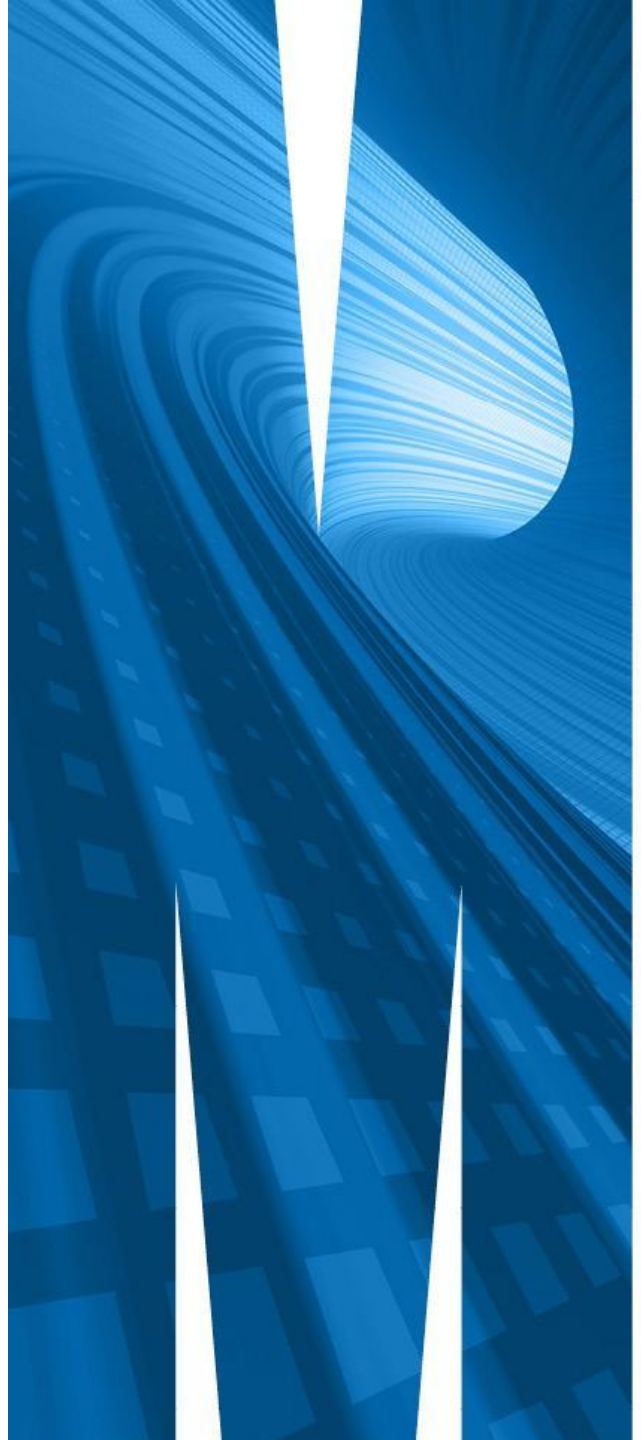


FIT2081 Mobile Application Development

WEEK 1

Dr. Lim Chern Hong

Semester 1, 2023
Monash University Malaysia

Introduction: The teaching team Sem 1, 2023

- Lecturer (Malaysia)
  - Dr Lim Chern Hong (lim.chernhong@monash.edu)
    - Please begin the email header with “FIT2081”.
  - Consultation
    - During the tutorial session OR any time with an appointment.

- Tutors (Malaysia)
  - Dr Vee Voon Yee (vee.voonyee@monash.edu)

- TA (Malaysia)
  - Mr. Mahamat Moussa
  - Mr. Wang Hanrui
  - Ms. Yap Sin Yee

Announcement for Week 1

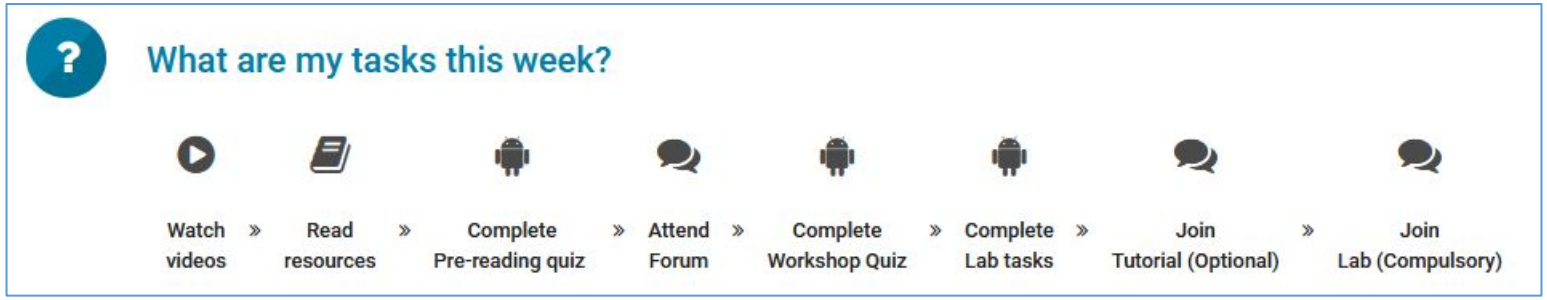
- The **Forum** and **Tutorial** classes will be **fully online**.
- The **Lab will be Physical**.
- Please find the venue and links at the moodle Class timetable (will be updated by Monday 24 Feb 2023).
- Tutorial class and Lab class begins from week 1.
- Pre-reading quiz and workshop quiz will begin from week 2.
- Lab assessment will begin from week 2.

Tool and Language

- Android Studio - https://developer.android.com/studio
- JAVA – Please revise your JAVA with material in week 0

***According to official website, running Android Studio requires at least **8GB RAM + 8GB disk space**. We are practicing “bring your own device (BYOD)” in this unit as you might require more hours to work on your assignments and bring it for interview.

Unit’s teaching and learning activities (From Week 2 onwards)



1&2) Read the slides, the ppt slide is with embedded pre-recorded bite-sized videos for weekly topics

3) Complete Pre-reading quiz (submit before forum)

4) Attend Forum on Monday (Revision and Q&A session)

5) Complete Workshop quiz (opens after forum and closes on Wed 11.55pm)

6) Complete lab tasks

7) Attend tutorial (OPTIONAL), the tutor will explain the lab task and consultation

8) Lab Assessment (COMPULSORY), do extra lab task, conduct interview and give mark on the lab tasks

Activities checklist for week 1

Activity	Notes	Checked?
Study Week 1 Slide Set	Unit's logistics and Application Types	
Study the slide "FIT2081_Week1_Malaysia"	Unit's information and bite-sized videos for weekly topics are embedded. Very useful for tutorial and lab.	
Attend Forum	Live, for topics wrap-up and Q&A	
Complete lab task	Setup Android studio and run your first app. Revise your JAVA.	
Attend tutorial	OPTIONAL – but suggest to join for the first week to get to know your tutor.	
Attend Lab	COMPULSORY – Lab introduction and mock interview will be conducted	

