EECS 349/444 – Fall 2019

Computer Security

Prof. Fanny Ye
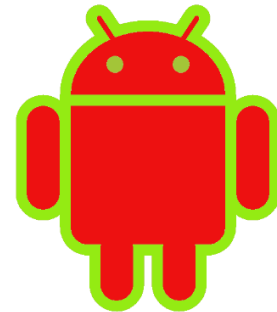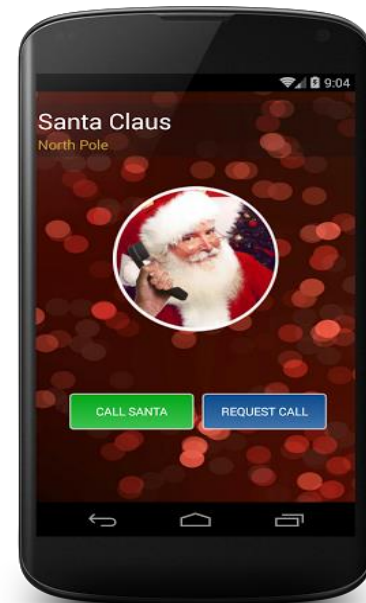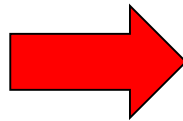
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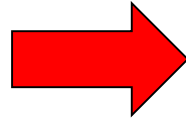2019.11.05

LAB: Android App Development

Note: this lab includes three questions (Q1-Q3) as described below. Please ask your primary TA during the lab if you have any questions.

Start with Dialing Calls

Q1: Develop "MyCall.apk" to allow dialing calls

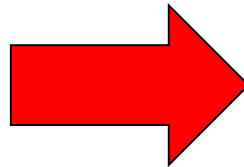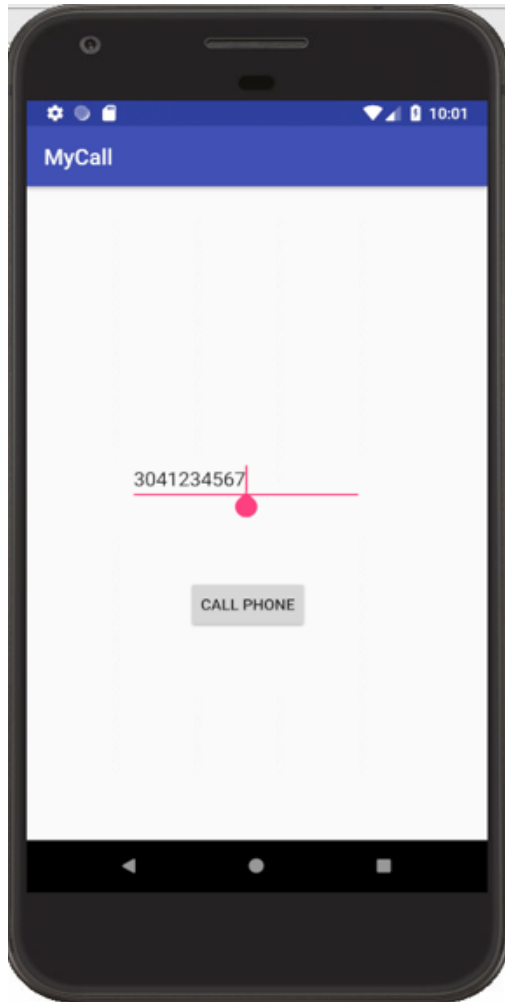**HW3-P2-Q1 (10pts): Using Android Studio to Develop "myCall.apk"**

Due date: 11/05/2019 @ 11:59pm.

❑ **Step1:** Download and install Android studio.

