Universidade do Estado do Rio de Janeiro
Faculdade de Engenharia e Ciências.

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Projeto "APP"

Rio de janeiro 2023

Projeto APP

Trabalho consistia em uma
aplicação, cujo seu objetivo era
explicitar as técnicas abordadas
durante as aulas da disciplina de
programação de dispositivos
móveis ministrada pelo professor
Dr.Eng.Carlos Augusto Sicsú
Ayres do Nascimento.

CONCLUSÃO

BIBLIOGRAFIA

INTRODUÇÃO

*"O espantoso crescimento de nossas tecnologias, a
adaptabilidade e precisão que elas alcançaram, as idéias e
hábitos que elas estão criando, trazem a certeza de que
profundas mudanças são iminentes"
Paul Válery, piéces sur
L'art, 1931 Le
Conquete de
l'ubiquite*

O projeto "APP" e´ um protótipo que mescla os projetos desenvolvidos durante as aulas, projetos tais que abordam as técnicas de programação trabalhadas e explicadas pelo professor Dr.Sicsú.

Nessas aulas foram implementadas calculadoras que executam cálculos básicos, sendo eles, soma, subtração, divisão, multiplicação, radiciação, exponenciação e imc , que demostram a complexidade de um desenvolvimento estruturado usando a arquitetura mvc.

Neste documento, será apresentado prints de tela que correspondem a interface do aplicativo onde foi inteiramente desenvolvida sem a utilização de frameworks. Com o código sendo compilado inicialmente usando o sdk Android 4.1 (jelly Bean) e depois compilado também no Android 11 (R) possibilitando então sua execução em qualquer dispositivo Android.

Código da Tela Principal

```xml
<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout 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:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">


    <ImageView

        android:id="@+id/imageView"

        android:layout_width="197dp"

        android:layout_height="204dp"

        android:layout_marginEnd="99dp"

        android:layout_marginBottom="44dp"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.93"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.178"

        app:srcCompat="@drawable/logouerj" />


    <TextView

        android:id="@+id/textView13"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Aplicativo de Calculadoras"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"
```

```xml
        app:layout_constraintHorizontal_bias="0.469"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.443" />


    <Button

        android:id="@+id/button4"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="chamaTelaCalc4"

        android:text="Calculadora Geo"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.517"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.841" />


    <Button

        android:id="@+id/button1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="chamaTelaCalc1"

        android:text="Calculadora Spinner Estático"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.517"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.553" />
```

```xml
<Button
    android:id="@+id/button3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="chamaTelaCalc3"
    android:text="Calculadora Spinner Dinâmico"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.517"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.74" />

<Button
    android:id="@+id/button5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="chamaTelaCalc5"
    android:text="Calculadora RadioButton"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.517"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.937" />

<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="chamaTelaCalc2"
```

```
        android:text="Calculadora IMC"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.517"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.651" />


    <TextView

        android:id="@+id/textView2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Faça sua Escolha:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.468"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.487" />


    <TextView

        android:id="@+id/textView"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Desenvolvido por Ruan fonseca"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.537"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.981" />
```

```xml
</androidx.constraintlayout.widget.ConstraintLayout>
```


Calculadora de Spinner Estático

```xml
<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout
    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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".calculadora_1.controller.telaCalc_1">

    <TextView
```

```xml
        android:id="@+id/textView2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Calculadora"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.039" />


    <TextView

        android:id="@+id/textView3"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Valor 1 :"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.074"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.28" />


    <TextView

        android:id="@+id/textView5"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Valor 2 :"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.075"

        app:layout_constraintStart_toStartOf="parent"
```

```xml
        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.38" />


    <TextView

        android:id="@+id/textView4"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Resultado:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.075"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.595" />


    <TextView

        android:id="@+id/textView"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Faça Sua Escolha:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.098" />


    <Spinner

        android:id="@+id/spinner"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:entries="@array/opcoes"
```

```xml
        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.148" />


    <EditText

        android:id="@+id/edtV1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.582"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.269" />


    <EditText

        android:id="@+id/editV2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.582"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.357" />
```

```xml
<EditText
    android:id="@+id/edtResp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="numberDecimal"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.582"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.599" />

<Button
    android:id="@+id/btnCalc"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="chamaTelaSecundaria"
    android:text="TelaSecundaria"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent"
/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

CÓDIGO DA TELA SECUNDÁRIA DA CALCULADORA DE SPINNER ESTÁTICO

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout 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"
```

```xml
android:layout_width="match_parent"

android:layout_height="match_parent"

tools:context=".calculadora_1.view.TelaResultCalc_1">


<TextView

    android:id="@+id/textView2"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Calculadora"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.039" />


<TextView

    android:id="@+id/textView3"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Valor 1 :"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.074"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.28" />


<TextView

    android:id="@+id/textView5"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"
```

```xml
    android:text="Valor 2 :"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.075"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.38" />


<TextView

    android:id="@+id/textView4"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Resultado:"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.075"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.595" />


<TextView

    android:id="@+id/textView"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Faça Sua Escolha:"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.098" />
```

```xml
<Spinner
    android:id="@+id/spinner"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:entries="@array/opcoes"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.148" />

<EditText
    android:id="@+id/editV1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="numberDecimal"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.582"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.269" />

<EditText
    android:id="@+id/editV2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="numberDecimal"
    app:layout_constraintBottom_toBottomOf="parent"
```

```xml
        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.582"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.357" />


    <EditText

        android:id="@+id/edtResp"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.582"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.599" />


    <Button

        android:id="@+id/btnCalc"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="estatico"

        android:text="Calcular"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent" />


    <Button
```

```
android:id="@+id/btnCalc3"

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:onClick="voltar"

android:text="Voltar"

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="0.774" />


</androidx.constraintlayout.widget.ConstraintLayout>
```
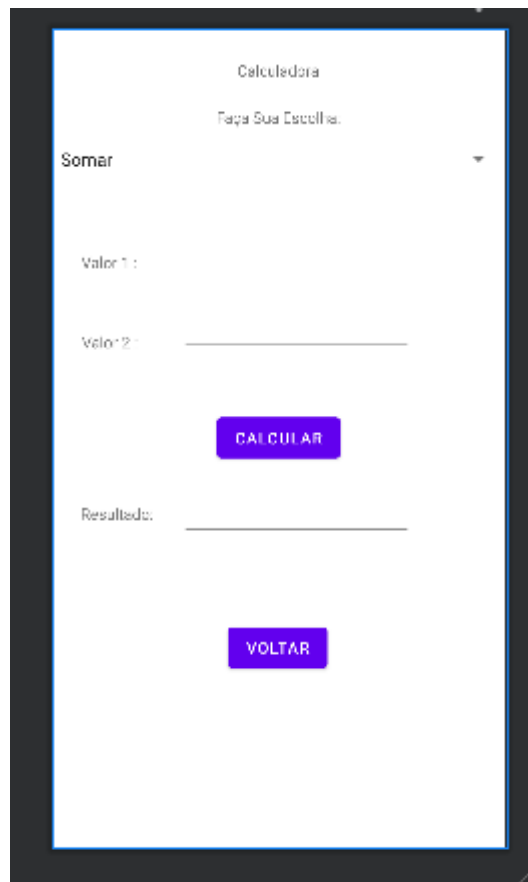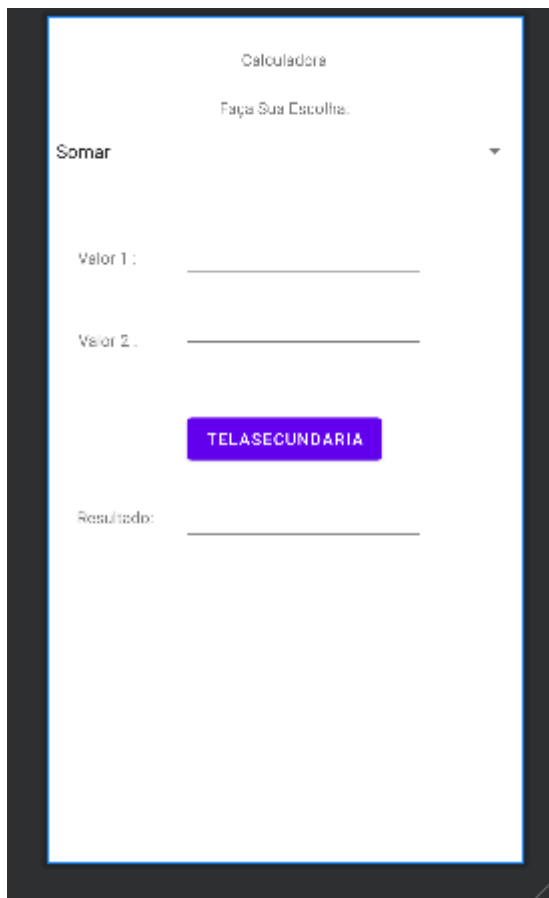
CÓDIGO DA TELA DA CALCULADORA IMC

```xml
<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout
    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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".calculadora_2.controller.telaCalc_2">
    <TextView
        android:id="@+id/textView2"
        android:layout_width="77dp"
        android:layout_height="40dp"
        android:text="Calcula IMC"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.023" />

    <TextView
        android:id="@+id/textView3"
        android:layout_width="76dp"
        android:layout_height="34dp"
        android:text="Peso:"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.047"
```

```xml
        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.131" />


    <TextView

        android:id="@+id/textView6"

        android:layout_width="76dp"

        android:layout_height="34dp"

        android:text="IMC:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.104"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.743" />


    <TextView

        android:id="@+id/textView4"

        android:layout_width="76dp"

        android:layout_height="34dp"

        android:text="Altura:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.047"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.212" />


    <TextView

        android:id="@+id/textView5"

        android:layout_width="76dp"
```

```xml
        android:layout_height="34dp"

        android:text="Sexo:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.047"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.314" />


    <TextView

        android:id="@+id/textView7"

        android:layout_width="76dp"

        android:layout_height="34dp"

        android:text="Situação:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.104"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.807" />


    <EditText

        android:id="@+id/edtV1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.497"

        app:layout_constraintStart_toStartOf="parent"
```

```xml
        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.116" />


    <EditText

        android:id="@+id/saidaImc"

        android:layout_width="241dp"

        android:layout_height="46dp"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.652"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.738" />


    <EditText

        android:id="@+id/edtV2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.512"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.199" />


    <RadioGroup

        android:layout_width="220dp"
```

```xml
    android:layout_height="47dp"

    android:orientation="horizontal"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.54"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.328">


    <RadioButton

        android:id="@+id/radioButtonfem"

        android:layout_width="112dp"

        android:layout_height="36dp"

        android:checked="true"

        android:text="Feminino" />


    <RadioButton

        android:id="@+id/radioButtonMasc"

        android:layout_width="110dp"

        android:layout_height="36dp"

        android:text="Masculino" />
</RadioGroup>

<CheckBox

    android:id="@+id/checkBoxIdade"

    android:layout_width="136dp"

    android:layout_height="46dp"

    android:text="Maior de 15 anos?"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.374"
```

```
        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.442" />


    <Button

        android:id="@+id/button"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="chamaTelaSecundaria"

        android:text="TelaSecundaria"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.424"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.566" />


    <EditText

        android:id="@+id/editTextSituacao"

        android:layout_width="246dp"

        android:layout_height="104dp"

        android:ems="10"

        android:gravity="start|top"

        android:inputType="textMultiLine"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.672"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.897" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

CÓDIGO DA TELA SECUNDÁRIA (CALCULADORA IMC)

