

MOBIL APP DEVELOPMENET LAB

WEEK 1: Install Android Studio and Create Hello World App

Android Studio provides a complete integrated development environment (IDE) including 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, build production apps, and publish on the Google Play store.

PROCEDURE:

Phase 1: Install Android Studio

Phase 2: Create Hello World App

Step 1: Open Android Studio

Step 2: In the main Welcome to Android Studio window, click **New Project**

Step 3: choose Empty Activity

Step 4: Enter Project Details

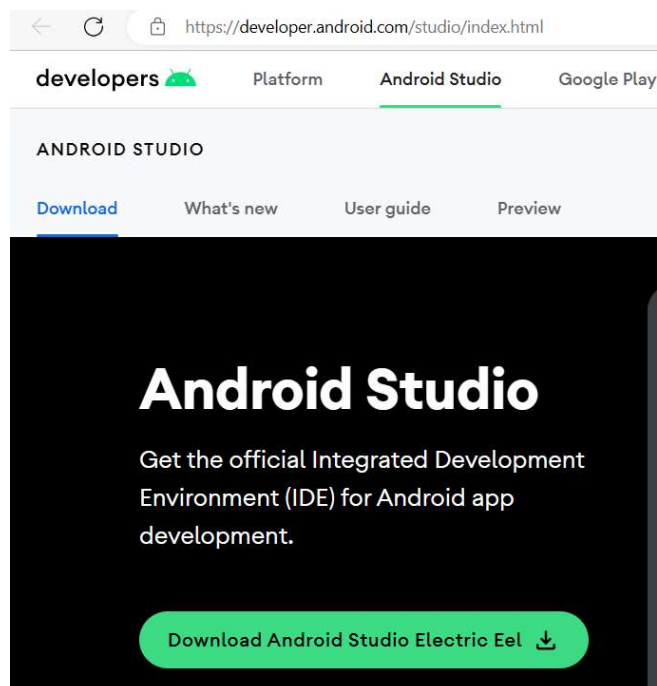
Step 5: Explore Project Details

Step 6: Study Code

Step 7: Use Android Virtual Device (Emulator)

Step 8: Run the App on the Virtual Device

Phase 1: Install Android Studio



Procedure:

Step 1: Download from <https://developer.android.com/studio/index.html>

Step 2: Run Setup → Next... → Finish

Step 3: Import Studio Setting Option → Do not Import Settings

Step 4: Install Type Option → Standard

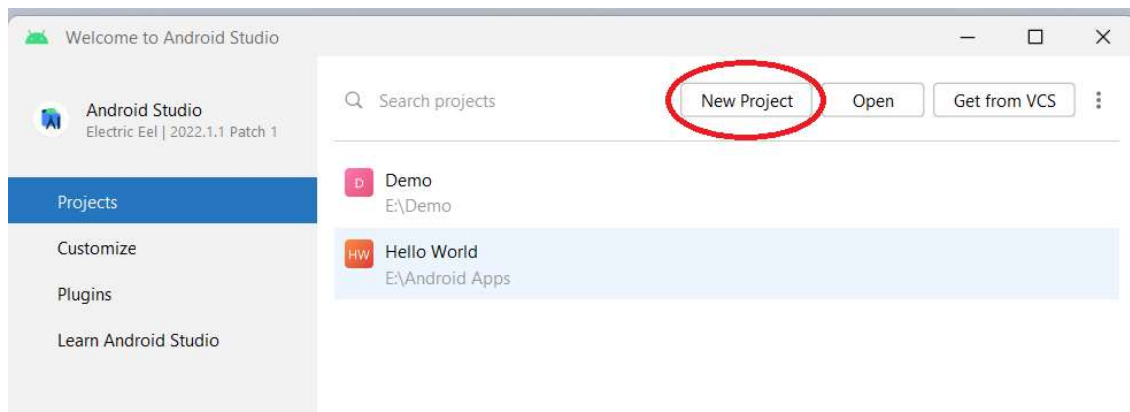
Step 5: Select UI Theme → Done

Phase 2: Create Hello World App

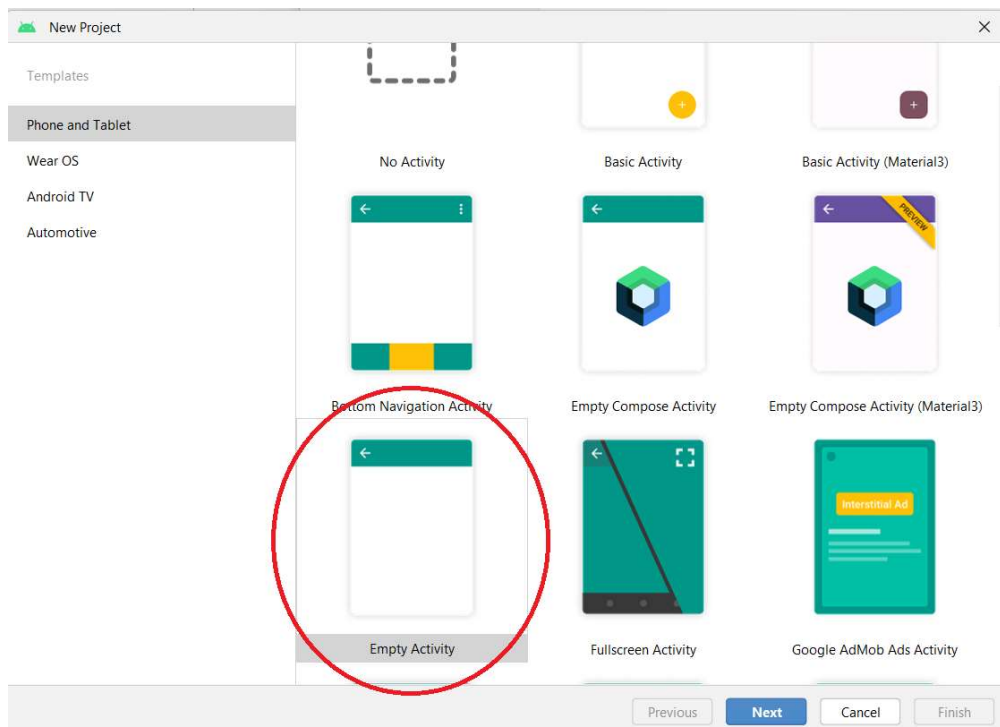
Procedure:

Step 1: Open Android Studio

Step 2: In the main Welcome to Android Studio window, click **New Project**



Step 3: choose Empty Activity



Step 4: Enter Project Details

Enter Name → Accept Default Package Name → Choose Save Location → Select Language → Select Minimum SDK → Click Finish Button

The screenshot shows the 'New Project' dialog in Android Studio. The dialog is titled 'New Project' and has a close button (X) in the top right corner. Below the title, it says 'Empty Activity' and 'Creates a new empty activity'. There are five main input fields: 'Name' (Hello World), 'Package name' (com.example.helloworld), 'Save location' (E:\RAMBABU\MRU\2022-23 EVEN SEMESTER\MAD LAB\Lab Manual\Projects), 'Language' (Java), and 'Minimum SDK' (API 24: Android 7.0 (Nougat)). Below these fields, there is an information icon and text: 'Your app will run on approximately 94.4% of devices. Help me choose'. There is also a checkbox for 'Use legacy android.support libraries' with a question mark icon. At the bottom, there is a warning icon and text: 'project location should not contain whitespace, as this can cause problems with the NDK tools.' At the bottom right, there are four buttons: 'Previous', 'Next', 'Cancel', and 'Finish'. The 'Finish' button is highlighted with a red circle.

Android Studio creates a folder for your projects, and builds the project with Gradle.

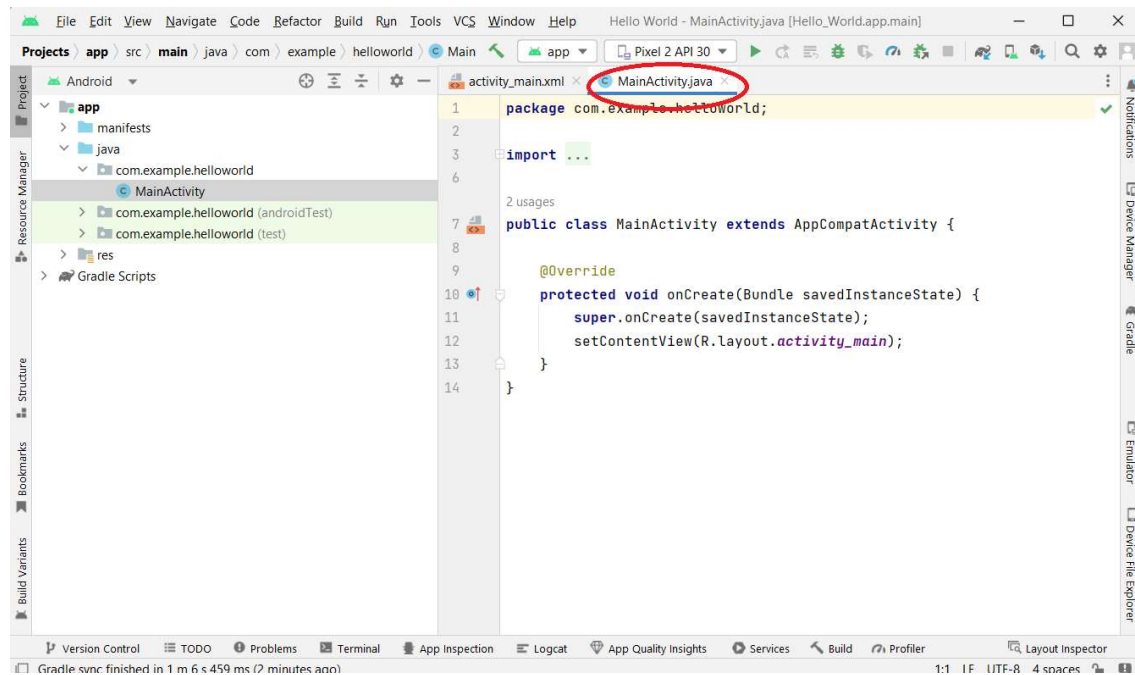
You may also see a "Tip of the day" message with keyboard shortcuts and other useful tips. Click **Close** to close the message.