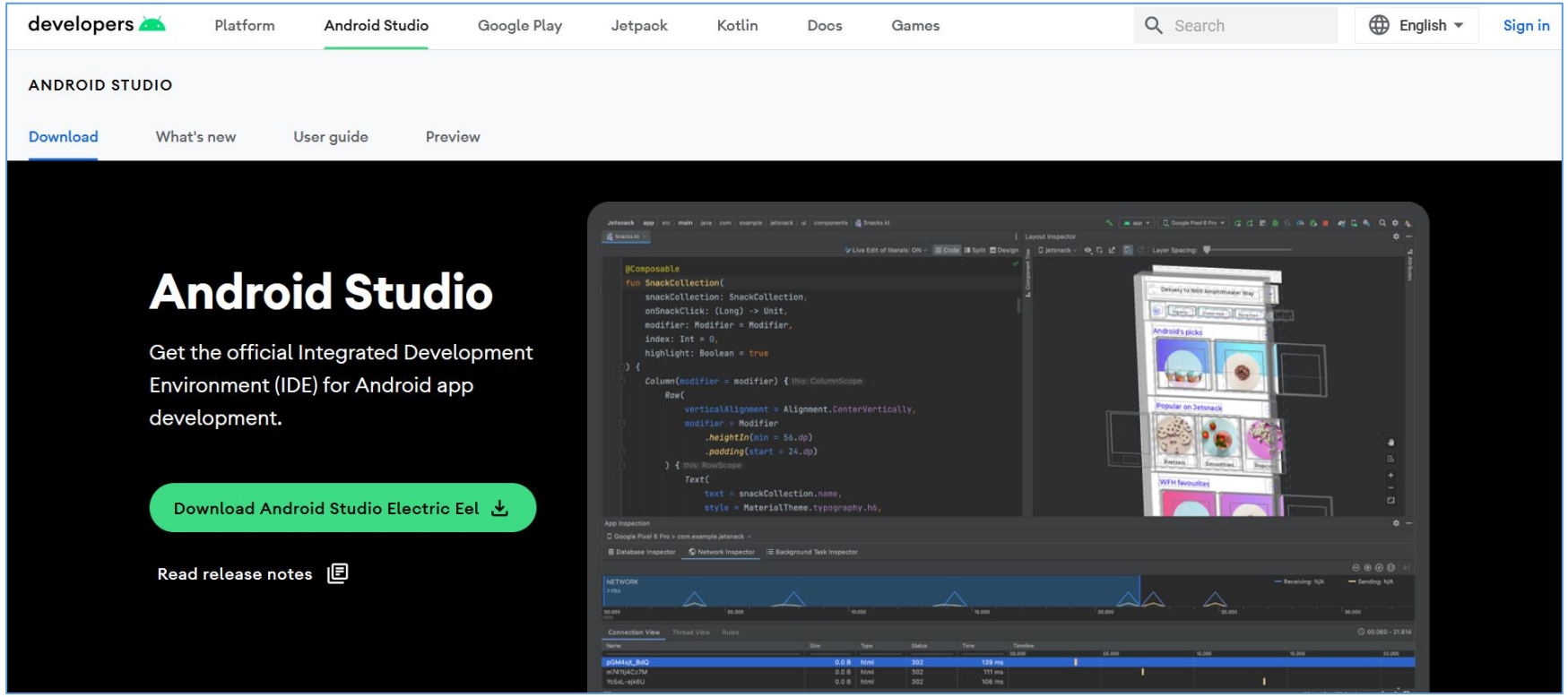
*** Pre-reading quiz and workshop quiz will begin in week 2!

Let’s get started!

Gif retrieved from https://giphy.com/

Tutorial on Android Studio Setup

1) Installation: Please download android studio from https://developer.android.com/studio and perform the installation.



