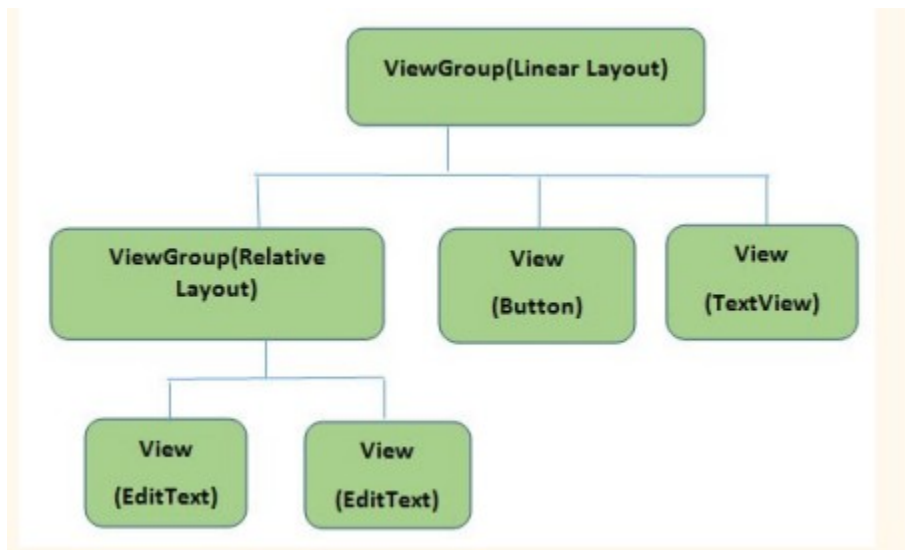


Tutorial

Android Application Development

1. What is Android and the latest version of Android?
2. Which Operating System Android is based on?
3. What is role of package name? What care should be taken while naming a package?
4. What is the meaning of Minimum SDK option while creating a new Project?
5. Explain View and ViewGroups with a diagram.
6. Write down sample code to create following structure.



7. What are Layouts for? List down different layouts (atleast 5). Differentiate between Linear Layout and Relative Layout.
8. How important is Constraint Layout. State its benefits.
9. Describe the Android architecture in detail.
10. What is the role of Emulator?
11. What's Activity in Android?
12. What are the components of the Android Application? Explain each of them in brief with an example.

- a) Activities
- b) Services
- c) Content Providers
- d) Broadcast Receiver
- e) Intents

13. What is the AndroidManifest.xml? This file resides in which folder?
14. Write a statement to access permission for Camera in AndroidManifest.xml file.
15. Ravina created two Activities titled as MainActivity and SecondActivity. She would like to launch an application using SecondActivity. What steps she shall follow?
16. Which files do exist in values folder when a new Android Project is created using Android Studio?
17. Describe the usage of Strings.xml file giving one example.
18. Describe the usage of colors.xml file giving one example.
19. Describe the usage of dimens.xml file giving one example.
20. Describe the usage of styles.xml file giving one example.
21. Explain Activity Life Cycle with diagram.
22. Differentiate between:
 - a) onCreate() and onStart() Methods
 - b) onPause() and onRestart() Methods
23. Give one example of using Log Class for debugging.
24. Explain following attributes of Linear Layout.
 - a) Gravity
 - b) Orientation
25. What is padding used for?
26. Differentiate between Gravity and Layout Gravity.
27. Which attribute is used to display the visible text on Button?
28. Can an image be placed on Button? Write down the steps.
29. Can text on Button be right aligned? If yes, which attribute can be used and how?
30. What is id attribute for? Write down its usage giving an example.
31. Write down the code for the following:
 - Two buttons and one text view on the screen. One button has text titled "Hello" and second includes "Namaste". Clicking on each button makes textview filled with Hello or Hi depending on the button clicked. Use OnClick attribute of button.
32. What is hint attribute used for in EditText View?
33. Can you comment a code while creating an Android App Development? What are the ways? Explain one example for each file, activity_main.xml and MainActivity.java both.
34. Showcase the usage of Method Overriding used while creating an app.
35. What are sp, dp used for? Explain each of them giving an example.
36. What is the way to change color of Button?
37. Write down the syntax and usage of findViewById method.
38. What is the Dalvik Virtual Machine?
39. What are the differences between Dalvik and ART?
40. What are APK files? Write down the steps to be taken for uploading App on play Store?

