

Assignment 3

60. What is ADT in Android?

The Android Development Tools (ADT) plugin adds powerful extensions to the Eclipse integrated development environment. It allows you to create and debug your Android applications easier and faster. If you use Eclipse, the ADT plugin gives you an incredible boost in developing Android applications:

It provides a New Project Wizard, which helps you quickly create and set up all of the basic files you'll need for a new Android application.

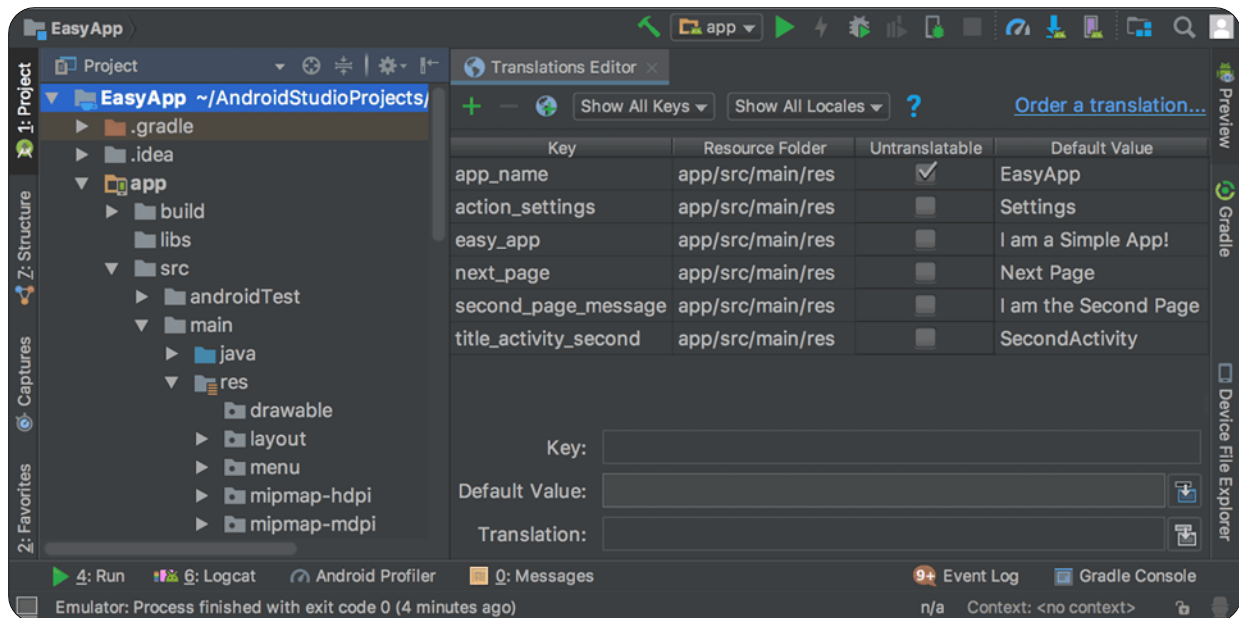


It gives you access to other Android development tools from inside the Eclipse IDE. For example, ADT lets you access the many capabilities of the DDMS tool: take screenshots, manage port-forwarding, set breakpoints, and view thread and process information directly from Eclipse.

It automates and simplifies the process of building your Android application. It provides an Android code editor that helps you write valid XML for your Android manifest and resource files.

61. How to translate in Android?

The Translations Editor provides a consolidated and editable view of all of your default and translated string resources. For an introduction to translating your application for different language.