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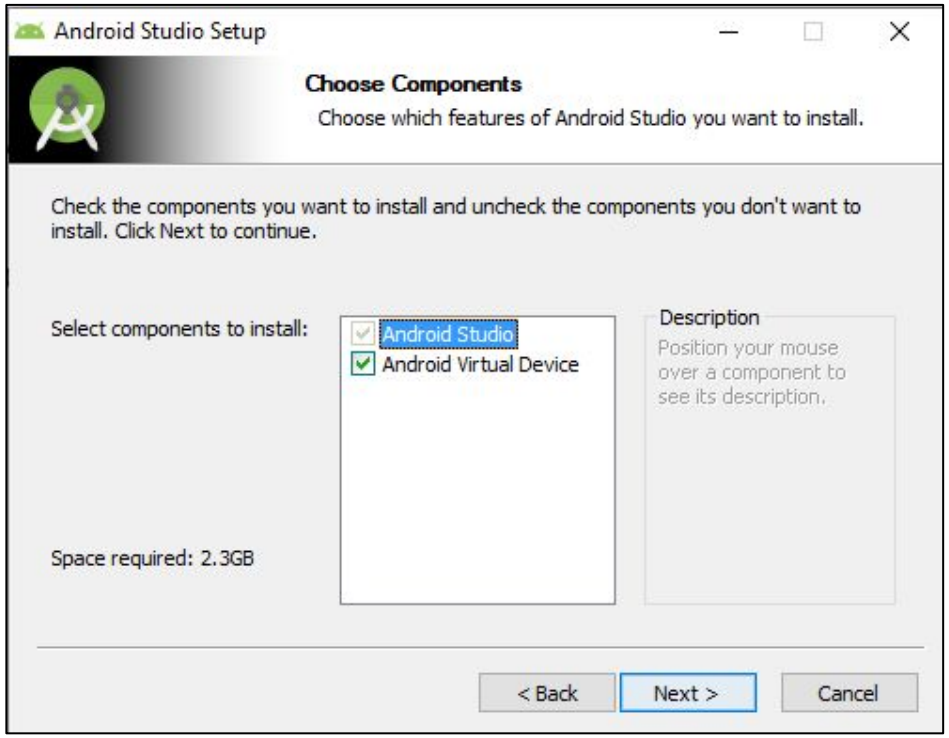

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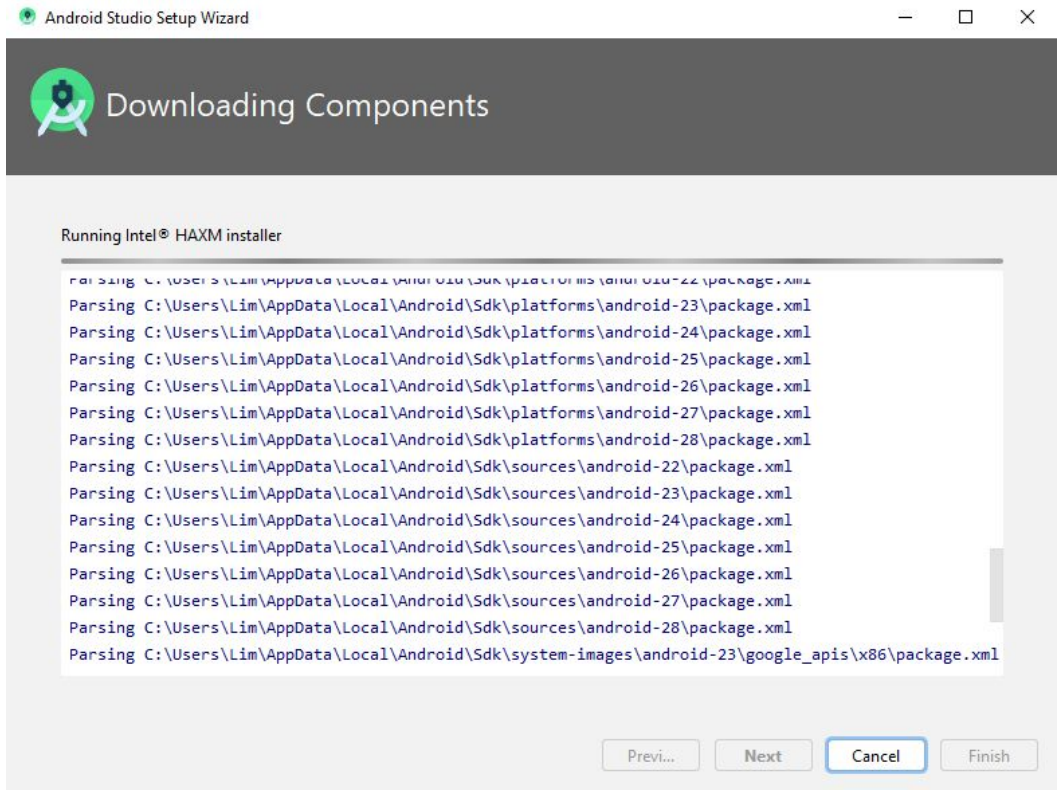
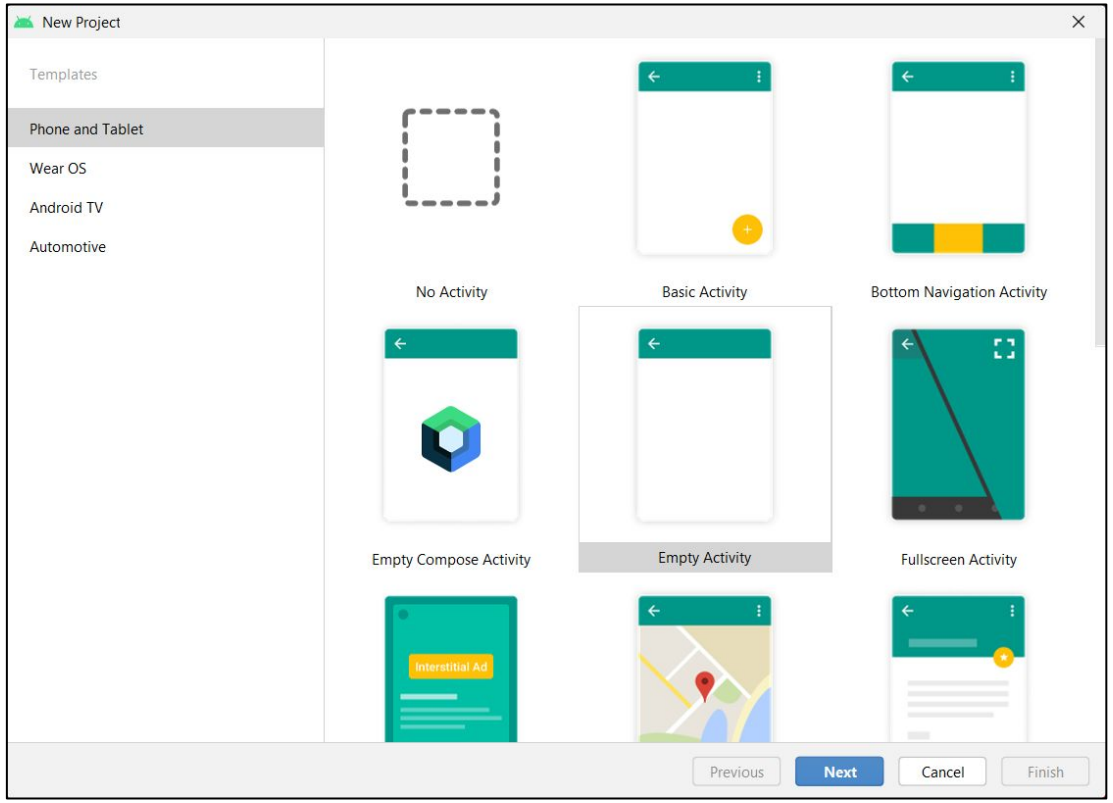
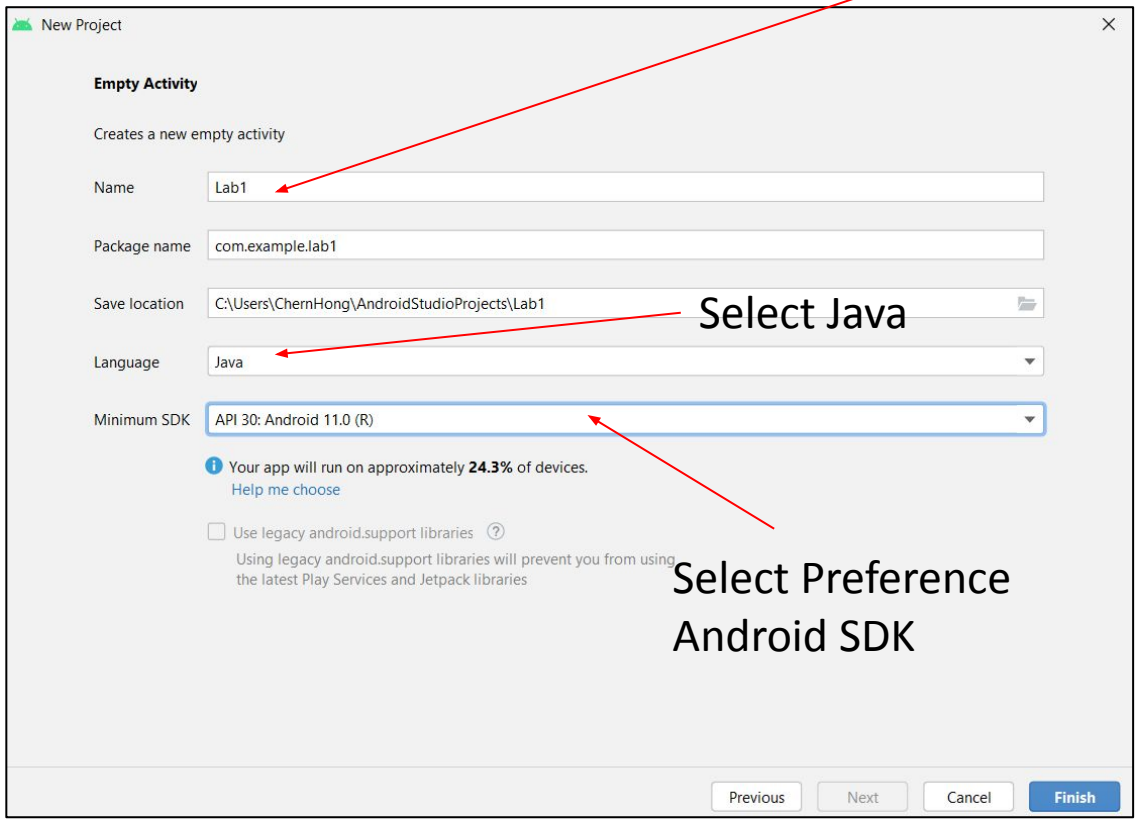


