



42036 - CYBER SECURITY FOR MOBILE PLATFORMS LAB 2: ENCRYPTION

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Outline:



1

Explicit Intent

2

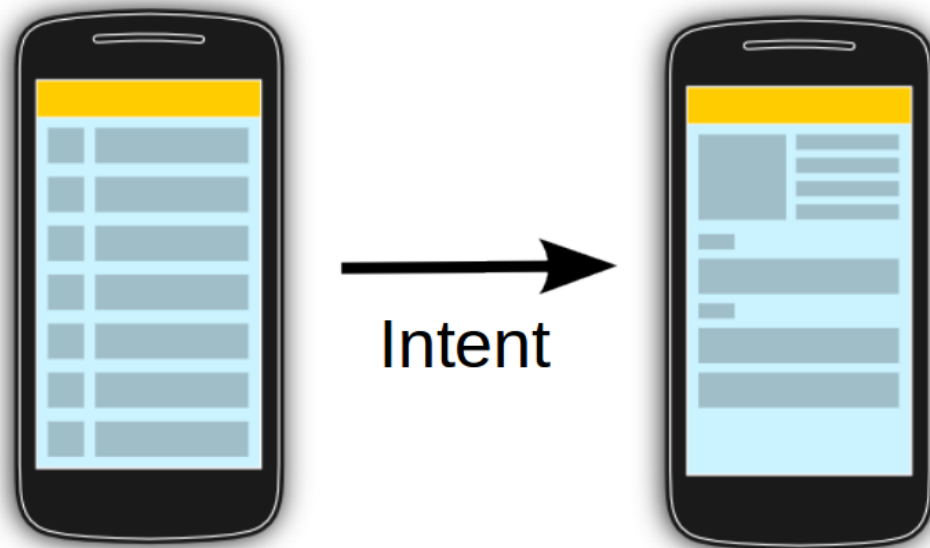
Encryption

3

The overview of Lab 2

1. Explicit intent [1]

Explicit Intents are used to **call a specific component**. When you know which component you want to launch. For example, you have an application that has 2 activities. Activity A and activity B. You want to **launch activity B** from activity A. In this case you define an **explicit intent targeting activity B** and then use it to directly call it.



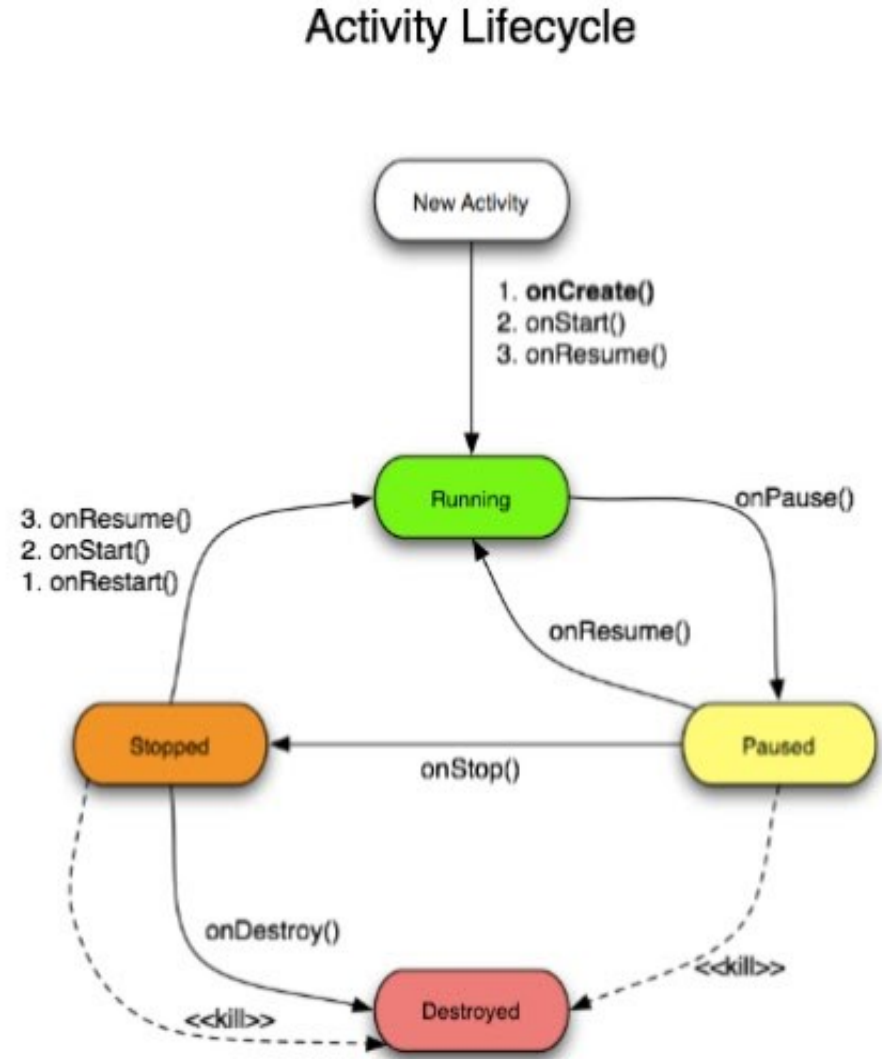
```
// Start the activity connect to the  
// specified class  
Intent i = new Intent(this, ActivityTwo.class);  
startActivity(i);
```

