

TASK GUIDE (A1.01)

A. Objectives.

Students know how to start an Android Studio Project with blank layout.

B. Requirements.

Hardware:

- 2 GB RAM minimum, 8 GB RAM recommended
 - 2 GB of available disk space minimum, 4 GB Recommended (500 MB for IDE + 1.5 GB for Android SDK and emulator system image)
 - 1280 x 800 minimum screen resolution
 - Intel processor with support for Intel VT-x, Intel EM64T (Intel 64), and Execute Disable (XD) Bit functionality
- Software:
- Microsoft Windows 7/8/10 (32-bit or 64-bit)
 - JDK 8
 - Android Studio IDE 3.5 (min)

C.

Resources.

Documents:

- Guide

Supplement files:

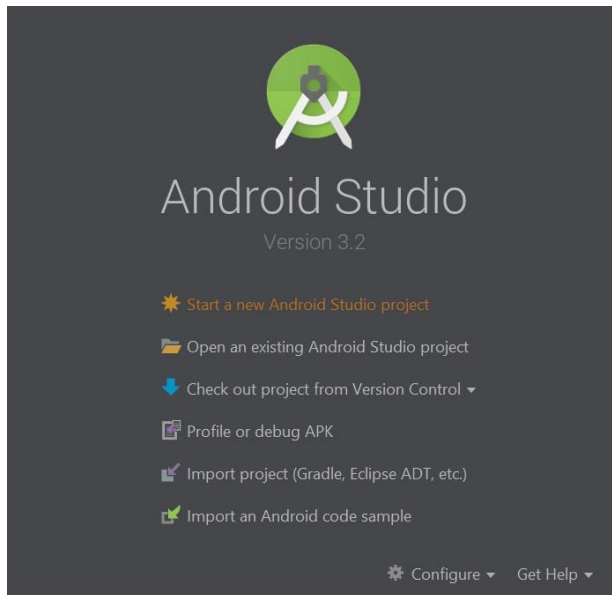
- ViewTest.java Test code:
- TestA1BasicUIKT011.java

D. Task Description.

Student start to create a project with specified project description and test it.

E. Specification.

1. Start a new Android Studio Project.



2. Continue to set up your project refer with this specification.

“Choose Your Project” dialog

- a) Select “Empty Activity”

“Configure Your Project” dialog

- b) Name: BasicApp
- c) Package name: org.aplas.basicapp
- d) Save Location: any
- e) Language: Kotlin
- f) Minimum API Level: API 21/Android 5.0 Lollipop
- g) This project will support instant apps: Uncheck
- h) Use android.* artifacts: Check

“Finish”

“Waiting for synchronizing”