The Android Studio editor appears. Follow these steps:

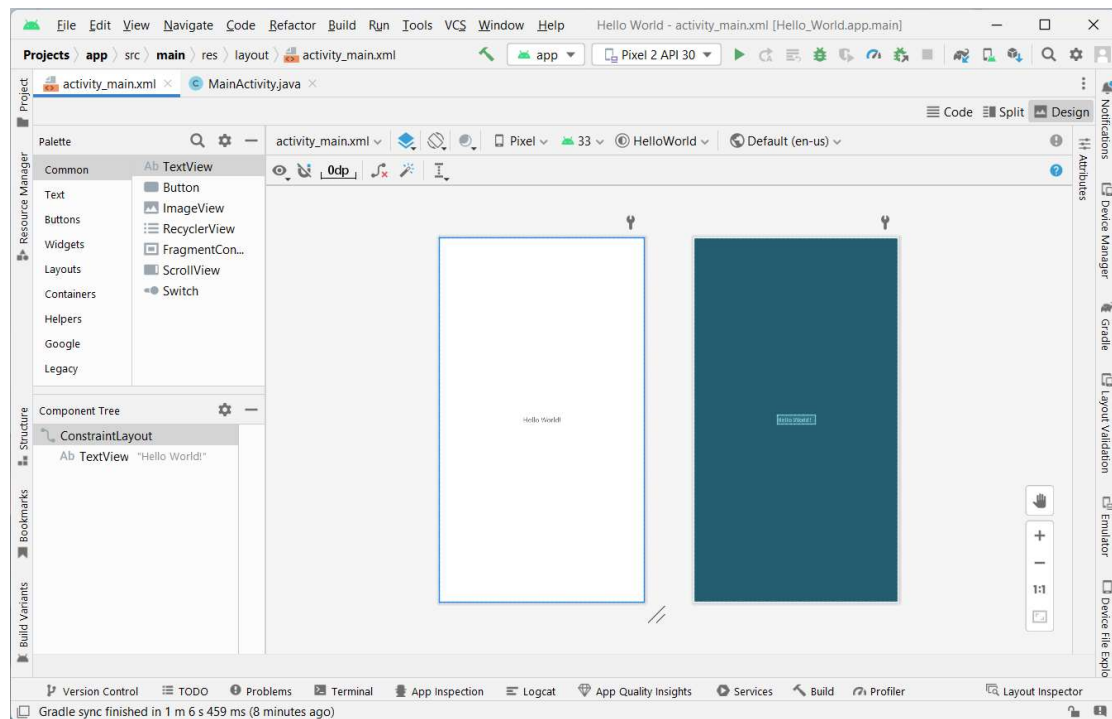
1. Click the **activity_main.xml** tab to see the layout editor.
2. Click the layout editor **Design** tab, if not already selected, to show a graphical rendition of the layout as shown below.