This might take some time and internet connection is required.

Tutorial on Android Studio Setup

2) Create a new empty activity





Tutorial on Android Studio Setup

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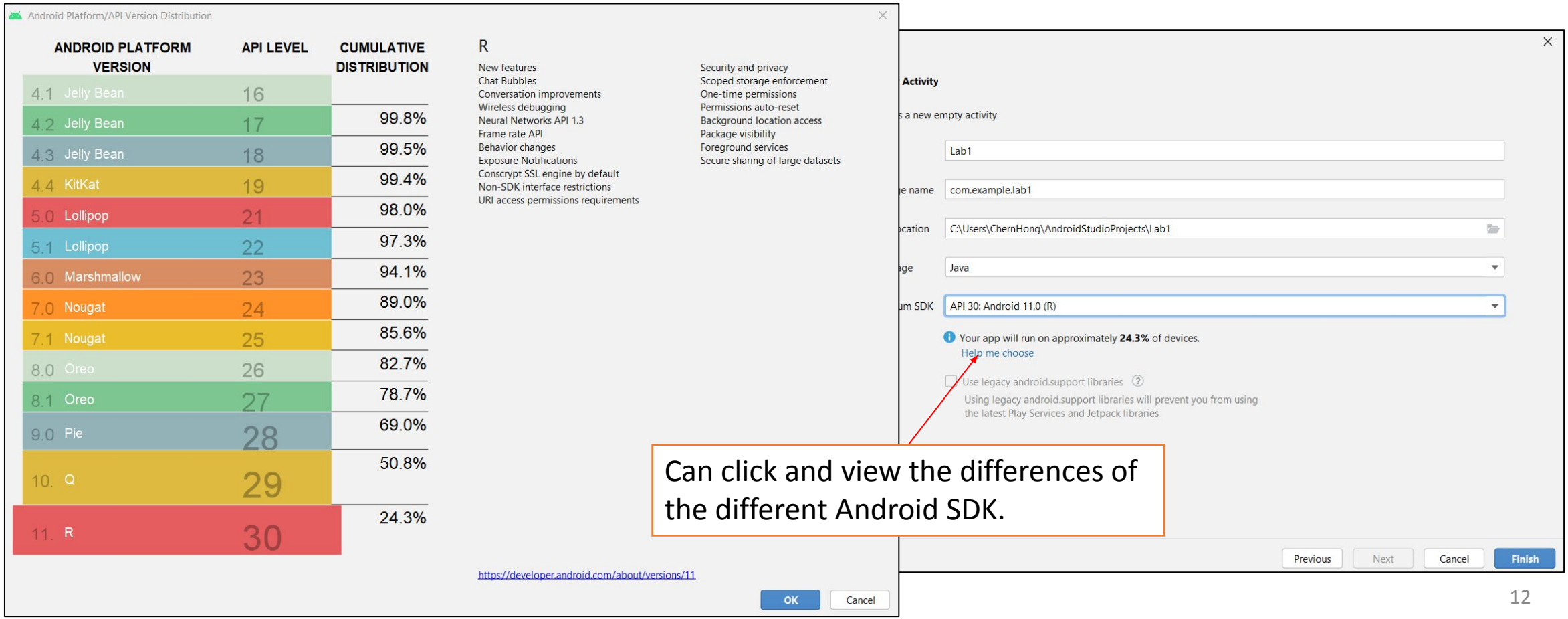
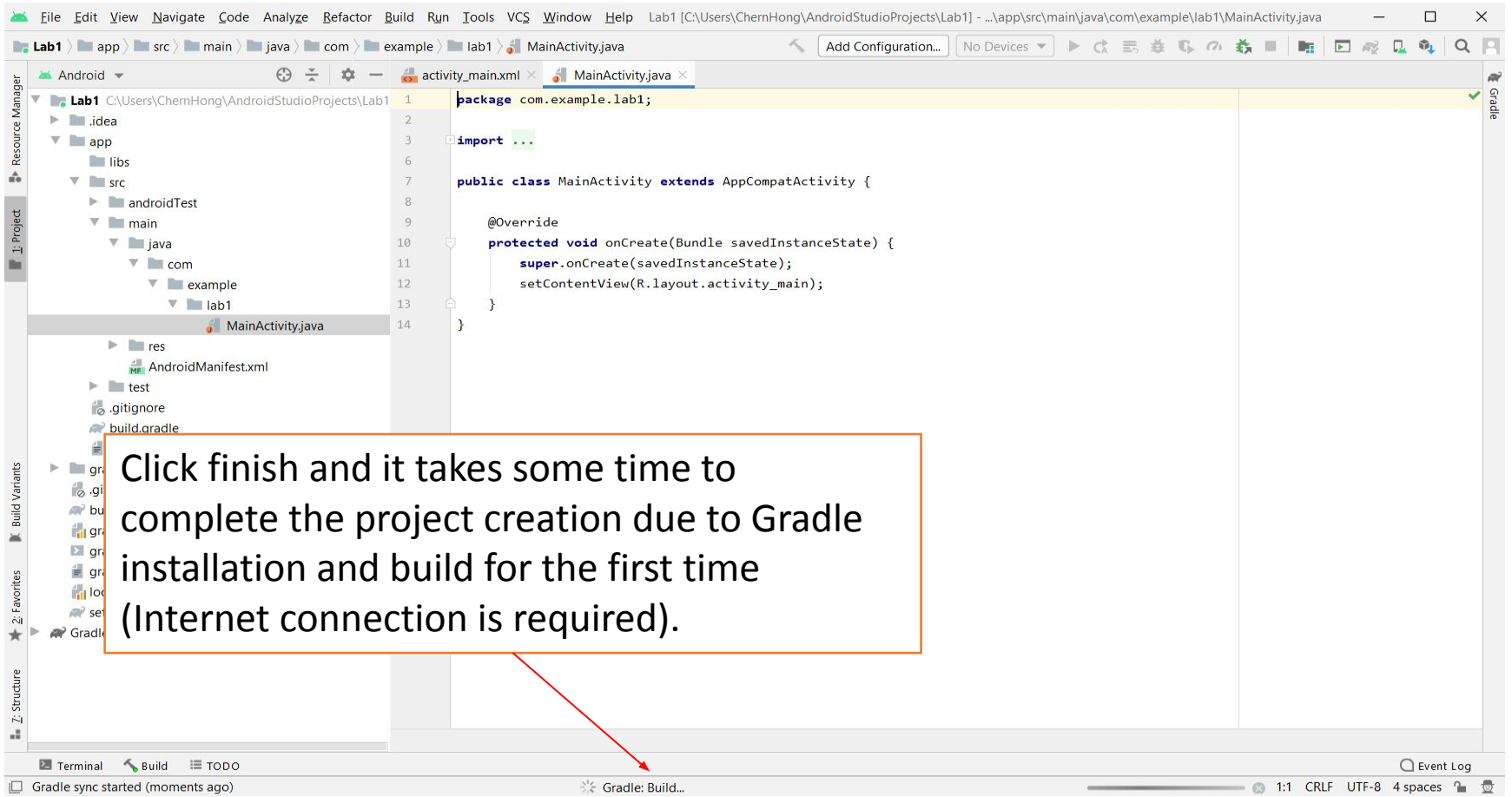