Translations Editor showing app text before translation

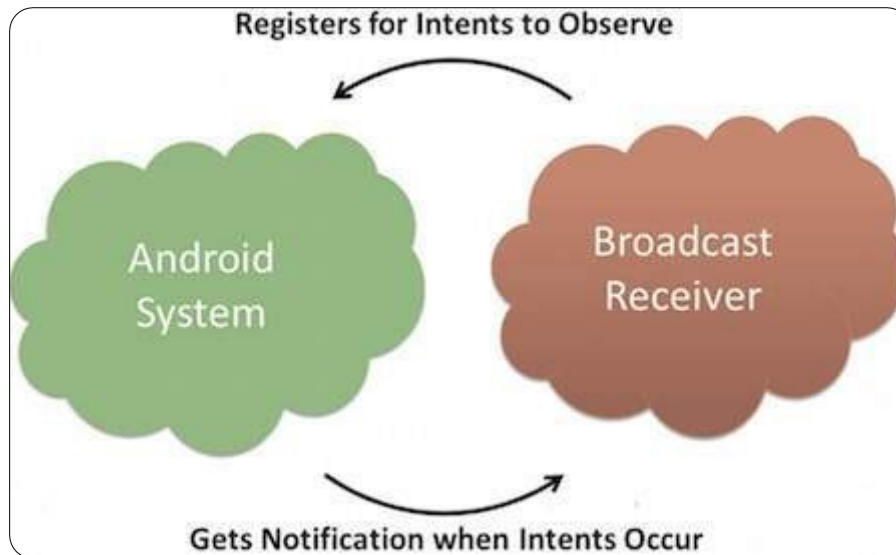
The string resources for a project are contained in strings.xml files. Your project has a default strings.xml file that contains string resources in the default language for your app, which is the language you expect most of your app users to speak. You can also have translated strings.xml files that contain string resources for other languages that you want your app to accommodate.

Once you have your default strings.xml file completed, you can add the translations yourself, or pay a professional service to do the translations. Either way, you should take advantage of the Android Studio features to help you manage and test localizable text.

62. What is stick intent in android?

These are the Intents which sticks with Android for future broadcast listener.

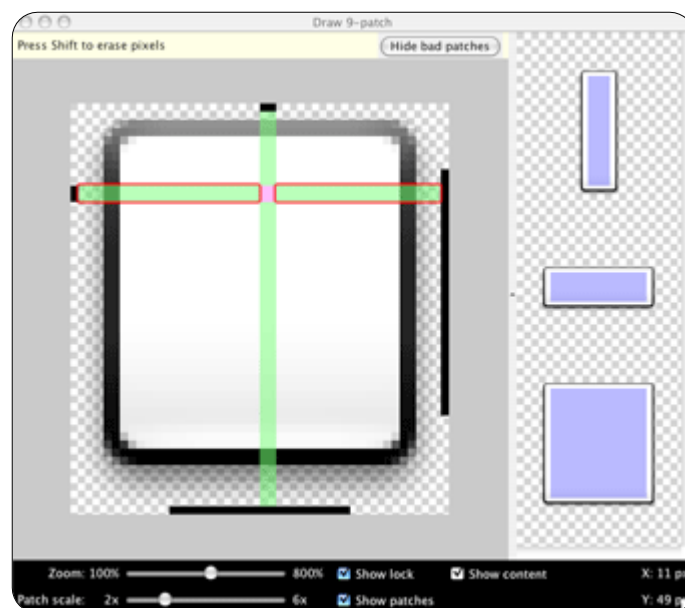
Sticky Intent is also a type of Intent which allows communication between a function and a service send Sticky Broadcast(), performs a send Broadcast(Intent) known as sticky, the Intent you are sending stays around after the broadcast is complete, so that others can quickly retrieve that data through the return value of registerReceiver (BroadcastReceiver, IntentFilter). In all other ways, this behaves the same as sendBroadcast(Intent).



One example of a sticky broadcast sent via the operating system is `ACTION_BATTERY_CHANGED`. When you call `registerReceiver()` for that action — even with a null `BroadcastReceiver` — you get the Intent that was last Broadcast for that action. Hence, you can use this to find the state of the battery without necessarily registering for all future state changes in the battery.

63. What is nine patch image tool in Android?

The Draw 9-patch tool is a WYSIWYG editor included in Android Studio that allows you to create bitmap images that automatically resize to accommodate the contents of the view and the size of the screen. Selected parts of the image are scaled horizontally or vertically based on indicators drawn within the image.



64. Which kernel is used in Android?

Android uses the Linux kernel under the hood. Because Linux is open-source, Google's Android developers could modify the Linux kernel to fit their needs. Linux gives the Android developers a pre-built, already maintained operating system kernel to start with so they don't have to write their own kernel.

65. What is application widget in Android?

In android, App widgets are the small application views that can be embedded in other applications such as the Home screen to quickly access the application data. These application views are referred as widgets in the user interface and we can publish these views using an App Widget Provider.