Step 5: Explore Project

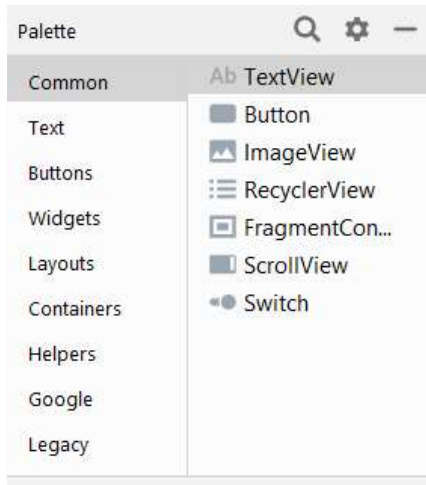
MainActivity.xml



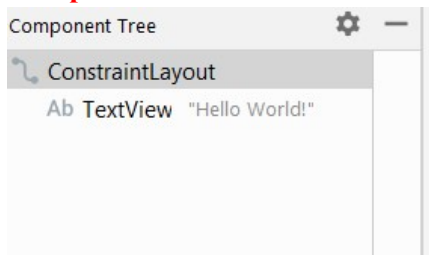
activity_main.xml



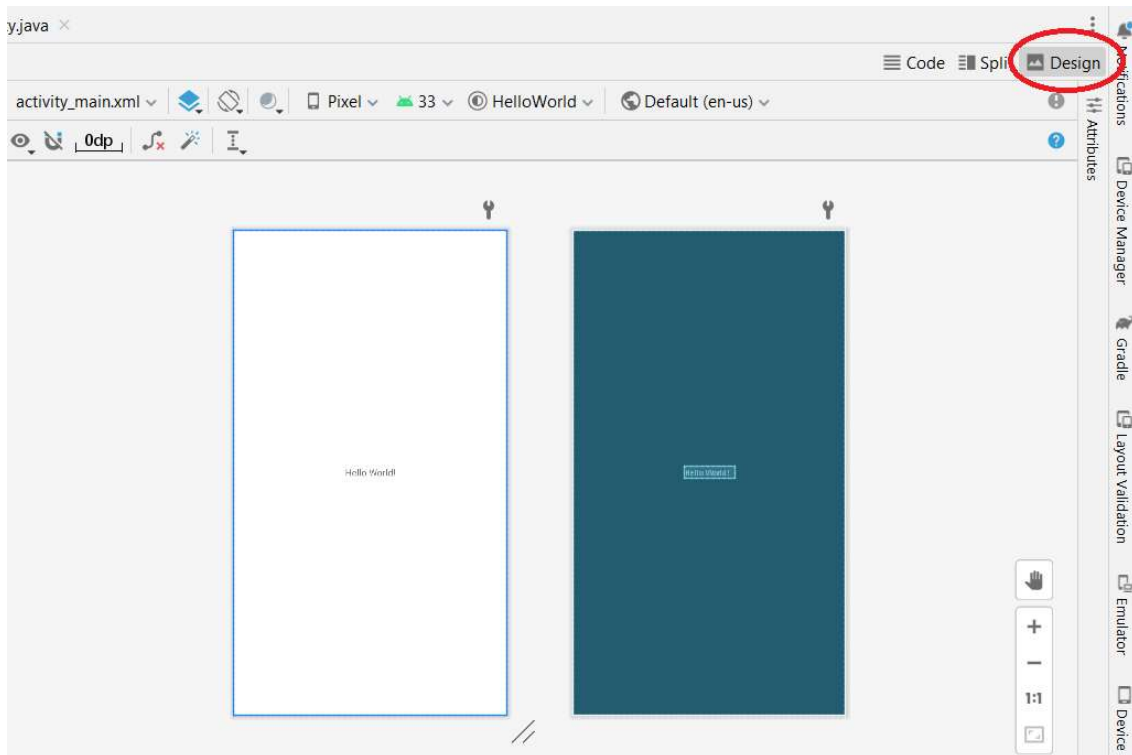
