

Chapter#1

1. What is an AVD?

ANS:

An AVD is an Android Virtual Device. It represents an Android emulator, which emulates a particular configuration of an actual Android device.

2. What is the difference between the android:versionCode and android:versionName attributes in the AndroidManifest.xml file?

ANS:

The android:versionCode attribute is used to programmatically check whether an application can be upgraded. It should contain a running number (an updated application is set to a higher number than the older version). The android:versionName attribute is used mainly for displaying to the user. It is a string, such as "1.0.1".

3. What is the use of the strings.xml file?

ANS:

The strings.xml file is used to store all string constants in your application. This enables you to easily localize your application by simply replacing the strings and then recompiling your application.

Chapter#2

4. What will happen if you have two or more activities with the same intent filter action name?

ANS:

The Android OS will display a dialog from which users can choose which activity they want to use.

5. Write the code to invoke the built-in Browser application?

ANS:

Use the following code:


```
Intent i = new  
Intent(android.content.Intent.ACTION_VIEW,  
Uri.parse("http://www.amazon.com"));  
startActivity(i);
```

6. Which components can you specify in an intent filter?

ANS:

In an intent filter, you can specify the following: action, data, type, and category.

7. What is the difference between the Toast class and the NotificationManager class?

ANS:

The Toast class is used to display alerts to the user; it disappears after a few seconds. The NotificationManager class is used to display notifications on the device's status bar. The alert displayed by the NotificationManager class is persistent and can only be dismissed by the user when selected.

8. Name the two ways to add fragments to an activity?

ANS:

You can either use the element in the XML file, or use the FragmentManager and FragmentTransaction classes to dynamically add/remove fragments from an activity.

9. Name one key difference between a fragment and an activity?

ANS:

One of the main differences between activities and fragments is that when an activity goes into the background, the activity is placed in the back stack. This allows an activity to be resumed when the user presses the Back button. Conversely, fragments are not automatically placed in the back stack when they go into the background.

- 10. What is the difference between the dp unit and the px unit? Which one should you use to specify the dimension of a view?**

ANS:

The dp unit is density independent and 1dp is equivalent to one pixel on a 160 dpi screen. The px unit corresponds to an actual pixel on screen. You should always use the dp unit because it enables your activity to scale properly when run on devices of varying screen size.

- 11. Why is the `AbsoluteLayout` not recommended for use?**

ANS:

With the advent of devices with different screen sizes, using the `AbsoluteLayout` makes it difficult for your application to have a consistent look and feel across devices.

- 12. What is the difference between the `onPause()` method and the `onSaveInstanceState()` method?**

ANS:

The `onPause()` event is fired whenever an activity is killed or sent to the background. The `onSaveInstanceState()` event is like the `onPause()` event, except that it is not always called, such as when the user presses the back button to kill the activity.

- 13. Name the three methods you can override to save an activity's state. In what instances should you use the various methods?**

ANS:

The three events are `onPause()`, `onSaveInstanceState()`, and `onRetainNonConfigurationInstance()`. You generally use the `onPause()` method to preserve the activity's state because the method is always called when the activity is about to be destroyed. However, for screen orientation changes, it is easier to use the `onSaveInstanceState()` method to save the state of the activity (such as the data entered by the user) using a `Bundle` object. The `onRetainNonConfigurationInstance()` method is useful for momentarily saving data (such as images or files downloaded from a web service) which might be too large to fit into a `Bundle` object.

- 14. How do you add action items to the Action Bar?**

ANS:

Adding action items to the Action Bar is similar to creating menu items for an options menu — simply handle the `onCreateOptionsMenu()` and `onOptionsItemSelected()` events.

Chapter#5

15. What is the purpose of the ImageSwitcher?

ANS:

The ImageSwitcher enables images to be displayed with animation. You can animate the image when it is being displayed, as well as when it is being replaced by another image.

16. Name the two methods you need to override when implementing an options menu in your activity?

ANS:

The two methods are `onCreateOptionsMenu()` and `onOptionsItemSelected()`.

17. Name the two methods you need to override when implementing a context menu in your activity?

ANS:

The two methods are `onCreateContextMenu()` and `onContextItemSelected()`.

18. How do you prevent the WebView from invoking the device's web browser when a redirection occurs in the WebView?

ANS:

To prevent launching the device's web browser, you need to implement the `WebViewClient` class and override the `shouldOverrideUrlLoading()` method.

Chapter#9

19. If you have embedded the Google Maps API into your Android application but it does not show the map when the application is loaded, what could be the likely reasons?

ANS:

The likely reasons are as follows:

- No Internet connection
- Incorrect placement of the element in the AndroidManifest.xml file
- Missing INTERNET permission in the AndroidManifest.xml file

20. What is the difference between geocoding and reverse geocoding?

ANS:

Geocoding is the act of converting an address into its coordinates (latitude and longitude). Reverse geocoding converts a pair of location coordinates into an address.

21. Name the two location providers that you can use to obtain your location data?

ANS:

The two providers are as follows:

- LocationManager.GPS_PROVIDER
- LocationManager.NETWORK_PROVIDER

22. What method is used for monitoring a location?

ANS:

The method is addProximityAlert().