

Question 1

```
<?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">

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Calculation"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.106" />

    <Spinner
        android:id="@+id/spinnerV"
        android:layout_width="409dp"
        android:layout_height="wrap_content"
        android:layout_marginStart="1dp"
        android:layout_marginTop="56dp"
        android:layout_marginEnd="1dp"
        android:layout_marginBottom="556dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView" />

    <EditText
        android:id="@+id/ednum1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="108dp"
        android:layout_marginTop="114dp"
        android:layout_marginEnd="93dp"
        android:layout_marginBottom="397dp"
```

```
android:ems="10"
android:inputType="number"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/spinnerV" />
```

<EditText

```
android:id="@+id/ednum2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="109dp"
android:layout_marginTop="119dp"
android:layout_marginEnd="93dp"
android:layout_marginBottom="232dp"
android:ems="10"
android:inputType="number"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/ednum1" />
```

<TextView

```
android:id="@+id/textResult"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="176dp"
android:layout_marginTop="22dp"
android:layout_marginEnd="178dp"
android:layout_marginBottom="191dp"
android:text="Result"
android:textSize="24sp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/ednum2" />
```

<Button

```
android:id="@+id/btResult"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="163dp"
android:layout_marginTop="44dp"
android:layout_marginEnd="158dp"
android:layout_marginBottom="92dp"
android:text="Result"
```

```

        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textResult" />

</androidx.constraintlayout.widget.ConstraintLayout>

<?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">

    <FrameLayout
        android:id="@+id/fragment_container"
        android:layout_width="match_parent"
        android:layout_height="match_parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

Question 2

```

package com.example.assignment1

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.Spinner
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity
import com.example.grade.R

class MainActivity : AppCompatActivity() {

    private lateinit var gradeSpinner: Spinner
    private lateinit var showGradeButton: Button

```

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private lateinit var gradeTextView: TextView

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

    gradeSpinner = findViewById(R.id.gradeSpinner)
    showGradeButton = findViewById(R.id.showGradeButton)
    gradeTextView = findViewById(R.id.gradeTextView)

    ArrayAdapter.createFromResource(
        this,
        R.array.grade_types,
        android.R.layout.simple_spinner_item
    ).also { adapter ->
        adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item)
        gradeSpinner.adapter = adapter
    }

    gradeSpinner.onItemSelectedListener = object : AdapterView.OnItemSelectedListener {
        override fun onItemSelected(parent: AdapterView<*>, view: View, position: Int, id:
Long) {

        }

        override fun onNothingSelected(parent: AdapterView<*>) {

        }
    }

    showGradeButton.setOnClickListener {
        val selectedPosition = gradeSpinner.selectedItemPosition
        val grade = resources.getStringArray(R.array.grade)
        gradeTextView.text = grade[selectedPosition]
    }
}
}

```

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Spinner
        android:id="@+id/gradeSpinner"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="50dp"/>

    <Button
        android:id="@+id/showGradeButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/gradeSpinner"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"
        android:text="Show Grade"/>

    <TextView
        android:id="@+id/gradeTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/showGradeButton"
        android:layout_marginTop="20dp"
        android:layout_centerHorizontal="true"
        android:textSize="18sp"/>
</RelativeLayout>
```