

# TASK GUIDE (B1.05)

## A. Objectives.

Students understand about activity lifecycle when on Create and on Start.

## 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

## C. Resources.

Documents:

- Guide

Supplement files:

- ViewTest.java

Test code:

- TestB1BasicActivityKT051.java

## D. Task Description.

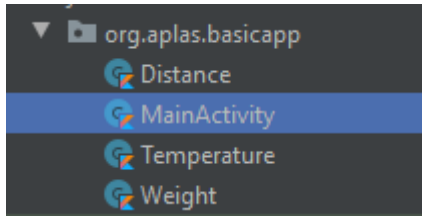
Student start to write methods to start activity and assign each element of activity.

Reference to learn Kotlin:

<https://kotlinlang.org/docs/reference/android-overview.html>

## E. Guidance.

1. Open BasicApp project that already test passed.
2. Open MainActivity.kt.



```
override fun onCreate(savedInstanceState: Bundle?) {  
    super.onCreate(savedInstanceState)    ...  
    ...  
}
```

3. Make sure method “onCreate” is already written.
4. In “onCreate” method, write a code to load “activity\_layout” located in layout resource.

Example : `setContentView(R.layout.layout_name) ;`

5. Under syntax number 4, assign every field of layout elements that defined in task 2.01.04 with the resource in activity.

Ex. : `field_name = findViewById<View>(R.id. resource_name) as datatype`

There are 9 fields that described below:

Field name	Data type	Resource name
convertBtn	Button	convertButton
inputTxt	EditText	inputText
outputTxt	EditText	outputText
unitOri	Spinner	oriList
unitConv	Spinner	convList
unitType	RadioGroup	radioGroup
roundBox	CheckBox	chkRounded
formBox	CheckBox	chkFormula
imgView	ImageView	img

6. Make a “onStart” method under the “onCreate” method like below.
7. To display a dialog when application started:
  - Under MainActivity class, create a private field with name “startDialog” and data type AlertDialog.

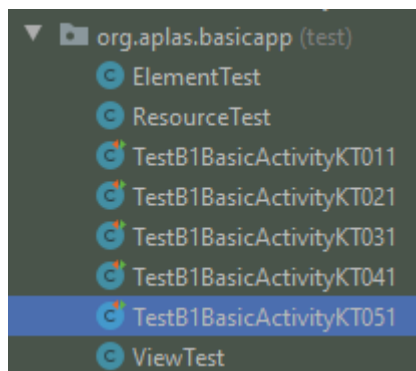
- Make a “onStart” method like below:
- In the “onStart” method, define the dialog like following:

```
override fun onStart() {
    super.onStart() ...
    ...
}
```

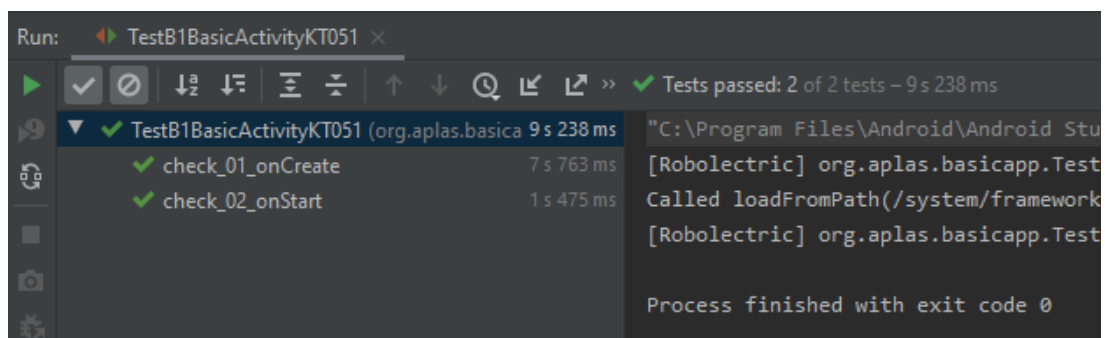
- Then show the dialog with “show” method.

```
startDialog = AlertDialog.Builder(this@MainActivity).create()
startDialog!!.setTitle("Application started")
startDialog!!.setMessage("This app can use to convert any
units")
startDialog!!.setButton(
    AlertDialog.BUTTON_NEUTRAL, "OK"
) { dialog, which -> dialog.dismiss() }
startDialog!!.show()
```

8. Copy “TestB1BasicActivityKT051.java” file to “org.aplas.basicapp (test)” folder.  
Replace if possible.



9. Right click on the “TestB1BasicActivityKT051.java” file then choose Run ‘TestB1BasicActivityKT051’ and click it. It may take long time to execute.
10. Get the result of your task. If passed you will get green check. If the test failed, you will get orange check get the messages and you must start your project again.



**F. Testing.**

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