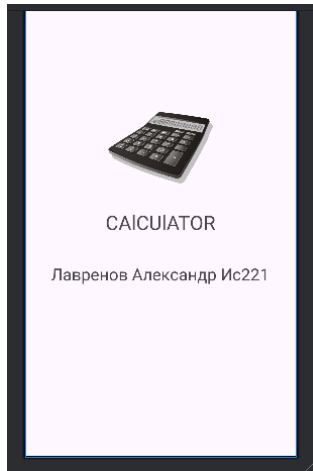


Практическая работа номер 9

1.Создаем новый проект

2.Оформляем заставку нашего приложения



3.Пишем код для перехода активностей

```
class MainActivity : AppCompatActivity() {  
    override fun onCreate(savedInstanceState: Bundle?) {  
        super.onCreate(savedInstanceState)  
        enableEdgeToEdge()  
        setContentView(R.layout.activity_main)  
  
        android.os.Handler(Looper.getMainLooper()).postDelayed({  
            val intent = Intent(packageContext, this, calculator::class.java)  
            startActivity(intent)  
        }, delayMillis: 1500)  
  
        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  
        }  
    }  
}
```

4.Добавляем цвета и стиль в colors.xml

```
<?xml version="1.0" encoding="utf-8"?>  
<resources>  
  
    <style name="Button_Style" parent="Widget.AppCompat.Button.Colored">  
        <item name="android:background">@color/purple_200</item>  
        <item name="android:textSize">24sp</item>  
        <item name="android:textColor">@color/black</item>  
        <item name="android:gravity">center</item>  
    </style>  
  
    <color name="black">#FF000000</color>  
    <color name="white">#FFFFFFF</color>  
    <color name="purple_200">#710a69</color>  
    <color name="purple_500">#710a69</color>  
    <color name="purple_700">#FF3700B3</color>  
    <color name="teal_200">#FF03DAC5</color>  
    <color name="teal_700">#FF018786</color>  
    <color name="red">#10b9a7</color>  
    <color name="pink">#FFC0CB</color>  
    <color name="orange">#9bbacb</color>  
    <color name="neon_green">#6bc6ff</color>  
</resources>
```

5.Добавляем viewbinding и exp4j

```
buildFeatures {  
    viewBinding = true  
}
```

```
implementation ("net.objecthunter:exp4j:0.4.8")
```

6.Дизайн макета в activity_calculator.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" />  
        </LinearLayout>  
        <TableLayout  
            android:layout_width="match_parent"  
            android:layout_height="wrap_content"  
            android:stretchColumns="*">  
            <TableRow>
```

```
                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="/" />  
            </TableRow>  
            <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" />  
                <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"
    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" />

```

```

        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" />
<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"

