

Android - Activities (Explicit)

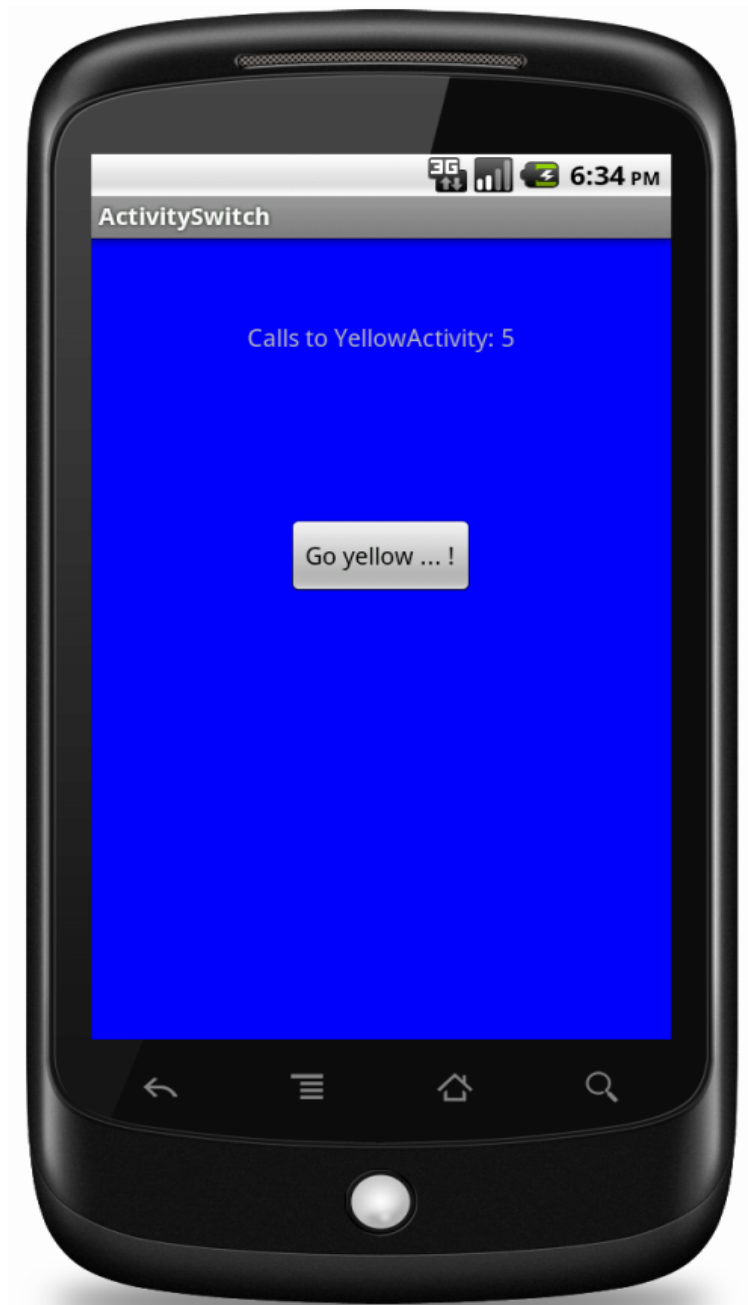
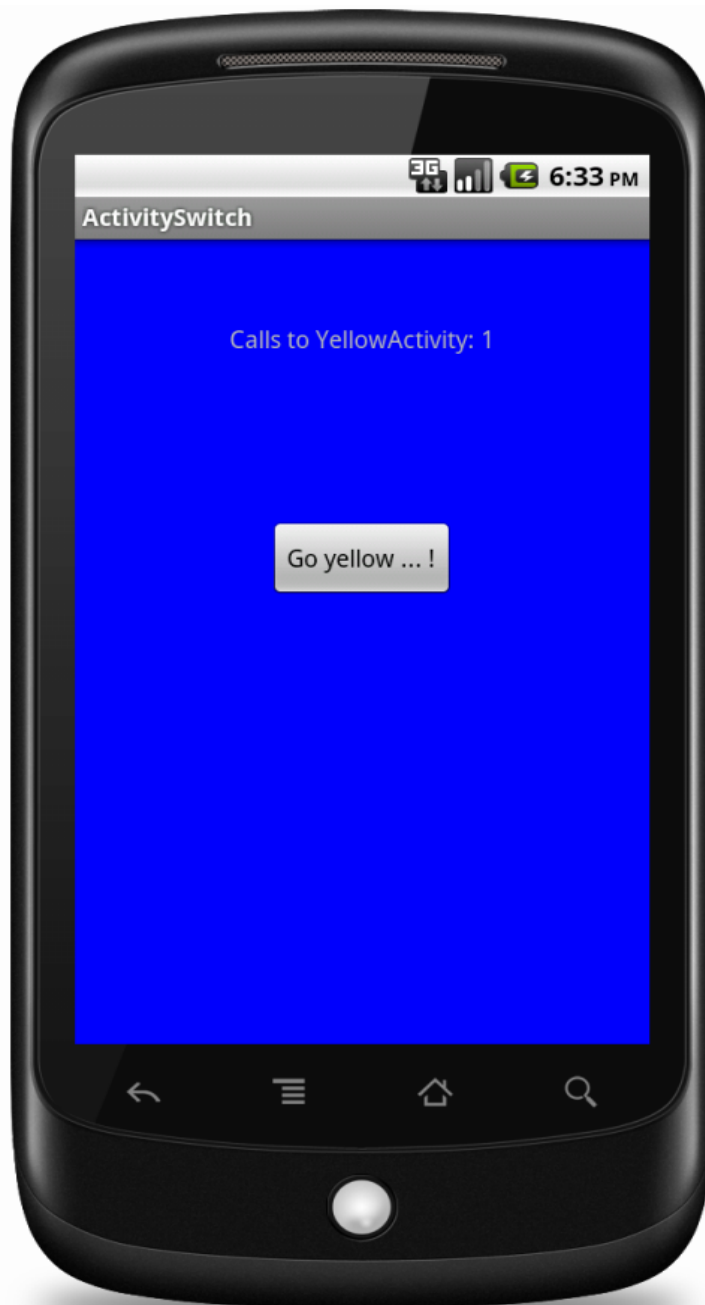
- An application to illustrate the activity life cycle
- An application consists of two activities that call each other
- Activities are referenced explicitly by naming their Java class objects
- If an activity is called, then it is pushed onto stack to become the main activity
- Exiting main activity results in that activity being popped off the stack
- Each activity has its own lifecycle and Android will call callbacks at the appropriate moments
- `LoggingActivity`: a helper class to demonstrate activity lifecycle:
 - overrides the activity lifecycle methods and logs appropriate messages

