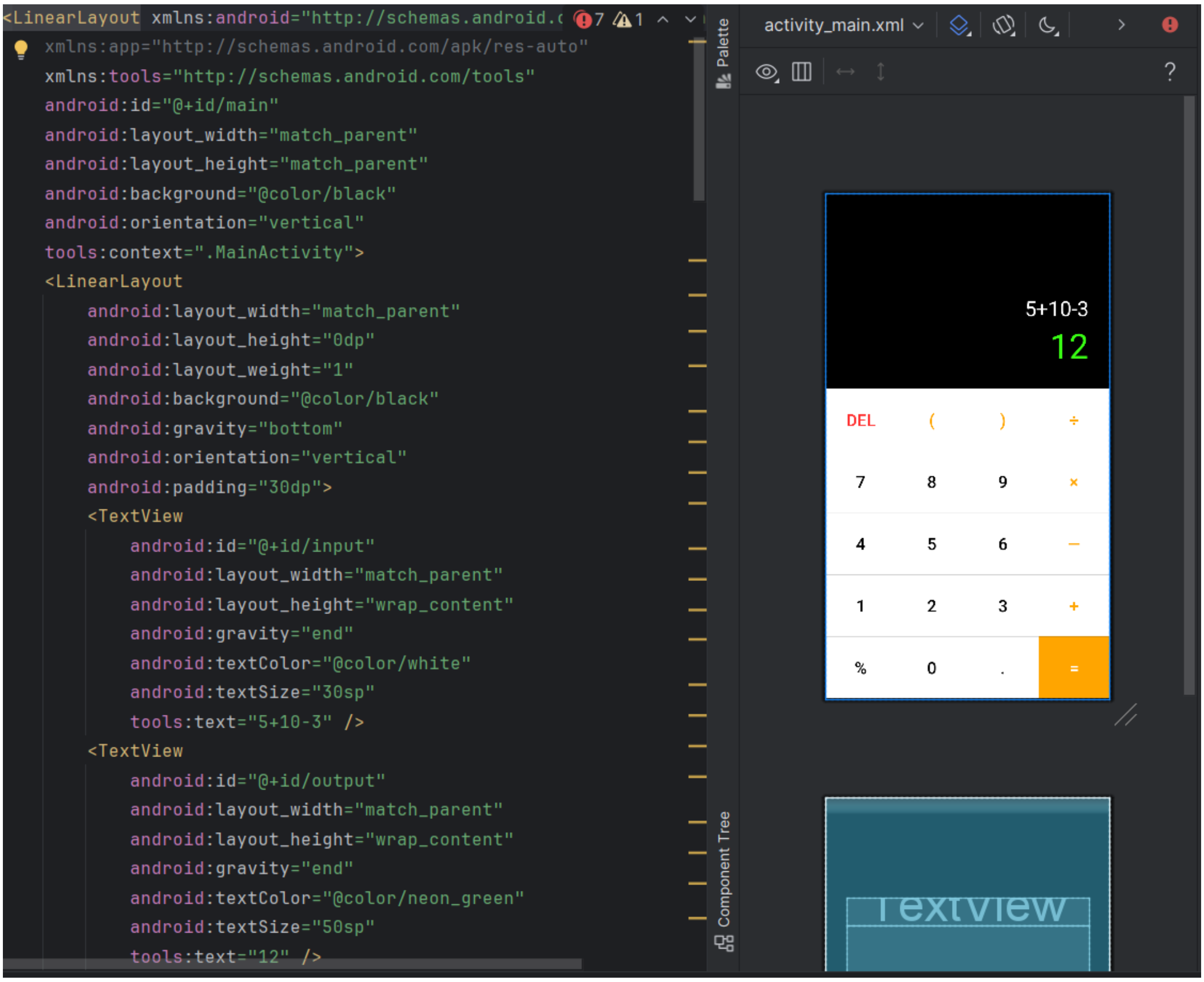
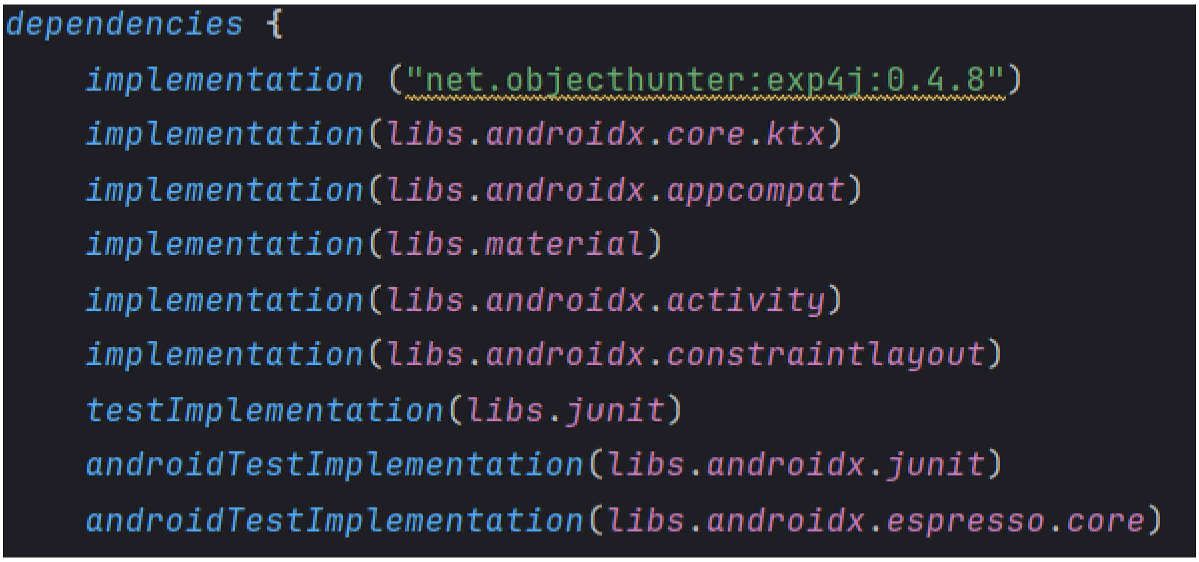
№9(Калькулятор)