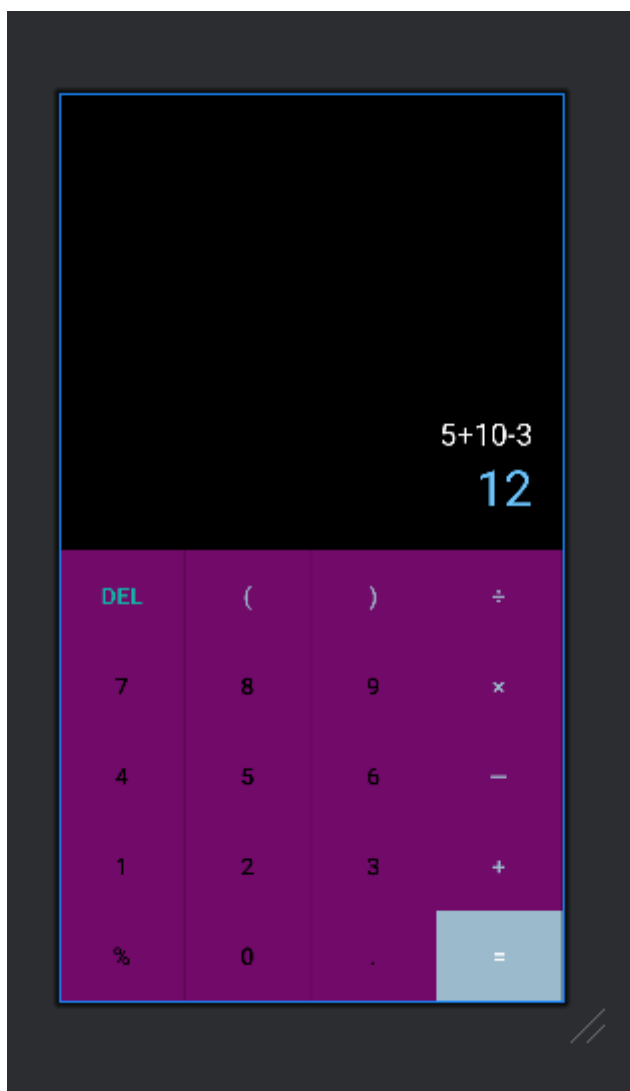
```

```

<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>

```

Внешний вид:



7. Добавляем код для калькулятора (заменяем знаки умножения на “*” и деления на “/”)

```
binding = ActivityCalculatorBinding.inflate(layoutInflater)

setContentView(binding.root)
binding.buttonClear.setOnClickListener {
    binding.input.text = " "
    binding.output.text = " "
}
binding.buttonBracketLeft.setOnClickListener {
    addToInputText( value: "(")
}
binding.buttonBracketRight.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.button7.setOnClickListener {
    addToInputText( value: "7")
}
binding.button8.setOnClickListener {
    addToInputText( value: "8")
}
```

```
binding.button9.setOnClickListener {
    addToInputText( value: "9")
}
binding.buttonDot.setOnClickListener {
    addToInputText( value: ".")
}
binding.buttonDivision.setOnClickListener {
    addToInputText( value: "/")
}
binding.buttonMultiply.setOnClickListener {
    addToInputText( value: "*")
}
binding.buttonSubtraction.setOnClickListener {
    addToInputText( value: "-")
}
binding.buttonAddition.setOnClickListener {
    addToInputText( value: "+")
}
binding.buttonEquals.setOnClickListener {
    showResult()
}
binding.buttonPercent.setOnClickListener {
    addToInputText( value: "%")
}

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
}

private fun addToInputText(value: String) {
    binding.input.append(value)
}
}
```

Функции:

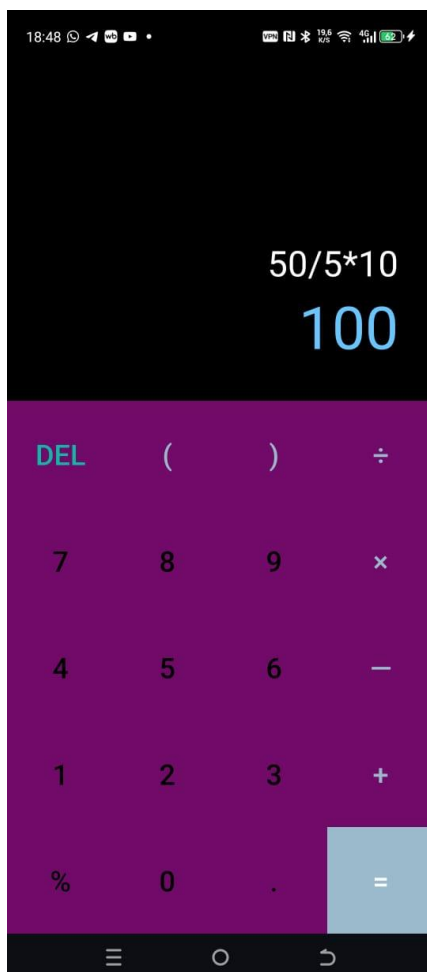
```
private fun addToInputText(value: String) {
    binding.input.append(value)
}

