1. What is Android? Who created it? What are Android Apps?

Android is a mobile operating system based on a modified version of the Linux kernel and other open source software, designed primarily for touchscreen mobile devices such as smartphones and tablets

Android Inc. was founded in Palo Alto, California, in October 2003 by **Andy Rubin**, **Rich Miner**, **Nick Sears**, and **Chris White**. **Rubin**.

An android app is a software application running on an android operating system.

2. What is the software used in the development of Android Apps?

Android studio is used in development of android apps.

3. Which are the languages commonly used in the development of android apps? Which language does InstiApp use?

Java is most commonly used in development of android apps.Though Kotlin is now the recommended language.XML is used in writing layouts or in vector assets.

Note: It is possible to develop C and C++ app using the Android Native Development Kit (NDK), however it isn't something that Google promotes.
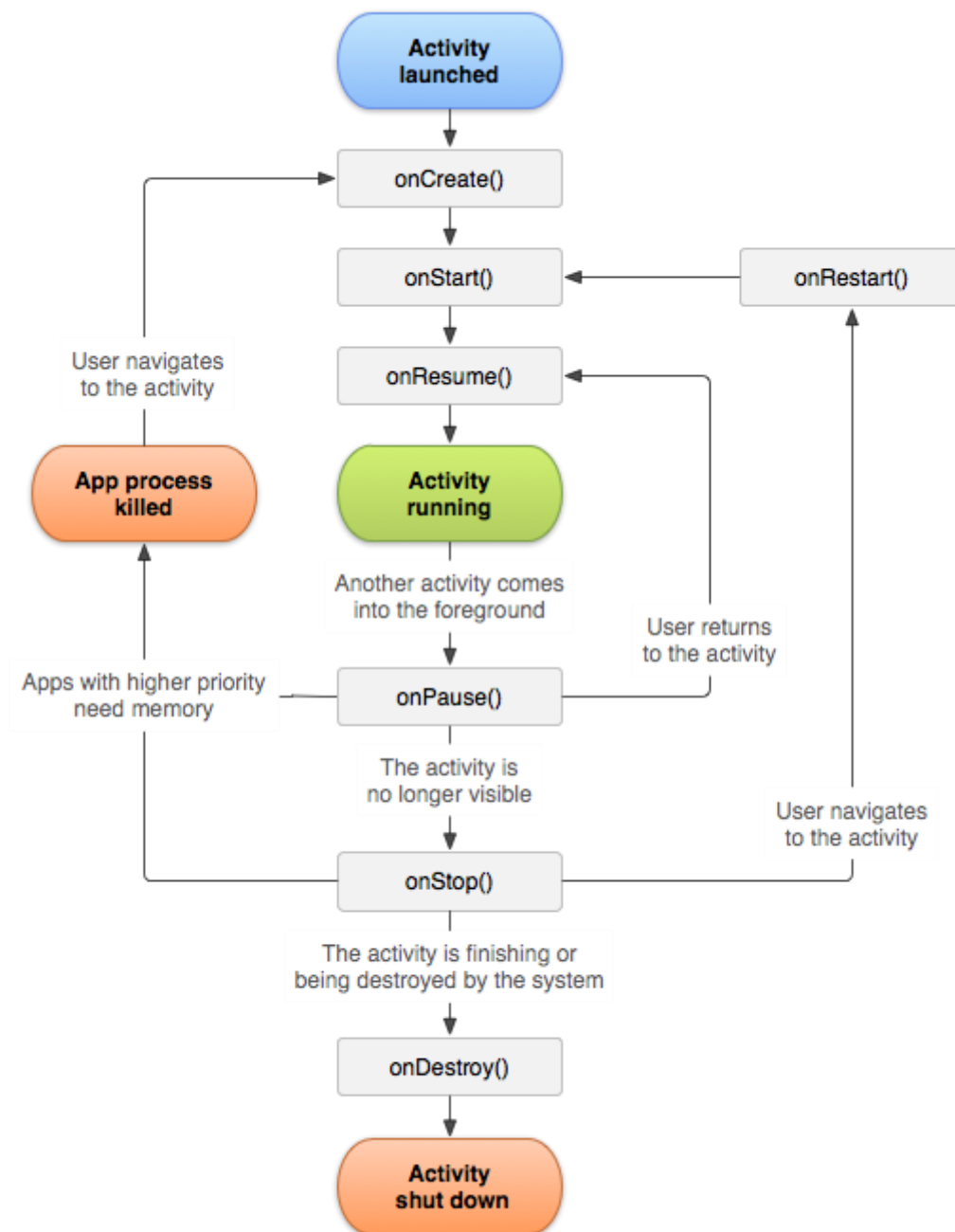
4. What is the activity cycle of a basic Android application? Diagrams/flowcharts preferred.