1. Гл. активность



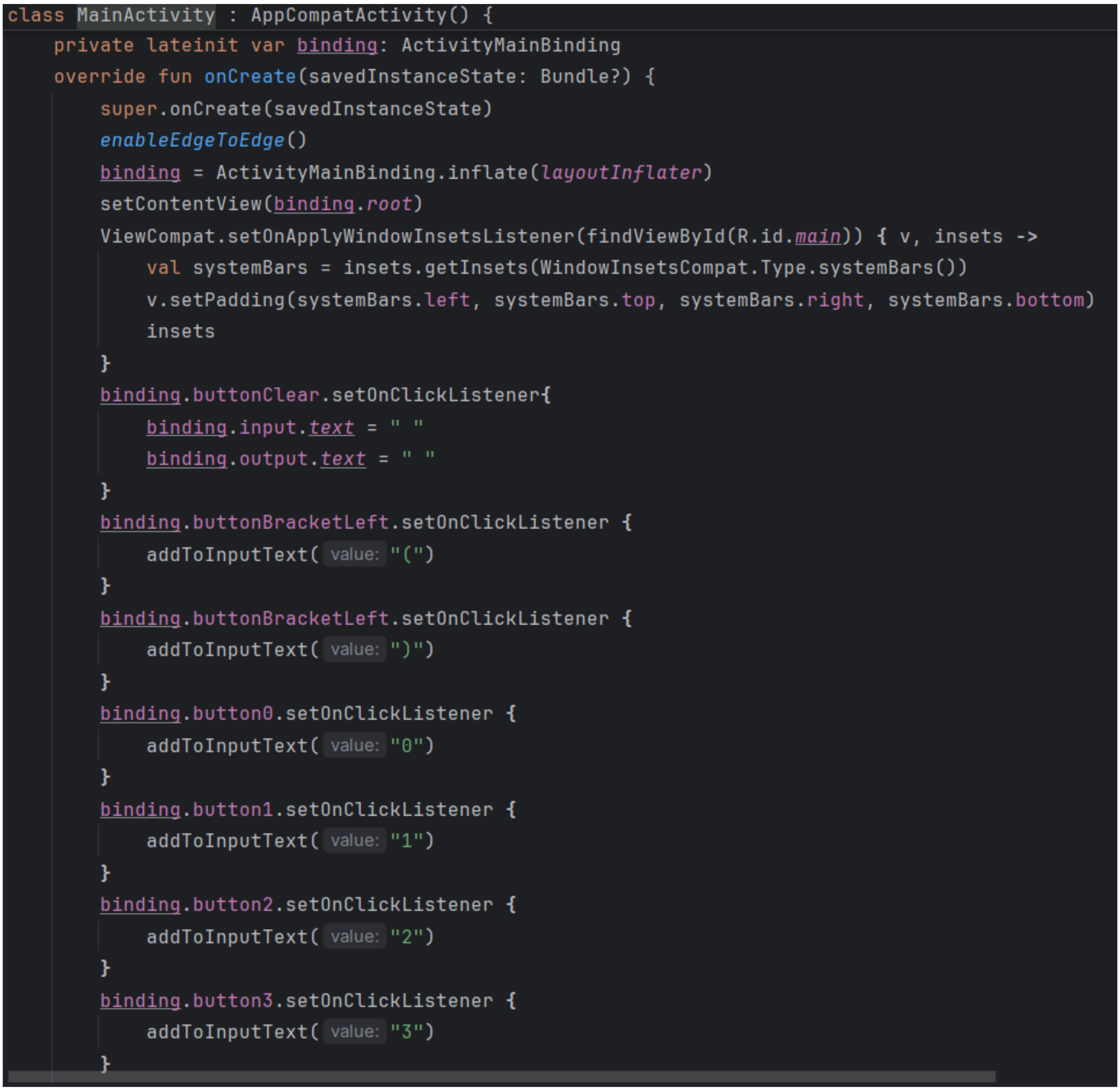
```
<LinearLayout xmlns:android="http://schemas.android.c
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/black"
    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" />
```