Palette



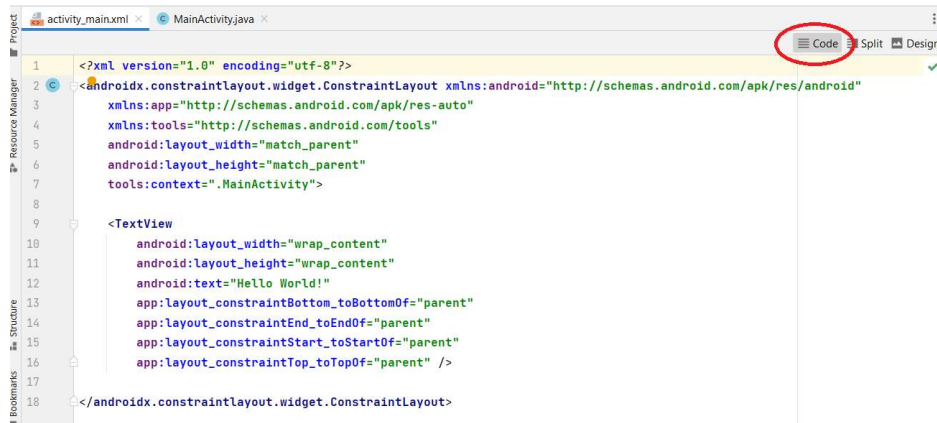
Component Tree



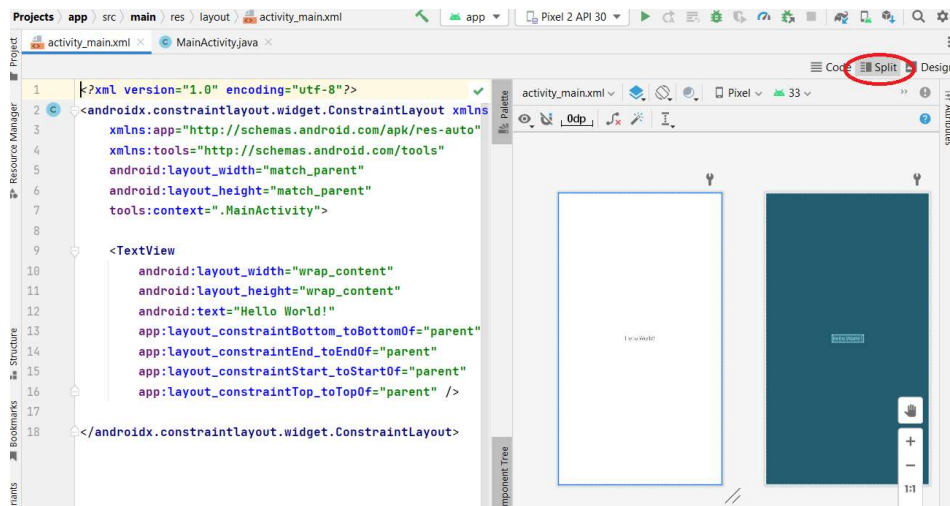
Design View



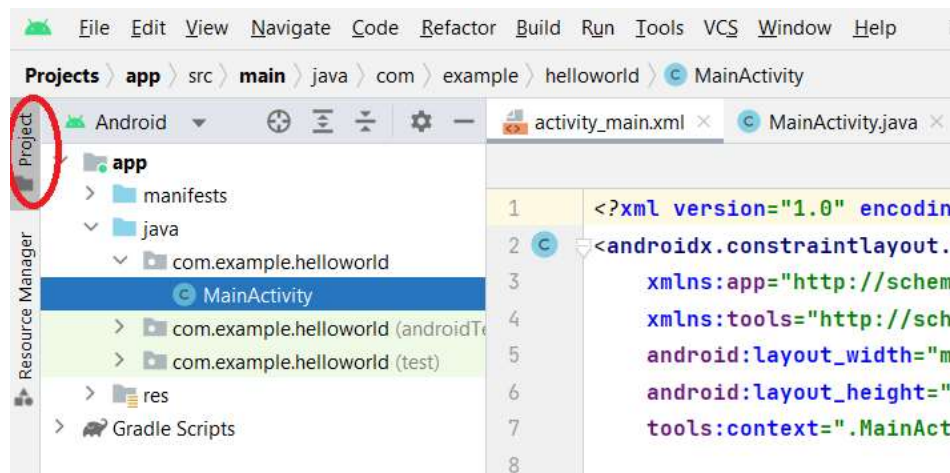