Tutorial on Android Studio Setup

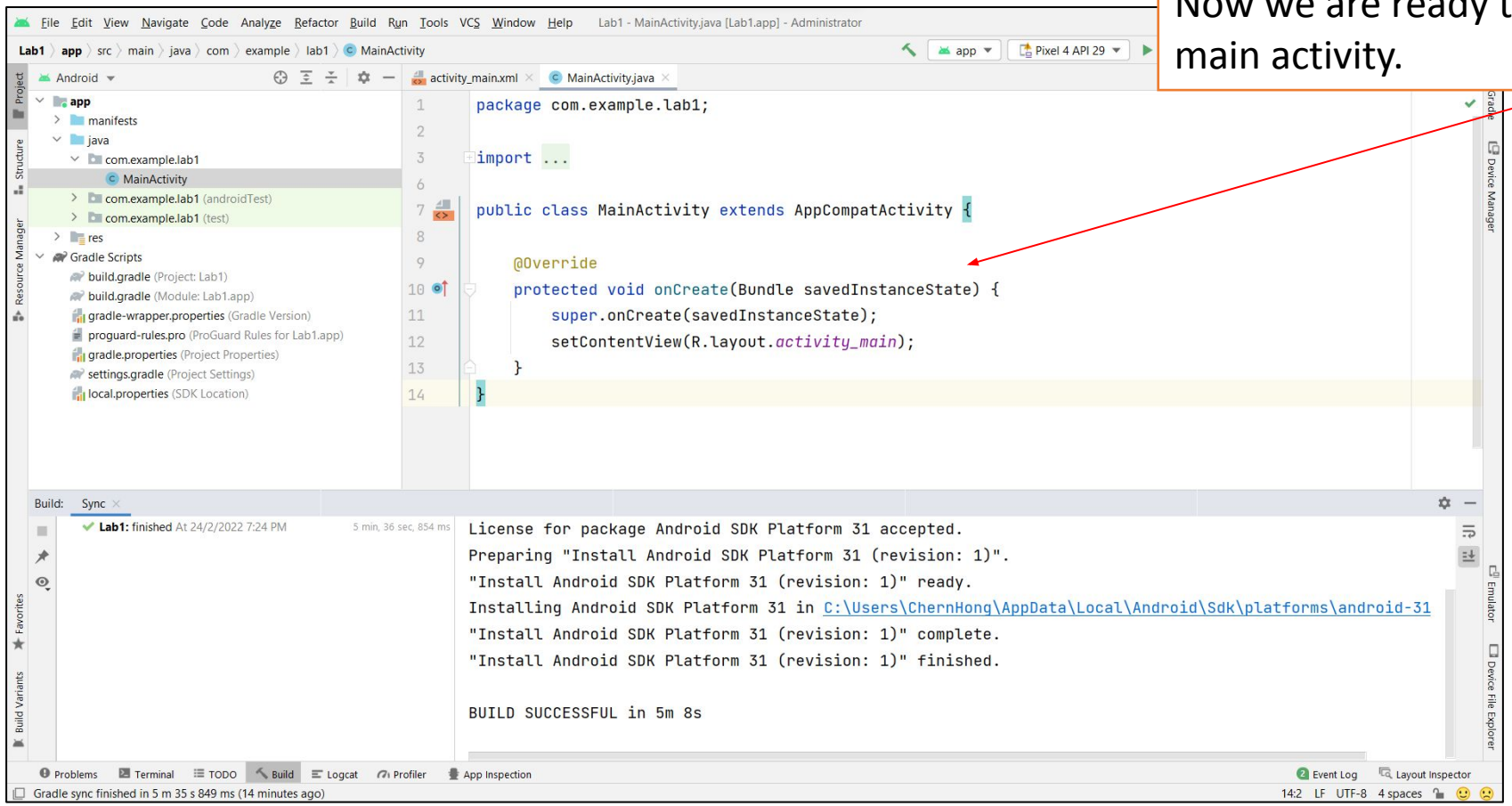
2) Create a new empty activity



Tutorial on Android Studio Setup

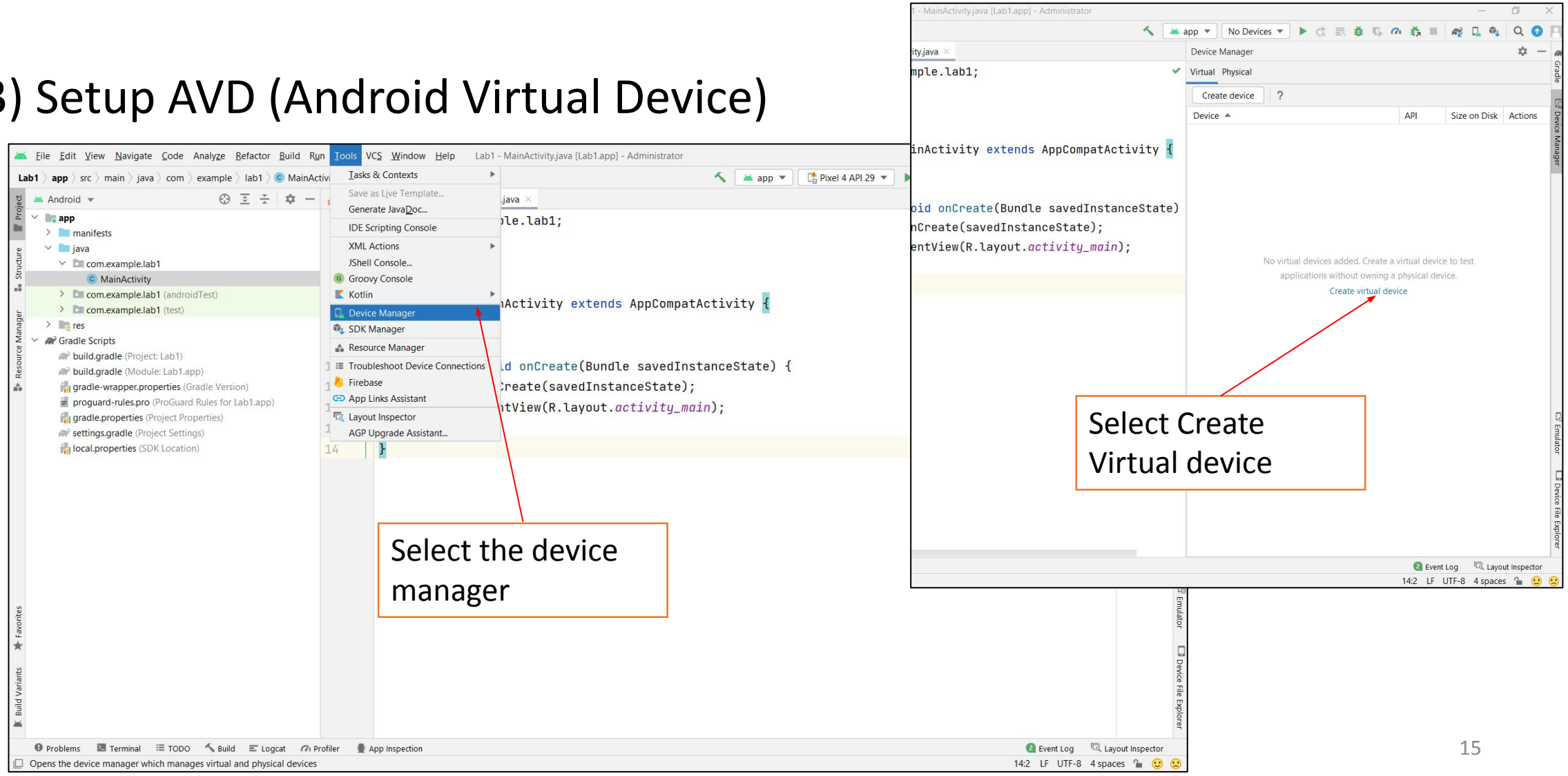
2) Create a new empty activity

Now we are ready to write our code in the main activity.



Tutorial on Android Studio Setup

3) Setup AVD (Android Virtual Device)



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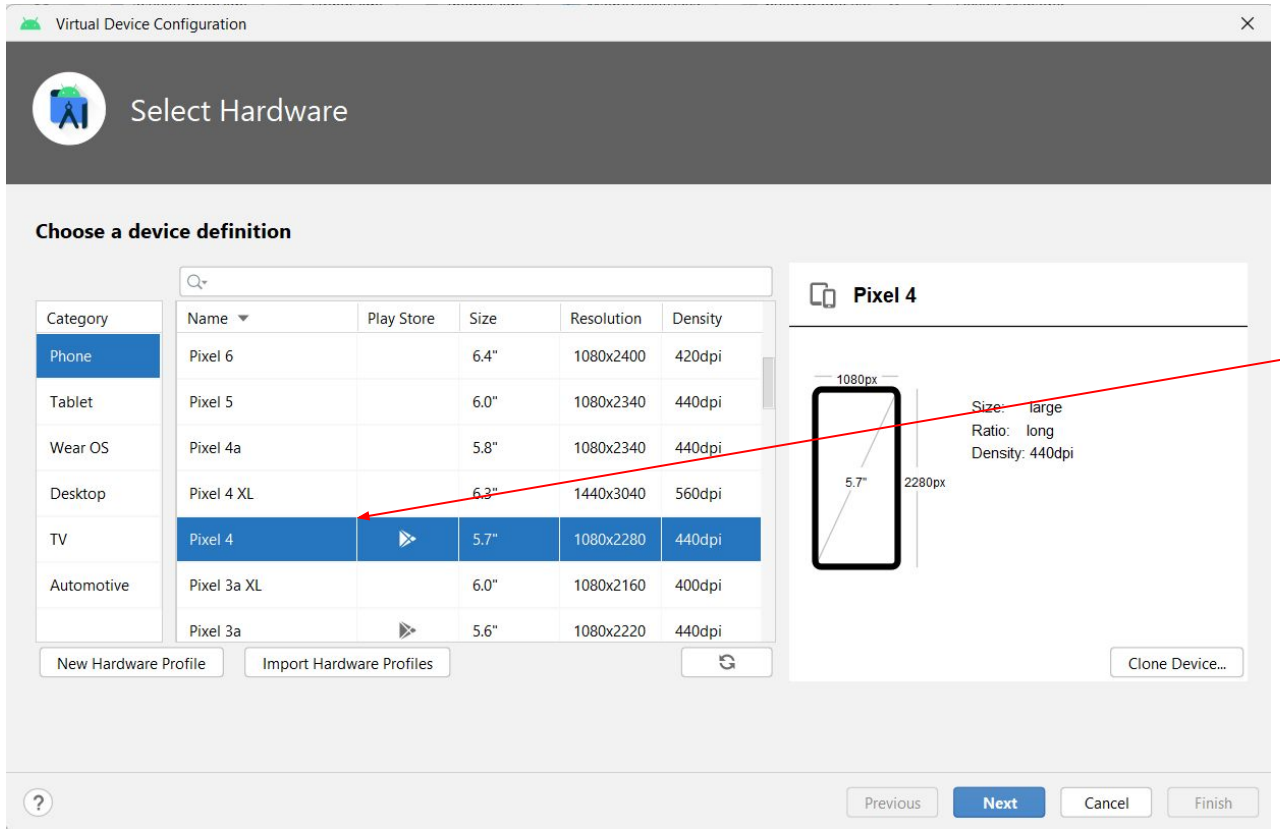
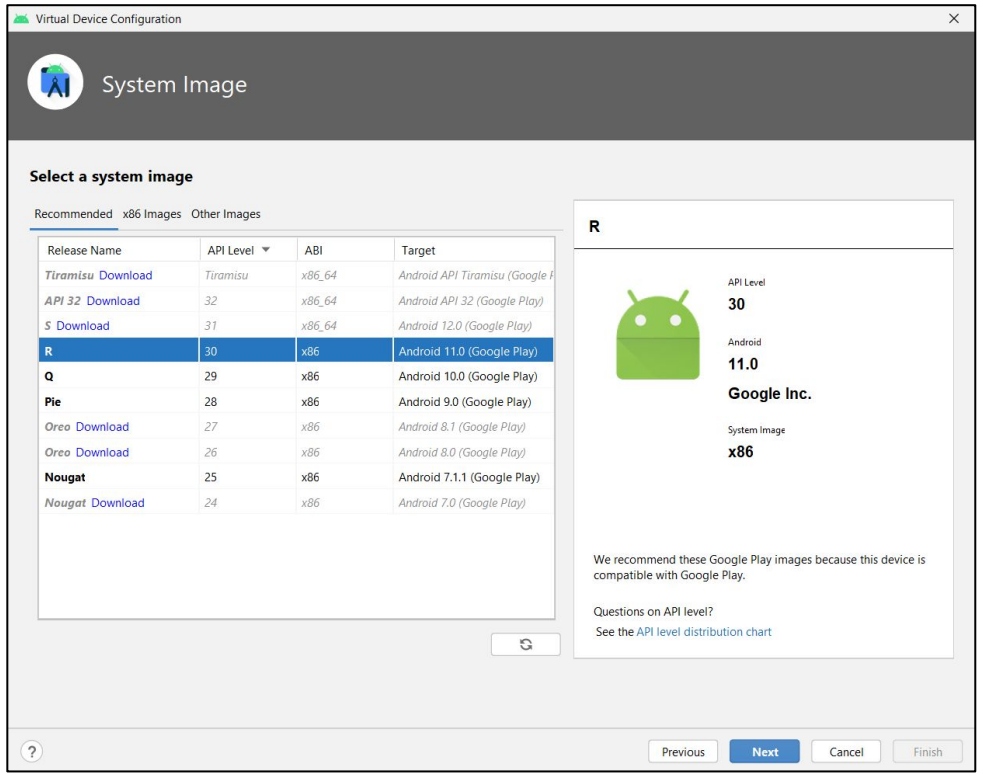