[1] <https://stackoverflow.com/questions/10272699/what-is-the-different-between-explicit-and-implicit-activity-call-in-android/20728603>

1. Explicit intent [2]

Android Activity Lifecycle is controlled by 7 methods of `android.app.Activity` class. The android Activity is the subclass of `ContextThemeWrapper` class.

[2] <https://www.javatpoint.com/android-life-cycle-of-activity>

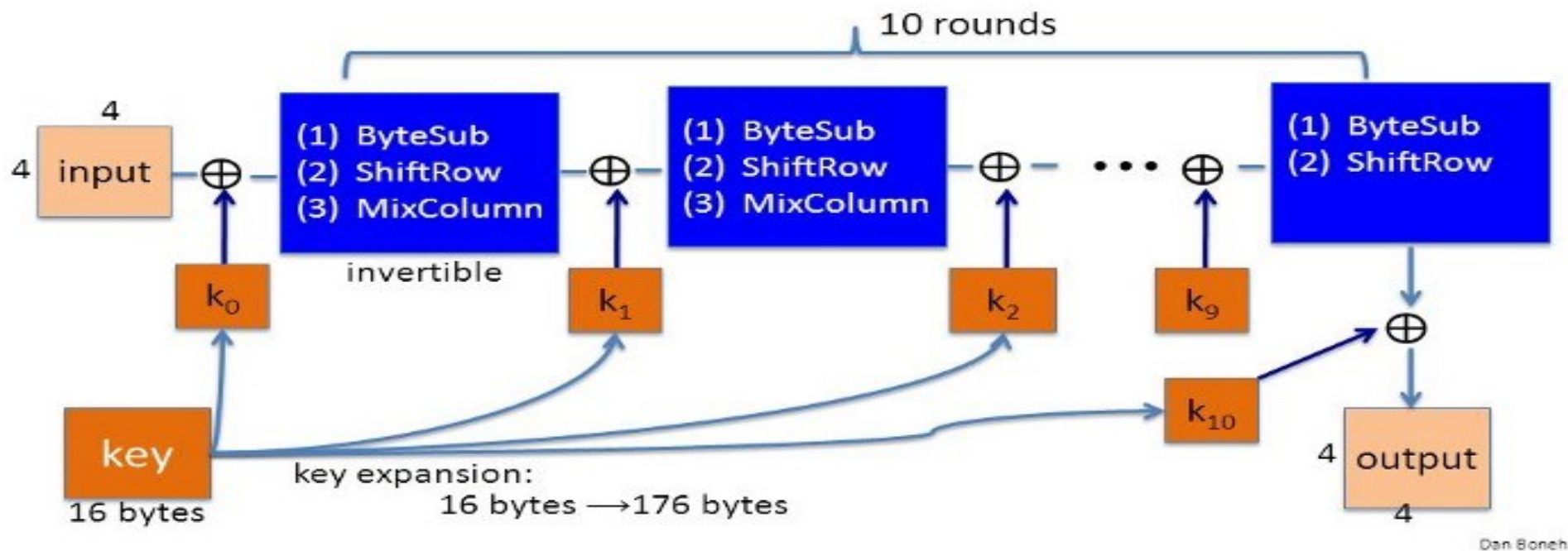


1. Explicit intent [2]

Method	Description
onCreate	called when activity is first created.
onStart	called when activity is becoming visible to the user.
onResume	called when activity will start interacting with the user.
onPause	called when activity is not visible to the user.
onStop	called when activity is no longer visible to the user.
onRestart	called after your activity is stopped, prior to start.
onDestroy	called before the activity is destroyed.

2. Encryption AES - 128 bit [3]

AES-128 schematic



2. Encryption AES - 128 bit [3]

It could take billions of years for a Brute Force attack to find a password to decrypt original message.

“Encryption saves lives, encryption protects property.” - Edward Snowden

[3] https://www.tutorialspoint.com/cryptography/advanced_encryption_standard

3. Over view of Lab 2

- ✓ **Task 1:** Program a simple intent app
- ✓ **Task 2:** Explicit intent for lab 1 app
- ✓ **Task 3:** Encryption of message app
- ✓ **Task 4:** Exercises for practice

THANK YOU!

Question & Answer