Code View



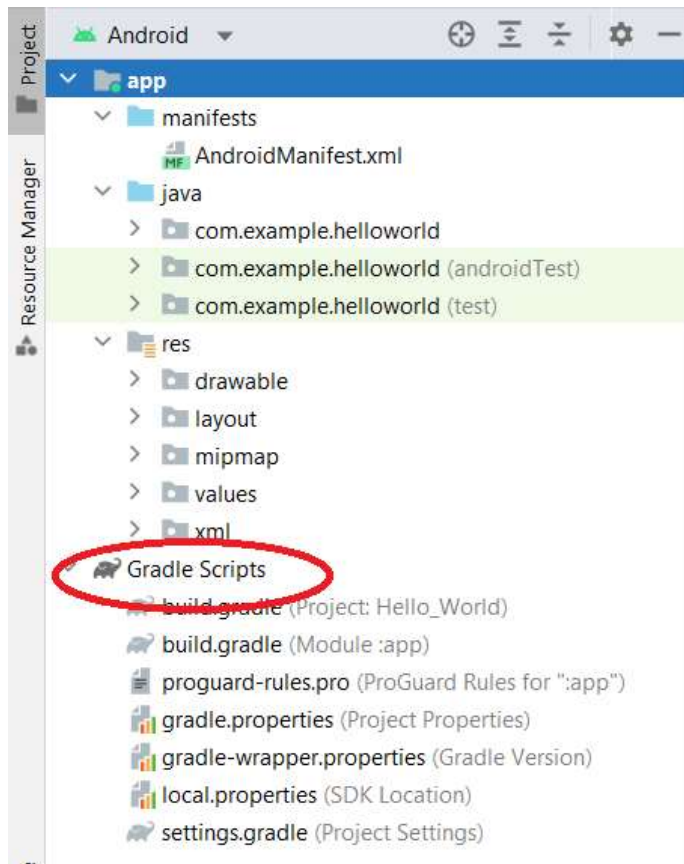
Split View



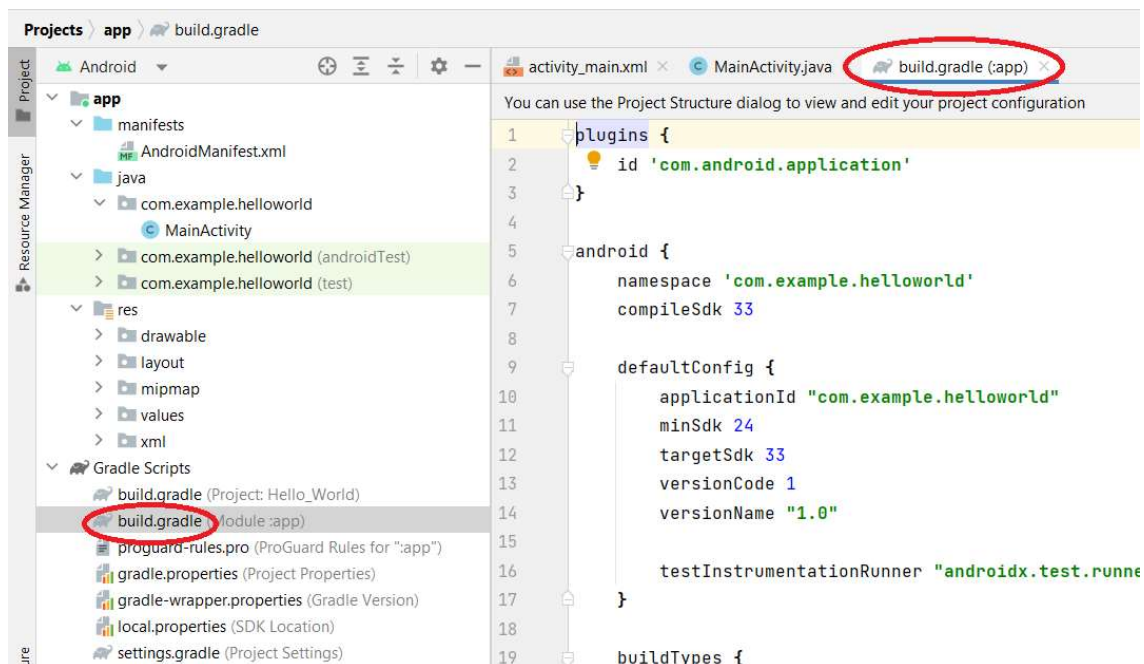
Project Pane



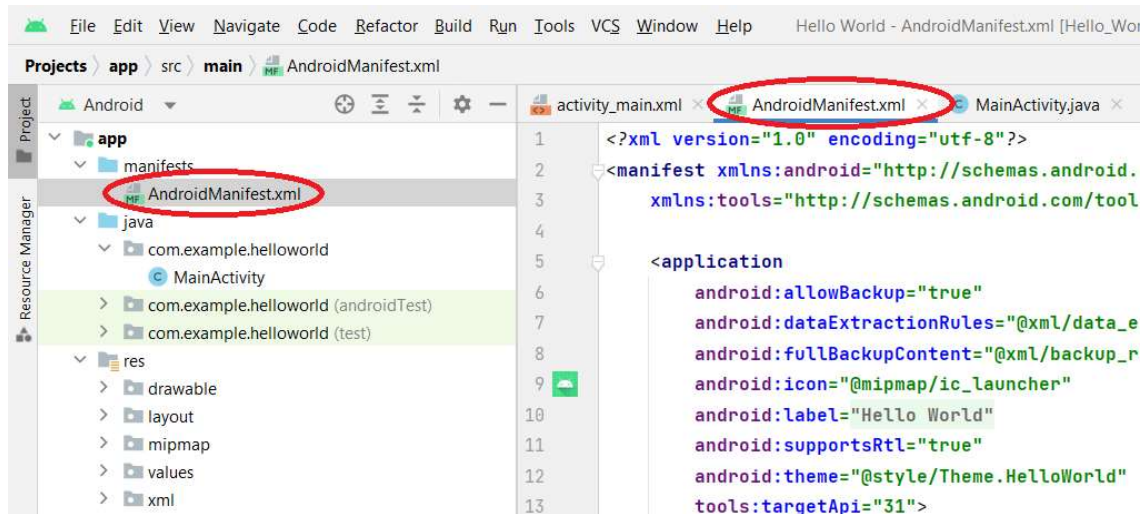