3. Change the content of “build.gradle (Module: app)” file like below, then **Sync** it. Continue to set up your project refer with this specification.

```

apply plugin: 'com.android.application'
apply plugin: 'kotlin-android'
apply plugin: 'kotlin-android-extensions'

android {
    compileSdkVersion 28
    buildToolsVersion "30.0.2"

    defaultConfig {
        applicationId "org.aplas.basicapp"
        minSdkVersion 21
        targetSdkVersion 28
        versionCode 1
        versionName "1.0"

        buildConfigField "int", "MIN_SDK_VERSION", "$minSdkVersion.apiLevel"
        buildConfigField "int", "TARGET_SDK_VERSION", "$targetSdkVersion.apiLevel"
        testInstrumentationRunner "androidx.test.runner.AndroidJUnitRunner"
    }

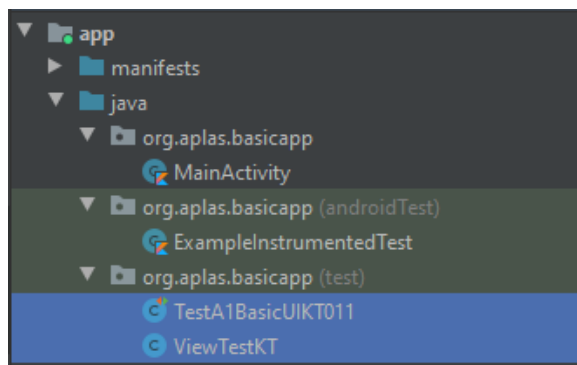
    buildTypes {
        release {
            minifyEnabled false
            proguardFiles getDefaultProguardFile('proguard-android-optimize.txt'),
'proguard-rules.pro'
        }
    }

    testOptions {
        unitTests {
            includeAndroidResources = true
        }
    }
}

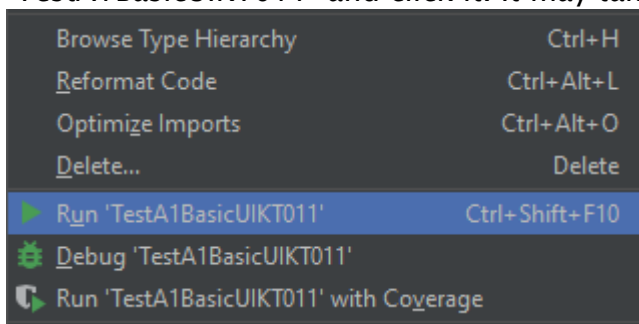
dependencies {
    implementation fileTree(dir: 'libs', include: ['*.jar'])
    implementation "org.jetbrains.kotlin:kotlin-stdlib-jdk7:$kotlin_version"
    implementation 'androidx.appcompat:appcompat:1.2.0'
    implementation 'androidx.core:core-ktx:1.0.2'
    implementation 'androidx.constraintlayout:constraintlayout:2.0.2'
    testImplementation 'junit:junit:4.12'
    testImplementation "org.robolectric:robolectric:4.2.1"
    androidTestImplementation 'androidx.test:runner:1.2.0'
    androidTestImplementation 'androidx.test.ext:junit:1.1.2'
    androidTestImplementation 'androidx.test.espresso:espresso-core:3.3.0'
}

```

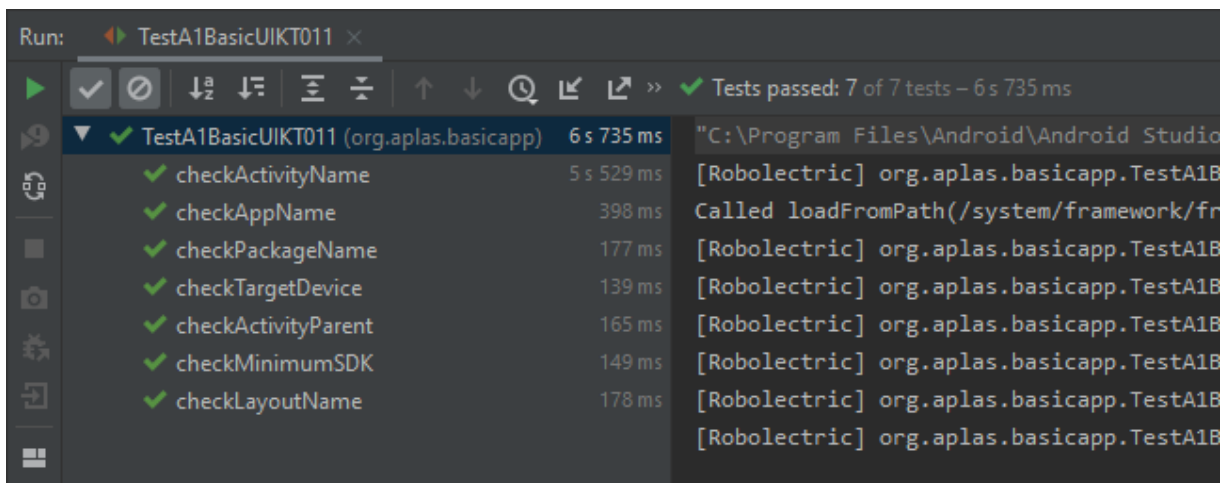
4. Delete “ExampleUnitTest” in “org.aplas.basicapp (test)” folder.
5. Copy “TestA1BasicUIKT011.java” and “ViewTest.java” file to “org.aplas.basicapp (test)” folder



6. Right click on the “TestA1BasicUIKT011.java” file then choose Run ‘TestA1BasicUIKT011’ and click it. It may take long time to execute.



7. Get the result of your task. If passed you will get green check. If the test failed, you would get orange check get the messages and you must start your project again.



F. Result

You have to try until get all green checks and continue to the next task.