

Assignment 1

Aim:

Android development environment. Installing and setting up the environment. Hello world application. Running the emulator. Inserting debug messages.

Objective:

- ☐ Install and use the Android IDE.
- ☐ Understand the development process for building Android apps.
- ☐ Create an Android project from a basic app template.

Theory:

Android Studio is Google's IDE for Android apps. Android Studio gives you an advanced code editor and a set of app templates. In addition, it contains tools for development, debugging, testing, and performance that make it faster and easier to develop apps. You can test your apps with a large range of preconfigured emulators or on your own mobile device, and build production APKs for publication.

To get up and running with Android Studio:

- ☐ You may need to install the Java Development Kit - Java 7 or better.
- ☐ Install Android Studio

Installing Android Studio

1. Navigate to the Android developers site and follow the instructions to download and install Android Studio.
 - o Accept the default configurations for all steps.
 - o Make sure that all components are selected for installation.
2. After finishing the install, the Setup Wizard will download and install some additional components. 3. When the download completes, Android Studio will start, and you are ready to create your first project.

Create the "Hello World" app

1. Launch Android Studio.
2. In the main **Welcome to Android Studio** window, click "Start a new Android Studio project". 3. In the **New Project** window, give your application an **Application Name**, such as "Hello World". 4. Verify the Project location, or choose a different directory for storing your project. 5. Choose a unique **Company Domain**.
6. Verify that the default **Project location** is where you want to store your Hello World app and other Android Studio projects, or change it to your preferred directory. Click Next.

7. On the **Target Android Devices** screen, "Phone and Tablet" should be selected.
8. Click **Next**.
9. If your project requires additional components for your chosen target SDK, Android Studio will install them automatically. Click **Next**.
10. **Customize the Activity** window. Every app needs at least one activity. An activity represents a single screen with a user interface and Android Studio provides templates to help you get started. For the Hello World project, choose the simplest template (as of this writing, the "Empty Activity" project template is the simplest template) available.
11. It is a common practice to call your main activity MainActivity. This is not a requirement.
12. Make sure the **Generate Layout file** box is checked (if visible).
13. Make sure the **Backwards Compatibility (App Compat)** box is checked.
14. Leave the **Layout Name** as activity_main. It is customary to name layouts after the activity they belong to. Accept the defaults and click **Finish**.

After these steps, Android Studio:

- ☐ Creates a folder for your Android Studio Projects.
- ☐ Builds your project with Gradle (this may take a few moments). Android Studio uses Gradle as its build system. See the Configure your build developer page for more information.
- ☐ Opens the code editor with your project.
- ☐ Displays a tip of the day.

In Android Studio, select **Run > Run app** or click the **Run icon** in the toolbar.

In the **Select Deployment Target** window, under **Available Emulators**, select **Nexus 5 API 23** and click **OK**. The emulator starts and boots just like a physical device. Depending on the speed of your computer, this may take a while. Your app builds, and once the emulator is ready, Android Studio will upload the app to the emulator and run it.

Conclusion:

Thus we know how to Install and use the Android IDE. Also we understand the development process for building Android apps. We have created an Android project from a basic app template.