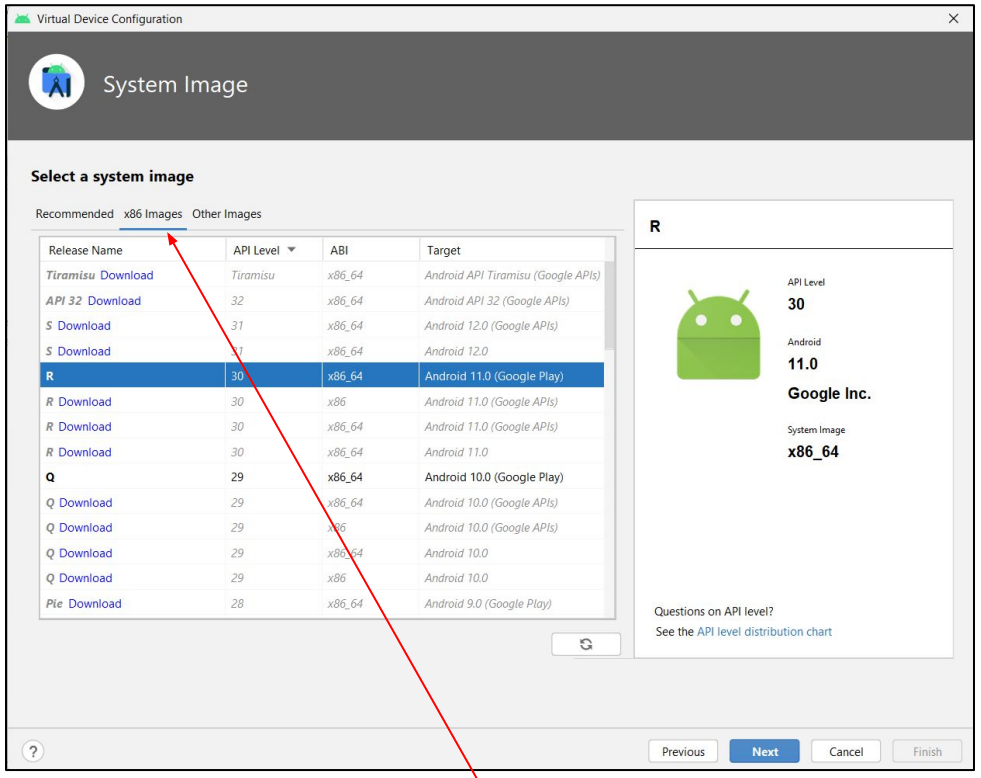
Choose your device

Tutorial on Android Studio Setup

3) Setup AVD (Android Virtual Device)



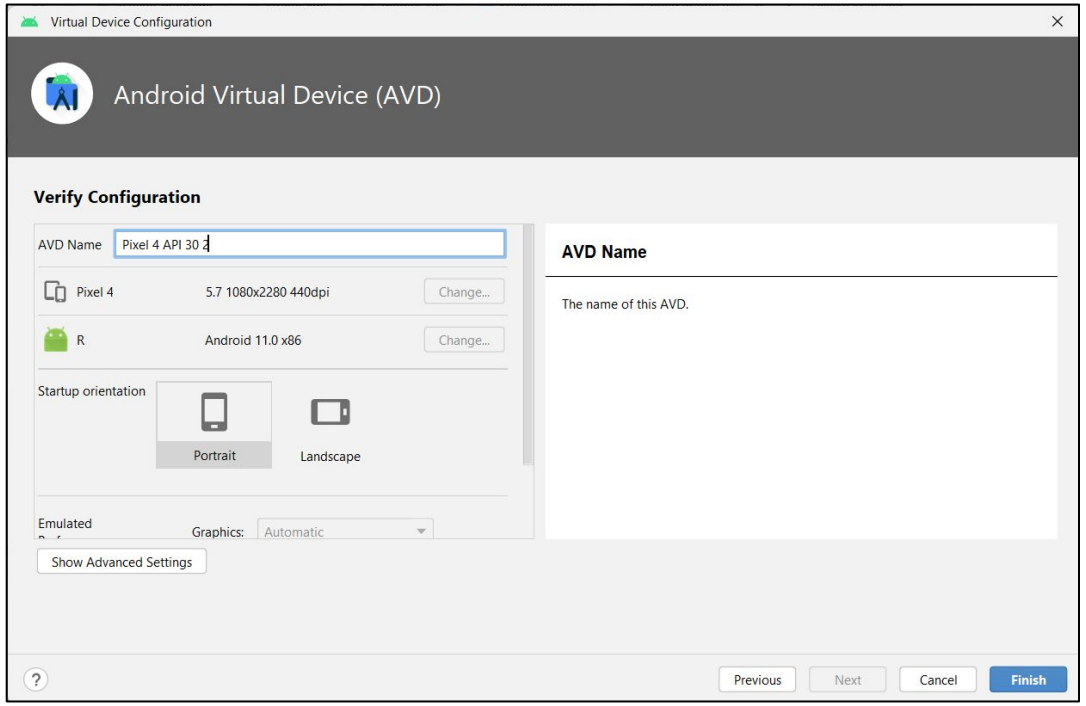
Choose your Android version



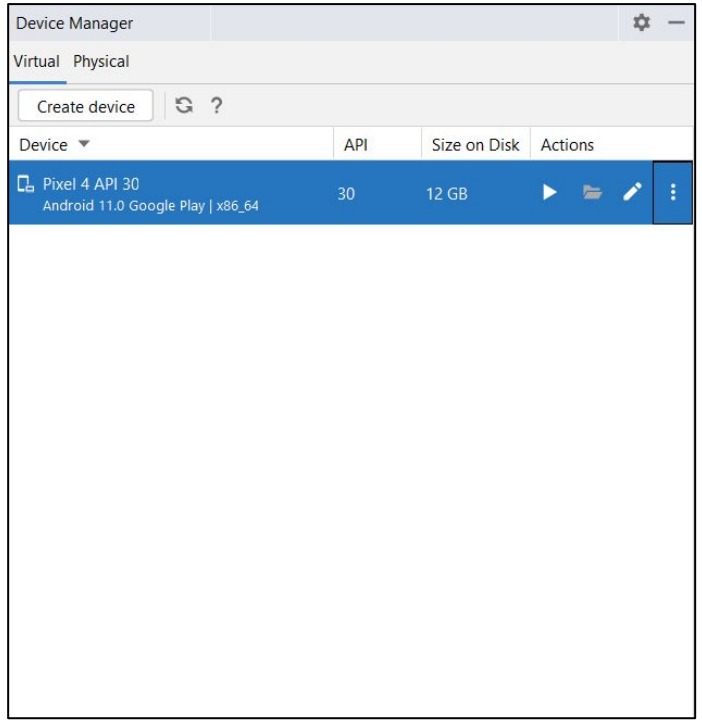
Choose to create the 64 bit AVD with Google Play

Tutorial on Android Studio Setup

3) Setup AVD (Android Virtual Device)