As a user navigates through the app, [Activity](#) instances in your app transition through different stages in their life-cycle. The Activity class provides a number of callbacks that allow the activity to know that a state has changed: that the system is creating, stopping, or resuming an activity, or destroying the process in which the activity resides.

Life Cycle Methods and Callbacks

In general, activity lifecycle has seven callback methods:

1. onCreate()
2. onStart()
3. onResume()
4. onPause()
5. onStop()
6. onRestart()
7. onDestroy()

Activity
launched

onCreate()

onStart()

onRestart()

onResume()

User navigates
to the activity

App process
killed

Activity
running

Another activity comes
into the foreground

User returns
to the activity

Apps with higher priority
need memory

onPause()

The activity is
no longer visible

User navigates
to the activity

onStop()

The activity is finishing or
being destroyed by the system

onDestroy()

Activity
shut down

5. What are 5 different UI elements in an android app? One example is a "TextView".

TextView , Button, ProgressBar , ImageView , CheckBox

6. [BONUS]What are some of the salient features of those languages (part c)? How similar are they to C++?

Features of XML

- XML focuses on data rather than how it looks

- Easy and efficient data sharing

- Supports platform transition

- Simplifies Platform change

Features of Java

- Simple syntax making it easy to learn

- Object-Oriented

- Platform Independent
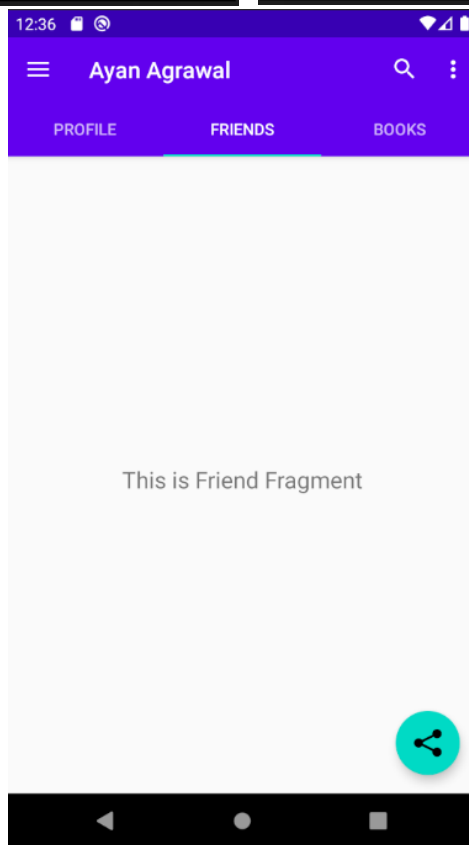
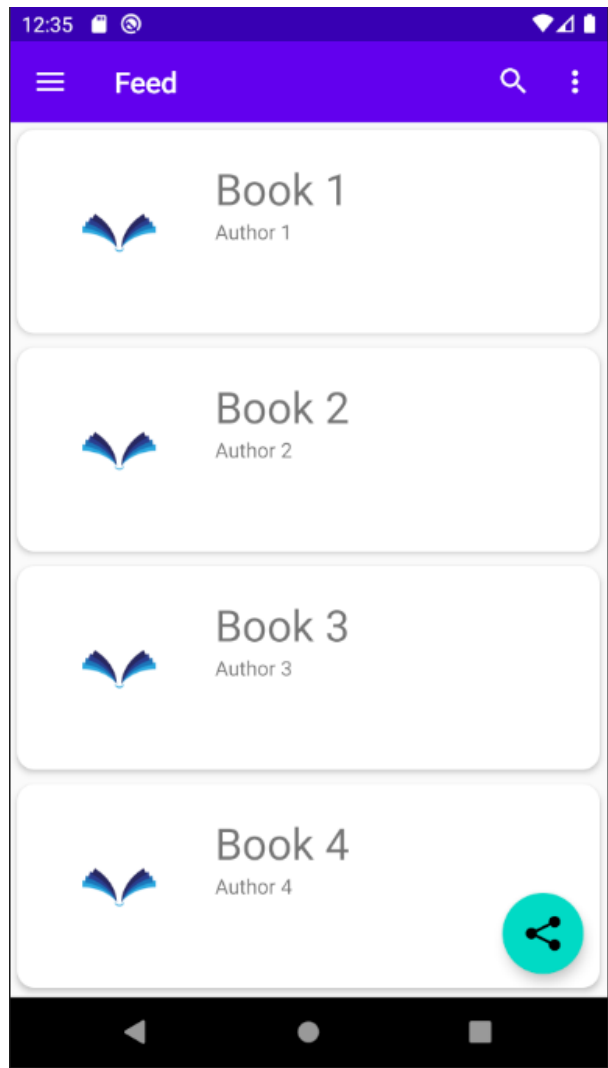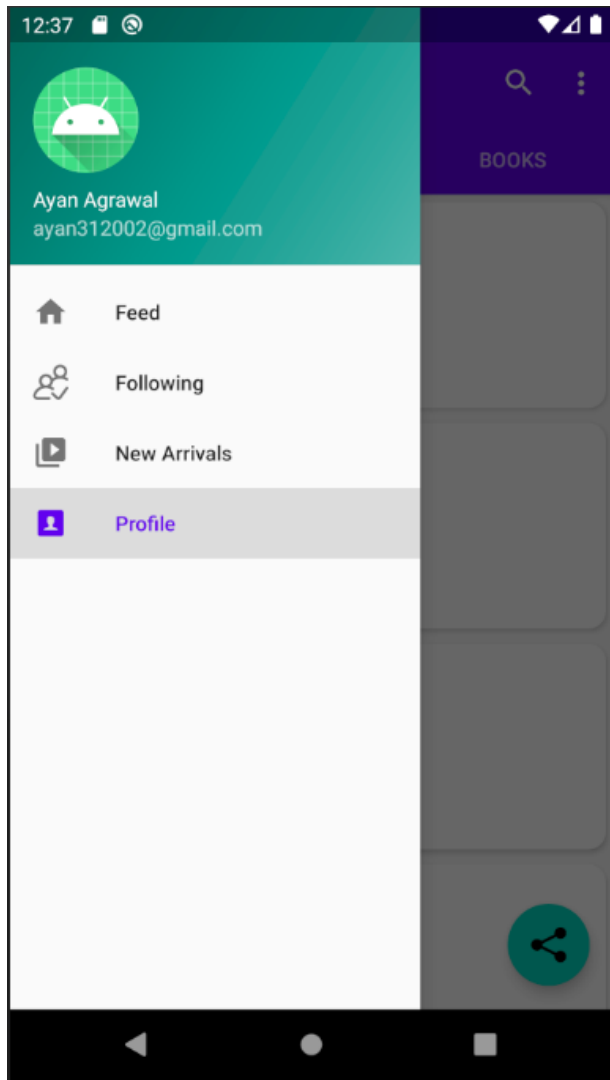- Secured since it runs insides a virtual machine sandbox

Features of Kotlin

- Concise code
- Null safety
- Expressive code
- Modern features
- Interoperability with Java
- JavaScript transpilation
- Native conversion (Kotlin Native)

Similarity of Java with C++

- Similar syntax
- Object-Oriented Both C++ and Java are object-oriented languages, which makes your program much more modular so you can reuse code for other programs.

TASK

Github Link: https://github.com/ayan312002/Book-ED

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