2. Добавляю библиотеку exp4j и ViewBinding

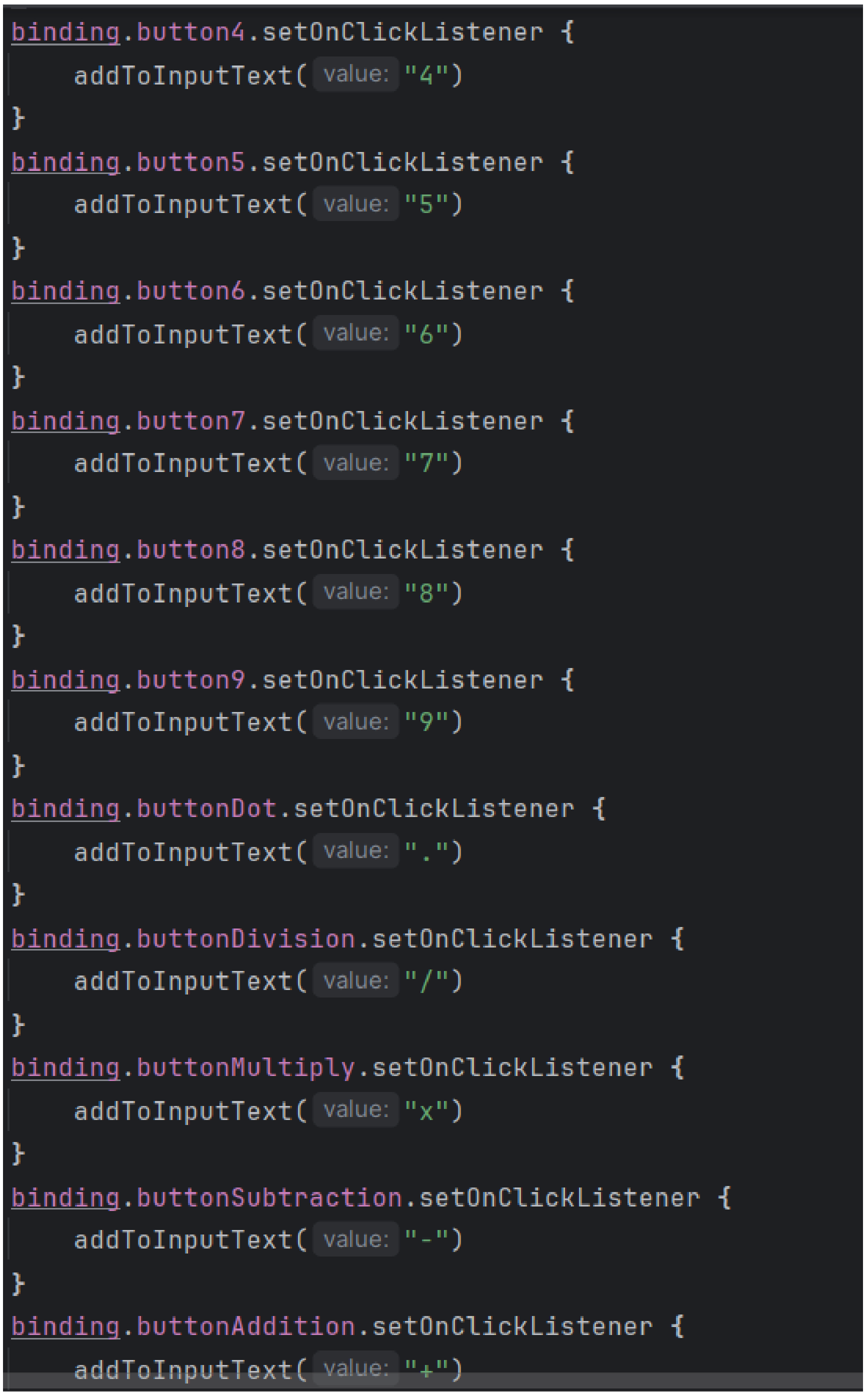


```
dependencies {
    implementation ("net.objecthunter:exp4j:0.4.8")
    implementation(libs.androidx.core.ktx)
    implementation(libs.androidx.appcompat)
    implementation(libs.material)
    implementation(libs.androidx.activity)
    implementation(libs.androidx.constraintlayout)
    testImplementation(libs.junit)
    androidTestImplementation(libs.androidx.junit)
    androidTestImplementation(libs.androidx.espresso.core)
```

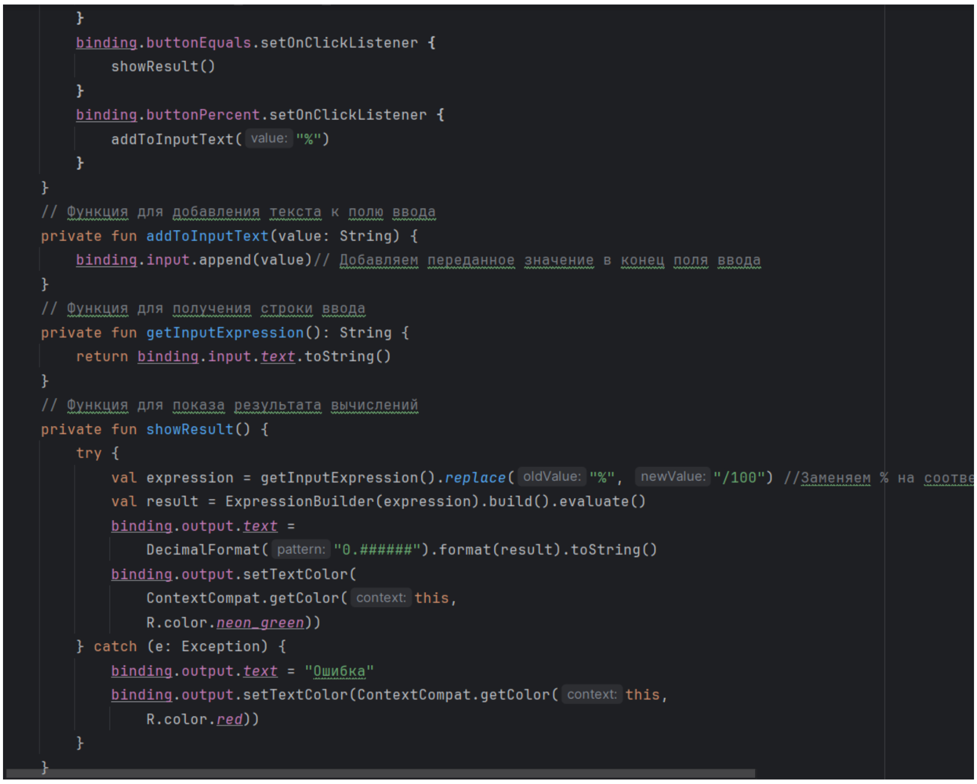
3. MainActivity



```
class MainActivity : AppCompatActivity() {
    private 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")
        }
```

