Лабораторная работа №9. Иванчук Вячеслав Сергеевич

Тк activity_main.xml большой то текстом

```xml
<LinearLayout
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"
    android:background="@color/black"
    android:orientation="vertical"
    tools:context=".MainActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="0dp"
        android:layout_weight="1"
        android:background="@color/black"
        android:gravity="bottom"
        android:orientation="vertical"
        android:padding="30dp">
        <TextView
            android:id="@+id/input"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:gravity="end"
            android:textColor="@color/white"
            android:textSize="30sp"
            tools:text="5+10-3" />
        <TextView
            android:id="@+id/output"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:gravity="end"
            android:textColor="@color/neon_green"
            android:textSize="50sp"
            tools:text="12" />
```

```xml
        </LinearLayout>
        <TableLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:stretchColumns="*">
            <TableRow>
                <androidx.appcompat.widget.AppCompatButton
                    android:id="@+id/button_clear"
                    style="@style/Button_Style"
                    android:layout_width="wrap_content"
                    android:layout_height="90dp"
                    android:text="Del"
                    android:textColor="@color/red" />
                <androidx.appcompat.widget.AppCompatButton
                    android:id="@+id/button_bracket_left"
                    style="@style/Button_Style"
                    android:layout_width="wrap_content"
                    android:layout_height="90dp"
                    android:text="("
                    android:textColor="@color/orange" />
                <androidx.appcompat.widget.AppCompatButton
                    android:id="@+id/button_bracket_right"
                    style="@style/Button_Style"
                    android:layout_width="wrap_content"
                    android:layout_height="90dp"
                    android:text=")"
                    android:textColor="@color/orange" />
                <androidx.appcompat.widget.AppCompatButton
                    android:id="@+id/button_division"
                    style="@style/Button_Style"
                    android:layout_width="wrap_content"
                    android:layout_height="90dp"
                    android:text="÷"
                    android:textColor="@color/orange" />
            </TableRow>
            <TableRow>
```

```xml
            <androidx.appcompat.widget.AppCompatButton
                android:id="@+id/button_7"
                style="@style/Button_Style"
                android:layout_width="wrap_content"
                android:layout_height="90dp"
                android:text="7" />
            <androidx.appcompat.widget.AppCompatButton
                android:id="@+id/button_8"
                style="@style/Button_Style"
                android:layout_width="wrap_content"
                android:layout_height="90dp"
                android:text="8" />
            <androidx.appcompat.widget.AppCompatButton
                android:id="@+id/button_9"
                style="@style/Button_Style"
                android:layout_width="wrap_content"
                android:layout_height="90dp"
                android:text="9" />
            <androidx.appcompat.widget.AppCompatButton
                android:id="@+id/button_multiply"
                style="@style/Button_Style"
                android:layout_width="wrap_content"
                android:layout_height="90dp"
                android:text="*"
                android:textColor="@color/orange" />
        </TableRow>
        <TableRow>
            <androidx.appcompat.widget.AppCompatButton
                android:id="@+id/button_4"
                style="@style/Button_Style"
                android:layout_width="wrap_content"
                android:layout_height="90dp"
                android:text="4" />
            <androidx.appcompat.widget.AppCompatButton
                android:id="@+id/button_5"
                style="@style/Button_Style"
```

```xml
            android:layout_width="wrap_content"
            android:layout_height="90dp"
            android:text="5" />
        <androidx.appcompat.widget.AppCompatButton
            android:id="@+id/button_6"
            style="@style/Button_Style"
            android:layout_width="wrap_content"
            android:layout_height="90dp"
            android:text="6" />
        <androidx.appcompat.widget.AppCompatButton
            android:id="@+id/button_subtraction"
            style="@style/Button_Style"
            android:layout_width="wrap_content"
            android:layout_height="90dp"
            android:text="−"
            android:textColor="@color/orange" />
    </TableRow>
    <TableRow>
        <androidx.appcompat.widget.AppCompatButton
            android:id="@+id/button_1"
            style="@style/Button_Style"
            android:layout_width="wrap_content"
            android:layout_height="90dp"
            android:text="1" />
        <androidx.appcompat.widget.AppCompatButton
            android:id="@+id/button_2"
            style="@style/Button_Style"
            android:layout_width="wrap_content"
            android:layout_height="90dp"
            android:text="2" />
        <androidx.appcompat.widget.AppCompatButton
            android:id="@+id/button_3"
            style="@style/Button_Style"
            android:layout_width="wrap_content"
            android:layout_height="90dp"
            android:text="3" />
```

```xml
        <androidx.appcompat.widget.AppCompatButton
            android:id="@+id/button_addition"
            style="@style/Button_Style"
            android:layout_width="wrap_content"
            android:layout_height="90dp"
            android:text="+"
            android:textColor="@color/orange" />
    </TableRow>
    <TableRow>
        <androidx.appcompat.widget.AppCompatButton
            android:id="@+id/button_percent"
            style="@style/Button_Style"
            android:layout_width="wrap_content"
            android:layout_height="90dp"
            android:text="%" />
        <androidx.appcompat.widget.AppCompatButton
            android:id="@+id/button_0"
            style="@style/Button_Style"
            android:layout_width="wrap_content"
            android:layout_height="90dp"
            android:text="0" />
        <androidx.appcompat.widget.AppCompatButton
            android:id="@+id/button_dot"
            style="@style/Button_Style"
            android:layout_width="wrap_content"
            android:layout_height="90dp"
            android:text="." />
        <androidx.appcompat.widget.AppCompatButton
            android:id="@+id/button_equals"
            style="@style/Button_Style"
            android:layout_width="wrap_content"
            android:layout_height="90dp"
            android:background="@color/orange"
            android:text="="
            android:textColor="@color/white" />
    </TableRow>
```

```
    </TableLayout>
</LinearLayout>
```

MainActivity.kt

```kotlin
package com.example.calculator

import android.content.Intent
import android.icu.text.DecimalFormat
import android.os.Bundle
import android.os.Looper
import androidx.activity.enableEdgeToEdge
import androidx.appcompat.app.AppCompatActivity
import androidx.core.content.ContextCompat
import androidx.core.view.ViewCompat
import androidx.core.view.WindowInsetsCompat
import com.example.calculator.databinding.ActivityMainBinding
import net.objecthunter.exp4j.ExpressionBuilder



class MainActivity : AppCompatActivity() {
    lateinit var binding: ActivityMainBinding
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        enableEdgeToEdge()
        binding =ActivityMainBinding.inflate(layoutInflater)
        setContentView(binding.root)

ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main)) { v, insets ->
            val systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars())
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom)
```

```kotlin
            insets
        }
        binding.buttonClear.setOnClickListener{
            binding.input.text = " "
            binding.output.text = " "
        }
        binding.buttonBracketLeft.setOnClickListener {
            addToInputText("(")
        }
        binding.buttonBracketRight.setOnClickListener {
            addToInputText(")")
        }
        binding.button0.setOnClickListener {
            addToInputText("0")
        }
        binding.button1.setOnClickListener {
            addToInputText("1")
        }
        binding.button2.setOnClickListener {
            addToInputText("2")
        }
        binding.button3.setOnClickListener {
            addToInputText("3")
        }
        binding.button4.setOnClickListener {
            addToInputText("4")
        }
        binding.button5.setOnClickListener {
            addToInputText("5")
        }
        binding.button6.setOnClickListener {
            addToInputText("6")
        }
        binding.button7.setOnClickListener {
            addToInputText("7")
        }
```

```kotlin
        binding.button8.setOnClickListener {
            addToInputText("8")
        }
        binding.button9.setOnClickListener {
            addToInputText("9")
        }
        binding.buttonDot.setOnClickListener {
            addToInputText(".")
        }
        binding.buttonDivision.setOnClickListener {
            addToInputText("÷")
        }
        binding.buttonMultiply.setOnClickListener {
            addToInputText("*")
        }
        binding.buttonSubtraction.setOnClickListener {
            addToInputText("-")
        }
        binding.buttonAddition.setOnClickListener {
            addToInputText("+")
        }
        binding.buttonEquals.setOnClickListener {
            showResult()
        }
        binding.buttonPercent.setOnClickListener {
            addToInputText("%")
        }
    }
    private fun addToInputText(value: String) {
        binding.input.append(value)
    }
    private fun getInputExpression(): String {
        return binding.input.text.toString()
    }
    private fun showResult() {
        try {
```

```kotlin
            var expression =
getInputExpression().replace("%", "/100")
            expression = expression.replace("÷","/")
            val result =
ExpressionBuilder(expression).build().evaluate()
            binding.output.text =
DecimalFormat("0.######").format(result).toString()

binding.output.setTextColor(ContextCompat.getColor(this,
R.color.neon_green))
        } catch (e: Exception) {
            binding.output.text = "Ошибка"

binding.output.setTextColor(ContextCompat.getColor(this,
R.color.red))
        }

    }
}
```
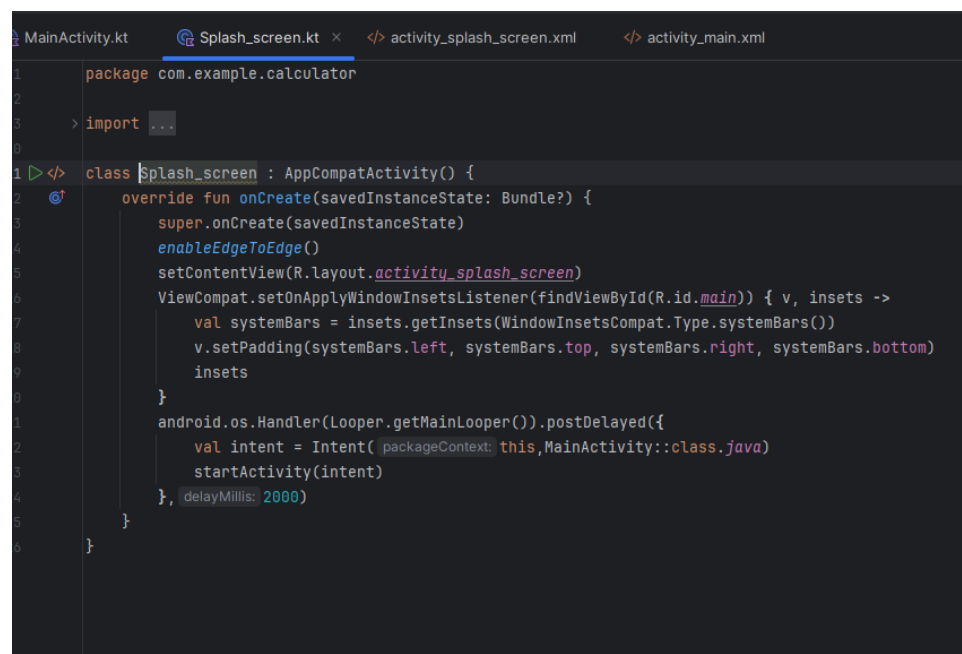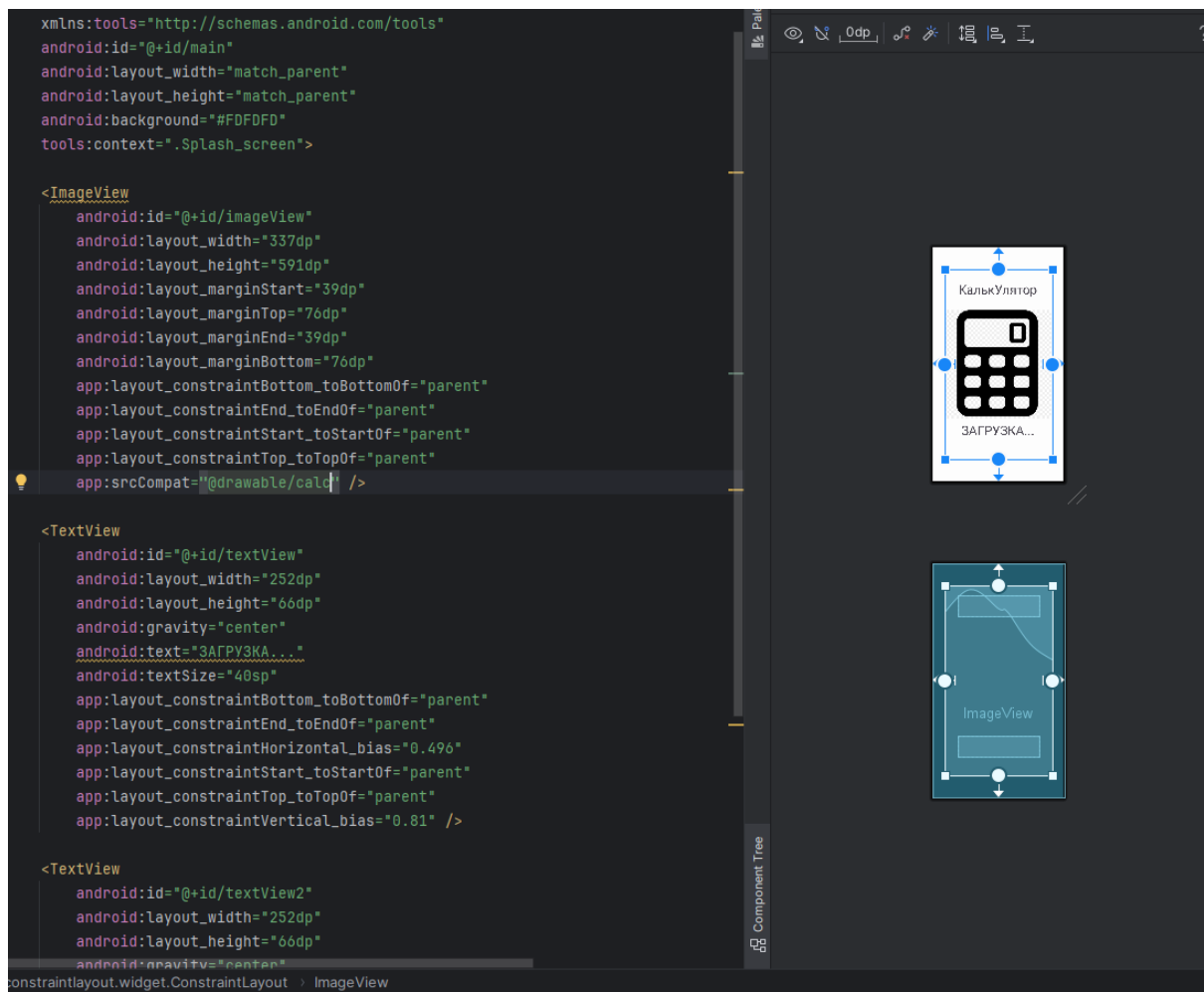
Делаем анимацию

```xml
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#FDFDFD"
    tools:context=".Splash_screen">

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="337dp"
        android:layout_height="591dp"
        android:layout_marginStart="39dp"
        android:layout_marginTop="76dp"
        android:layout_marginEnd="39dp"
        android:layout_marginBottom="76dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:srcCompat="@drawable/calc" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="252dp"
        android:layout_height="66dp"
        android:gravity="center"
        android:text="ЗАГРУЗКА..."
        android:textSize="40sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.496"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.81" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="252dp"
        android:layout_height="66dp"
        android:gravity="center"
```

constraintlayout.widget.ConstraintLayout  >  ImageView

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