Android Activity

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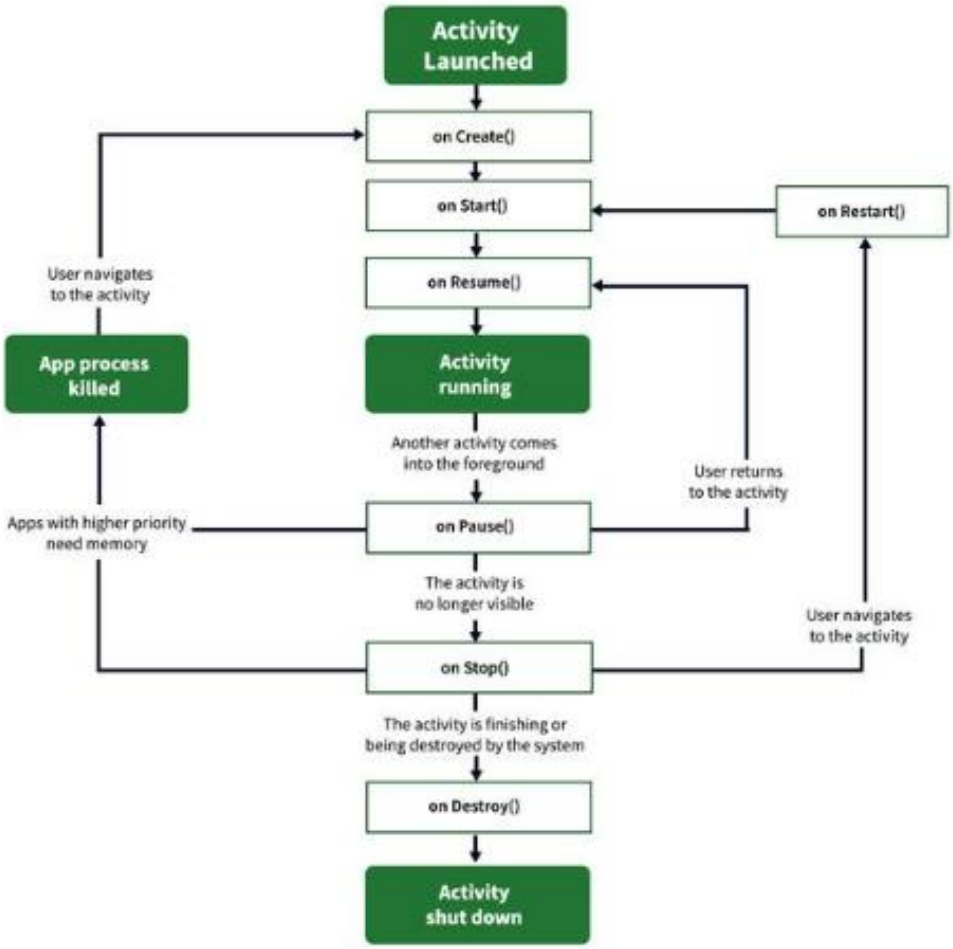
➢ Introduction

1. Activity is important component of android application every application must have at least one activity.
2. Using activity user can interact with application through layouts.
3. Layouts are the XML files contains views and these views will be set to activity using setContentView() method
4. setContentView() takes layout id as the argument.
   ex. setContentView(R.layout.activity)

➢ Activity Life Cycle

1. In android application we can have N number of activity each activity has its own life cycle, there are 7 life cycle methods
2. onCreate(), onStart(), onResume(), onPause(), onStop(), onDestroy(), onRestart().
3. **onCreate()** will be called once activity is created and in onCreate() most of the static work will done like creating view, binding data to list etc.
4. **onStart()** will be called once activity is visible to the user but user cannot interact with activity UI.
5. **onResume()** indicates user that activity is running in foreground so user can interact with application.
6. **onPause()** indicates that activity is going to background, and we should avoid heavy processing in this method because until call back returns from the onPause() new Activity will not be created on top of existing activity.
7. **onStop()** indicates activity is in background state and user cannot interact with the UI of that activity, this method may never be called in low memory situation.
8. **onDestroy()** is the final call to indicate that activity is completely killed and activity instance is destroyed from memory.
9. **onRestart()** is called whenever user is moving back to previous activity.



Activity Lifecycle in Android

➢ Restore Data on configuration change

1. To Restore Data on configuration change we have to override two methods onSaveInstanceState(), onRestoreInstanceState().
2. Data will be stored in the form of Bundle which store data in Key and Value pair
3. On save instance state will called after onStop() and that data will restored from onCreate() method of the activity.
4. On save instance state will not be called if user explicitly closes the activity

➢ Cross questions

1. Each life cycle method must call super class method otherwise compiler will through an error
2. Among all 7 life cycle methods onCreate() is the only method has bundle arguments
3. In android 12 exported must be set in activity tag inside manifest file **android:exported = “false”**
4. Log.d() key value must be 23 charecters
5. Activity can be started without layout file also
6. On configuration change activity on stop will be call then onRestart() onDestroy will not be called