

Nombre completo: Daniel García Méndez

## AE U3.2 Layout Android

Actividad y tipo:	<b>AE U3.2 Layout Android</b>
Lugar:	<b>Centro Docente</b>
Individual / Equipo:	<b>Individual</b>
RA y CE	<b>RA2.g, RA2.i, RA3.f, RA3.g, RA3.h</b>
Fecha:	<b>Fecha de entrega disponible en Moodle</b>
Formato	<b>Se deberá entregar un .PDF con el siguiente formato: Nombre Apellidos - U3.2.pdf</b>

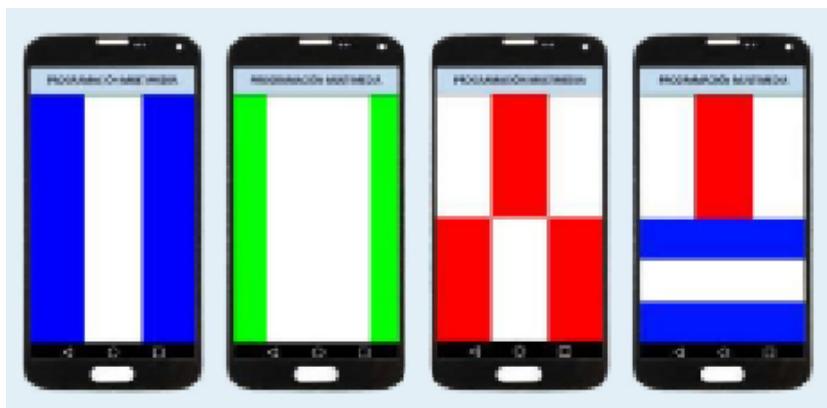
### Objetivos

El objetivo de esta actividad es identificar el conocimiento adquirido tras la revisión de las Unidades: UD3.3 Interfaces de usuario: los layouts PMDM

### Descripción de la actividad

Realiza la siguientes actividades:

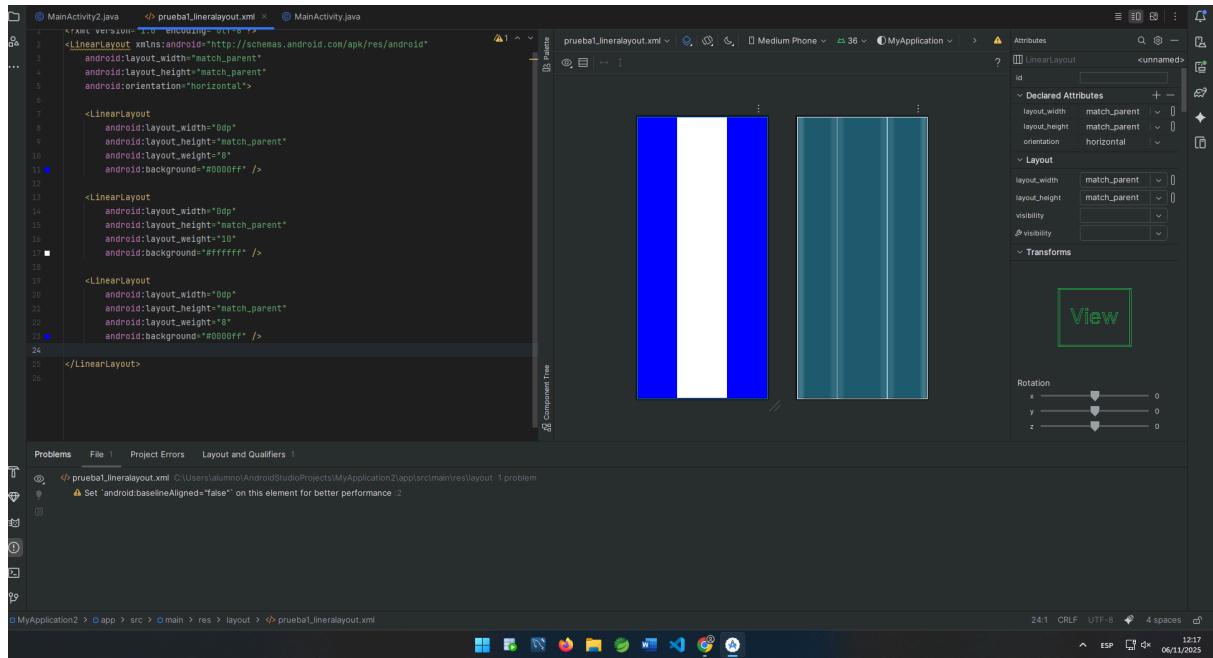
1. Realiza con LinearLayout la siguiente estructura de layouts anidados.