- The app has two activities :
 - `BlueActivity`
 - Main activity
 - An intent has to be constructed to call `YellowActivity`
 - On press of button the `YellowActivity` will be called
 - `YellowActivity`
 - `BlueActivity` is pushed into the background
 - Pressing a button returns to `BlueActivity`
 - A call to `finish()` ends the current activity and returns to the previous one on the activity stack
 - Leaving `YellowActivity` - returns to `BlueActivity`
 - `onActivityResult()` of `BlueActivity` will be called
 - a return value in form of an `Intent` can be returned
- Back button has to be handled by overriding `onBackPressed()`

- On click of button on BlueActivity, the YellowActivity will be pushed onto stack
- On click of button on YellowActivity, YellowActivity will be popped out of stack and returned back to BlueActivity



The YellowActivity keeps track of number of times the activity was called. This is returned to the BlueActivity in form of Intent which is displayed in the TextView of BlueActivity



- When running this application, the logging output can be observed (using DDMS) to understand activity lifecycle methods that are invoked by Android.

| Log | |
|--|--|
| tag | Message |
| D alvikvm | GC_EXPLICIT freed 33 objects / 1856 bytes in 55ms |
| ActivityManager | Starting activity: Intent { act=android.intent.action.MAIN cat=[android.intent.category.LAUNCHER] flg=0x10200000 cmp=o |
| org.xmlvm.tutorial.android.activity.BlueActivity | onCreate() called |
| org.xmlvm.tutorial.android.activity.BlueActivity | onStart() called |
| org.xmlvm.tutorial.android.activity.BlueActivity | onResume() called |
| ActivityManager | Displayed activity org.xmlvm.tutorial.android.activity/.BlueActivity: 530 ms (total 530 ms) |
| ActivityManager | Starting activity: Intent { cmp=org.xmlvm.tutorial.android.activity/.YellowActivity } |
| org.xmlvm.tutorial.android.activity.BlueActivity | onPause() called |
| org.xmlvm.tutorial.android.activity.YellowActivity | onCreate() called |
| org.xmlvm.tutorial.android.activity.YellowActivity | onStart() called |
| org.xmlvm.tutorial.android.activity.YellowActivity | onResume() called |
| ActivityManager | Displayed activity org.xmlvm.tutorial.android.activity/.YellowActivity: 303 ms (total 303 ms) |
| org.xmlvm.tutorial.android.activity.BlueActivity | onStop() called |
| org.xmlvm.tutorial.android.activity.YellowActivity | onPause() called |
| org.xmlvm.tutorial.android.activity.BlueActivity | onRestart() called |
| org.xmlvm.tutorial.android.activity.BlueActivity | onStart() called |
| org.xmlvm.tutorial.android.activity.BlueActivity | onResume() called |
| org.xmlvm.tutorial.android.activity.YellowActivity | onStop() called |
| org.xmlvm.tutorial.android.activity.YellowActivity | onDestroy() called |
| ActivityManager | Starting activity: Intent { act=android.intent.action.MAIN cat=[android.intent.category.HOME] flg=0x10200000 cmp=com.a |
| org.xmlvm.tutorial.android.activity.BlueActivity | onPause() called |
| InputManagerService | Ignoring hideSoftInput of: com.android.internal.view.IInputMethodClient\$Stub\$Proxy@450c9cf8 |
| SntpClient | request time failed: java.net.SocketException: Address family not supported by protocol |
| org.xmlvm.tutorial.android.activity.BlueActivity | onStop() called |

Called during start of BlueActivity

Called when YellowActivity is called from BlueActivity

Called when returned back to BlueActivity from YellowActivity

References

- [Activity](#)
- [Activity lifecycle](#)
- [Intent](#)

Exercise

- Add a GreenActivity that can be reached via a button from the YellowActivity. No data needs to be passed between YellowActivity and GreenActivity.