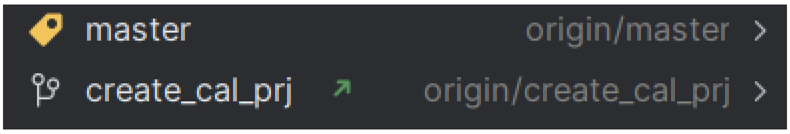


```
binding.button4.setOnClickListener {
    addToInputText( value: "4")
}
binding.button5.setOnClickListener {
    addToInputText( value: "5")
}
binding.button6.setOnClickListener {
    addToInputText( value: "6")
}
binding.button7.setOnClickListener {
    addToInputText( value: "7")
}
binding.button8.setOnClickListener {
    addToInputText( value: "8")
}
binding.button9.setOnClickListener {
    addToInputText( value: "9")
}
binding.buttonDot.setOnClickListener {
    addToInputText( value: ".")
}
binding.buttonDivision.setOnClickListener {
    addToInputText( value: "/")
}
binding.buttonMultiply.setOnClickListener {
    addToInputText( value: "x")
}
binding.buttonSubtraction.setOnClickListener {
    addToInputText( value: "-")
}
binding.buttonAddition.setOnClickListener {
    addToInputText( value: "+")
```



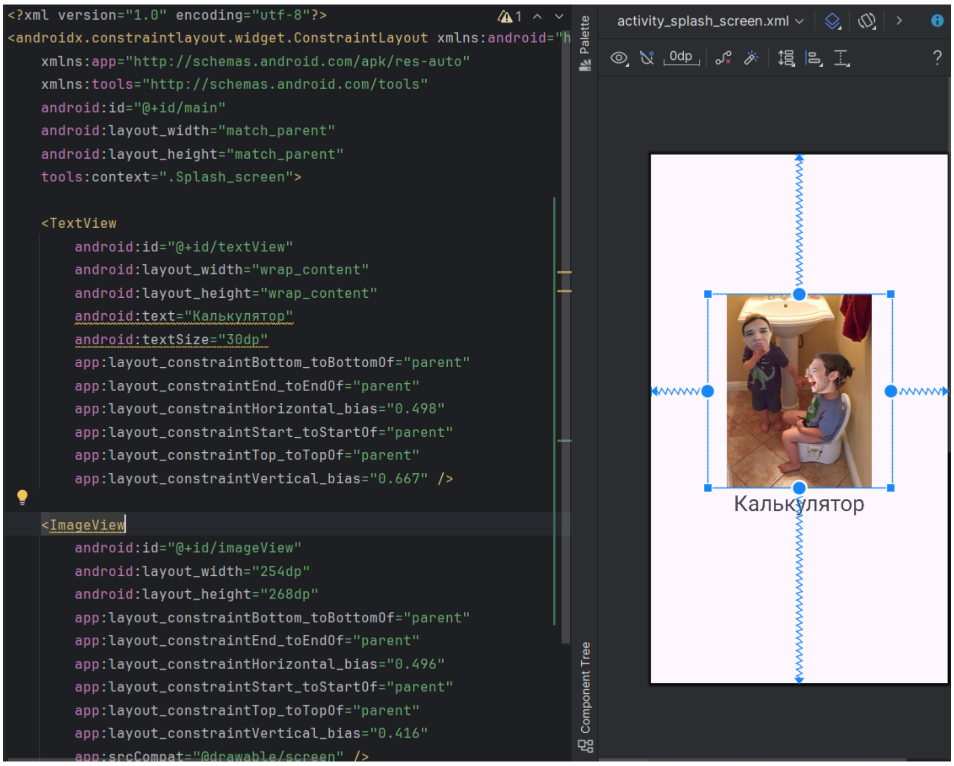
```
    }
    binding.buttonEquals.setOnClickListener {
        showResult()
    }
    binding.buttonPercent.setOnClickListener {
        addToInputText( value: "%")
    }
}
// Функция для добавления текста к полю ввода
private fun addToInputText(value: String) {
    binding.input.append(value)// Добавляем переданное значение в конец поля ввода
}
// Функция для получения строки ввода
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") //Заменяем % на соотве
        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))
    }
}
```

4. Создаю доп ветку в которой будет заставка



```
master              origin/master  >
create_cal_prj  ↗   origin/create_cal_prj  >
```

5. Создаю загрузочный экран

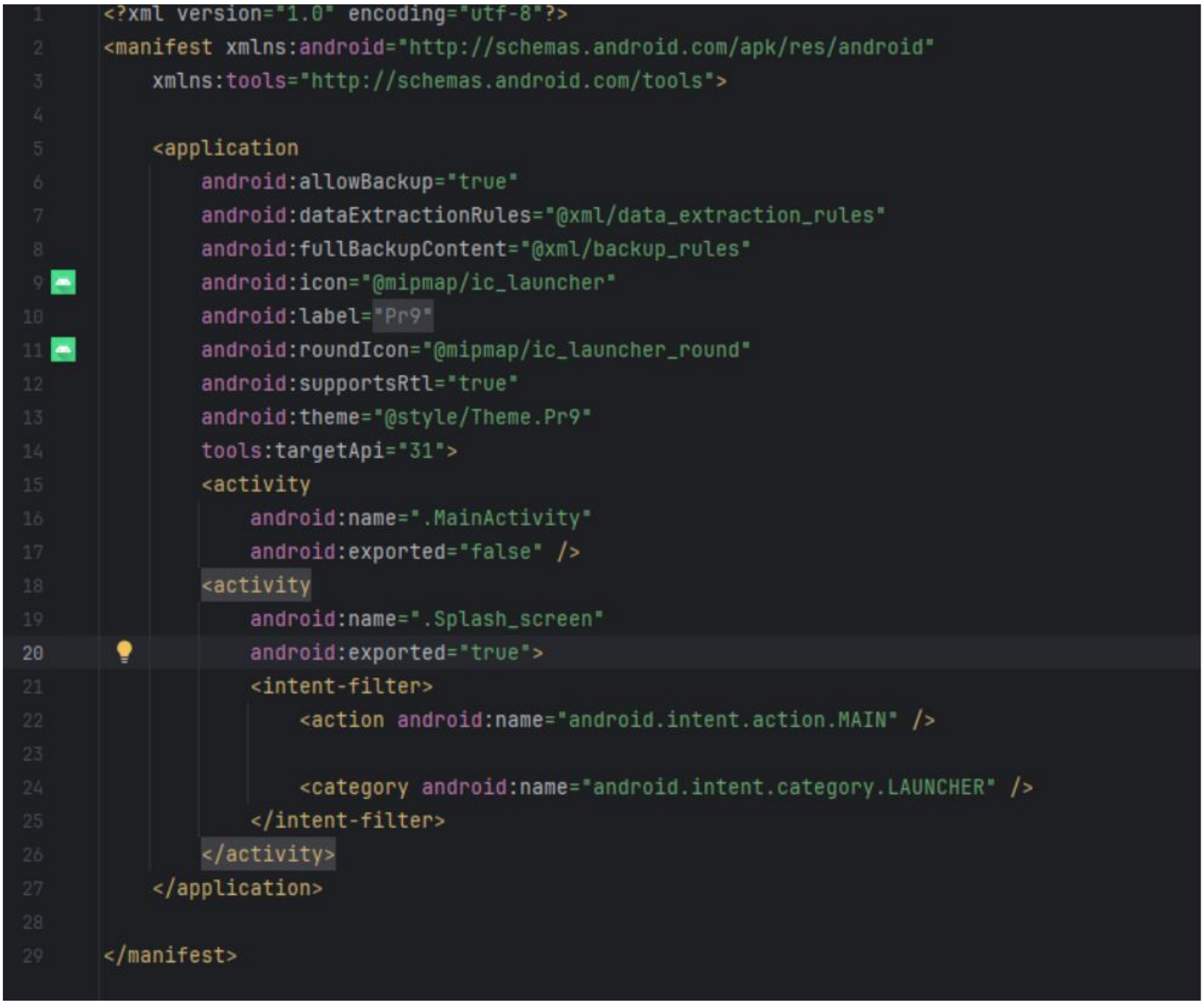


```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="h
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Splash_screen">

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Калькулятор"
        android:textSize="30dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.667" />

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="254dp"
        android:layout_height="268dp"
        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="0.416"
        app:srcCompat="@drawable/screen" />
```