The screenshot shows a web form titled '1 Application Data'. It contains a section 'Application Info' with the following fields:

ApplicationNo	Application Date	Application Value	Currency Code
231	24/09/2018	7800	EUR

Product Name	CreditApplication Branch	Application Status	Contract No
Personal Loan	TBI Romania	Accepted	

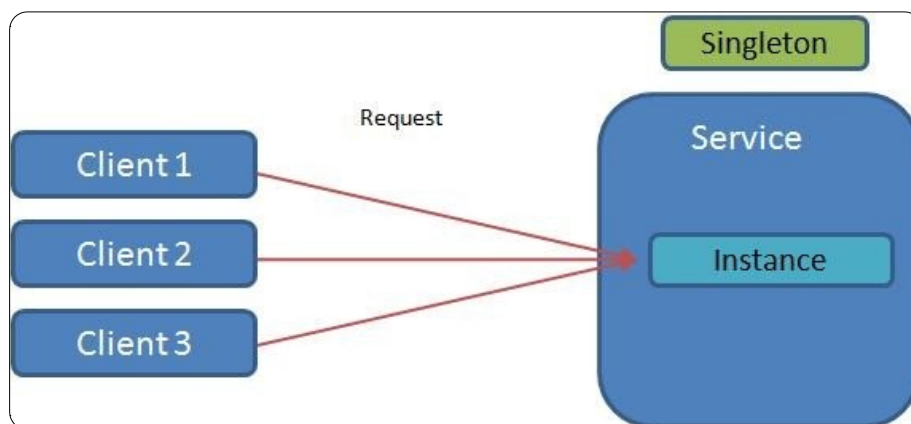
Reason Type	Resolution Date

66. How to change application name after it's deployment in Android?

Yes, you can change the name whenever you want by changing android:label attribute of your application tag in AndroidManifest. Xml file. But, you can't change Package name once you uploaded app on play store.

67. What is Singleton class in Android?

A singleton is a design pattern that restricts the instantiation of a class to only one instance. Notable uses include controlling concurrency and creating a central point of access for an application to access its data store.



68.What are the types of flag to run an application in Android?

Each application must have an AndroidManifest.xml file in its root directory. The manifest file present essential information about the app to the Android system, information the system must have before it can run any of the app code.

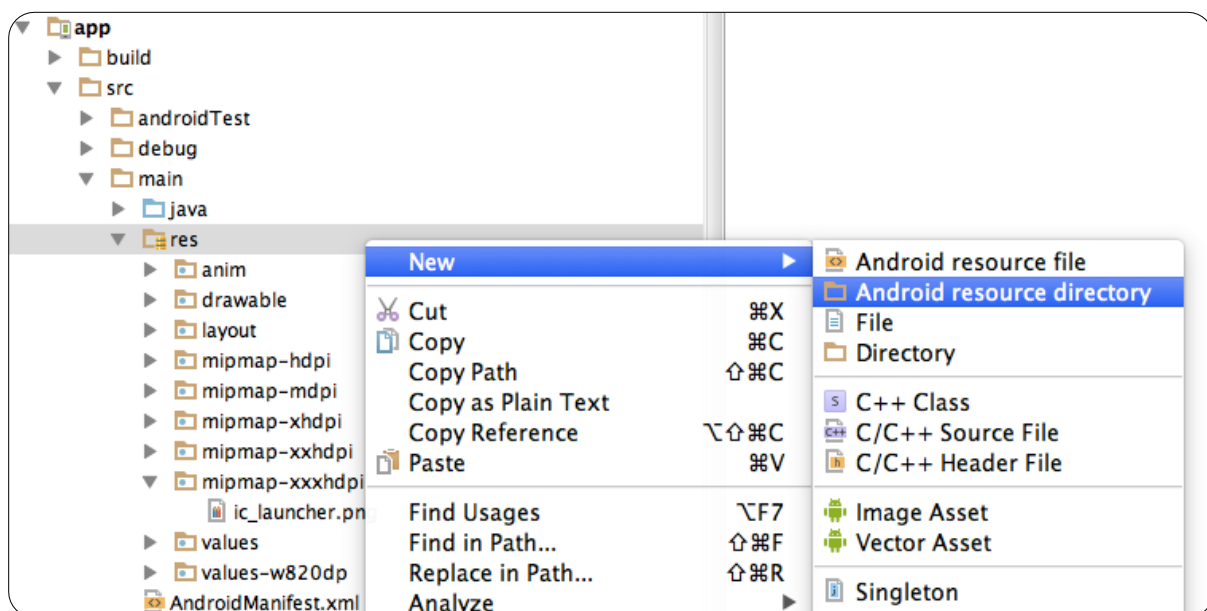
FLAG_ACTIVITY_NEW_TASK →When using this flag, if a task is already running for the activity you are now starting, then a new activity will not be started; instead, the current task will simply be brought to the front of the screen with the state it was last in.