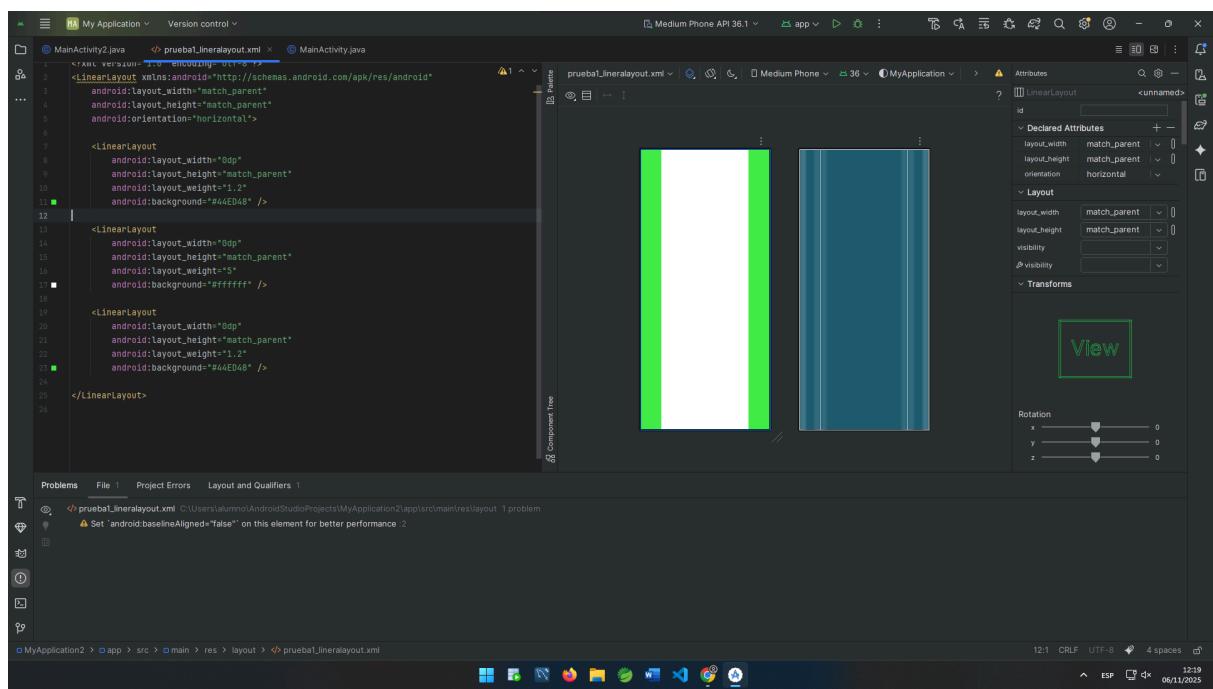


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1



