

В этот практической, в activity_main.xml мы пишем такой код:

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

```

84         style="@style/Button_Style"
85         android:layout_width="wrap_content"
86         android:layout_height="90dp"
87         android:text="9" />
88     <androidx.appcompat.widget.AppCompatButton
89         android:id="@+id/button_multiply"
90         style="@style/Button_Style"
91         android:layout_width="wrap_content"
92         android:layout_height="90dp"
93         android:text="x"
94         android:textColor="@color/orange" />
95 </TableRow>
96 <TableRow>
97     <androidx.appcompat.widget.AppCompatButton
98         android:id="@+id/button_4"
99         style="@style/Button_Style"
100        android:layout_width="wrap_content"
101        android:layout_height="90dp"
102        android:text="4" />
103    <androidx.appcompat.widget.AppCompatButton
104        android:id="@+id/button_5"
105        style="@style/Button_Style"
106        android:layout_width="wrap_content"
107        android:layout_height="90dp"
108        android:text="5" />
109    <androidx.appcompat.widget.AppCompatButton
110        android:id="@+id/button_6"
111        style="@style/Button_Style"
112        android:layout_width="wrap_content"
113        android:layout_height="90dp"
114        android:text="6" />
115    <androidx.appcompat.widget.AppCompatButton
116        android:id="@+id/button_subtraction"
117        style="@style/Button_Style"
118        android:layout_width="wrap_content"
119        android:layout_height="90dp"
120        android:text="-"
121        android:textColor="@color/orange" />
122 </TableRow>

```

```

123 <TableRow>
124     <androidx.appcompat.widget.AppCompatButton
125         android:id="@+id/button_1"
126         style="@style/Button_Style"
127         android:layout_width="wrap_content"
128         android:layout_height="90dp"
129         android:text="1" />
130     <androidx.appcompat.widget.AppCompatButton
131         android:id="@+id/button_2"
132         style="@style/Button_Style"
133         android:layout_width="wrap_content"
134         android:layout_height="90dp"
135         android:text="2" />
136     <androidx.appcompat.widget.AppCompatButton
137         android:id="@+id/button_3"
138         style="@style/Button_Style"
139         android:layout_width="wrap_content"
140         android:layout_height="90dp"
141         android:text="3" />
142     <androidx.appcompat.widget.AppCompatButton
143         android:id="@+id/button_addition"
144         style="@style/Button_Style"
145         android:layout_width="wrap_content"
146         android:layout_height="90dp"
147         android:text="+"
148         android:textColor="@color/orange" />
149 </TableRow>
150 <TableRow>
151     <androidx.appcompat.widget.AppCompatButton
152         android:id="@+id/button_percent"
153         style="@style/Button_Style"
154         android:layout_width="wrap_content"
155         android:layout_height="90dp"
156         android:text="%" />
157     <androidx.appcompat.widget.AppCompatButton
158         android:id="@+id/button_0"
159         style="@style/Button_Style"
160         android:layout_width="wrap_content"
161         android:layout_height="90dp"
162         android:text="0" />

```

```

163         <androidx.appcompat.widget.AppCompatButton
164             android:id="@+id/button_dot"
165             style="@style/Button_Style"
166             android:layout_width="wrap_content"
167             android:layout_height="90dp"
168             android:text="." />
169         <androidx.appcompat.widget.AppCompatButton
170             android:id="@+id/button_equals"
171             style="@style/Button_Style"
172             android:layout_width="wrap_content"
173             android:layout_height="90dp"
174             android:background="@color/orange"
175             android:text="="
176             android:textColor="@color/white" />
177     </TableRow>
178 </TableLayout>
179 </LinearLayout>

