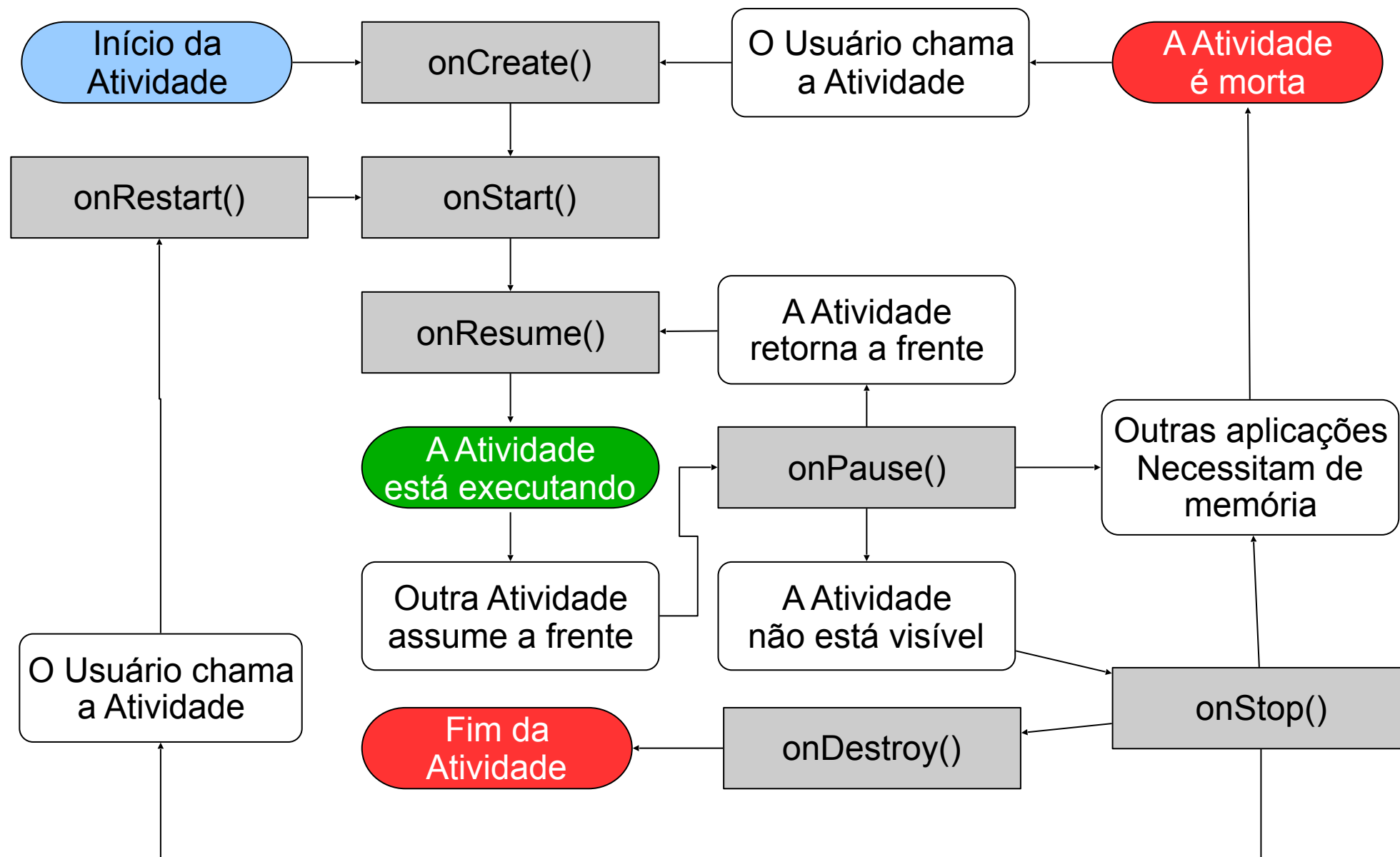


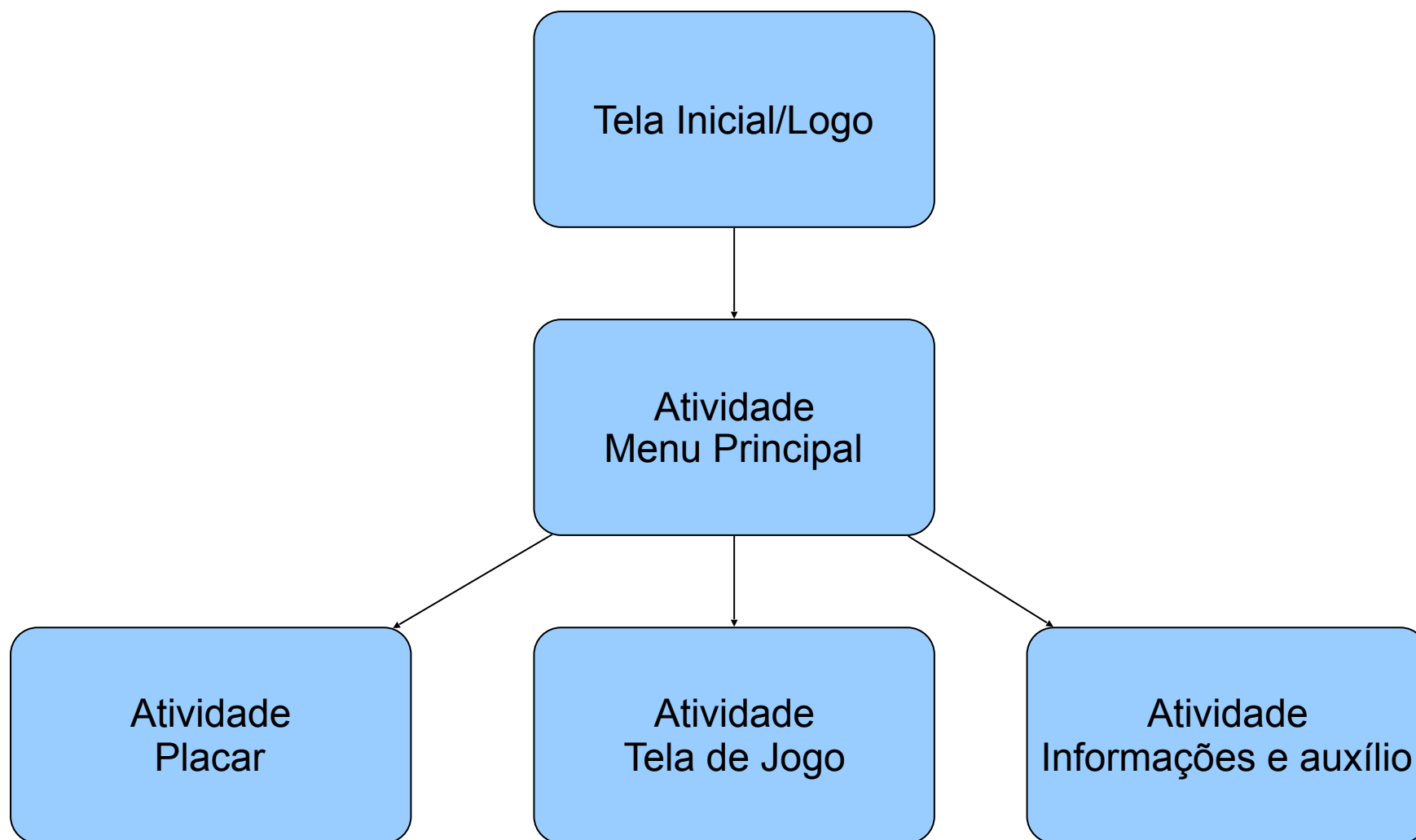


Activity, View e UI

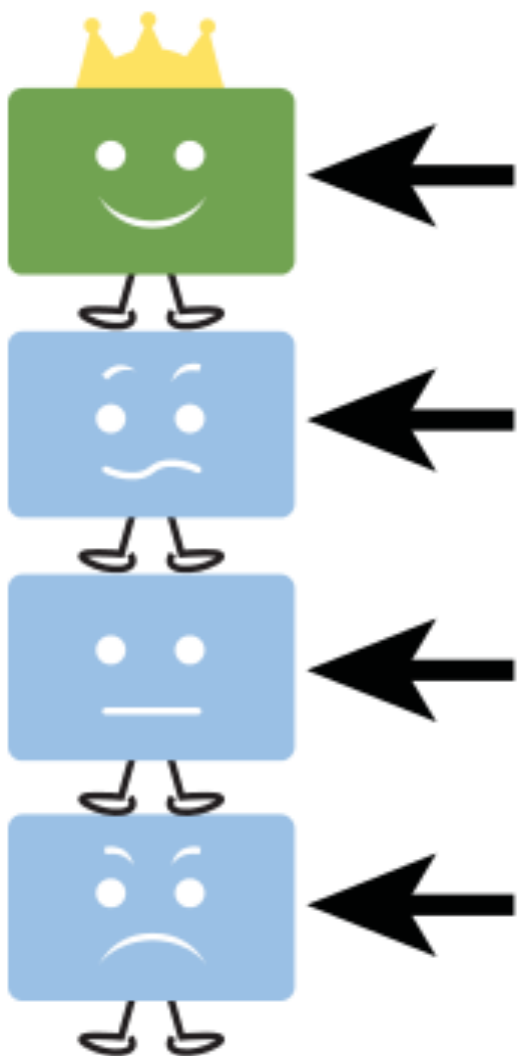
O Ciclo de vida da Activity



O Ciclo de vida da Activity



O Ciclo de vida da Activity



Atividade interagindo com o usuário. No topo da pilha.