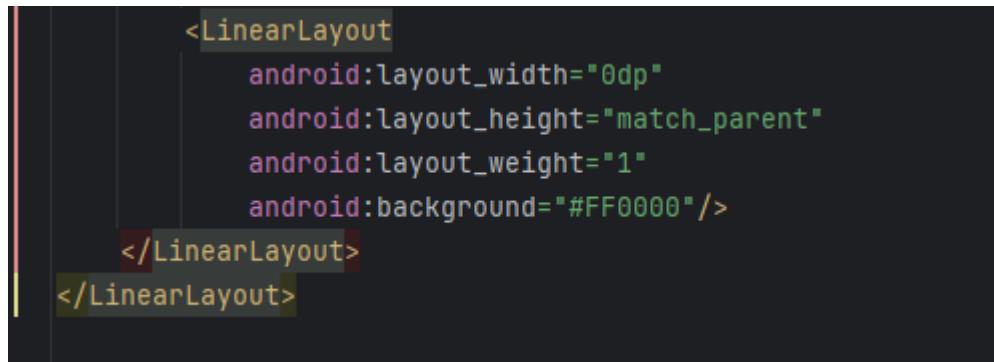
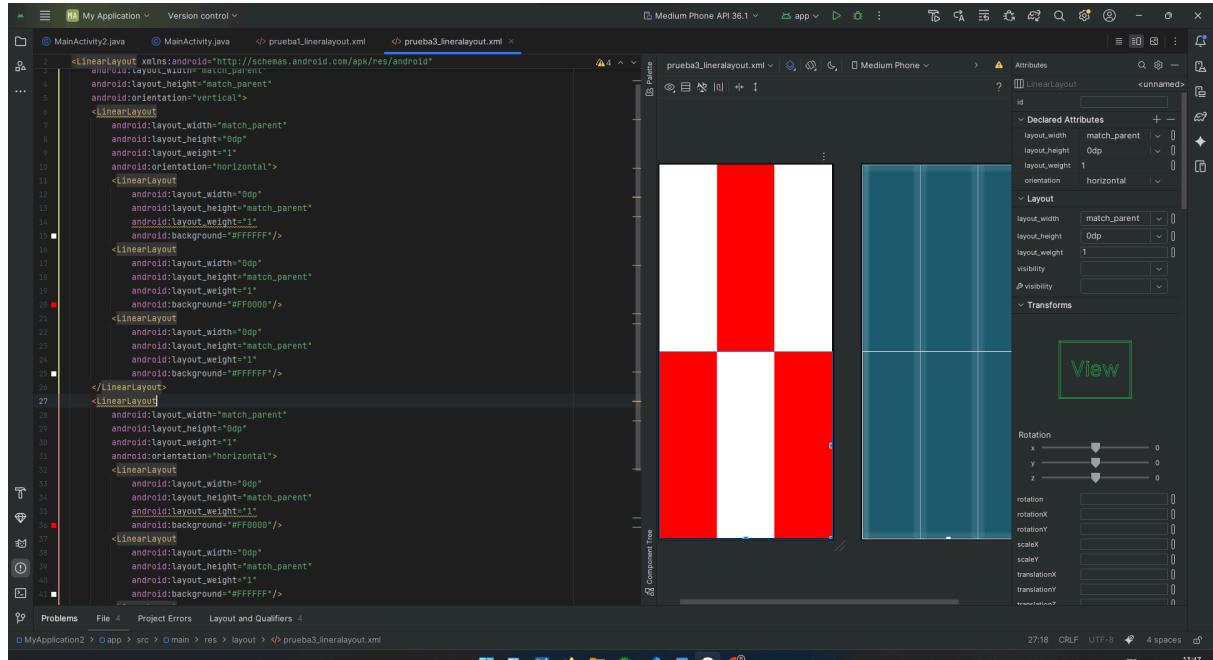
2