Gradle Scripts



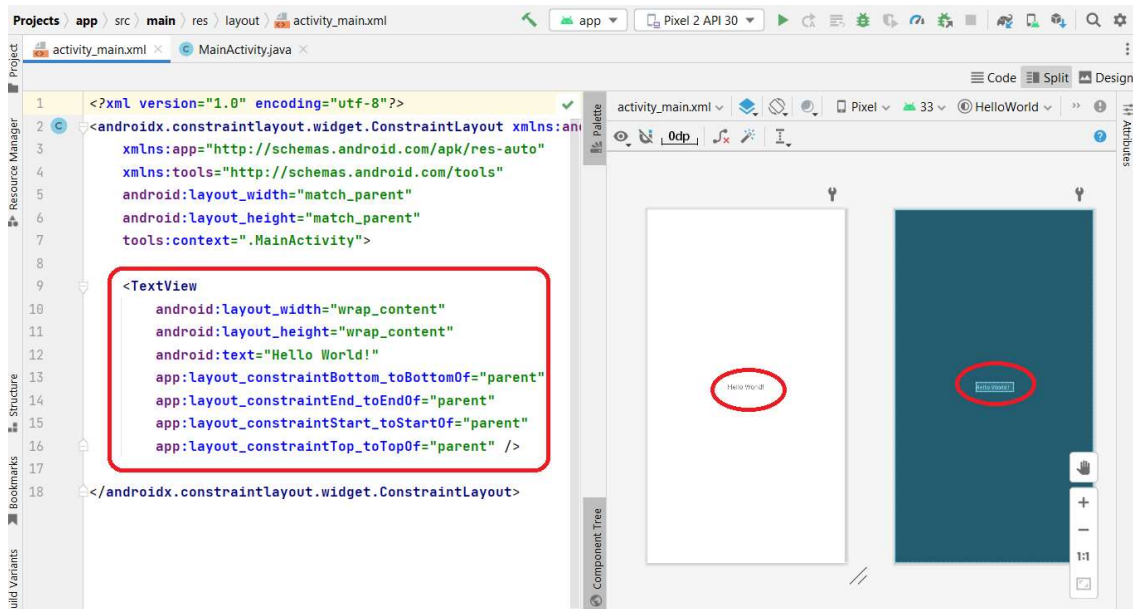
build.gradle



AndroidManifest.xml



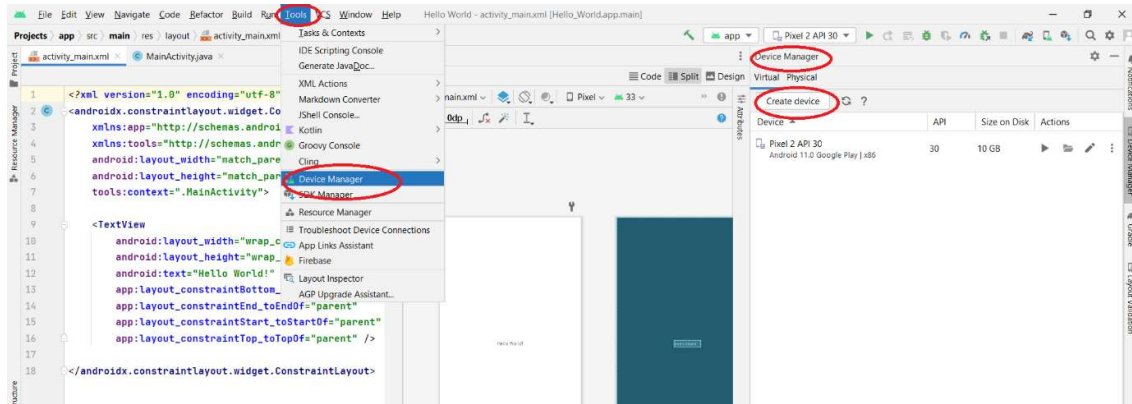
Step 6: Study Code (TextView Component)