Uma segunda Atividade na pilha. Se utilizado o BACK ou a atividade superior for destruída, esta irá ao topo

Atividade no ponto intermediário da pilha. Só será utilizada se as atividade superiores forem destruídas.

Atividade na parte inferior da pilha. Se as Atividades acima necessitarem de recursos, esta será destruída.

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="br.senai.sp.cfp132.appinicial">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="AppInicial"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

```
public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
    }
}
```

The screenshot displays the Android Studio IDE with the following components:

- Toolbar:** Standard Android Studio development tools.
- Project Explorer:** Shows the project structure with folders like `app`, `src`, `main`, `res`, and `layout`. The `main.xml` file is selected.
- Palette:** A list of UI widgets including `TextView`, `Button`, `ToggleButton`, `CheckBox`, `RadioButton`, `CheckedTextView`, `Spinner`, `ProgressBar`, `SeekBar`, `QuickContactBadge`, `RatingBar`, `Switch`, `Space`, and various `Text Fields` like `Plain Text`, `Password`, `Phone`, and `Postal Address`.
- Component Tree:** Shows the hierarchy of the layout: `main (ConstraintLayout)` containing `edNome (EditText)`, `textView - "@string/r"`, `textView2 - "Idade"`, `edIdade (EditText)`, and `button - "Ok"`.
- Design View:** A visual representation of the XML layout on a Nexus 4 device. It shows a blue header with the text "AppInicial", two text input fields labeled "Nome" and "Idade", and an "OK" button at the bottom.
- Properties Panel:** Displays the attributes for the selected `button` widget.
 - ID:** `button`
 - layout_width:** `91dp`
 - layout_height:** `51dp`
 - Button style:** `buttonStyle`
 - background:** `drawable/btn_default_material`
 - backgroundTint:** (empty)
 - stateListAnimator:** `_state_list_anim_material`
 - elevation:** (slider set to 0)
 - visibility:** `none`
 - onClick:** `onClicked`
 - TextView text:** `Ok`
 - textAppearance:** `AppCompat.Widget.Button`
 - fontFamily:** `sans-serif-medium`
 - typeface:** `none`
- Bottom Bar:** Includes tabs for `Design` and `Text`, and a status bar at the bottom showing messages, terminal, Android Monitor, and TODO.

The image shows the Android Studio IDE with the `main.xml` file open in the Text editor. The XML code defines a `ConstraintLayout` with three `EditText` fields and one `TextView` (labeled as OK in the preview). The fields are for 'Nome', 'Idade', and a number. The layout is previewed on a Nexus 4 device.

```

<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="br.senai.sp.cfp132.appinicial.MainActivity">

    <EditText
        android:layout_width="0dp"
        android:layout_height="43dp"
        android:inputType="textPersonName"
        android:ems="10"
        android:id="@+id/edNome"
        app:layout_constraintLeft_toLeftOf="@+id/main"
        android:layout_marginStart="16dp"
        app:layout_constraintTop_toBottomOf="@+id/textView"
        android:layout_marginTop="8dp"
        app:layout_constraintRight_toRightOf="@+id/main"
        android:layout_marginEnd="16dp" />

    <TextView
        android:text="@string/nome"
        android:layout_width="61dp"
        android:layout_height="19dp"
        android:id="@+id/textView"
        app:layout_constraintLeft_toLeftOf="@+id/main"
        android:layout_marginStart="16dp"
        app:layout_constraintTop_toTopOf="@+id/main"
        android:layout_marginTop="16dp" />

    <TextView
        android:text="Idade"
        android:layout_width="61dp"
        android:layout_height="19dp"
        android:id="@+id/textView2"
        app:layout_constraintLeft_toLeftOf="@+id/main"
        android:layout_marginStart="16dp"
        app:layout_constraintTop_toBottomOf="@+id/edNome"
        android:layout_marginTop="16dp" />

    <EditText
        android:layout_width="0dp"
        android:layout_height="45dp"
        android:inputType="number"
  
```

The preview shows a mobile app interface with a blue header 'Applnicial' and a white content area. It contains three text input fields labeled 'Nome', 'Idade', and a number field, and an 'OK' button. The layout is previewed on a Nexus 4 device.

```
<resources>
    <string name="app_name">AppInicial</string>
    <string name="nome">Nome</string>
    <string name="idade">Idade</string>
    <string name="ok">Ok</string>
    <string name="msg">Bem Vindo, %1$s\nsua idade é: %2$d</string>
</resources>
```

- ▼ app
 - ▼ manifests
 - AndroidManifest.xml
 - ▼ java
 - br.senai.sp.cfp132.appinicial
 - MainActivity
 - ▼ res
 - drawable
 - ▼ layout
 - main.xml
 - ▼ mipmap
 - ic_launcher.png (5)
 - ▼ values
 - colors.xml
 - dimens.xml (2)
 - strings.xml
 - styles.xml

Os Componentes da UI

<EditText

```
android:layout_width="0dp"
android:layout_height="43dp"
android:inputType="textPersonName"
android:ems="10"
android:id="@+id/edNome"
tools:ignore="LabelFor"
app:layout_constraintLeft_toLeftOf="@+id/main"
android:layout_marginStart="16dp"
app:layout_constraintTop_toBottomOf="@+id/textView"
android:layout_marginTop="8dp"
app:layout_constraintRight_toRightOf="@+id/main"
android:layout_marginEnd="16dp" />
```

<TextView

```
android:text="@string/nome"
android:layout_width="61dp"
android:layout_height="19dp"
android:id="@+id/textView"
app:layout_constraintLeft_toLeftOf="@+id/main"
android:layout_marginStart="16dp"
app:layout_constraintTop_toTopOf="@+id/main"
android:layout_marginTop="16dp" />
```

Nome

```
public class MainActivity extends AppCompatActivity {
    private EditText edNome;
    private EditText edIdade;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        edNome = (EditText) findViewById(R.id.edNome);
        edIdade = (EditText) findViewById(R.id.edIdade);
    }

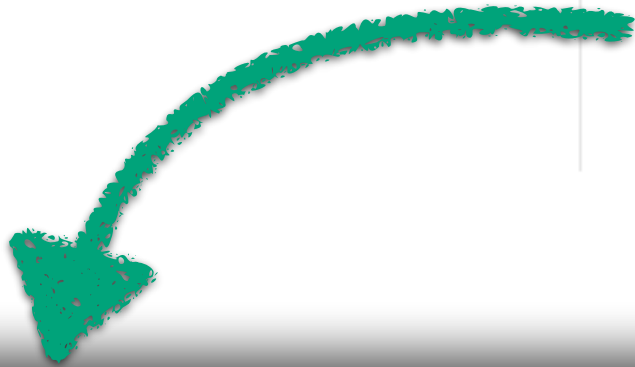
    public void okClicked(View view) {
        String nome = edNome.getText().toString();

        //..

        edNome.setText("");
        edIdade.setText("");
        edNome.requestFocus();
    }
}
```

Os Componentes da UI

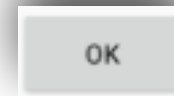
```
<Button
    android:text="@string/ok"
    android:layout_width="91dp"
    android:layout_height="51dp"
    tools:layout_editor_absoluteY="204dp"
    android:id="@+id/button"
    android:onClick="okClicked"
    tools:ignore="MissingConstraints"
    app:layout_constraintLeft_toLeftOf="@+id/edIdade"
    app:layout_constraintRight_toRightOf="@+id/edIdade" />
```



```
public void okClicked(View view) {
    String nome = edNome.getText().toString();
    int idade = Integer.parseInt(edIdade.getText().toString());

    String msg = getResources().getString(R.string.msg, nome, idade);
    Toast.makeText(getBaseContext(), msg, Toast.LENGTH_LONG).show();

    edNome.setText("");
    edIdade.setText("");
    edNome.requestFocus();
}
```



Mensagem

Resource.xml

```
<string name="msg">Bem Vindo, %1$s\nsua idade é%2$d</string>
```

MainActivity.java

```
String msg = getResources().getString(R.string.msg, nome, idade);  
Toast.makeText(getBaseContext(),msg, Toast.LENGTH_LONG).show();
```

Toast apresentado

Bem Vindo, Fulano de Tal
sua idade é: 22

Juros Simples

JurosSimples

Capital Inicial

10.000,00

Taxa de Juros Mensal

1,6

Nº de Meses

12

Capital Resultante

11.920,00

CALCULAR

LIMPAR