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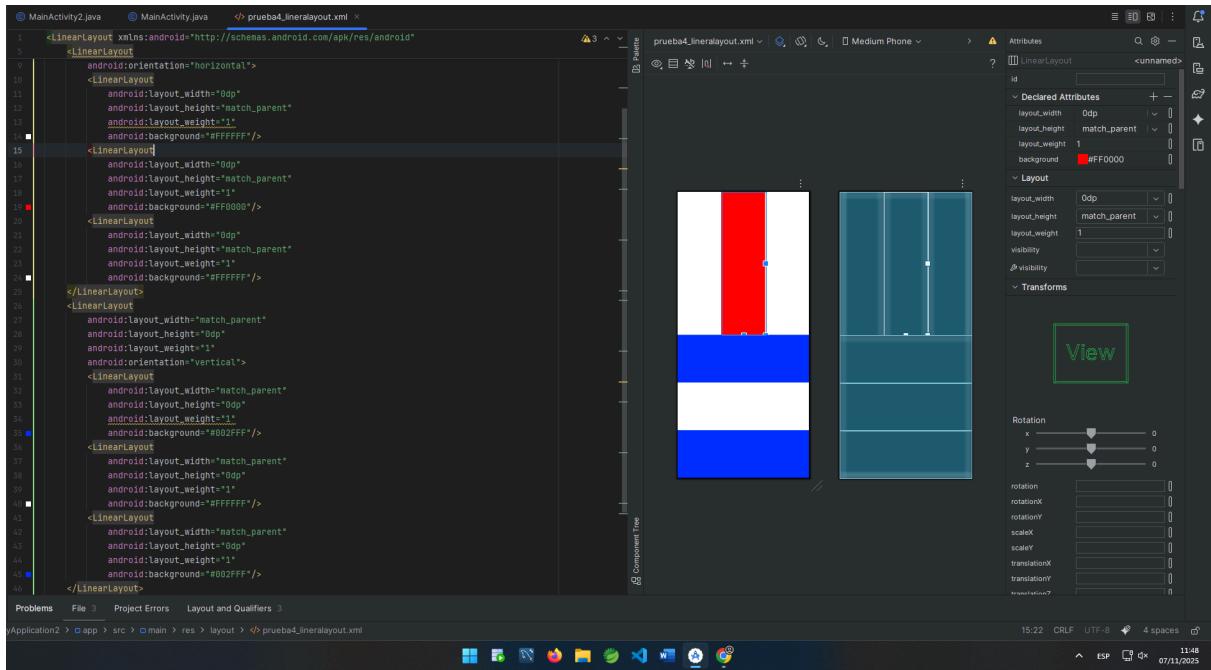
3



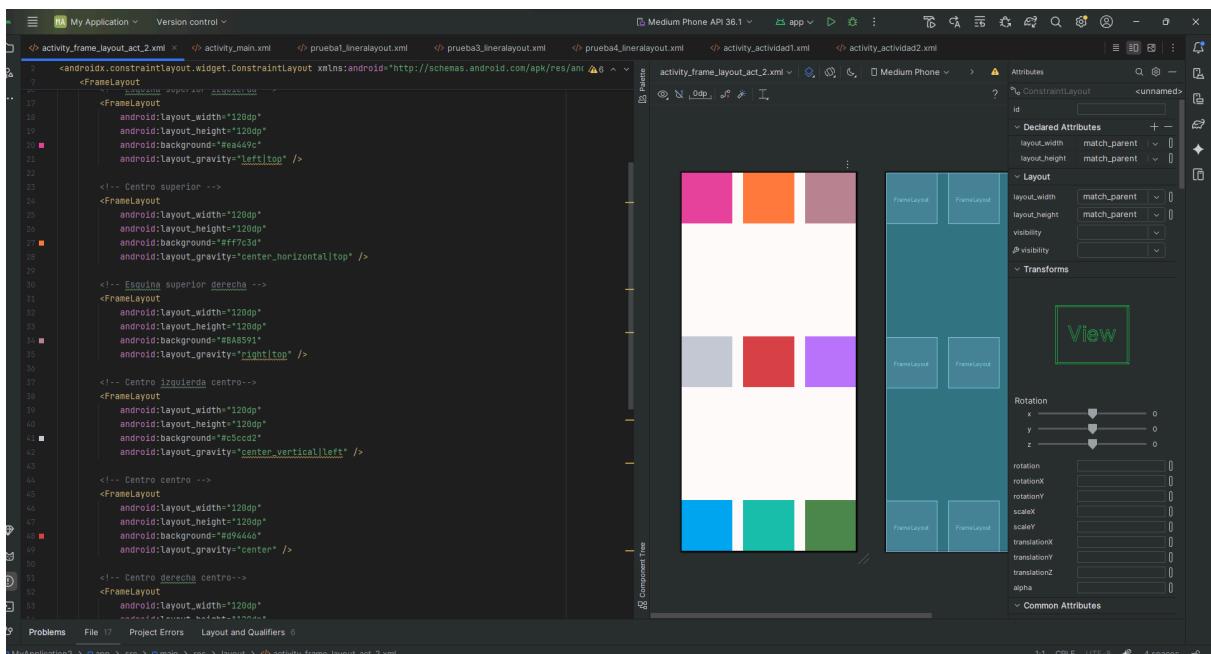
4.