FLAG_ACTIVITY_CLEAR_TOP →Will cause any existing task that would be associated with the activity to be cleared before the activity is started. This way, when you load that.

FLAG_ACTIVITY_NEW_TASK, and you hit the back button, you won't end up back at a login or sign up screen. That'd be a little awkward for our users if they were already logged in and hit it by accident.

69.What do you mean by Drawable folder in Android?

A Drawable resource is a general concept for a graphic which can be drawn. The simplest case is a graphical file (bitmap), which would be represented in Android via a BitmapDrawable class. Every Drawable is stored as individual files in one of the res/drawable folders.



70.How is the use of web view in Android?

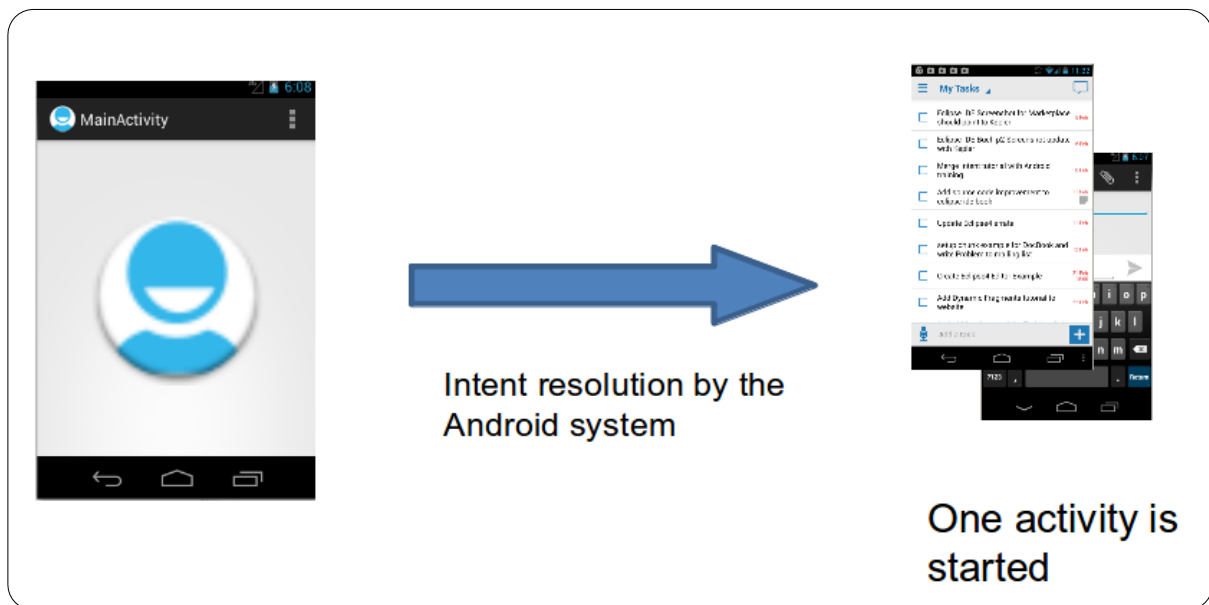
Android WebView is used to display web page in android. The web page can be loaded from same application or URL. It is used to display online content in android activity. Android WebView uses webkit engine to display web page. The android.webkit.WebView is the subclass of AbsoluteLayout class. The loadUrl() and loadData() methods of Android WebView class are used to load and display web page.

71.What is portable WiFi hotspot?

Portable Wi-Fi hotspot is an app that, as its name suggests, lets you turn your Android device into a Wi-Fi access point. In a few words, this app allows you to share your Android's Internet connection with other devices. Additionally, you can rename the connection and even set a password.

72.How do you pass the data to sub activities in Android?

Passing data to (Sub)Activities is, once again, not hard to manage. One can use so called Bundles, which are more or less ordinary HashMap's that can take only trivial data types, to carry information from one Activity to another.



73.How does android track the application on process?

Android system assigns each application a unique ID that is called Linux user ID. This ID is used to track each application.

74.What are the basic tools used to develop an Android app?

Basic tools used to develop an android app are:

- A] Android Studio IDE(Integrated Development environment)
- B] Java JDK
- C] Android phone to test the app.



