**PRACTICAL # 01**

**OBJECT:**

Setting up Android Application Development Tools

**THEORY:**

The development tools for Android based application include the following:

- Android Studio

- Android SDK (any newer versions)

- Emulator

The Android studio is IDE used for designing, compiling and debugging Android applications. It also facilitates signing and publishing the applications. Android SDK ( Software Development Kit ) provides tools required to build Android apps. The Android SDK now comes bundled with Android Studio.

Android SDK consists of several components including:

Platform-tools

Build-tools

SDK-tools

The Android Debug Bridge (ADB)

Android Emulator

Finally, the emulator is also a part of Android SDK that allows the Android applications to be tested on a virtual device, the runs on your computer without needing a physical device.

Android applications are developed using Android SDK, which uses Java. Java is an Object Oriented, Cross-platform programming language. Java uses Java Virtual Machine to run its programs while Android applications use Delvik Virtual Machine.

**Tools Setup:**

Download from the Android Studio homepage <https://developer.android.com/studio/>

Make sure your platform meets the recommended requirements for Android Studio.

Android Studio will automatically detect your operating system.

- Installing Android Studio on 64-bit Windows 8.1

Launch the android-studio-bundle-143.2821654-windows.exe file to start the installation process. Follow the instructions on next page to also install the Android SDK (included with the installer) and an Android Virtual Device (AVD).

Just keep the default settings. After clicking Next, you'll be taken to the license agreement dialog box. Accept the license to continue the installation.

On the next dialog box, you can change the installation locations for Android Studio and the Android SDK or leave default value.

Next, the installer defaults to creating a shortcut for launching this program, or you can decline the shortcut.

The dialog box will inform you when installation has finished.

After installing Android Studio, install android SDK version for specific version of android you want to develop applications.

Finally, setup emulator for corresponding to the version of Android you want to develop applications for.

**ACTIVITIES**

**Activity 1**

Install and setup Android Studio, Android SDK and the Emulator.

**REVIEW QUESTIONS**

1. What is Android Studio?
2. What are the main components of Android SDK?
3. What is the Android Emulator?