

Question 1

Mainactivity.kt

```
package com.example.midterm_question1_mob_prog

import android.os.Bundle
import android.view.View
import android.widget.AdapterView
import android.widget.AdapterView.OnItemClickListener
import android.widget.ArrayAdapter
import android.widget.Button
import android.widget.EditText
import android.widget.Spinner
import android.widget.TextView
import androidx.activity.enableEdgeToEdge
import androidx.appcompat.app.AppCompatActivity
import androidx.core.view.ViewCompat
import androidx.core.view.WindowInsetsCompat
import kotlin.math.sqrt

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        enableEdgeToEdge()
        setContentView(R.layout.activity_main)

        // Midterm Exam

        // Initialization of the variables #1213488 Okpala Ikechukwu

        val button: Button = findViewById(R.id.btanswer)
        val edtxt1: EditText = findViewById(R.id.thefirst)
        val edtxt2: EditText = findViewById(R.id.thesecond)
        val resultTV: TextView = findViewById(R.id.textResult)

        var flag : String = "sum"
        // spinner items
        var spinnerVal : Spinner = findViewById(R.id.spSelect)
        var options = arrayOf("sum","multiply","divide","subtract","mean")
        spinnerVal.adapter = ArrayAdapter<String>(this,android.R.layout.simple_list_item_1,options)

        button.setOnClickListener() {view ->
            var x: Int = edtxt1.text.toString().toInt();
```

```

var y: Int = edtxt2.text.toString().toInt()

if(flag == "sum")
    resultTV.text = sum(x,y).toString()
else if (flag == "multiply")
    resultTV.text = multiply(x,y).toString()
else if(flag == "subtract")
    resultTV.text = subtract(x,y).toString()
else if (flag == "mean" )
    resultTV.text = mean(x,y).toString()

when(flag) { "divide" ->
    resultTV.text = divide(x,y).toString()
    else ->
        println("Can't perform action")}

}

spinnerVal.onItemSelectedListener = object : AdapterView.OnItemSelectedListener {
    override fun onItemSelected(p0: AdapterView<*>?, p1: View?, p2: Int, p3: Long) {
        flag = options.get(p2)
        // p2 is the index of selected item }
    }

    override fun onNothingSelected(p0: AdapterView<*>?) {
        // TODO("Not yet implemented")
    }
}

}

}

public fun sum(a: Int, b: Int): Int{return a+b;}
public fun multiply(a: Int, b: Int): Int{return a*b;}
public fun divide(a: Int, b: Int): Int {return a/b;}
public fun subtract(a: Int, b: Int): Int {return a-b;}
public fun mean(a: Int, b: Int): Int {return (a+b)/2;}

}

```

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:id="@+id/main"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context="MainActivity"
```

>

// ike okpala midterm

```
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Midterm_Question1_1213488"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    android:textSize="28sp"
    app:layout_constraintVertical_bias="0.148" />
```

```
<EditText
    android:id="@+id/first"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Input first number"

    android:inputType="number"
    app:layout_constraintBottom_toTopOf="@+id/second"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```
<EditText
    android:id="@+id/second"
    android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
android:layout_marginBottom="272dp"
android:ems="10"
android:hint="Input second number"
android:inputType="number"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.497"
app:layout_constraintStart_toStartOf="parent" />
```

```
<TextView
    android:id="@+id/textResult"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text=""
    tools:layout_editor_absoluteX="177dp"
    tools:layout_editor_absoluteY="578dp"
    app:layout_constraintBottom_toTopOf="@id/spSelect"
    app:layout_constraintTop_toBottomOf="@id/thesecond"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    android:textSize="45sp"
    android:textColor="#FF0000"/>
```

```
<Spinner
    android:id="@+id/spSelect"
    android:layout_width="300dp"
    android:layout_height="wrap_content"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/thesecond"
    tools:layout_editor_absoluteY="46dp" />
```

```
<Button
    android:id="@+id/btanswer"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textStyle="bold"
    android:text="Answer"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@id/spSelect"  
app:layout_constraintVertical_bias="0.0" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

Attached Screenshots

Dropdown box to select calculation options below

I focused on simplicity to avoid unnecessary errors.