```

В MainActivity пишем этот код:

```

1  package com.example.a9
2
3  import android.os.Bundle
4  import androidx.appcompat.app.AppCompatActivity
5  import androidx.core.content.ContextCompat
6  import androidx.core.view.ViewCompat
7  import androidx.core.view.WindowInsetsCompat
8  import com.example.a9.databinding.ActivityMainBinding
9  import net.objecthunter.exp4j.ExpressionBuilder
10 import java.text.DecimalFormat
11
12 class MainActivity : AppCompatActivity() {
13
14     private lateinit var binding: ActivityMainBinding
15
16     override fun onCreate(savedInstanceState: Bundle?) {
17         super.onCreate(savedInstanceState)
18
19         // Инициализация viewBinding
20         binding = ActivityMainBinding.inflate(layoutInflater)
21         setContentView(binding.root)
22
23         // Настройка edge-to-edge режима
24         ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main)) { v, insets ->
25             val systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars())
26             v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom)
27             insets
28         }
29
30         // Обработчики нажатий для кнопок
31         binding.buttonClear.setOnClickListener {
32             binding.input.text = ""
33             binding.output.text = ""
34         }
35         binding.buttonBracketLeft.setOnClickListener { addToInputText(value: "(") }
36         binding.buttonBracketRight.setOnClickListener { addToInputText(value: ")") }
37         binding.button0.setOnClickListener { addToInputText(value: "0") }
38         binding.button1.setOnClickListener { addToInputText(value: "1") }
39         binding.button2.setOnClickListener { addToInputText(value: "2") }
40         binding.button3.setOnClickListener { addToInputText(value: "3") }
41         binding.button4.setOnClickListener { addToInputText(value: "4") }
42         binding.button5.setOnClickListener { addToInputText(value: "5") }
43         binding.button6.setOnClickListener { addToInputText(value: "6") }
44         binding.button7.setOnClickListener { addToInputText(value: "7") }
45         binding.button8.setOnClickListener { addToInputText(value: "8") }

```

```

46         binding.button9.setOnClickListener { addToInputText( value: "9") }
47         binding.buttonDot.setOnClickListener { addToInputText( value: "." ) }
48         binding.buttonDivision.setOnClickListener { addToInputText( value: "÷") }
49         binding.buttonMultiply.setOnClickListener { addToInputText( value: "x") }
50         binding.buttonSubtraction.setOnClickListener { addToInputText( value: "-" ) }
51         binding.buttonAddition.setOnClickListener { addToInputText( value: "+" ) }
52         binding.buttonEquals.setOnClickListener { showResult() }
53         binding.buttonPercent.setOnClickListener { addToInputText( value: "%" ) }
54     }
55
56     // Функция для добавления текста к полю ввода
57     private fun addToInputText(value: String) {
58         binding.input.append(value) // Добавляем переданное значение в конец поля ввода
59     }
60
61     // Функция для получения строки ввода
62     private fun getInputExpression(): String {
63         return binding.input.text.toString() // Возвращаем текст из поля ввода
64     }
65
66     // Функция для показа результата вычислений
67     private fun showResult() {
68         try {
69             // Заменяем % на деление на 100 для корректного расчета
70             val expression = getInputExpression().replace( oldValue: "%", newValue: "/100")
71             val result = ExpressionBuilder(expression).build().evaluate()
72             binding.output.text = DecimalFormat( pattern: "0.####").format(result).toString()
73             binding.output.setTextColor(ContextCompat.getColor( context: this, R.color.neon_green))
74         } catch (e: Exception) {
75             binding.output.text = "Ошибка"
76             binding.output.setTextColor(ContextCompat.getColor( context: this, R.color.red))
77         }
78     }
79 }

```

В AndroidManifest.xml пишем это:

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <manifest xmlns:android="http://schemas.android.com/apk/res/android"
3      xmlns:tools="http://schemas.android.com/tools">
4
5      <application
6          android:allowBackup="true"
7          android:dataExtractionRules="@xml/data_extraction_rules"
8          android:fullBackupContent="@xml/backup_rules"
9          android:icon="@mipmap/ic_launcher"
10         android:label="@string/app_name"
11         android:roundIcon="@mipmap/ic_launcher_round"
12         android:supportsRtl="true"
13         android:theme="@style/Theme._9"
14         tools:targetApi="31">
15
16         <activity
17             android:name=".Splash_screen"
18             android:exported="true">
19             <intent-filter>
20                 <action android:name="android.intent.action.MAIN" />
21                 <category android:name="android.intent.category.LAUNCHER" />
22             </intent-filter>
23         </activity>
24
25         <activity
26             android:name=".MainActivity"
27             android:exported="true">
28         </activity>
29     </application>
30
31 </manifest>
32

```

В Splash_screen.kt пишем это:

```
1 package com.example.a9
2
3 import android.content.Intent
4 import android.os.Bundle
5 import android.os.Handler
6 import android.os.Looper
7 import androidx.activity.enableEdgeToEdge
8 import androidx.appcompat.app.AppCompatActivity
9 import androidx.core.view.ViewCompat
10 import androidx.core.view.WindowInsetsCompat
11
12 class Splash_screen : AppCompatActivity() {
13     override fun onCreate(savedInstanceState: Bundle?) {
14         super.onCreate(savedInstanceState)
15         enableEdgeToEdge()
16         setContentView(R.layout.activity_splash_screen)
17
18         ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main)) { v, insets ->
19             val systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars())
20             v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom)
21             insets
22         }
23
24         android.os.Handler(Looper.getMainLooper()).postDelayed({
25             val intent = Intent(packageContext, MainActivity::class.java)
26             startActivity(intent)
27         }, delayMillis: 2000)
28     }
29 }
30 }
```

В activity_splash_screen.xml пишем этот код:

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <LinearLayout
3     xmlns:android="http://schemas.android.com/apk/res/android"
4     xmlns:app="http://schemas.android.com/apk/res-auto"
5     xmlns:tools="http://schemas.android.com/tools"
6     android:id="@+id/main"
7     android:layout_width="match_parent"
8     android:layout_height="match_parent"
9     tools:context=".Splash_screen"
10    android:orientation="vertical">
11
12
13    <ImageView
14        android:id="@+id/imageView"
15        android:layout_width="match_parent"
16        android:layout_height="400dp"
17        android:layout_marginTop="120dp"
18        app:layout_constraintBottom_toBottomOf="parent"
19        app:layout_constraintEnd_toEndOf="parent"
20        app:layout_constraintStart_toStartOf="parent"
21        app:layout_constraintTop_toTopOf="parent"
22        app:srcCompat="@drawable/calculator" />
23
24
25    <TextView
26        android:id="@+id/textView2"
27        android:layout_width="match_parent"
28        android:layout_height="wrap_content"
29        android:gravity="center"
30        android:text="калькулятор" />
31
32
33 </LinearLayout>
```

B build.gradle.kts:

```
1  plugins {
2      alias(libs.plugins.android.application)
3      alias(libs.plugins.kotlin.android)
4  }
5
6  android {
7      namespace = "com.example.a9"
8      compileSdk = 35
9
10     buildFeatures {
11         viewBinding = true
12     }
13
14     defaultConfig {
15         applicationId = "com.example.a9"
16         minSdk = 24
17         targetSdk = 34
18         versionCode = 1
19         versionName = "1.0"
20
21         testInstrumentationRunner = "androidx.test.runner.AndroidJUnitRunner"
22     }
23
24     buildTypes {
25         release {
26             isMinifyEnabled = false
27             proguardFiles(
28                 getDefaultProguardFile("name: "proguard-android-optimize.txt"),
29                 "proguard-rules.pro"
30             )
31         }
32     }
33
34     compileOptions {
35         sourceCompatibility = JavaVersion.VERSION_1_8
36         targetCompatibility = JavaVersion.VERSION_1_8
37     }
38
39     kotlinOptions {
40         jvmTarget = "1.8"
41     }
42 }
43
44 dependencies {
45     implementation(libs.androidx.core.ktx)
46     implementation(libs.androidx.appcompat)
47     implementation(libs.material)
48     implementation(libs.androidx.activity)
49     implementation(libs.androidx.constraintlayout)
50     implementation("net.objecthunter:exp4j:0.4.8")
51     testImplementation(libs.junit)
52     androidTestImplementation(libs.androidx.junit)
53     androidTestImplementation(libs.androidx.espresso.core)
```

Результат:

