# Installing Android Studio:

* + I visit the official Android Studio download page.
  + I select my operating system and download the latest stable version.
  + Once the download finishes, I open the installation file.
  + I run the .exe file and follow the on-screen instructions.
  + After installation I launched Android Studio for the first time.
  + During the initial setup, Android Studio guides me through downloading the necessary SDK components.
  + I choose a standard installation and ensure I download all the required SDK tools.
  + In Android Studio, I go to the AVD Manager from the "Tools" menu.
  + I create a new virtual device by choosing a hardware profile (like Pixel 4) and selecting a system image (e.g., API 30).
  + I finish the setup and start the AVD to ensure it works properly.

# Creating an Android App for "Hello Universe":

* + I open Android Studio.
  + I click on "Start a new Android Studio project."
  + I select "Empty Activity" and click "Next."
  + I name my application (e.g., "Hello Universe").
  + I set the package name (e.g., com.example.hellouniverse).
  + I choose a location to save my project.
  + I select the language (Java).
  + I set the minimum SDK to API 21: Android 5.0 (Lollipop).
  + I click "Finish."
  + I navigate to activity\_main.xml
  + Then I added the code as follows:

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android[="http://schemas.android.com/apk/res/android](http://schemas.android.com/apk/res/android)"

xmlns:app[="http://schemas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:too[ls="http://schemas.android.com/tools"](http://schemas.android.com/tools) android:id="@+id/main"

android:layout\_width="match\_parent" android:layout\_height="match\_parent" tools:context=".MainActivity">

<TextView

android:layout\_width="223dp" android:layout\_height="33dp" android:text="Hello Universe!"

android:textAlignment="center" android:textSize="25dp"

app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

# Running The Application:

* + I make sure there are no errors in my code by checking the build output at the bottom of Android Studio.
  + **I select the target device:**
  + **For a physical device:** I connect my Android device via USB. I enable Developer Mode and USB Debugging on the device.
  + **For an AVD:** I ensure the virtual device is running in the AVD Manager.
  + I click the "Run" button (green triangle) in Android Studio.
  + **Output:**