```xml
<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout
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:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".calculadora_2.view.TelaSecundariaCalc2">


    <TextView

        android:id="@+id/textView2"

        android:layout_width="77dp"

        android:layout_height="40dp"

        android:text="Calcula IMC"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.023" />


    <TextView

        android:id="@+id/textView3"

        android:layout_width="76dp"

        android:layout_height="34dp"

        android:text="Peso:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.047"

        app:layout_constraintStart_toStartOf="parent"
```

```xml
        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.131" />


    <TextView

        android:id="@+id/textView6"

        android:layout_width="76dp"

        android:layout_height="34dp"

        android:text="IMC:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.104"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.707" />


    <TextView

        android:id="@+id/textView4"

        android:layout_width="76dp"

        android:layout_height="34dp"

        android:text="Altura:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.047"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.212" />


    <TextView

        android:id="@+id/textView5"

        android:layout_width="76dp"

        android:layout_height="34dp"
```

```xml
    android:text="Sexo:"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.047"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.314" />


<TextView

    android:id="@+id/textView7"

    android:layout_width="76dp"

    android:layout_height="34dp"

    android:text="Situação:"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.104"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.784" />


<EditText

    android:id="@+id/edtV1"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:ems="10"

    android:inputType="numberDecimal"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.497"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"
```

```xml
        app:layout_constraintVertical_bias="0.116" />


    <EditText
        android:id="@+id/saidaImc"
        android:layout_width="241dp"
        android:layout_height="46dp"
        android:ems="10"
        android:inputType="numberDecimal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.652"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.702" />


    <EditText
        android:id="@+id/edtV2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="numberDecimal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.512"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.199" />


    <RadioGroup
        android:layout_width="220dp"
        android:layout_height="47dp"
```

```xml
        android:orientation="horizontal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.54"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.328">


        <RadioButton

            android:id="@+id/radioButtonfem"

            android:layout_width="112dp"

            android:layout_height="36dp"

            android:checked="true"

            android:text="Feminino" />


        <RadioButton

            android:id="@+id/radioButtonMasc"

            android:layout_width="110dp"

            android:layout_height="36dp"

            android:text="Masculino" />
    </RadioGroup>


    <CheckBox

        android:id="@+id/checkBoxIdade"

        android:layout_width="136dp"

        android:layout_height="46dp"

        android:text="Maior de 15 anos?"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.374"

        app:layout_constraintStart_toStartOf="parent"
```

```xml
        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.442" />


    <Button

        android:id="@+id/button"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="verfica"

        android:text="Verificar"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.424"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.566" />


    <Button

        android:id="@+id/button6"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="voltar"

        android:text="Voltar"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.478"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.976" />


    <EditText

        android:id="@+id/editTextSituacao"
```

```xml
        android:layout_width="246dp"

        android:layout_height="104dp"

        android:ems="10"

        android:gravity="start|top"

        android:inputType="textMultiLine"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.672"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.858" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

Calcula IMC

Peso: _____

Altura: _____

Sexo: ◉ Feminino   ○ Masculino

☐ Maior de 18 anos?

VERIFICAR

IMC: _____

Situação:

_____

VOLTAR

Calcula IMC

Peso: _____

Altura: _____

Sexo: ◉ Feminino   ○ Masculino

☐ Maior de 18 anos?

TELASECUNDARIA

IMC: _____

Situação:

_____

CÓDIGO CALCULADORA SPINNER DINÂMICO

```xml
<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout
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:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".calculadora3.controller.telaCalc_3">


    <Button

        android:id="@+id/btnCalc"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="chamaTelaSecundaria"

        android:text="TelaSecundaria"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent" />


    <EditText

        android:id="@+id/edtV1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"
```

```xml
        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.582"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.269" />


    <EditText

        android:id="@+id/editV2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.582"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.357" />


    <EditText

        android:id="@+id/edtResp"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.582"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"
```

```xml
        app:layout_constraintVertical_bias="0.599" />


    <Spinner
        android:id="@+id/spinner"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:entries="@array/opcoes"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.148" />


    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Calculadora"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.039" />


    <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Valor 1 :"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
```

```xml
        app:layout_constraintHorizontal_bias="0.074"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.28" />
    <TextView

        android:id="@+id/textView5"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Valor 2 :"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.075"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.38" />
    <TextView

        android:id="@+id/textView4"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Resultado:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.075"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.595" />
    <TextView

        android:id="@+id/textView"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Faça Sua Escolha:"
```

```
        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.098" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

CÓDIGO DA TELA SECUNDÁRIA (CALCULADORA SPINNER DINÂMICO)

```
<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout
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:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".calculadora3.view.TelaSecundariaCalc3">


    <Button

        android:id="@+id/btnCalc"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="spinnerstatic"

        android:text="Calcular"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent" />


    <Button

        android:id="@+id/btnCalc5"
```

```xml
        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="voltar"

        android:text="Voltar"

        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="0.761" />


    <EditText

        android:id="@+id/edtV1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.582"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.269" />


    <EditText

        android:id="@+id/editV2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"
```

```
        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.582"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.357" />


    <EditText

        android:id="@+id/edtResp"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.582"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.599" />


    <Spinner

        android:id="@+id/spinner"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:entries="@array/opcoes"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.148" />


    <TextView
```
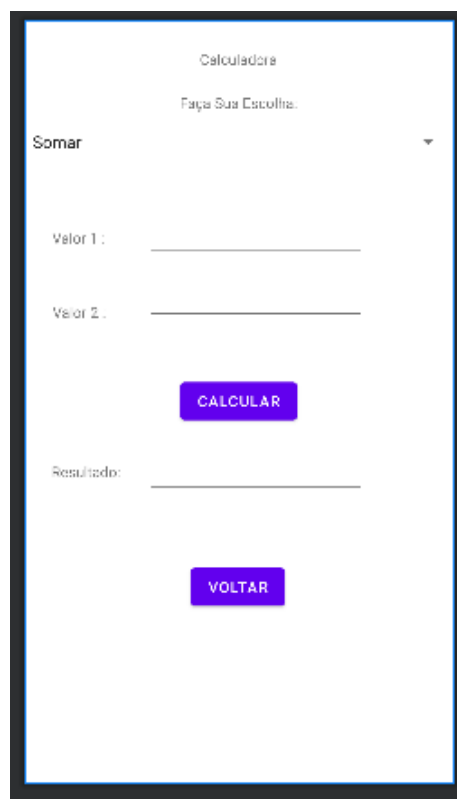
```xml
        android:id="@+id/textView2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Calculadora"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.039" />


    <TextView

        android:id="@+id/textView3"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Valor 1 :"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.074"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.28" />


    <TextView

        android:id="@+id/textView5"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Valor 2 :"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.075"

        app:layout_constraintStart_toStartOf="parent"
```

```xml
        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.38" />


    <TextView

        android:id="@+id/textView4"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Resultado:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.075"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.595" />


    <TextView

        android:id="@+id/textView"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Faça Sua Escolha:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.098" />


</androidx.constraintlayout.widget.ConstraintLayout>
```

CÓDIGO DA TELA DA CALCULADORA DE FORMAS GEOMÉTRICA

```xml
<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout
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:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".calculadora_4.controller.telaCalc4">

 <EditText

     android:id="@+id/editValor1"

     android:layout_width="wrap_content"

     android:layout_height="wrap_content"

     android:ems="10"

     android:inputType="numberDecimal"

     app:layout_constraintBottom_toBottomOf="parent"
```

```xml
        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.497"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.421" />
    <TextView

        android:id="@+id/textView10"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Resultado:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.026"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.741" />
     <EditText

        android:id="@+id/editResult"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.497"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.75" />
     <EditText

        android:id="@+id/editValor2"

        android:layout_width="wrap_content"
```

```xml
        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.497"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.508" />

    <Button

        android:id="@+id/btnCalc2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="chamaTelaSoma"

        android:text="TelaSecundaria"

        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="0.614" />

    <TextView

        android:id="@+id/textView12"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Valor 1 :"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.027"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"
```

```
        app:layout_constraintVertical_bias="0.425" />
    <TextView
        android:id="@+id/textView11"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Valor 2 :"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.027"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.525" />
    <TextView
        android:id="@+id/textView9"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Escolha a forma Geométrica:"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.098" />
    <TextView
        android:id="@+id/textView8"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Calculadora"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
```

```xml
        app:layout_constraintVertical_bias="0.039" />

    <RadioGroup

        android:layout_width="162dp"

        android:layout_height="126dp"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.497"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.214">

        <RadioButton

            android:id="@+id/rbtTriangulo"

            android:layout_width="wrap_content"

            android:layout_height="wrap_content"

            android:text="Triângulo" />

        <RadioButton

            android:id="@+id/rbtRetangulo"

            android:layout_width="wrap_content"

            android:layout_height="wrap_content"

            android:text="Retângulo" />

    </RadioGroup>

</androidx.constraintlayout.widget.ConstraintLayout>
```

CÓDIGO DA TELA SECUNDÁRIA (CALCULADORA FORMA GEOMÉTRICA)

```xml
<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout
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:layout_width="match_parent"

    android:layout_height="match_parent"
```

```xml
    tools:context=".calculadora_4.view.TelaSecundariaCalc4">

    <EditText
        android:id="@+id/editValor1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="numberDecimal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.421" />

    <TextView
        android:id="@+id/textView10"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Resultado:"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.026"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.741" />

    <EditText
        android:id="@+id/editResult"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```xml
        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.497"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.75" />


    <EditText

        android:id="@+id/editValor2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.497"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.508" />


    <Button

        android:id="@+id/btnCalc2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="calcular"

        android:text="Calcular"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.498"
```

```xml
        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.614" />


    <Button

        android:id="@+id/btnCalc4"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:onClick="voltar"

        android:text="Voltar"

        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="0.888" />


    <TextView

        android:id="@+id/textView12"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Valor 1 :"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.027"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.425" />


    <TextView

        android:id="@+id/textView11"
```

```xml
    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Valor 2 :"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.027"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.525" />


<TextView

    android:id="@+id/textView9"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Escolha a forma Geométrica:"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.098" />


<TextView

    android:id="@+id/textView8"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Calculadora"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.039" />
```