Input a name for the AVD



Your AVD will be available in the list

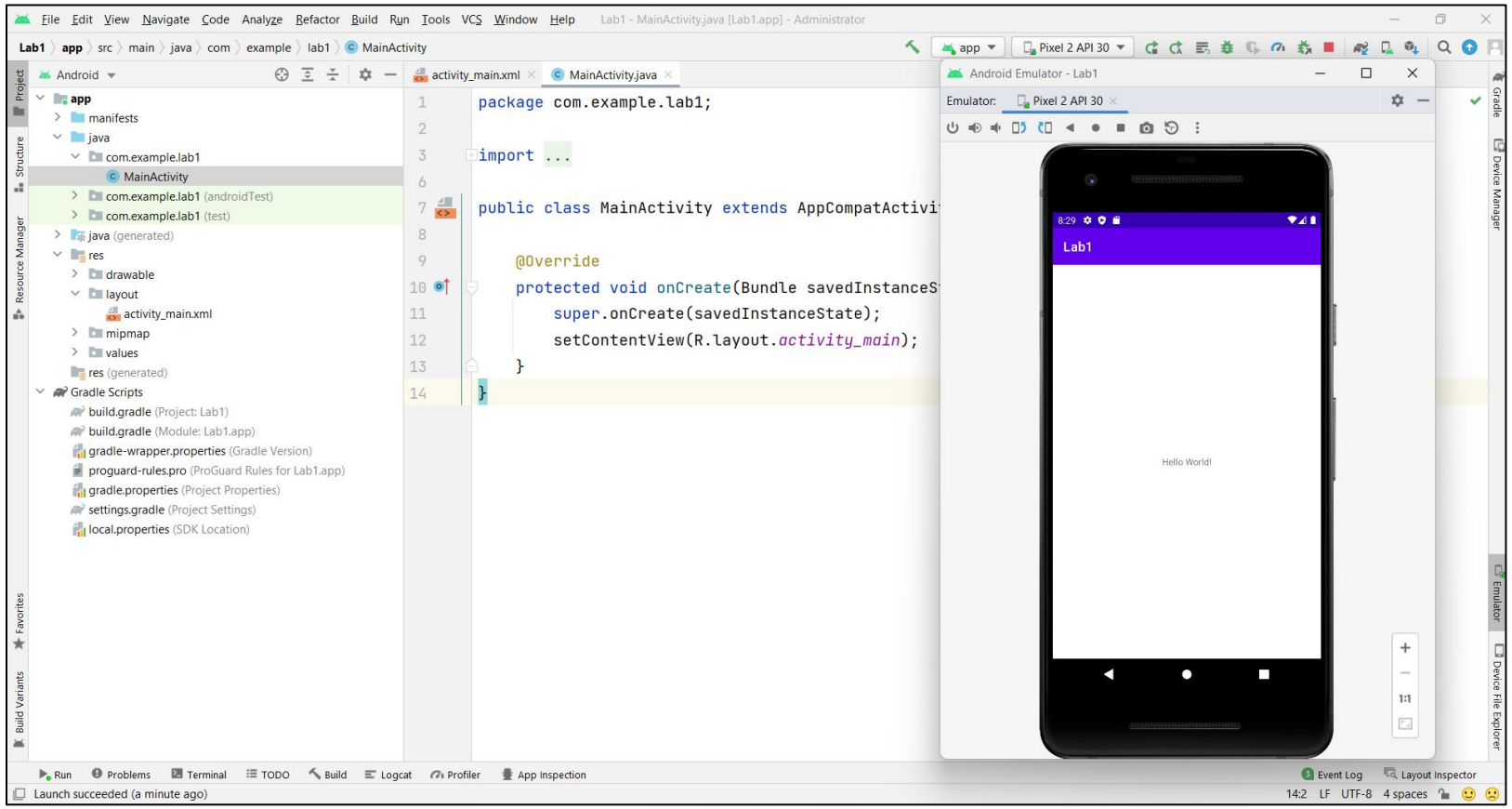
Tutorial on Android Studio Setup

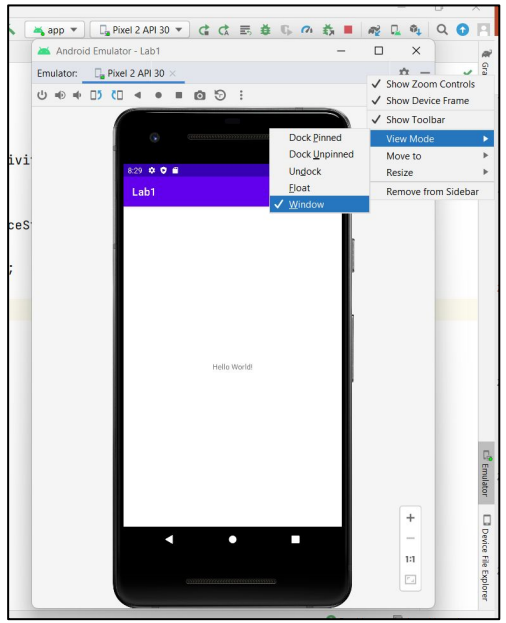
4) Run your app on your AVD

Click run then it will initiate the AVD, install the APK and show the main activity page. It takes longer time for the first launch.

Tutorial on Android Studio Setup

4) Run your app on your AVD



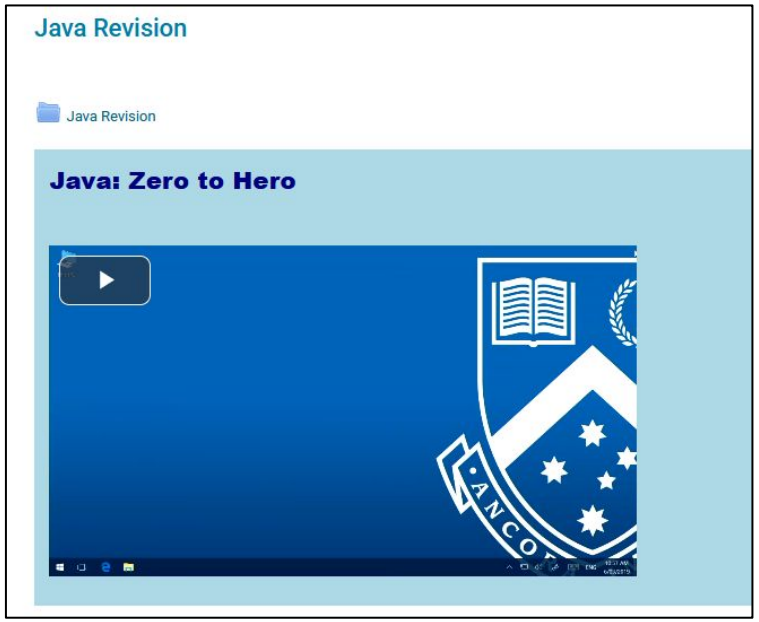


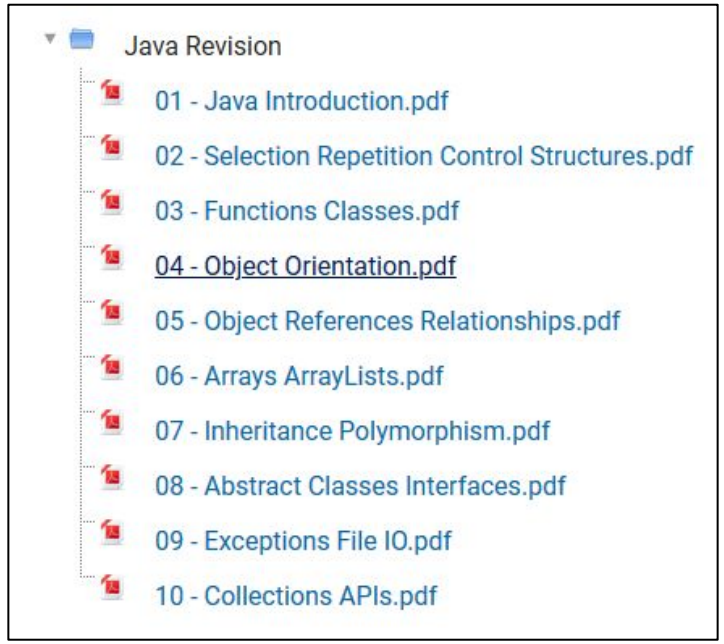
Tips, use this option to detach the virtual device from your android studio.

Tada! Congrats on creating your first App. And of course you can run it on your own android phone instead of AVD.

Quick revision on JAVA Polymorphism

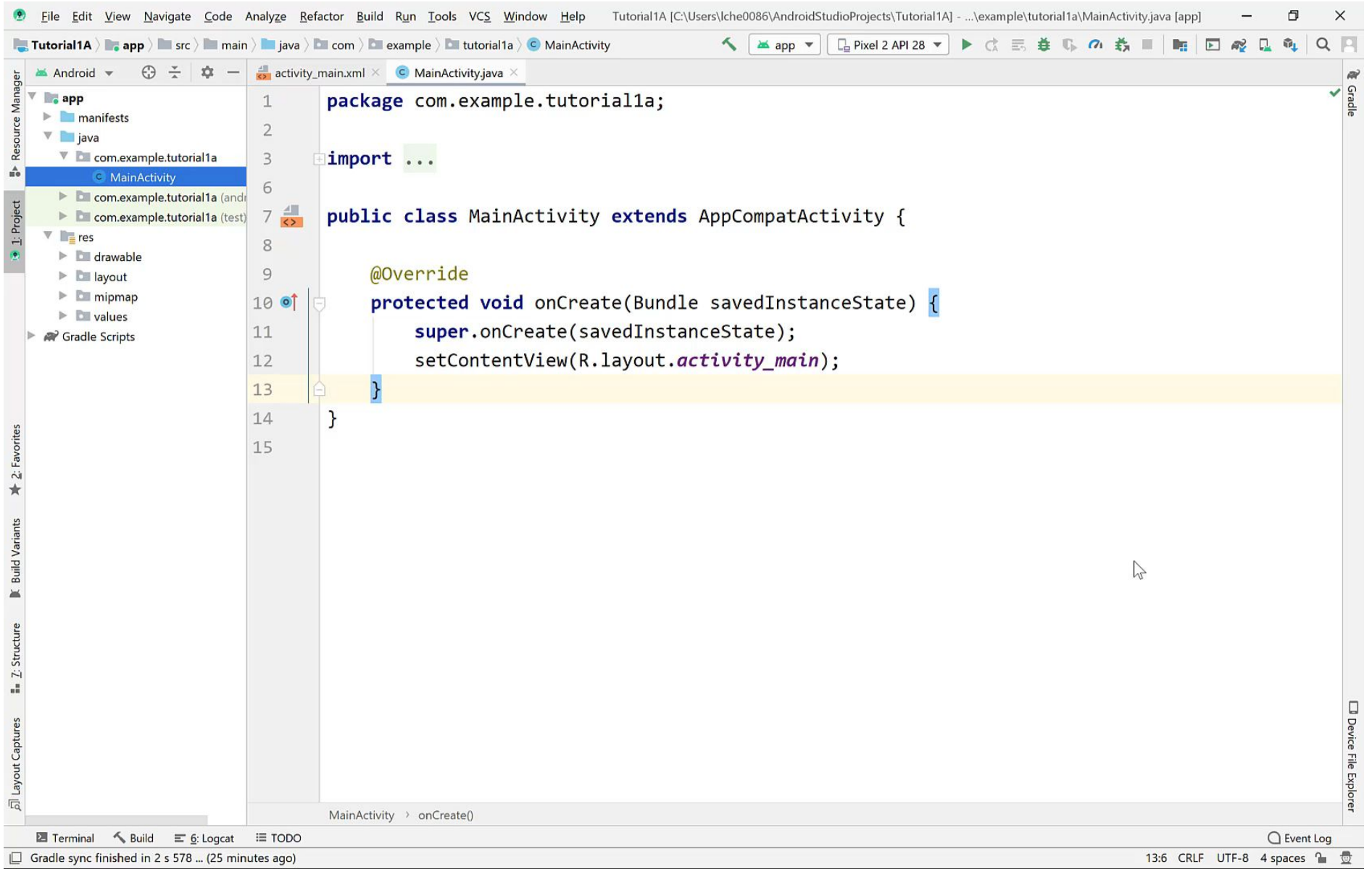
1. Students are expected to have prerequisite knowledge on JAVA Object Oriented Concepts.
2. You may do your own revision from here: https://www.w3schools.com/java/java_polymorphism.asp
3. Or there are some references in the moodle (Orientation week's contents).