6. Редактирую манифест



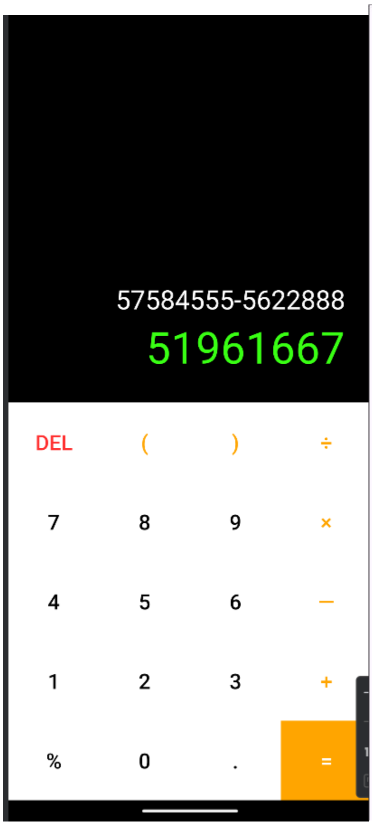
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="Pr9"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Pr9"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="false" />
        <activity
            android:name=".Splash_screen"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

7. Результат



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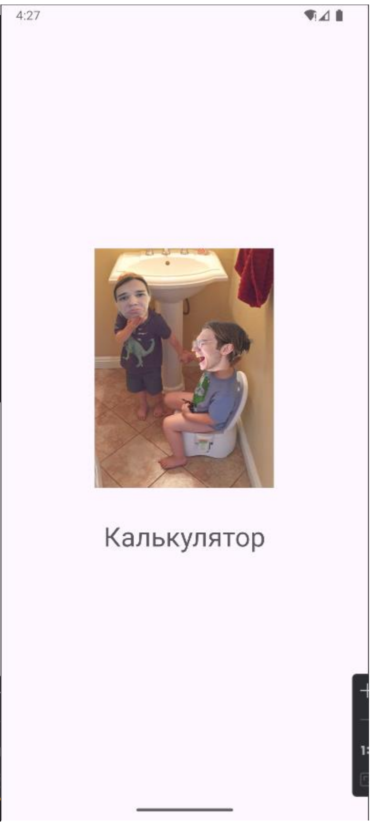

Калькулятор