```xml
<RadioGroup
    android:layout_width="162dp"
    android:layout_height="126dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.497"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.214">

    <RadioButton
        android:id="@+id/rbtTriangulo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Triângulo" />

    <RadioButton
        android:id="@+id/rbtRetangulo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Retângulo" />
</RadioGroup>

</androidx.constraintlayout.widget.ConstraintLayout>
```

CÓDIGO DA CALCULADORA RADIOBUTTON

```xml
<?xml version="1.0" encoding="utf-8"?>


<androidx.constraintlayout.widget.ConstraintLayout
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:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".calculadora_5.controller.telaCalc_5">


    <TextView

        android:id="@+id/textView3"
```

```xml
    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Calculadora Radio Button"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.022" />


<TextView

    android:id="@+id/textView"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Valor 1:"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.099"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.099" />


<EditText

    android:id="@+id/edtV1"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:ems="10"

    android:inputType="numberDecimal"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.497"

    app:layout_constraintStart_toStartOf="parent"
```

```xml
        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.08" />


    <TextView

        android:id="@+id/textView2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Valor 2:"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.1"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.203" />


    <EditText

        android:id="@+id/edtV2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.497"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.201" />


    <RadioGroup

        android:id="@+id/radioGroup"

        android:layout_width="201dp"
```

```xml
android:layout_height="292dp"

android:orientation="vertical"

app:layout_constraintBottom_toBottomOf="parent"

app:layout_constraintEnd_toEndOf="parent"

app:layout_constraintHorizontal_bias="0.171"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toTopOf="parent"

app:layout_constraintVertical_bias="0.587">


<RadioButton

    android:id="@+id/rbtSoma"

    android:layout_width="79dp"

    android:layout_height="wrap_content"

    android:checked="true"

    android:text="Soma" />


<RadioButton

    android:id="@+id/rbtsub"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:checked="true"

    android:text="Subtração" />


<RadioButton

    android:id="@+id/rbtdiv"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:checked="true"

    android:text="Divisão" />


<RadioButton
```

```xml
        android:id="@+id/rbtrad"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:checked="true"

        android:text="Radiciação" />


    <RadioButton

        android:id="@+id/rbtexp"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:checked="true"

        android:text="Exponenciação" />


    <RadioButton

        android:id="@+id/rbtmult"

        android:layout_width="173dp"

        android:layout_height="wrap_content"

        android:text="Multiplicação" />

</RadioGroup>


<TextView

    android:id="@+id/textView4"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Escolha sua opção:"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.124"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.279" />
```

```xml
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="chamaTelaSoma"
    android:text="TelaSecundaria"
    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="0.828" />

<TextView
    android:id="@+id/textView5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Resultado:"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.052"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.905" />

<EditText
    android:id="@+id/edtresult"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
```

```xml
        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.552"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.916" />


</androidx.constraintlayout.widget.ConstraintLayout>
```

CÓDIGO DA TELA SECUNDÁRIA (CALCULADORA RADIOBUTTON)

```xml
<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout
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:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".calculadora_5.view.TelaSecundariaCalc5">


    <TextView

        android:id="@+id/textView3"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Calculadora Radio Button"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.022" />
```

```xml
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Valor 1:"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.099"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.099" />

<EditText
    android:id="@+id/edtV1"
    android:layout_width="165dp"
    android:layout_height="51dp"
    android:ems="10"
    android:inputType="numberDecimal"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.557"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.08" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Valor 2:"
    app:layout_constraintBottom_toBottomOf="parent"
```

```xml
        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.1"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.203" />


    <EditText

        android:id="@+id/edtV2"

        android:layout_width="168dp"

        android:layout_height="59dp"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.563"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.177" />


    <RadioGroup

        android:id="@+id/radioGroup"

        android:layout_width="201dp"

        android:layout_height="292dp"

        android:orientation="vertical"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.171"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.587">
```

```xml
<RadioButton
    android:id="@+id/rbtSoma"
    android:layout_width="79dp"
    android:layout_height="wrap_content"
    android:checked="true"
    android:text="Soma" />

<RadioButton
    android:id="@+id/rbtsub"
    android:layout_width="105dp"
    android:layout_height="wrap_content"
    android:checked="true"
    android:text="Subtração" />

<RadioButton
    android:id="@+id/rbtdiv"
    android:layout_width="118dp"
    android:layout_height="wrap_content"
    android:checked="true"
    android:text="Divisão" />

<RadioButton
    android:id="@+id/rbtrad"
    android:layout_width="134dp"
    android:layout_height="wrap_content"
    android:checked="true"
    android:text="Radiciação" />

<RadioButton
    android:id="@+id/rbtexp"
    android:layout_width="140dp"
```

```xml
        android:layout_height="wrap_content"

        android:checked="true"

        android:text="Exponenciação" />


    <RadioButton

        android:id="@+id/rbtmult"

        android:layout_width="127dp"

        android:layout_height="wrap_content"

        android:text="Multiplicação" />
</RadioGroup>


<TextView

    android:id="@+id/textView4"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Escolha sua opção:"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.124"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.279" />


<Button

    android:id="@+id/button"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:onClick="voltar"

    android:text="Voltar"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"
```

```
    app:layout_constraintHorizontal_bias="0.866"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.828" />


<Button

    android:id="@+id/button7"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:onClick="verificar"

    android:text="Calcular"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.2"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.828" />


<TextView

    android:id="@+id/textView5"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:text="Resultado:"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.052"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintVertical_bias="0.905" />


<EditText
```

```xml
        android:id="@+id/edtresult"

        android:layout_width="183dp"

        android:layout_height="46dp"

        android:ems="10"

        android:inputType="numberDecimal"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.6"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.916" />


</androidx.constraintlayout.widget.ConstraintLayout>
```

Calculadora Radio Button

Valor 1: _____

Valor 2: _____

Escolha sua opção:

- ⭘ Soma
- ⭘ Subtração
- ⭘ Divisão
- ⭘ Radiciação
- ⦿ Exponenciação
- ⭘ Multiplicação

TELASECUNDARIA

Resultado: _____

Calculadora Radio Button

Valor 1: _____

Valor 2: _____

Escolha sua opção:

- ⭘ Soma
- ⭘ Subtração
- ⭘ Divisão
- ⭘ Radiciação
- ⦿ Exponenciação
- ⭘ Multiplicação

CALCULAR   **VOLTAR**

Resultado: _____

CÓDIGO CORRESPONDENTE AO PROCESSAMENTO DAS OPERAÇÕES DA CALCULADORA SPINNER ESTÁTICO

VIEW

```java
package com.example.app.calculadora_1.view;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.EditText;

import android.widget.Spinner;


import androidx.appcompat.app.AppCompatActivity;


import com.example.app.R;

import com.example.app.calculadora_1.model.Calculadora;


public class TelaResultCalc_1 extends AppCompatActivity {
    Spinner spinner;
    EditText edtValor1, edtValor2, edtResposta;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_tela_secundaria_calc1);
    spinner = (Spinner)findViewById(R.id.spinner);
    edtValor1 = (EditText) findViewById(R.id.editV1);
    edtValor2 = (EditText) findViewById(R.id.editV2);
    edtResposta = (EditText) findViewById(R.id.edtResp);


    edtValor1.setText(getIntent().getExtras().getString("valor1"));
    edtValor2.setText(getIntent().getExtras().getString("valor2"));
    }
```

```java
public void voltar(View v) {
    String operacao = edtResposta.getText().toString(),Valor_1 = edtValor1.getText().toString(),
    Valor_2 = edtValor2.getText().toString();

    // Prepara a Intent de retorno para o valor da soma
    Intent returnIntent = new Intent();
    // Define o parâmetro e o valor
    returnIntent.putExtra("resp1",Valor_1);
    returnIntent.putExtra("resp2",Valor_2);
    returnIntent.putExtra("resp3", operacao);
    setResult(RESULT_OK, returnIntent);
    // Encerra a atividade
    finish();
}
public void estatico(View v){
    double aux1,aux2;
    if (spinner.getSelectedItem().toString().toString().equals("Somar")){
        Calculadora calc = new Calculadora(
            Double.parseDouble(edtValor1.getText().toString()),
            Double.parseDouble(edtValor2.getText().toString())
        );

        edtResposta.setText(calc.formatar(calc.somar(),6));
    }else if (spinner.getSelectedItem().toString().toString().equals("Subtração")){
        Calculadora calc = new Calculadora(
            Double.parseDouble(edtValor1.getText().toString()),
            Double.parseDouble(edtValor2.getText().toString())
        );
        edtResposta.setText(calc.formatar(calc.subtracao(),6));

    }else if (spinner.getSelectedItem().toString().toString().equals("Multiplicação")){
```

```java
        Calculadora calc = new Calculadora(
            Double.parseDouble(edtValor1.getText().toString()),
            Double.parseDouble(edtValor2.getText().toString())
        );
        edtResposta.setText(calc.formatar(calc.multiplicacao(),6));


    }else if(spinner.getSelectedItem().toString().toString().equals("Divisão")){
        Calculadora calc = new Calculadora(
            Double.parseDouble(edtValor1.getText().toString()),
            Double.parseDouble(edtValor2.getText().toString())
        );
        edtResposta.setText(calc.formatar(calc.divisao(),6));


    }else if(spinner.getSelectedItem().toString().toString().equals("Radiciação")){
        Calculadora calc = new Calculadora(
            Double.parseDouble(edtValor1.getText().toString()),
            Double.parseDouble(edtValor2.getText().toString())
        );
        edtResposta.setText(calc.formatar(calc.radiciacao(),6));
    }else if (spinner.getSelectedItem().toString().toString().equals("Exponenciação")){
        Calculadora calc = new Calculadora(
            Double.parseDouble(edtValor1.getText().toString()),
            Double.parseDouble(edtValor2.getText().toString())
        );
        edtResposta.setText(calc.formatar(calc.exponenciacao(),6));
    }
  }
}
MODEL
package com.example.app.calculadora_1.model;
```

```java
import static java.lang.Math.pow;

public class Calculadora {

    double v1, v2;

    public Calculadora(){

    }
    public Calculadora(double v1, double v2){
        this.v1 = v1;
        this.v2 = v2;
    }

    public double getV1() {
        return v1;
    }

    public void setV1(double v1) {
        this.v1 = v1;
    }

    public double getV2() {
        return v2;
    }

    public void setV2(double v2) {
        this.v2 = v2;
    }
    public double somar(){
        return v1 + v2;
```

```java
    }
    public double subtracao(){
        return v1 - v2;
    }
    public double multiplicacao(){
        return v1 * v2;
    }
    public double divisao(){
        return v1 / v2;
    }


    public double radiciacao(){
        return (pow(v1,(1.0/v2)));
    }
    public double exponenciacao(){
        return pow(v1,v2);
    }


    public String formatar(double v, int nc){
        return String.format("%." + String.valueOf(nc)+"f",v);
    }
}
```

CONTROLLER

```java
package com.example.app.calculadora_1.controller;


import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.EditText;

import android.widget.Spinner;
```

```java
import androidx.appcompat.app.AppCompatActivity;


import com.example.app.R;

import com.example.app.calculadora_1.view.TelaResultCalc_1;


public class telaCalc_1 extends AppCompatActivity {
    Spinner spinner;
    EditText edtValor1, edtValor2, edtResposta;


    static final int ACTIVITY_REQUEST = 1;
    Intent intent;


    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_tela_calc1);
        spinner = (Spinner)findViewById(R.id.spinner);
        edtValor1 = (EditText) findViewById(R.id.edtV1);
        edtValor2 = (EditText) findViewById(R.id.editV2);
        edtResposta = (EditText) findViewById(R.id.edtResp);
    }
    public void chamaTelaSecundaria(View v){
        double val1 , val2,val3,val4,val5;
        val1 = Double.parseDouble(edtValor1.getText().toString());
        val2 = Double.parseDouble(edtValor2.getText().toString());


        intent = new Intent(getApplicationContext(), TelaResultCalc_1.class);
        intent.putExtra("valor1",String.valueOf(val1));
        intent.putExtra("valor2",String.valueOf(val2));
        startActivityForResult(intent,ACTIVITY_REQUEST);
    }
```

```java
    @Override
    protected void onActivityResult(int requestCode, int resultCode, Intent data) {
        super.onActivityResult(requestCode, resultCode, data);
        if (requestCode == ACTIVITY_REQUEST && resultCode == RESULT_OK) {


            String retorno1 = data.getStringExtra("resp1");
            String retorno2 = data.getStringExtra("resp2");
            String retorno3 = data.getStringExtra("resp3");


            double Valor_1 = Double.parseDouble(retorno1), Valor_2 = Double.parseDouble(retorno2),
Valor_resp = Double.parseDouble(retorno3);


            //Coloca o valor da soma no EditText
            edtValor1.setText(String.format("%.2f", Valor_1));
            edtValor2.setText(String.format("%.2f", Valor_2));
            edtResposta.setText(String.format("%.2f", Valor_resp));


        }


    }
}
```

CÓDIGO CORRESPONDENTE AO PROCESSAMENTO DAS OPERAÇÕES DA CALCULADORA IMC

VIEW

```java
package com.example.app.calculadora_2.view;


import static java.lang.Math.pow;


import android.content.Intent;
```

```java
import android.os.Bundle;

import android.view.View;

import android.widget.CheckBox;

import android.widget.EditText;

import android.widget.RadioButton;


import androidx.appcompat.app.AppCompatActivity;


import com.example.app.R;


public class TelaSecundariaCalc2 extends AppCompatActivity {
    EditText edt1, edt2, edtIMC;
    EditText edtPeso,edtAltura,edtSituacao;
    RadioButton rbtFeminino,rbtMasculino;
    CheckBox chkIdade;
    String aux,aux2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_tela_secundaria_calc2);
        edt1 = (EditText) findViewById(R.id.edtV1);
        edt2 = (EditText) findViewById(R.id.edtV2);
        edtIMC = (EditText) findViewById(R.id.saidaImc);
        edtSituacao = (EditText) findViewById(R.id.editTextSituacao);
        rbtFeminino = (RadioButton) findViewById(R.id.radioButtonfem);
        rbtMasculino = (RadioButton) findViewById(R.id.radioButtonMasc);
        chkIdade = (CheckBox) findViewById(R.id.checkBoxIdade);

        // Pegar como String porque será colocado no EditText
        edt1.setText(getIntent().getExtras().getString("valor1"));
        edt2.setText(getIntent().getExtras().getString("valor2"));
```

```java
        aux = getIntent().getExtras().getString("valor3");

        aux2 = getIntent().getExtras().getString("valor4");


        if (aux.equals("1")){

            rbtFeminino.setChecked(true); // Marca o RadioButton


        }else if (aux.equals("0")){

            rbtMasculino.setChecked(true); // Marca o RadioButton

        }
        if (aux2.equals("1")){

            chkIdade.setChecked(true); // Marca o RadioButton


        }else if (aux2.equals("0")){

            chkIdade.setChecked(false); // Marca o RadioButton

        }


    }


    public void voltar(View v) {

        String soma = edtIMC.getText().toString();

        String situacao = edtSituacao.getText().toString();



        // Prepara a Intent de retorno para o valor da soma

        Intent returnIntent = new Intent();

        // Define o parâmetro e o valor

        returnIntent.putExtra("resp1", soma);

        returnIntent.putExtra("resp4", situacao);


        setResult(RESULT_OK, returnIntent);

        // Encerra a atividade
```

```java
        finish();
}


public void verfica(View v){

    double peso,altura,imc = 0.0;
    int idade; //true - marcado ,false - não marcado
    int sexo;  //1 - feminino e 2 - masculino
    String situacao = "NULL";
    peso = Double.parseDouble(edt1.getText().toString());
    altura = Double.parseDouble(edt2.getText().toString());
    if (chkIdade.isChecked()){
        idade = 1;
    }else{
        idade = 0;
    }

    if(rbtFeminino.isChecked()) {
        sexo = 1;
    }else{
        sexo = 2;
    }

    //processamento
    switch (idade){
        case 1:
            if(sexo == 1){
                imc = peso/pow(altura,2);
                if(imc < 19.1){
                    situacao = "Abaixo do Peso";
```

```
            }else if ((imc > 19.1)&&(imc < 25.8)){

                situacao = "No peso Normal";

            }else if ((imc > 25.8)&&(imc < 27.3)){

                situacao = "Marginalmente acima do peso";

            }else if ((imc > 27.3)&&(imc < 32.3)){

                situacao = "Acima do peso ideal";

            }else if(imc > 32.3) {

                situacao = "Obesa";

            }

        }


        if(sexo == 2){

            imc = peso/pow(altura,2);

            if(imc < 20.7){

                situacao = "Abaixo do Peso";

            }else if ((imc > 20.7 )&&(imc < 26.4)){

                situacao = "No peso Normal";

            }else if ((imc > 26.4)&&(imc < 27.8)){

                situacao = "Marginalmente acima do peso";

            }else if ((imc > 27.8)&&(imc < 31.1)){

                situacao = "Acima do peso ideal";

            }else if(imc > 31.1){

                situacao = "Obeso";

            }


        }

        break;

case 0:

    situacao = "idade Inválida !!";

    break;
```

```java
        }
        //saida
        edtIMC.setText(String.format("%.2f",imc));
        edtSituacao.setText(situacao);
    }



}
```

CONTROLLER

```java
package com.example.app.calculadora_2.controller;


import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.CheckBox;

import android.widget.EditText;

import android.widget.RadioButton;


import androidx.appcompat.app.AppCompatActivity;


import com.example.app.R;

import com.example.app.calculadora_2.view.TelaSecundariaCalc2;


public class telaCalc_2 extends AppCompatActivity {
    EditText edtPeso,edtAltura,edtImc,edtSituacao;
    RadioButton rbtFeminino,rbtMasculino;
    CheckBox chkIdade;
    Intent intent;
    static final int ACTIVITY_REQUEST = 1;
    @Override
```

```java
protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_tela_calc2);

    edtPeso = (EditText) findViewById(R.id.edtV1);

    edtAltura = (EditText) findViewById(R.id.edtV2);

    edtImc = (EditText) findViewById(R.id.saidaImc);

    edtSituacao = (EditText) findViewById(R.id.editTextSituacao);

    rbtFeminino = (RadioButton) findViewById(R.id.radioButtonfem);

    rbtMasculino = (RadioButton) findViewById(R.id.radioButtonMasc);

    chkIdade = (CheckBox) findViewById(R.id.checkBoxIdade);
}


public void chamaTelaSecundaria(View v){

    double val1,val2;

    String val3,val4;

    val1 = Double.parseDouble(edtPeso.getText().toString());

    val2 = Double.parseDouble(edtAltura.getText().toString());



    intent = new Intent(getApplicationContext(), TelaSecundariaCalc2.class);

    intent.putExtra("valor1",String.valueOf(val1));

    intent.putExtra("valor2",String.valueOf(val2));


    if (rbtFeminino.isChecked()){

        val3 = "1";

        intent.putExtra("valor3", String.valueOf(val3));

    }else if(rbtMasculino.isChecked()){

        val3 = "0";

        intent.putExtra("valor3", String.valueOf(val3));

    }
```

```java
        if (chkIdade.isChecked()){

            val3 = "1";

            intent.putExtra("valor4", String.valueOf(val3));

        }else{

            val3 = "0";

            intent.putExtra("valor4", String.valueOf(val3));

        }



        startActivityForResult(intent,ACTIVITY_REQUEST);

    }



    @Override
    protected void onActivityResult(int requestCode, int resultCode, Intent data) {

        super.onActivityResult(requestCode, resultCode, data);

        if (requestCode == ACTIVITY_REQUEST && resultCode == RESULT_OK) {

            String retorno1 = data.getStringExtra("resp1");

            String retorno4 = data.getStringExtra("resp4");



            double soma = Double.parseDouble(retorno1);

            String situacao = String.valueOf(retorno4);

            //Coloca o valor da soma no EditText

            edtImc.setText(String.format("%.2f", soma));

            edtSituacao.setText(String.format(situacao));

        }

    }



}
```

CÓDIGO CORRESPONDENTE AO PROCESSAMENTO DAS OPERAÇÕES DA CALCULADORA SPINNER DINÂMICO

CONTROLLER

```java
package com.example.app.calculadora3.controller;


import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.ArrayAdapter;

import android.widget.EditText;

import android.widget.Spinner;

import android.widget.TextView;


import androidx.appcompat.app.AppCompatActivity;


import com.example.app.R;

import com.example.app.calculadora_1.view.TelaResultCalc_1;


import java.util.ArrayList;

import java.util.List;


public class telaCalc_3 extends AppCompatActivity {

    EditText edtValor1, edtValor2;

    TextView edtResposta;

    Spinner spinner;

    static final int ACTIVITY_REQUEST = 1;

    Intent intent;

    List<String> operacoes = new ArrayList<String>();


    @Override
```

```java
protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_tela_calc3);

    edtValor1 = (EditText) findViewById(R.id.edtV1);

    edtValor2 = (EditText) findViewById(R.id.editV2);

    edtResposta = (TextView) findViewById(R.id.edtResp);

    spinner = (Spinner) findViewById(R.id.spinner);

    preenche();

}

public void  preenche(){

    //operacoes.add("Faça sua escolha: ");

    operacoes.add("Soma");

    operacoes.add("Subtração");

    operacoes.add("Multiplicação");

    operacoes.add("Divisão");

    operacoes.add("Exponenciação");

    operacoes.add("Radiciação");

    ArrayAdapter<String> arrayAdapter = new ArrayAdapter<>(this,
android.R.layout.simple_spinner_dropdown_item, operacoes);

    ArrayAdapter<String> spinnerArrayAdapter = arrayAdapter;

    spinnerArrayAdapter.setDropDownViewResource(android.R.layout.simple_spinner_item);

    spinner.setAdapter(spinnerArrayAdapter);

}

public void chamaTelaSecundaria(View v){

    double val1 , val2;

    val1 = Double.parseDouble(edtValor1.getText().toString());

    val2 = Double.parseDouble(edtValor2.getText().toString());

    Double val3 = Double.valueOf(2);

    intent = new Intent(getApplicationContext(), TelaResultCalc_1.class);

    intent.putExtra("valor1",String.valueOf(val1));

    intent.putExtra("valor2",String.valueOf(val2));
```

```java
if (spinner.getSelectedItem().equals("Soma")){

    //soma


    val3 = Double.valueOf(1);

    intent.putExtra("valor3", val3);
}else if(spinner.getSelectedItem().equals("Subtração")){

    //subtração

    val3 = Double.valueOf(2);

    intent.putExtra("valor3", val3);
}else if(spinner.getSelectedItem().equals("Multiplicação")) {

    //multiplicação

    val3 = Double.valueOf("3");

    intent.putExtra("valor3",val3);


}else if(spinner.getSelectedItem().equals("Divisão")){

    //divisão

    val3 = Double.valueOf("4");

    intent.putExtra("valor3",val3);


}else if(spinner.getSelectedItem().equals("Exponenciação")){

    //exponenciação

    val3 = Double.valueOf("5");

    intent.putExtra("valor3", val3);


}else if(spinner.getSelectedItem().equals("Radiciação")){

    //Radiciação

    val3 = Double.valueOf("6");

    intent.putExtra("valor3", val3);
}else {

    //opcao invalida (TOAST)
```

```java
            edtResposta.setText("OPERAÇÃO INVALIDA");

        }


        startActivityForResult(intent,ACTIVITY_REQUEST);
    }
    @Override
    protected void onActivityResult(int requestCode, int resultCode, Intent data) {
        super.onActivityResult(requestCode, resultCode, data);
        if (requestCode == ACTIVITY_REQUEST && resultCode == RESULT_OK) {


            String retorno1 = data.getStringExtra("resp1");
            String retorno2 = data.getStringExtra("resp2");
            String retorno3 = data.getStringExtra("resp3");


            double Valor_1 = Double.parseDouble(retorno1), Valor_2 = Double.parseDouble(retorno2),
Valor_resp = Double.parseDouble(retorno3);


            //Coloca o valor da soma no EditText
            edtValor1.setText(String.format("%.2f", Valor_1));
            edtValor2.setText(String.format("%.2f", Valor_2));
            edtResposta.setText(String.format("%.2f", Valor_resp));


        }
    }
}


MODEL


package com.example.app.calculadora3.model;


public class Calculadora3 {
```

```java
double valor1, valor2; // Atributos
public Calculadora3() { }

// Construtores
public Calculadora3(double v1, double v2) {
    setValor1(v1);
    setValor2 (v2);
}
public void setValor1(double valor){
    valor1 = valor;
}

public double getValor1() {
    return valor1;
}

public void setValor2(double valor) {
    valor2 = valor;
}

public double getValor2() {
    return valor2;
}
public double somar(){
    return valor1 + valor2;
}
public double subt(){
    return valor1 - valor2;
}
public double mult(){
    return valor1 * valor2;
```

```java
    }
    public double divis(){
        return valor1 / valor2;
    }
    public double expo(){
        return Math.pow(valor1, valor2);
    }
    public double radic(){
        return Math.pow(valor1,1.0/valor2);
    }


    public String formatar(double valor, int nc){
        return String.format("%."+ String.valueOf(nc) + "f", valor);
    }
}
```

VIEW

```java
package com.example.app.calculadora3.view;


import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.EditText;

import android.widget.Spinner;

import android.widget.TextView;


import androidx.appcompat.app.AppCompatActivity;


import com.example.app.R;

import com.example.app.calculadora3.model.Calculadora3;
```

```java
import java.util.ArrayList;

import java.util.List;


public class TelaSecundariaCalc3 extends AppCompatActivity {

    EditText edtValor1, edtValor2,aux;

    TextView edtResposta;

    Spinner spinner;


    List<String> operacoes = new ArrayList<String>();


    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_tela_secundaria_calc3);

        edtValor1 = (EditText) findViewById(R.id.edtV1);

        edtValor2 = (EditText) findViewById(R.id.editV2);

        edtResposta = (TextView) findViewById(R.id.edtResp);

        spinner = (Spinner) findViewById(R.id.spinner);


        edtValor1.setText(getIntent().getExtras().getString("valor1"));

        edtValor2.setText(getIntent().getExtras().getString("valor2"));

        aux.setText(getIntent().getExtras().getString("valor3"));


        if (aux.equals("1")){

            operacoes.set(1,"Soma");

            spinner.setSelection(1);


        }else if (aux.equals("2")){

            operacoes.set(2,"Soma");

            spinner.setSelection(2);
```

```java
        }else if (aux.equals("3")){

            spinner.setSelection(3);


        }else if (aux.equals("4")){

            spinner.setSelection(4);


        }else if (aux.equals("5")){

            spinner.setSelection(5);


        }else if (aux.equals("6")){

            spinner.setSelection(6);


        }

    }


    public void spinnerstatic(View v){

        Calculadora3 calc = new Calculadora3(

            Double.parseDouble(edtValor1.getText().toString()),

            Double.parseDouble(edtValor2.getText().toString())

        );


        if (spinner.getSelectedItemId()==1){

            //soma

            edtResposta.setText(calc.formatar(calc.somar(),3));

        }else if(spinner.getSelectedItemId()==2){

            //subtração

            edtResposta.setText(calc.formatar(calc.subt(),3));

        }else if(spinner.getSelectedItemId()==3) {
```

```java
            //multiplicação

            edtResposta.setText(calc.formatar(calc.mult(),3));


        }else if(spinner.getSelectedItemId()==4){

            //divisão

            edtResposta.setText(calc.formatar(calc.divis(),3));


        }else if(spinner.getSelectedItemId()==5){

            //exponenciação

            edtResposta.setText(calc.formatar(calc.expo(),3));


        }else if(spinner.getSelectedItemId()==6){

            //Radiciação

            edtResposta.setText(calc.formatar(calc.radic(),3));

        }else {

            //opcao invalida (TOAST)

            edtResposta.setText("OPERAÇÃO INVALIDA");

        }


}


public void voltar(View v) {

    String operacao = edtResposta.getText().toString(),Valor_1 = edtValor1.getText().toString(),

        Valor_2 = edtValor2.getText().toString();


    // Prepara a Intent de retorno para o valor da soma

    Intent returnIntent = new Intent();

    // Define o parâmetro e o valor

    returnIntent.putExtra("resp1",Valor_1);

    returnIntent.putExtra("resp2",Valor_2);

    returnIntent.putExtra("resp3", operacao);
```

```java
        setResult(RESULT_OK, returnIntent);

        // Encerra a atividade

        finish();

    }

}
```

CÓDIGO CORRESPONDENTE AO PROCESSAMENTO DAS OPERAÇÕES DA CALCULADORA FORMA GEOMÉTRICA

CONTROLLER

```java
package com.example.app.calculadora_4.controller;


import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.EditText;

import android.widget.RadioButton;


import androidx.appcompat.app.AppCompatActivity;


import com.example.app.R;

import com.example.app.calculadora_4.view.TelaSecundariaCalc4;


public class telaCalc4 extends AppCompatActivity {

    EditText edtV1, edtV2, edtResult;

    RadioButton rbTriangulo,rbRetangulo;

    Intent intent;

    static final int ACTIVITY_REQUEST = 1;


    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_tela_calc4);
```

```java
        edtV1 = (EditText) findViewById(R.id.editValor1);

        edtV2 = (EditText) findViewById(R.id.editValor2);

        edtResult=(EditText) findViewById(R.id.editResult);


        rbTriangulo = (RadioButton) findViewById(R.id.rbtTriangulo);

        rbRetangulo = (RadioButton) findViewById(R.id.rbtRetangulo);
}
public void chamaTelaSoma(View v){

    //Entrada de Dados

    double val1, val2;

    String val3 = "2";

    val1 = Double.parseDouble(edtV1.getText().toString());

    val2 = Double.parseDouble(edtV2.getText().toString());

    // Processamento de chamada da nova tela

    intent = new Intent(getApplicationContext(), TelaSecundariaCalc4.class);

    // Envia o nome para a segunda atividade

    intent.putExtra("valor1", String.valueOf(val1));

    intent.putExtra("valor2", String.valueOf(val2));


    if (rbTriangulo.isChecked()){

        val3 = "1";

        intent.putExtra("valor3", String.valueOf(val3));

    }else if(rbRetangulo.isChecked()){

        val3 = "0";

        intent.putExtra("valor3", String.valueOf(val3));

    }



    // chama a segunda atividade aguardando valores de retorno no request = 1

    startActivityForResult(intent, ACTIVITY_REQUEST);
```

```java
    }
    @Override
    protected void onActivityResult(int requestCode, int resultCode, Intent data) {
        super.onActivityResult(requestCode, resultCode, data);
        if (requestCode == ACTIVITY_REQUEST && resultCode == RESULT_OK) {
            String retorno1 = data.getStringExtra("resp1"),
                    retorno2 = data.getStringExtra("resp2"),
                     retorno3 = data.getStringExtra("resp3");
            double operacao = Double.parseDouble(retorno3),v2 = Double.parseDouble(retorno2),v1 =
Double.parseDouble(retorno1);


            edtV1.setText(String.format("%.2f",v1));
            edtV2.setText(String.format("%.2f",v2));
            edtResult.setText(String.format("%.2f", operacao));
        }
    }


}
```

VIEW

```java
package com.example.app.calculadora_4.view;


import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.EditText;

import android.widget.RadioButton;


import androidx.appcompat.app.AppCompatActivity;
```

```java
import com.example.app.R;

public class TelaSecundariaCalc4 extends AppCompatActivity {
    EditText edtV1, edtV2, edtResult;
    String aux;
    RadioButton rbTriangulo,rbRetangulo;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_tela_secundaria_calc4);
        edtV1 = (EditText) findViewById(R.id.editValor1);
        edtV2 = (EditText) findViewById(R.id.editValor2);
        edtResult=(EditText) findViewById(R.id.editResult);


        rbTriangulo = (RadioButton) findViewById(R.id.rbtTriangulo);
        rbRetangulo = (RadioButton) findViewById(R.id.rbtRetangulo);


        // Pegar como String porque será colocado no EditText
        edtV1.setText(getIntent().getExtras().getString("valor1"));
        edtV2.setText(getIntent().getExtras().getString("valor2"));
        aux = getIntent().getExtras().getString("valor3");


        if (aux.equals("1")){
            rbTriangulo.setChecked(true); // Marca o RadioButton
            rbRetangulo.setChecked(false);
        }else if (aux.equals("0")){
            rbRetangulo.setChecked(true); // Marca o RadioButton
            rbTriangulo.setChecked(false);
        }
    }
```

```java
public void calcular(View v){

    double V1, V2;

    V1 = Double.parseDouble(edtV1.getText().toString());
    V2 = Double.parseDouble(edtV2.getText().toString());

    if(rbTriangulo.isChecked()){
        edtResult.setText(String.format("%.2f",(V1*V2)/2));
    } else if (rbRetangulo.isChecked()){
        edtResult.setText(String.format("%.2f",(V1*V2)));
    }
}

public void voltar(View v) {
    String operacao = edtResult.getText().toString(),Valor_1 = edtV1.getText().toString(),Valor_2 = edtV1.getText().toString();
    // Prepara a Intent de retorno para o valor da soma
    Intent returnIntent = new Intent();
    // Define o parâmetro e o valor
    returnIntent.putExtra("resp1",Valor_1);
    returnIntent.putExtra("resp2",Valor_2);
    returnIntent.putExtra("resp3",operacao);
    setResult(RESULT_OK, returnIntent);
    // Encerra a atividade
    finish();
}
```

CÓDIGO CORRESPONDENTE AO PROCESSAMENTO DAS OPERAÇÕES DA CALCULADORA RADIOBUTTON

CONTROLLER

```java
package com.example.app.calculadora_5.controller;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.RadioButton;

import androidx.appcompat.app.AppCompatActivity;

import com.example.app.R;
import com.example.app.calculadora_5.view.TelaSecundariaCalc5;

public class telaCalc_5 extends AppCompatActivity {
    EditText edtV1, edtV2, edtResult;
    RadioButton rbSoma, rbSub,rbDiv,rbMult,rbRad,rbExp;
    static final int ACTIVITY_REQUEST = 1;
    Intent intent;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_tela_calc5);
        edtV1= (EditText) findViewById(R.id.edtV1);
        edtV2=(EditText) findViewById(R.id.edtV2);
        edtResult=(EditText) findViewById(R.id.edtresult);

        rbSoma=(RadioButton) findViewById(R.id.rbtSoma);
        rbSub=(RadioButton) findViewById(R.id.rbtsub);
        rbDiv=(RadioButton) findViewById(R.id.rbtdiv);
        rbMult=(RadioButton) findViewById(R.id.rbtmult);
        rbExp=(RadioButton) findViewById(R.id.rbtexp);
```

```java
        rbRad=(RadioButton) findViewById(R.id.rbtrad);
}
public void chamaTelaSoma(View v){
    //Entrada de Dados
    double val1, val2;
    val1 = Double.parseDouble( edtV1.getText().toString());
    val2 = Double.parseDouble( edtV2.getText().toString());
    String val3 = "2";
    // Processamento de chamada da nova tela
    intent = new Intent(getApplicationContext(), TelaSecundariaCalc5.class);
    // Envia o nome para a segunda atividade
    intent.putExtra("valor1", String.valueOf(val1));
    intent.putExtra("valor2", String.valueOf(val2));

    if (rbSoma.isChecked()){
        val3 = "1";
        intent.putExtra("valor3", String.valueOf(val3));
    }else if(rbSub.isChecked()){
        val3 = "2";
        intent.putExtra("valor3", String.valueOf(val3));
    }else if(rbDiv.isChecked()){
        val3 = "3";
        intent.putExtra("valor3", String.valueOf(val3));
    }else if(rbMult.isChecked()){
        val3 = "4";
        intent.putExtra("valor3", String.valueOf(val3));
    }else if(rbExp.isChecked()){
        val3 = "5";
        intent.putExtra("valor3", String.valueOf(val3));
    }else if(rbRad.isChecked()){
        val3 = "6";
```

```java
        intent.putExtra("valor3", String.valueOf(val3));
    }
    // chama a segunda atividade aguardando valores de retorno no request = 1
    startActivityForResult(intent, ACTIVITY_REQUEST);


}
@Override
protected void onActivityResult(int requestCode, int resultCode, Intent data) {
    super.onActivityResult(requestCode, resultCode, data);
    if (requestCode == ACTIVITY_REQUEST && resultCode == RESULT_OK) {
        String retorno1 = data.getStringExtra("resp1"),
            retorno2 = data.getStringExtra("resp2"),
            retorno3 = data.getStringExtra("resp3");


        double operacao = Double.parseDouble(retorno3),v2 = Double.parseDouble(retorno2),v1 =
Double.parseDouble(retorno1);


        edtV1.setText(String.format("%.2f",v1));
        edtV2.setText(String.format("%.2f",v2));
        edtResult.setText(String.format("%.2f", operacao));
    }
}


}
```

VIEW

```java
package com.example.app.calculadora_5.view;


import static java.lang.Math.pow;


import android.content.Intent;
```

```java
import android.os.Bundle;

import android.view.View;

import android.widget.EditText;

import android.widget.RadioButton;


import androidx.appcompat.app.AppCompatActivity;


import com.example.app.R;


public class TelaSecundariaCalc5 extends AppCompatActivity {

    EditText edtV1, edtV2, edtResult;

    RadioButton rbSoma, rbSub,rbDiv,rbMult,rbRad,rbExp;

    String aux;


    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_tela_secundaria_calc5);

        edtV1= (EditText) findViewById(R.id.edtV1);

        edtV2=(EditText) findViewById(R.id.edtV2);

        edtResult=(EditText) findViewById(R.id.edtresult);


        rbSoma=(RadioButton) findViewById(R.id.rbtSoma);

        rbSub=(RadioButton) findViewById(R.id.rbtsub);

        rbDiv=(RadioButton) findViewById(R.id.rbtdiv);

        rbMult=(RadioButton) findViewById(R.id.rbtmult);

        rbExp=(RadioButton) findViewById(R.id.rbtexp);

        rbRad=(RadioButton) findViewById(R.id.rbtrad);


        // Pegar como String porque será colocado no EditText

        edtV1.setText(getIntent().getExtras().getString("valor1"));
```

```java
        edtV2.setText(getIntent().getExtras().getString("valor2"));

        aux = getIntent().getExtras().getString("valor3");


        if (aux.equals("1")){

            rbSoma.setChecked(true); // Marca o RadioButto

        }else if (aux.equals("2")){

            rbSub.setChecked(true); // Marca o RadioButton

        }else if (aux.equals("3")){

            rbDiv.setChecked(true); // Marca o RadioButton

        }else if (aux.equals("4")){

            rbMult.setChecked(true); // Marca o RadioButton

        }else if (aux.equals("5")){

            rbExp.setChecked(true); // Marca o RadioButton

        }else if (aux.equals("6")){

            rbRad.setChecked(true); // Marca o RadioButton

        }


}

public void verificar(View v){

    //entrada

    double V1, V2,resultado;


    V1 = Double.parseDouble(edtV1.getText().toString());

    V2 = Double.parseDouble(edtV2.getText().toString());


    if(rbSoma.isChecked()){

        edtResult.setText(String.format("%.2f",(V1+V2)));

    } else if (rbDiv.isChecked()){

        edtResult.setText(String.format("%.2f",(V1/V2)));

    }else if (rbMult.isChecked()){
```

```java
            edtResult.setText(String.format("%.2f",(V1*V2)));
        }else if (rbSub.isChecked()){
            edtResult.setText(String.format("%.2f",(V1-V2)));
        }else if (rbRad.isChecked()){
            edtResult.setText(String.format("%.2f",pow(V1,(1/V2))));
        }else if (rbExp.isChecked()){
            edtResult.setText(String.format("%.2f",pow(V1,V2)));
        }


    }



    public void voltar(View v) {
        String operacao = edtResult.getText().toString(),
            Valor_1 = edtV1.getText().toString(),Valor_2 = edtV2.getText().toString();
        // Prepara a Intent de retorno para o valor da soma
        Intent returnIntent = new Intent();


        // Define o parâmetro e o valor
        returnIntent.putExtra("resp1",Valor_1);
        returnIntent.putExtra("resp2",Valor_2);
        returnIntent.putExtra("resp3",operacao);


        setResult(RESULT_OK, returnIntent);
        // Encerra a atividade
        finish();
    }
}
```

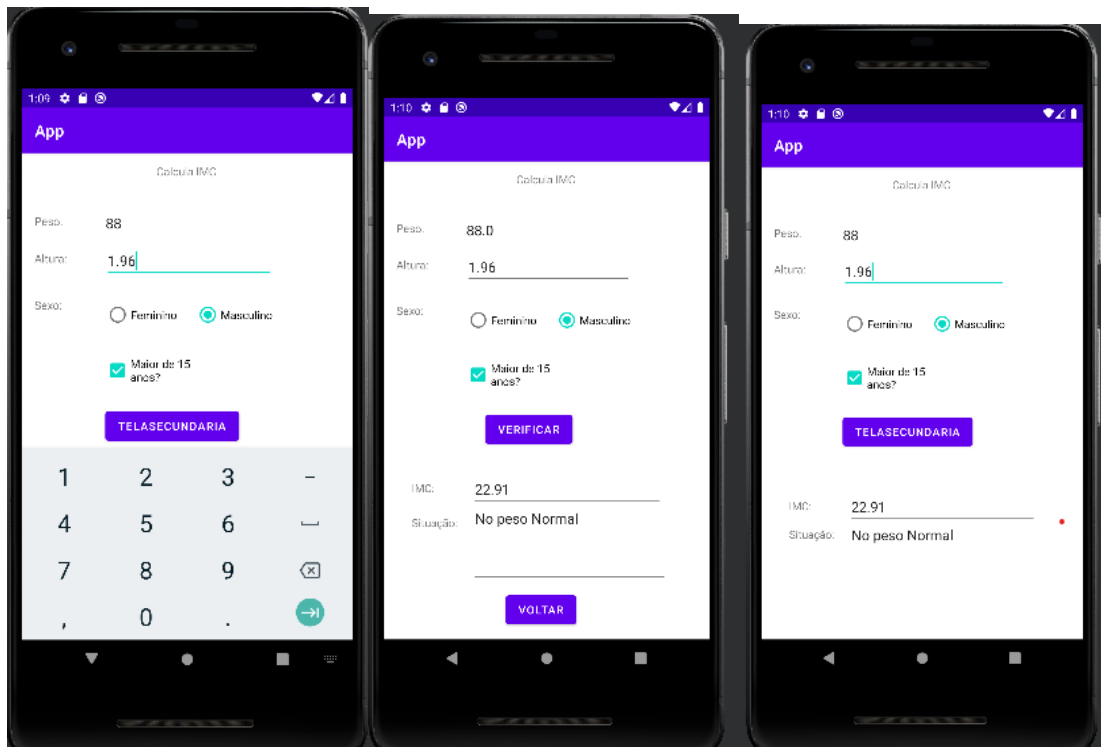**TESTES**

TESTE CORRESPONDENTE A CALCULADORA SPINNER ESTÁTICO
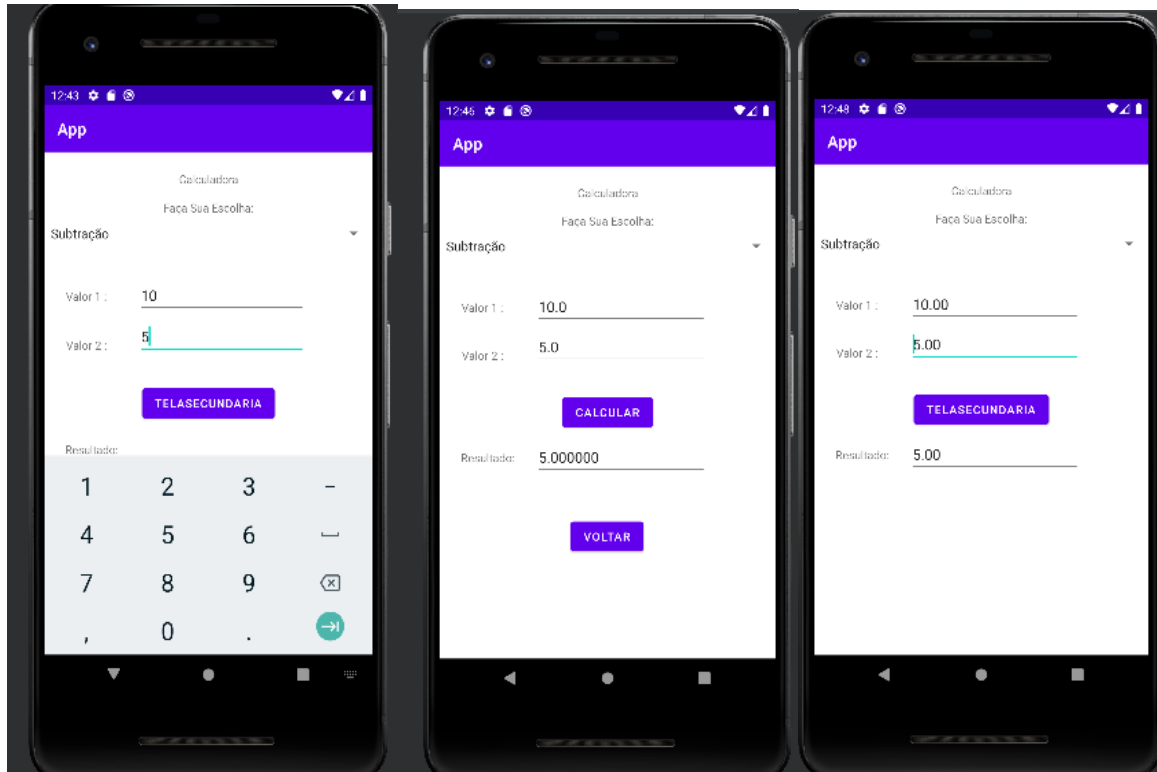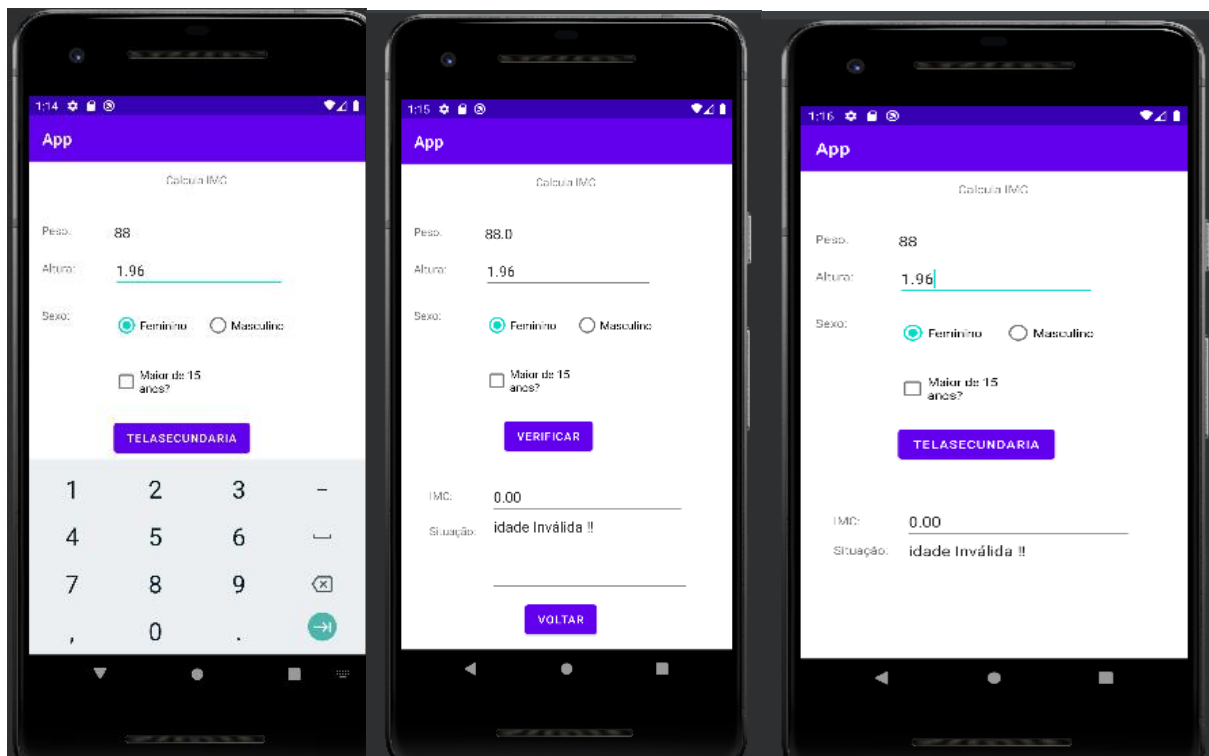
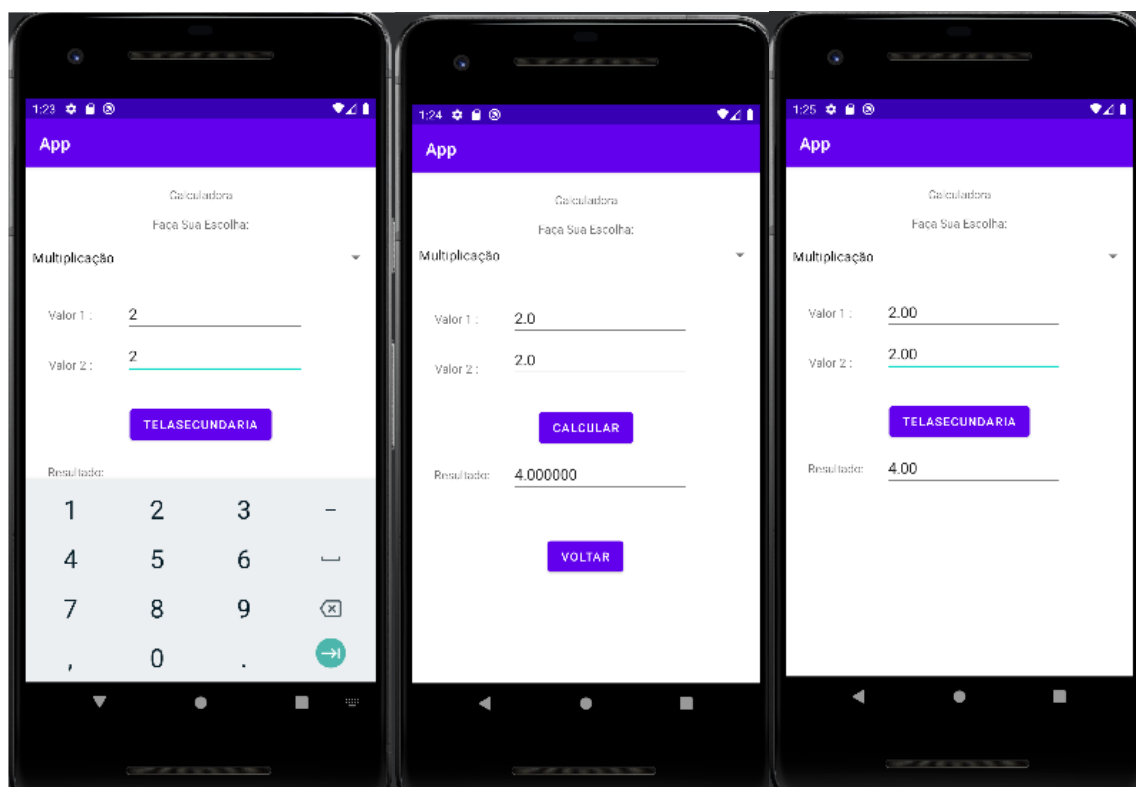**TESTE CORRESPONDENTE A CALCULADORA IMC**

FEMININO
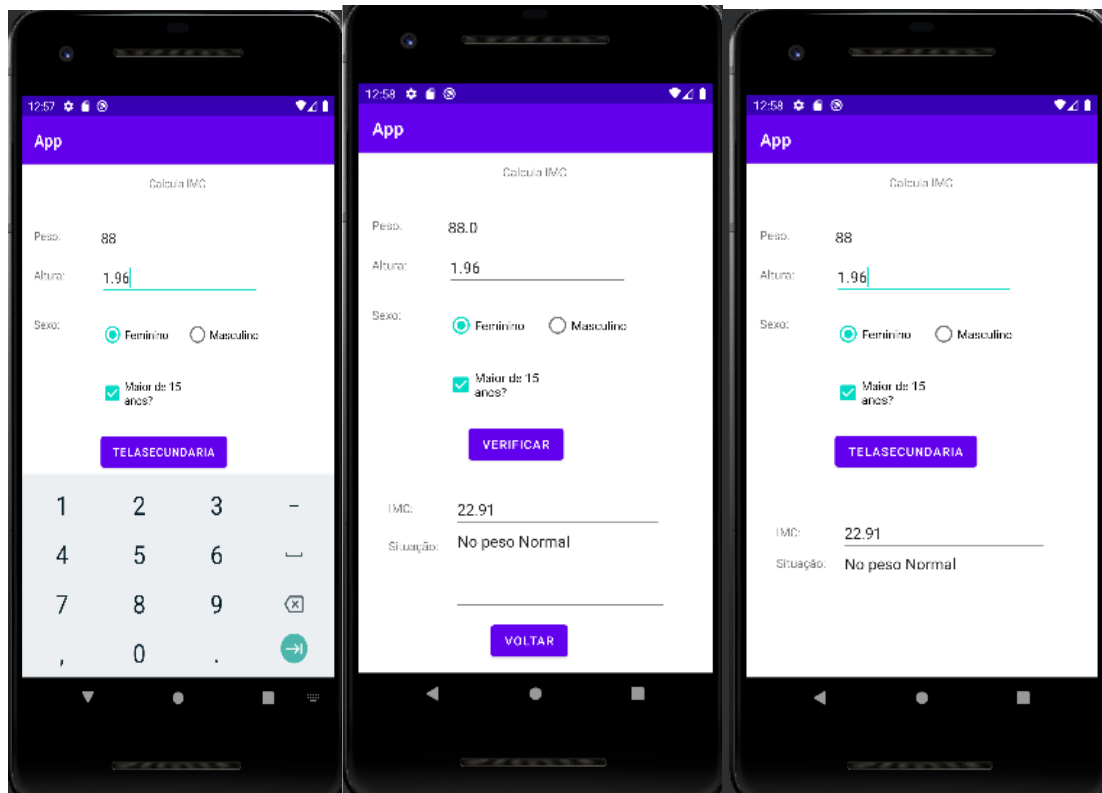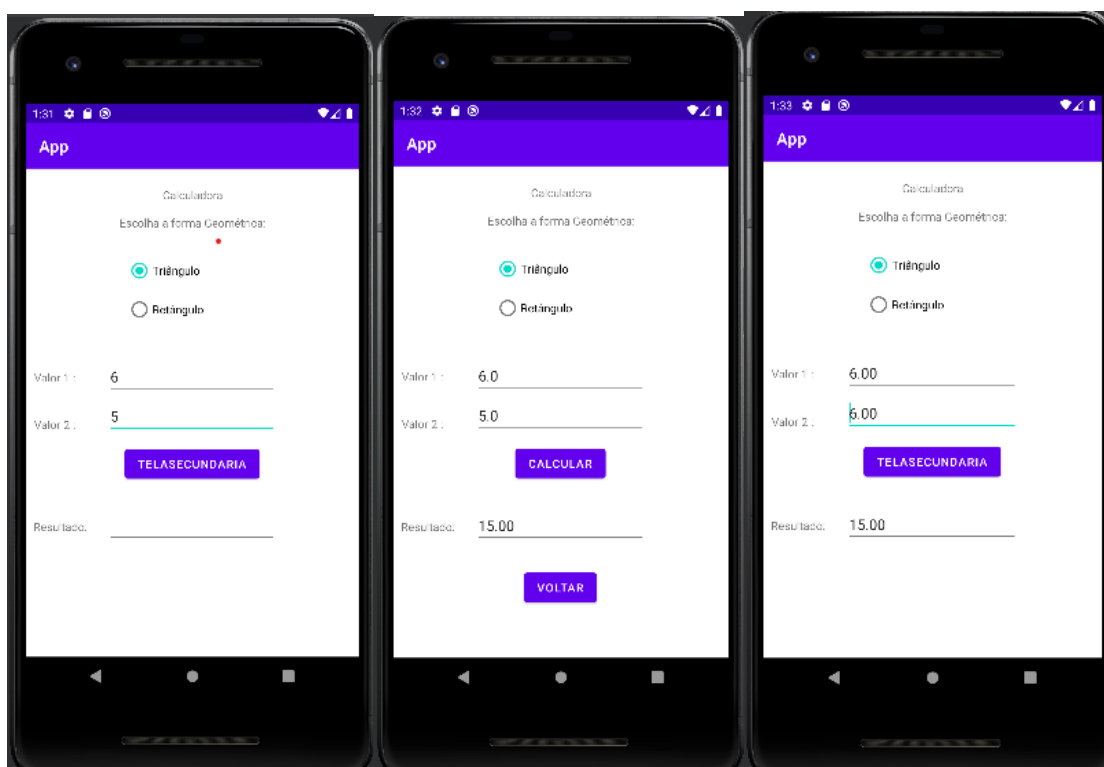

MASCULINO
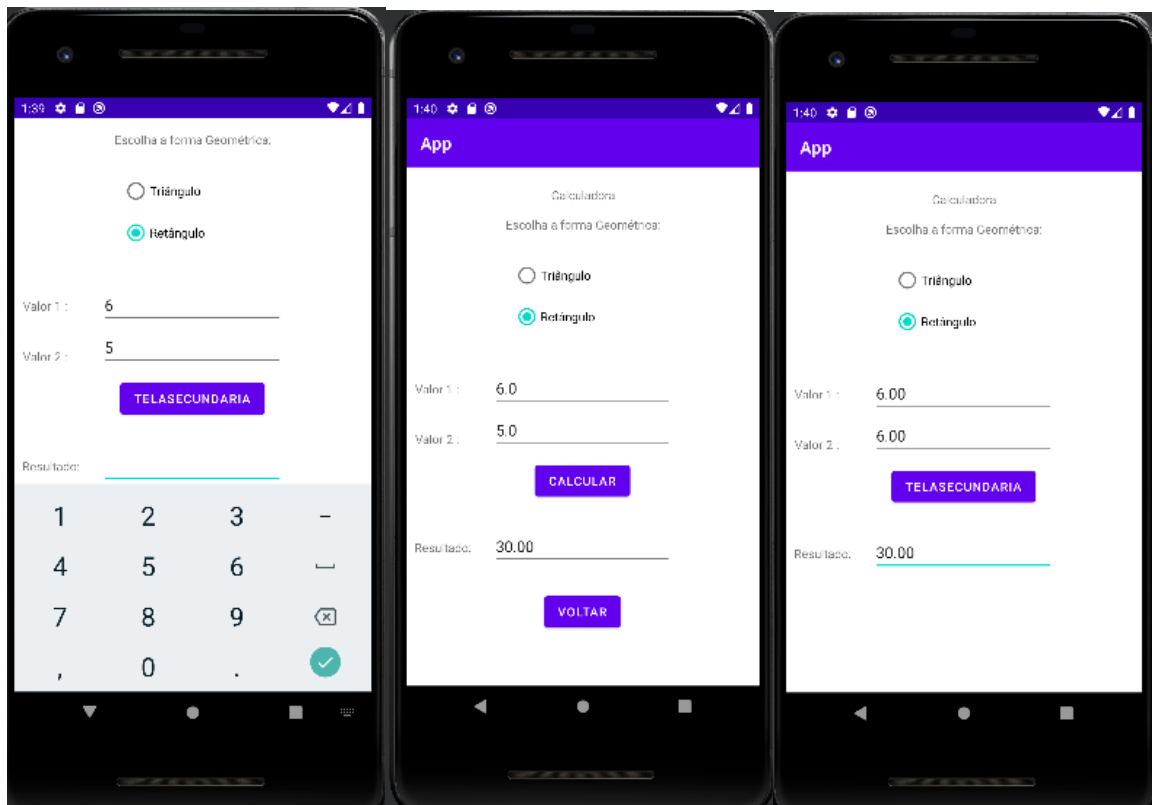
IDADE INVÁLIDA

TESTE CORRESPONDENTE A SPINNER DINÂMICO