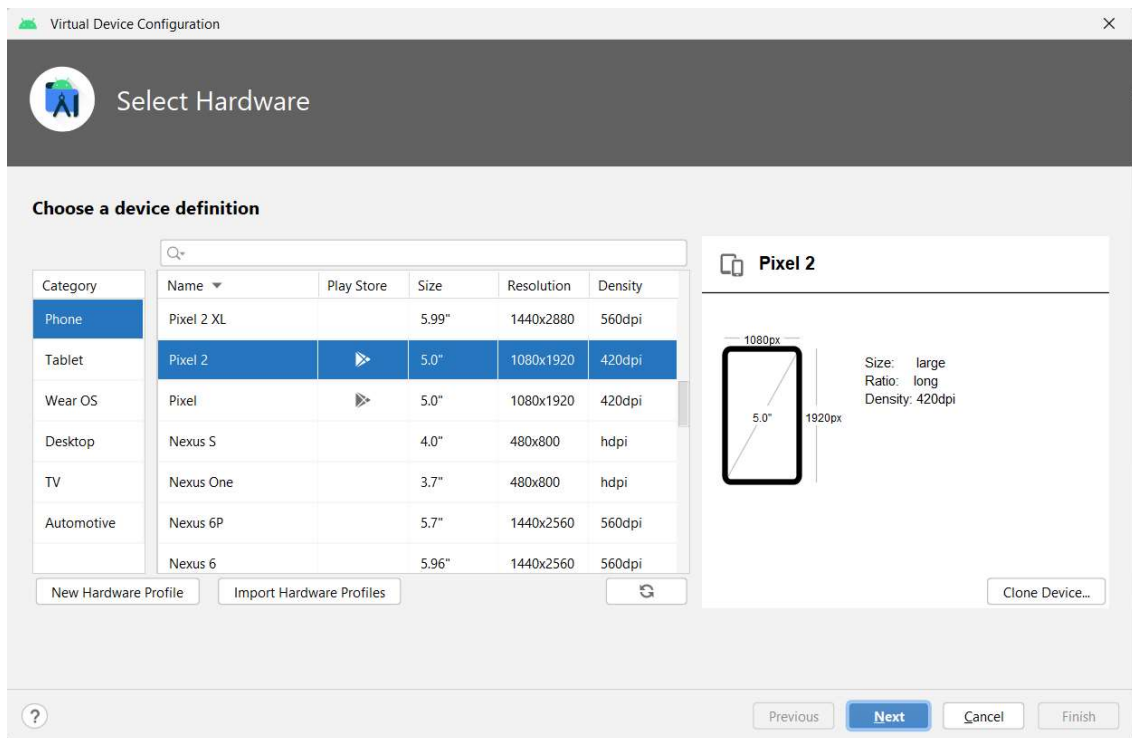
Step 7: Use Android Virtual Device (Emulator)

Create Android Virtual Device (AVD):

Menu → Tools → Device Manger → Create Device

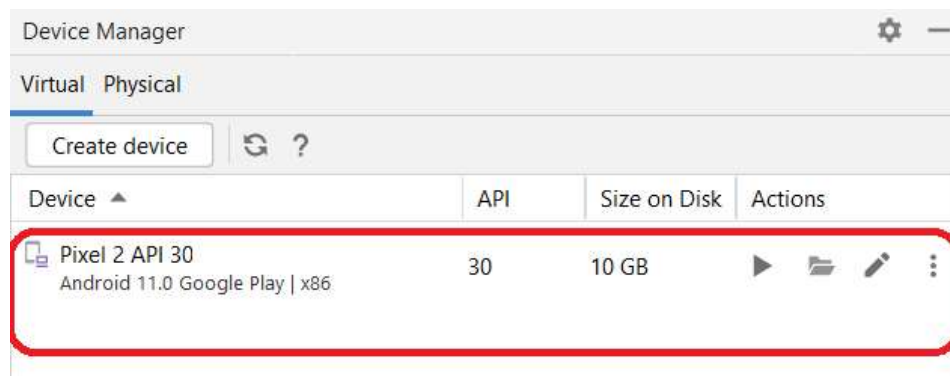


Choose Device Definition → Select Category (**Phone**) → Select Pixel 2 → Next → Select System Image → Install → Next



Verify Configuration → Finish

Device will be added.



Step 8: Run the App on the Virtual Device