❑ **Step2:** Write an app to enable dialing calls using the *CALL_PHONE* functionality provided by Andriod OS and produce the "myCall.apk".
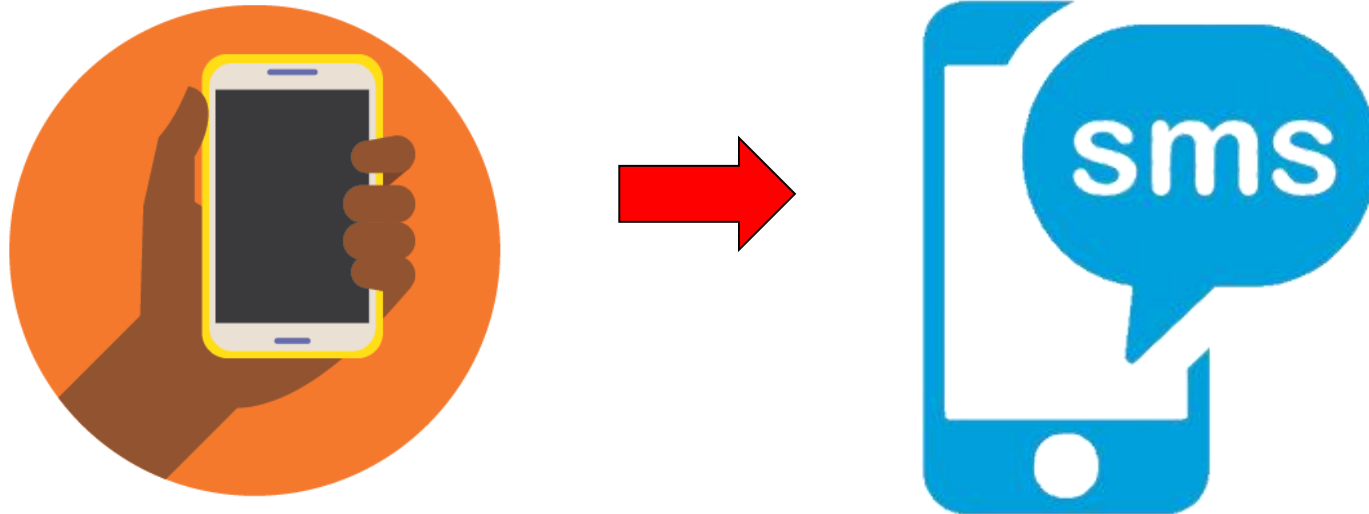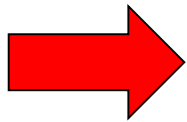
Using Android Studio to Develop "MyCall.apk"

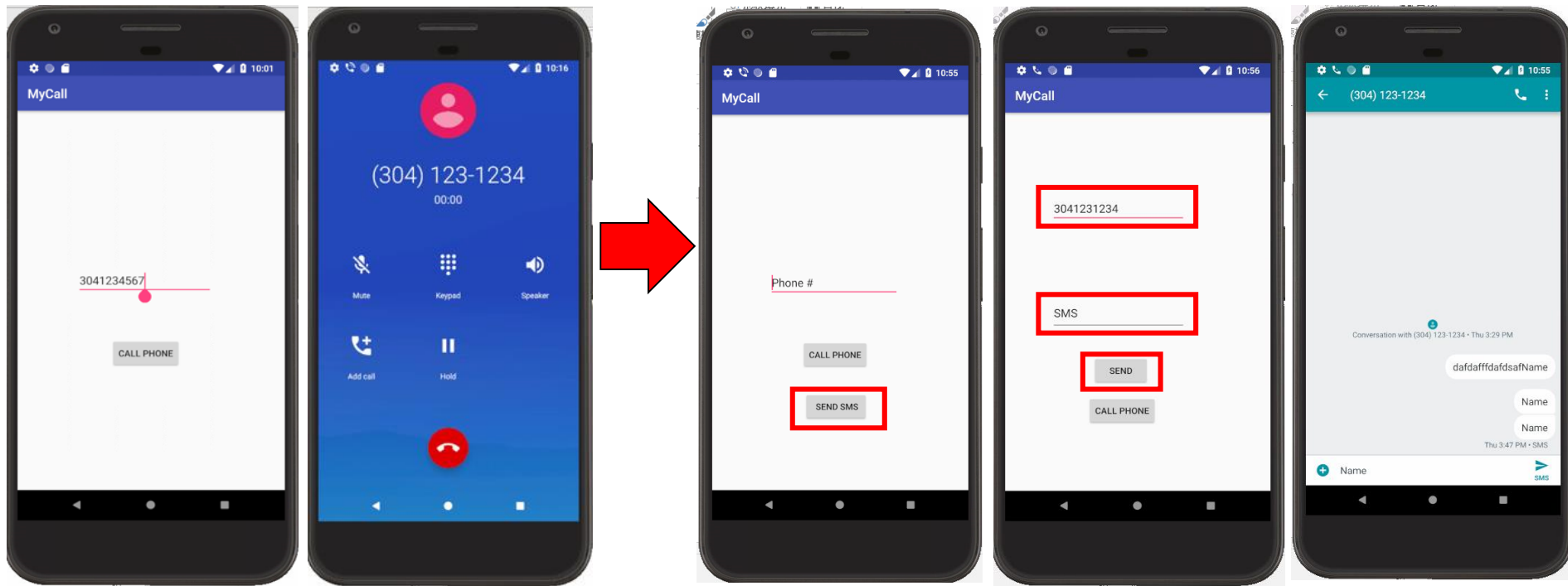**Q2:** Enhance "MyCall.apk" to allow sending SMS