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

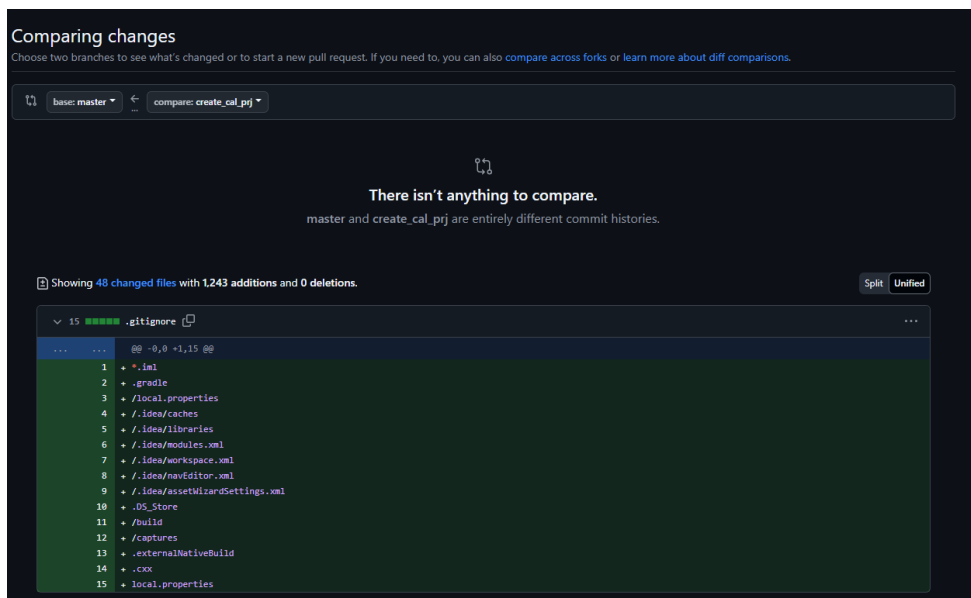
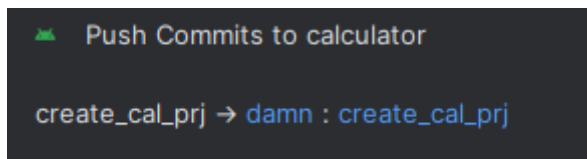
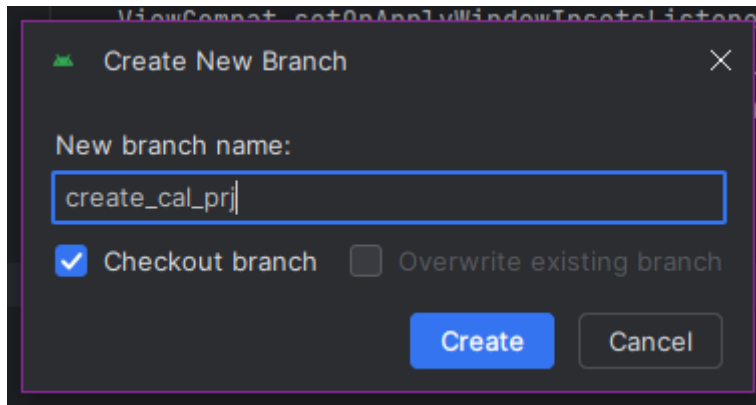
// Функция для показа результата вычислений
private fun showResult() {
    try {
        val expression = getInputExpression().replace(oldValue: "%", newValue: "/100") //

        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))
    }
}
}
```

8.Работа:



9.Добавляем новый branch с нашим калькулятором на гитхаб и скрещиваем их вместе с master



create_cal_prj

3 Branches

Tags

Go to file

Add file

Code

This branch is 1 commit ahead of, 1 commit behind master.

Contribute

PivnayaGODZILLA

change

4fdb864 · 8 minutes ago

1 Commit

.idea	change	8 minutes ago
app	change	8 minutes ago
gradle	change	8 minutes ago
.gitignore	change	8 minutes ago
build.gradle.kts	change	8 minutes ago
gradle.properties	change	8 minutes ago
gradlew	change	8 minutes ago
gradlew.bat	change	8 minutes ago
settings.gradle.kts	change	8 minutes ago