ПРАКТИЧЕСКАЯ №9

КАЛЬКУЛЯТОР

1.код mainactivity.xml:

```xml
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="0dp"
    android:layout_weight="1"
    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" />

    <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" />
</LinearLayout>

<TableLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:stretchColumns="*">
```

```xml
        <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"
                tools:ignore="HardcodedText,VisualLintButtonSize" />

            <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="#EF6C00"
                tools:ignore="HardcodedText,VisualLintButtonSize" />

            <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="#EF6C00"
                tools:ignore="HardcodedText,VisualLintButtonSize" />

            <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="#EF6C00"
                tools:ignore="HardcodedText,VisualLintButtonSize" />

        </TableRow>
```

1.2

```xml
        <TableRow>

            <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"
                tools:ignore="HardcodedText,VisualLintButtonSize"/>

            <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"
                tools:ignore="HardcodedText,VisualLintButtonSize"/>

            <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"
                tools:ignore="HardcodedText,VisualLintButtonSize"/>

            <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="#EF6C00"
                tools:ignore="HardcodedText,VisualLintButtonSize" />

        </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"
                tools:ignore="HardcodedText,VisualLintButtonSize"/>

            <androidx.appcompat.widget.AppCompatButton
                android:id="@+id/button_5"
                style="@style/Button_Style"
                android:layout_width="wrap_content"
                android:layout_height="90dp"
                android:text="5"
                tools:ignore="HardcodedText,VisualLintButtonSize" />

            <androidx.appcompat.widget.AppCompatButton
                android:id="@+id/button_6"
                style="@style/Button_Style"
                android:layout_width="wrap_content"
```

```xml
                        tools:ignore="HardcodedText,VisualLintButtonSize" />

                    <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"
                        tools:ignore="HardcodedText,VisualLintButtonSize" />

                    <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="#EF6C00"
                        tools:ignore="HardcodedText,VisualLintButtonSize" />
                </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="%"
                        tools:ignore="HardcodedText,VisualLintButtonSize" />

                    <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"
                        tools:ignore="HardcodedText,VisualLintButtonSize"/>

                    <androidx.appcompat.widget.AppCompatButton
                        android:id="@+id/button_dot"
                        style="@style/Button_Style"
                        android:layout_height="90dp"
                        android:layout_width="wrap_content"
                        android:text="."
                        tools:ignore="HardcodedText,VisualLintButtonSize"/>

                    <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="#616161"
                        tools:ignore="HardcodedText,VisualLintButtonSize" />

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

2.main activity

```kotlin
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)
            insets
        }
        binding.buttonClear.setOnClickListener{
            binding.input.text = " "
            binding.output.text = " "
        }
        binding.buttonBracketLeft.setOnClickListener {
            addToInputText( value: "(")
        }
        binding.buttonBracketLeft.setOnClickListener {
            addToInputText( value: ")")
        }
        binding.button0.setOnClickListener {
            addToInputText( value: "0")
        }
        binding.button1.setOnClickListener {
            addToInputText( value: "1")
        }
        binding.button2.setOnClickListener {
            addToInputText( value: "2")
        }
        binding.button3.setOnClickListener {
            addToInputText( value: "3")
        }
        binding.button4.setOnClickListener {
            addToInputText( value: "4")
        }
        binding.button5.setOnClickListener {
            addToInputText( value: "5")
        }
        binding.button6.setOnClickListener {
            addToInputText( value: "6")
        }
        binding.buttonPercent.setOnClickListener {
            addToInputText( value: "%")
        }
    }
    private fun showResult() {
        try {
            val expression = getInputExpression().replace( oldValue: "%", newValue: "/100")
            val result = ExpressionBuilder(expression).build().evaluate()
            binding.output.text =
                DecimalFormat( pattern: "0.######").format(result).toString()
            binding.output.setTextColor(ContextCompat.getColor( context: this, R.color.neon_green))
        }
        catch (e:Exception){
            binding.output.text = "Ошибка"
            binding.output.setTextColor(ContextCompat.getColor( context: this, R.color.red))
        }
    }
    private fun addToInputText(value: String) {
        binding.input.append(value)

    }
    private fun getInputExpression(): String {
        return binding.input.text.toString()
    }
}
```

3.приложение