Video 1 - Quick revision on JAVA Polymorphism

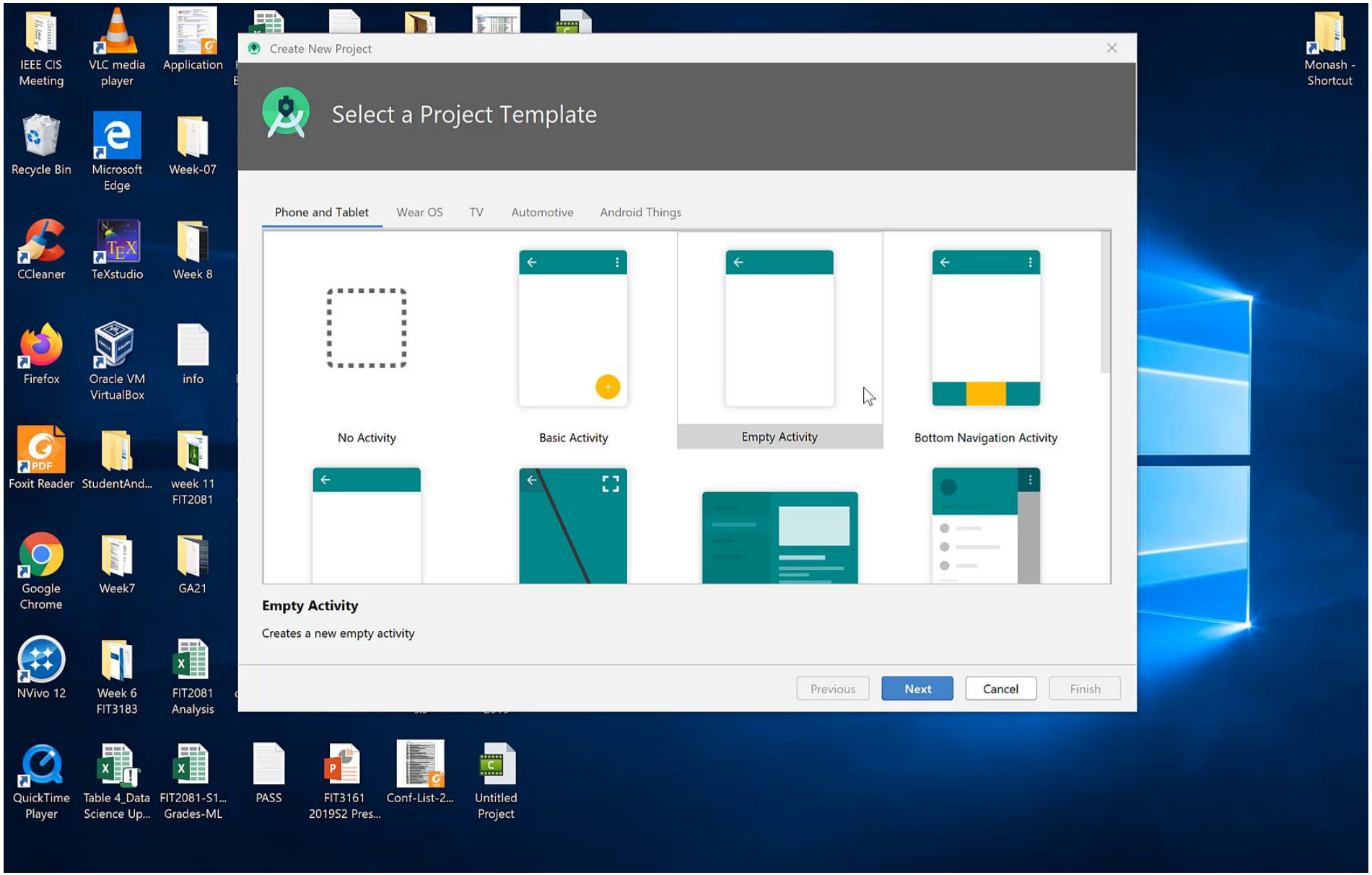
1) Please play the video (17 minutes 20 Seconds)



Note: the android studio version used in the videos might not be the latest version, but the contents are the same.

Video 2 - Modify the Empty Mobile App

1) Please play the video (10 minutes)



Feeling Excited?! Now is your turn!

Gif retrieved from https://giphy.com/

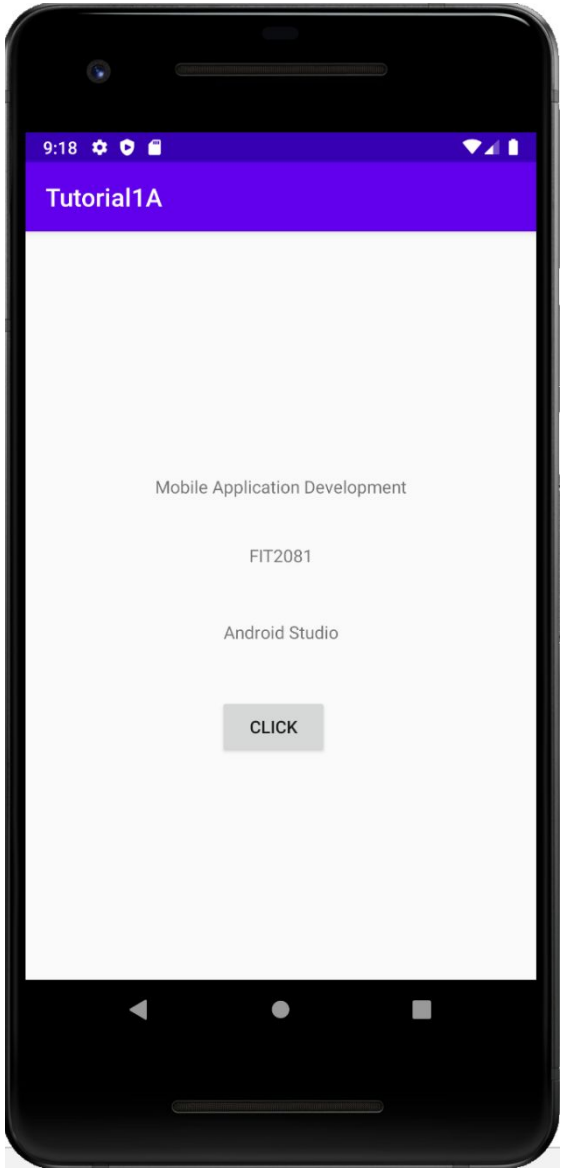
Lab 1 – Instructions

1) Download and install the Android studio environment
2) Create an empty app and run it on the AVD (API 30, CPU 64bit with Google Play)
3) Try the challenge tasks

Lab 1 – Instructions

- **Challenge tasks:**

1. In the empty android project,
   I. Create the UnitInterface, Unit, and ITUnit class (may refer to videos in this slide).
   II. Input two new text views and a button into the layout.
   III. In the Main activity, create a method for when the button is clicked, the text views will show the unit name, unit code, and unit software (as in figure).



Extra notes

- https://www.techradar.com/sg/best/best-mobile-app-development-software
- https://www.guru99.com/mobile-app-development-tools.html
- Many different platform to develop app for different purposes but mostly are not free.

- Java VS Kotlin
  - https://www.educba.com/java-vs-kotlin/

Thank you!