75. Why can't you run java byte code on Android?

That's because Android uses Dalvik Virtual Machine and not traditional JVM. The class file i.e. the byte code for Android is first optimized even more to make it mobile friendly (Which usually has a custom format according to specifications of Dalvik VM), which differs from normal bytecode. Hence direct JAVA bytecode won't run.

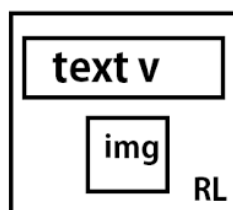
76. What are the notifications available in android?

The three types of android notifications are:

- a) Toast Notification:
Shows message that fades away after a few seconds. (Background type also)
- b) Dialog Notification:
Comes out of an active Activity.
- c) Status Notification:
Shows notification message and displayed till user action. (Background type also)

77. What is container in android?

Containers, as the name itself implies, hold objects and widgets together, depending on which specific items are needed and in what particular arrangement that is wanted. Containers may hold labels, fields, buttons or even child containers as example.



78.What is an Adapter in android?

In Android, Adapter is a bridge between UI component and data source that helps us to fill data in UI component. It holds the data and send the data to an Adapter view then view can take the data from the adapter view and shows the data on different views like as ListView, GridView, Spinner etc.

79.What are shared preferences in android?

A sharedPreferences file is a simple XML file which belongs to your application. You can store key-value pairs of data which your app requires often. Most often, it can be used as some sort of cache/cookie which will be useful when the user's detail/action is to be remembered when he comes back to use the application.

80.What does the intent filter do in android?

An intent filter specifies the types of intents to which an activity, service, or broadcast receiver can respond to by declaring the capabilities of a component. Android components register intent filters either statically in the AndroidManifest.xml or in case of a broadcast receiver also dynamically via code.



81.How to update UI from a service in android?

We can not update User interface from service directly to show progress in android. We can use `runOnUiThread()` method of activity to update UI from background thread. Or you can use an android Handler to achieve this. Use the following function to perform tasks on the UI thread:

```
runOnUiThread( new Runnable() {  
    public void run() {  
        //Whatever task you wish to perform  
        //For eg. textView.setText("SOME TEXT")  
    }  
});
```


82. What are application Widgets in android?

Application widgets are miniature application views that can be embedded in other applications (such as the Home screen) and receive periodic updates”. We can divide Android widgets into three main categories:

- Information widgets:

These display the latest updated information about the app state. Weather, time and currency quotation widgets all belong to this category.

- Collection widgets:

These present the collection of similar information. For example, a collection of emails, articles or daily tasks. Control widgets - These provide quick and easy access to app functions that are most important for the user. It means that the user can manage the app from the home screen without opening it.

83. What are the exceptions available in android?

In exception is an event, which occurs during the execution of a program, that disrupts the normal flow of the program’s instructions. When an error occurs within a method, the method creates an object and hands it off to the runtime system.

The object, called an exception object, contains information about the error, including its type and the state of the program when the error occurred. Creating an exception object and handing it to the runtime system is called throwing an exception. After a method throws an exception, the runtime system attempts to find something to handle it. The set of possible “something” to handle the exception is the ordered list of methods that had been called to get to the method where the error occurred.

The class Exception and its subclasses are a form of Throwable that indicates conditions that a reasonable application might want to catch. The class Exception and any subclasses that are not also subclasses of RuntimeException are checked exceptions. Checked exceptions need to be declared in a method or constructor’s throws clause if they can be thrown by the execution of the method or constructor and propagate outside the method or constructor boundary.

Exception Types

- a) Checked Exception
- b) Unchecked Exception
- c) Error

- a) Checked Exception

The first kind of exception is the “Checked Exception”. These are exceptional conditions that a well-written application should anticipate and recover from.

- b) Unchecked Exception

These are exceptional conditions that are internal to the application, and that the application usually cannot anticipate or recover from.

- c) Error

These are exceptional conditions that are external to the application, and that the application usually cannot anticipate or recover from.

The following are the exceptions that are supported by Android:

1) InflateException:

This exception is thrown When an error conditions are occurred.

2) Surface.OutOfResourceException:

This exception is thrown When a surface is not created or resized.

3) SurfaceHolder.BadSurfaceTypeException:

This exception is thrown from the lockCanvas() method, when invoked on a Surface whose is SURFACE_TYPE_PUSH_BUFFERS

4) WindowManager.BadTokenException:

This exception is thrown at the time of trying. to add view an invalid WindowManager. LayoutParamstoken.

84.What is the order of dialog-box in android?

Positive, Neutral, Negative.

