TASK GUIDE (B2.07)

A. Objectives.

Student will understand how start the timer to start the game.

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 (Minimum 3.2)

C. Resources.

Documents:

- Guide

Supplement files:

- -

Test code:

- TestB2AdvancedWidgetsKT071.java

D. Task Description.

Student start to declare method to start the game and start the timer.

E. Specification.

1. Open task B2.06 (ColorApp project) that already test passed.

2. Open “MyActivity.kt” file and add new fields in MyActivity class, with this description.

Name	Modifiers access	Initial value
isStarted	-	false

How to declare?

```
class MyActivity : AppCompatActivity() {          .
      .
      <Modifier> <Field name> = <initial value>;

      .
      .
}
```

Put here

3. Create a new function method with name “getNewRandomInt” with int output and 3 parameters. This method to get new random int between min and max, also with 1 number exception.

```
fun getNewRandomInt(min: Int, max: Int, except: Int): Int {
     val r = Random()
     var found = false
     var number: Int
     do {
         number = r.ints(min, max + 1).findFirst().asInt
         if (number != except) found = true
     } while (!found)
     return number
 }
```

4. Create a new private void method with name “newGameStage” and blank parameters.

```
private fun newGameStage() {
}
```

5. In the “initColorList” method, do these steps.

   Then declare a String[] variable “clrTxt” and assign it with string in TextView “clrText” like this code

```
val clrTxt =(findViewById<View>(R.id.clrText) as
TextView).text.toString()
```

   Declare an int variable “lastNum” and assign it with related index of “clrText” in array “clrList” like this code.

```
val lastNum = Arrays.asList(*clrList).indexOf(clrTxt)
```

Declare an int variable “colorIdx” and assign it with random integer between 0-5 like this code and exception number “lastNum”. Use “getNewRandomInt” method.

```
val colorIdx = getNewRandomInt(0, 5, lastNum)
```

Set string of “clrText” with color with index “colorIdx”.

```
clrText!!.text = clrList[colorIdx]
```

Then, start the CountDownTimer.

```
countDown!!.start()
```

6. In “startGame” method, write this code.

```
if (!isStarted) {
    <put code here>
}
```

In the if statement, write these following steps.

Set the progressBar with 0.

```
progress!!.progress = 0
```

Set scoreText to “0”.

```
scoreText!!.text = "0"
```

Set visibility of “startBtn” to be INVISIBLE.

```
start!!.visibility = View.INVISIBLE
```

Set the value of “isStarted” to be true.

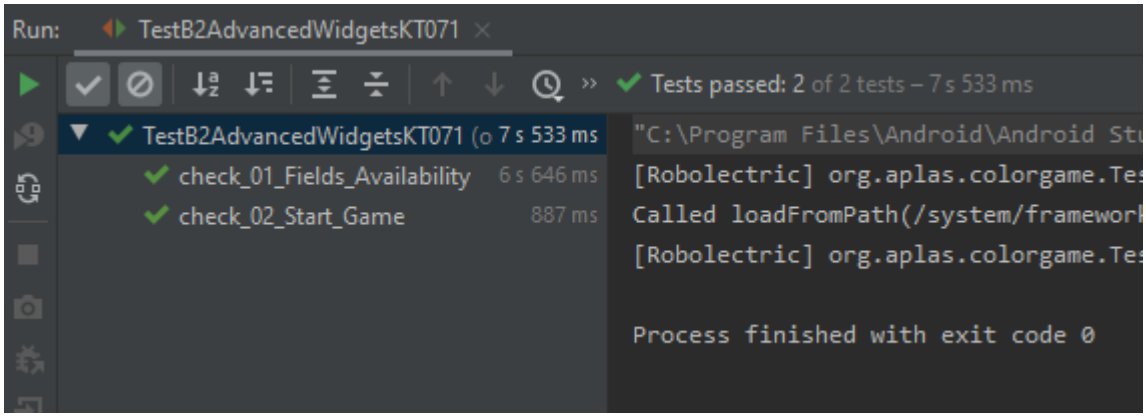
```
isStarted = true
```

Call the “newGameStage” method.

```
newGameStage()
```

F. Testing.

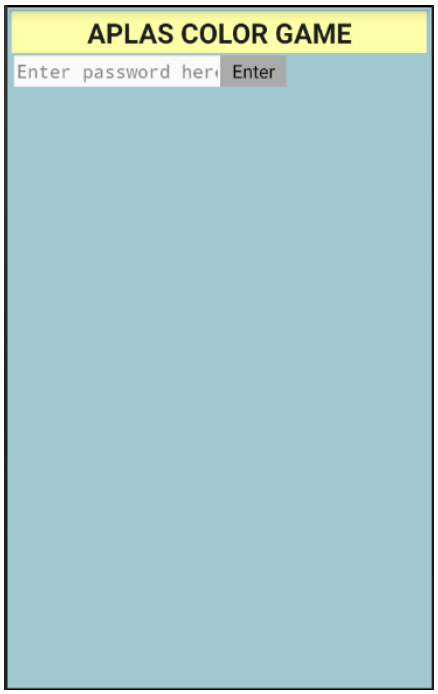
1. Copy “TestB2AdvancedWidgetsKT071.java” file to “org.aplas.colorgame (test)” folder.
2. Right click on the “TestB2AdvancedWidgetsKT071.java” file then choose Run ‘TestB2AdvancedWidgetsKT071’ and click it. It may take long time to execute.
3. Get the result of your task. If passed you will get green check like below. If the test failed, you will get orange check get the messages and you must check your work again.



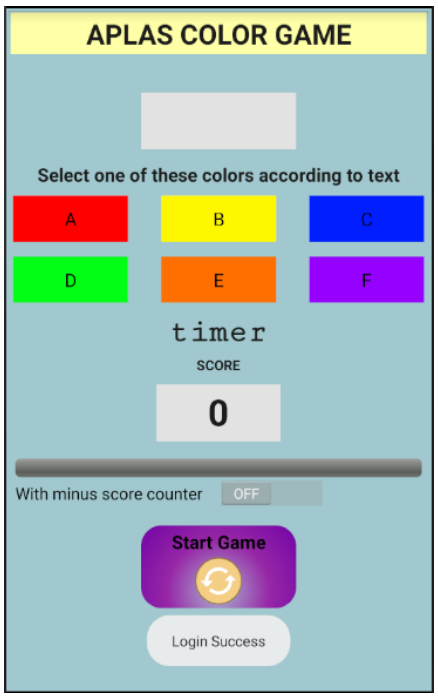
You have to try until get all green checks and continue to the next task.

Run the App

If you have passed the test, you can run your application with this result.



Then, enter the correct password with “quiz@123”, then press the “Enter” button. This display will be shown.



Touch the “Start Game” button and the timer will start, and the color string will be shown.