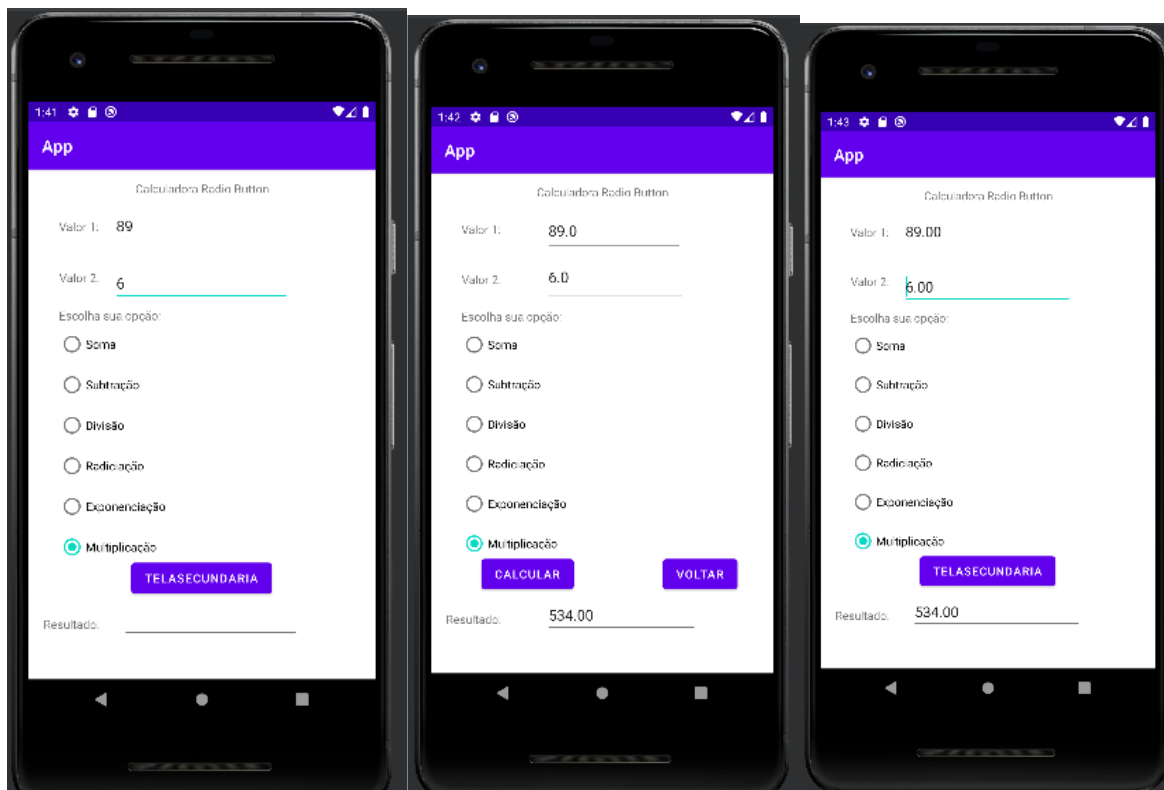**TESTE CORRESPONDENTE A CALCULADORA DE FORMA GEOMÉTRICA**

TRIÂNGULO

RETÂNGULO

TESTE CORRESPONDENTE A RADIOBUTTON

CONCLUSÃO

Foram mostradas operações na qual o APP realiza e demostradas suas interfaces.

BIBLIOGRAFIA

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(ACESSADO EM 30/12/2022)

MATERIAL DE AULA

https://teams.microsoft.com/_?culture=pt-br&country=BR&lm=deeplink&lmsrc=homePageWeb&cmpid=WebSignIn#/school/FileBrowserTabApp/Geral?threadId=19:zLfSUdsAwsfz2il197BlnhFd1X_ej0_f5F3gWtthqnU1@thread.tacv2&ctx=channel

(ACESSADO EM 30/12/2022)