Enhance "MyCall.apk" to allow sending SMS

HW3-P2-Q2 (10pts): Using Android Studio to Develop "myCall.apk"

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New GUI
(i.e., new activity)

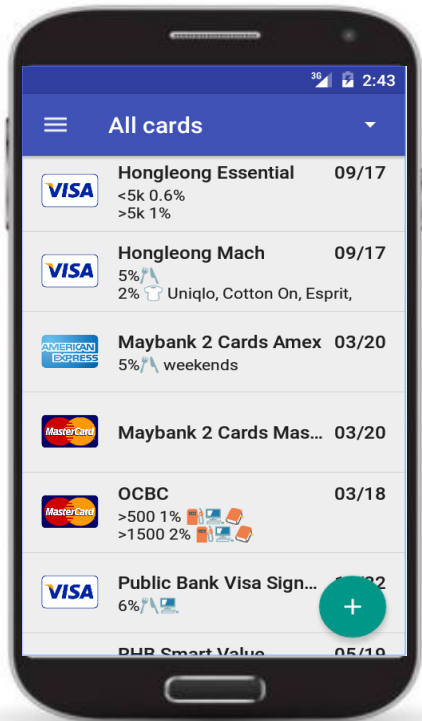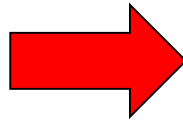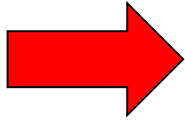# Hint: Use Intent to Enable Interaction between Activities in an APP

Recap: Intent

❑ An **Intent** is a messaging object that provides runtime binding between separate components, such as two activities/apps, where it can be thought of as the glue between activities/apps. The Intent represents an app's "**intent to do something**."

- **Implicit intents** do not name a specific component, but instead declare a general action to perform, which allows a component from another app to handle it. For example, *CALL_PHONE*.

- **Explicit intents** specify which application will satisfy the intent, by supplying either the target app's package name or a fully-qualified component class name. You'll typically use an explicit intent to start a component in your own app, because you know the class name of the activity or service you want to start.

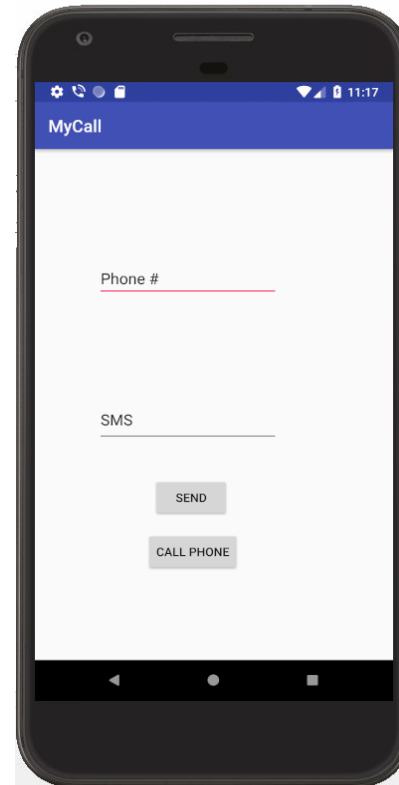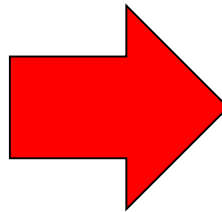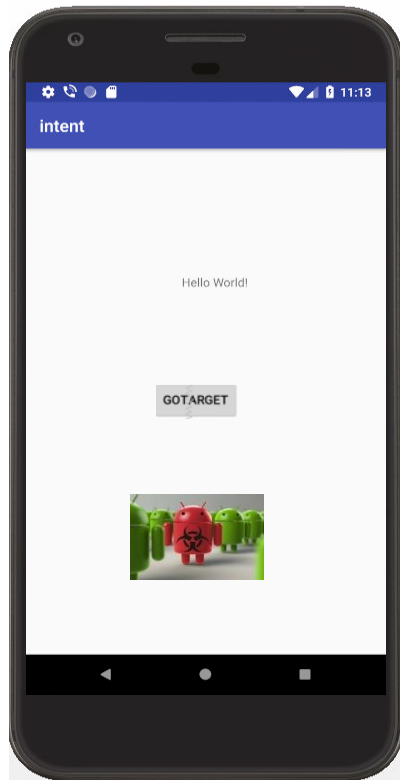**Q3:** How can Android malware exploit MyCall app?

Develop "MalDroid.apk" to invoke "MyCall.apk"

HW3-P2-Q3 (10pts): Using Develop "MalDroid.apk" to invoke "MyCall.apk"

Due date: 11/05/2019 @ 11:59pm.

Hint: Use Intent to Enable Interaction between Apps