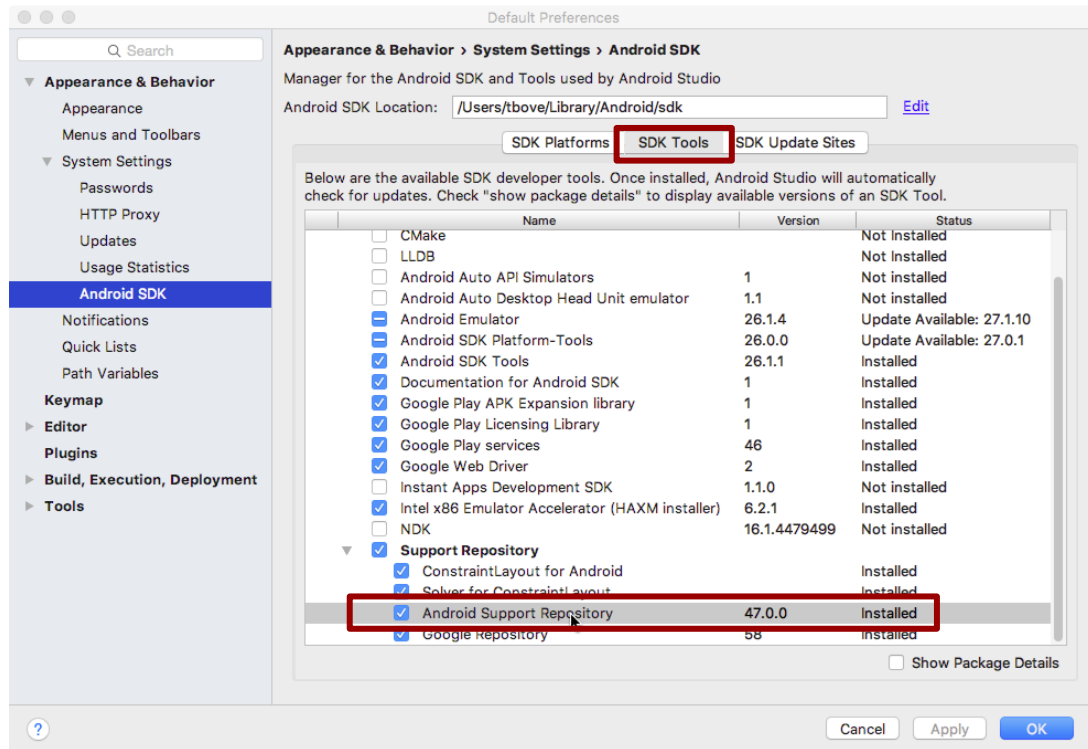


Find the Android Support Library

1. **SDK Tools** tab
2. Find **Android Support Repository**
3. Must be **Installed**

If **Not Installed** or **Update Available**

1. Check checkbox and **Apply**
2. In dialog, confirm components and click **OK** to install
3. When done, click **Finish**
4. Verify that it is **Installed** now



Find the dependency identifier

1. Open [Support Library Features](#) page
2. Find the feature you want
 - For example, the recommended [v7 appcompat](#) library
3. Copy the build script dependency identifier for the library
 - `com.android.support:appcompat-v7:26.1.0`

Add dependency to build.gradle

1. open `build.gradle` (Module: `app`)
2. In the `dependencies` section, add dependency for support library if not already included from template
 - `implementation 'com.android.support:appcompat-v7:26.1.0'`
3. Update the version number, if prompted
4. **Sync Now** when prompted

Updated build.gradle (Module: app)

```
dependencies {  
    implementation fileTree(dir: 'libs', include: ['*.jar'])  
    implementation 'com.android.support:appcompat-v7:26.1.0'  
    implementation  
        'com.android.support.constraint:constraint-layout:1.0.2'  
    testImplementation 'junit:junit:4.12'  
    androidTestImplementation  
        'com.android.support.test:runner:1.0.1'  
    androidTestImplementation  
        'com.android.support.test.espresso:espresso-core:3.0.1'  
}
```

Learn more

- [Android Support Library](#) (introduction)
- [Support Library Setup](#)
- [Support Library Features](#)
- [API Reference](#) (all packages that start with android.support)

What's Next?

- Concept Chapter: [3.3 The Android Support Library](#)
- Practical: [3.3 Support libraries](#)

END