41. What is Toast in Android?
42. Write down three ways to display a message on the screen in Android? Which are they? How are they different to each other?
43. Differentiate between Checkbox and Radiobutton.
44. You are designing an Activity which accepts which of the various ID cards like passport, adhar, PAN, election card. is/are possessed by user and whether the user is Above 18 years of age. Which view/viewgroup will you prefer and why?
45. Explain the usage of the Switch view giving an example.
46. Explain the usage of Toggle bar giving an example.
47. App designer intends to display a list of completion suggestions automatically while the user is typing, what widget can be used? Explain the role of Adapter in fulfilling the mentioned task.
48. What's Service in android?
49. What's Content Provider in android?
50. What's Broadcast Receiver in android?
51. What's Fragment in android?
52. Differentiate between Fragment and Activity.
53. Describe the usage of Adapter giving an example.
54. List down usage and advantage of ListView.
55. Which are the commonly used Adapter in Android used to fill the data in the UI components.
56. Write down the steps to show an image on an Activity.
57. What are Click Listeners? Give one example.
58. Describe Intents. Mention its types. Explain the code showcased in a box below.

```
Intent intent = new Intent(getApplicationContext(), SecondActivity.class);
startActivity(intent);
```

59. What are Explicit Intent and Implicit Intent? Explain giving one example of each.
60. Give one example of passing data through intent.
61. An App creator wishes to provide option to user to choose background color of each Activity. Once color is being chosen it needs to be stored somewhere, so next time background color should be chosen color. What functionality of android app development will you prefer to use. Write down the steps to implement the functionality.
62. What's Context in Android?
63. What is View in Android?
64. Difference between View and ViewGroup in Android
65. Explain Date and Time picker with its methods.

66. What is drawable folder used for?
67. Give one example of Adding log statements to your app which can be useful to debug the app.
68. Explain the meaning of following statement.
- a) `Log.d("MainActivity", "Hello World");`
69. The `layout_width` and `layout_height` can take one of three values, which are they? When to use which one?
70. Explain the following property:
- a) `android:onClick="showToast"`
71. Point out Error in following code, Write the correct version and complete the code so that the count can be displayed on Screen.

```
int count;
```

```
Toast toast = Toast.makeText(context, count, Toast.LENGTH_LONG);
```

72. What is an adapter? Explain its working with the help of a figure.
73. List uses of adapters.
74. Write a code snippet showing the use of an `ArrayAdapter` for displaying names from an `ArrayList` in a `ListView`.
75. Write a code snippet to display a list of days of the week in a spinner using `ArrayAdapter`.
76. Differentiate between options menu and context menu.
77. Which event handlers need to be written to handle options menu?
78. Write the code to handle "Login" and "Logout" options menu items. Both should display appropriate Toast messages. Assume suitable menu layout file is already created.
79. Which event handlers need to be written to handle context menu?
80. Write code to handle "Edit" and "Delete" context menu items on a `ListView`. Both should display appropriate Toast messages. Assume suitable menu layout file is already created.
81. What is a notification?
82. Which permission is required for generating a notification for API level 33 and higher?
83. Which system service is required for generating notifications?
84. What is a notification channel?
85. Which parameters are required for creating a notification channel? Write along with their data types.
86. Write code to create a notification channel "NOTICES".
87. Write code to generate a notification under the "NOTICES" channel and with high priority.
88. What is the significance of the notification id when generating notification?

89. Object of which class is used to create a notification? List the commonly used methods of that class.
90. Write code to get access to notification manager.