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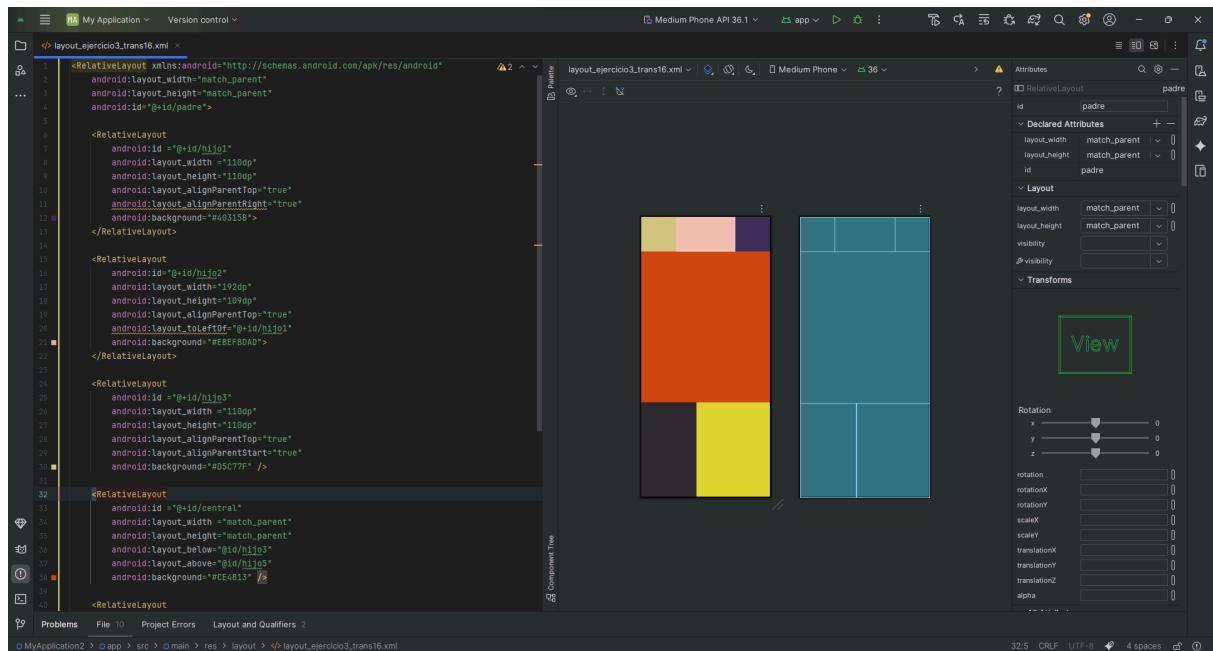
- Realiza una aplicación con una actividad cuya FrameLayout principal tenga nueve FrameLayouts interiores y muestren la disposición de la figura de la transparencia 14.



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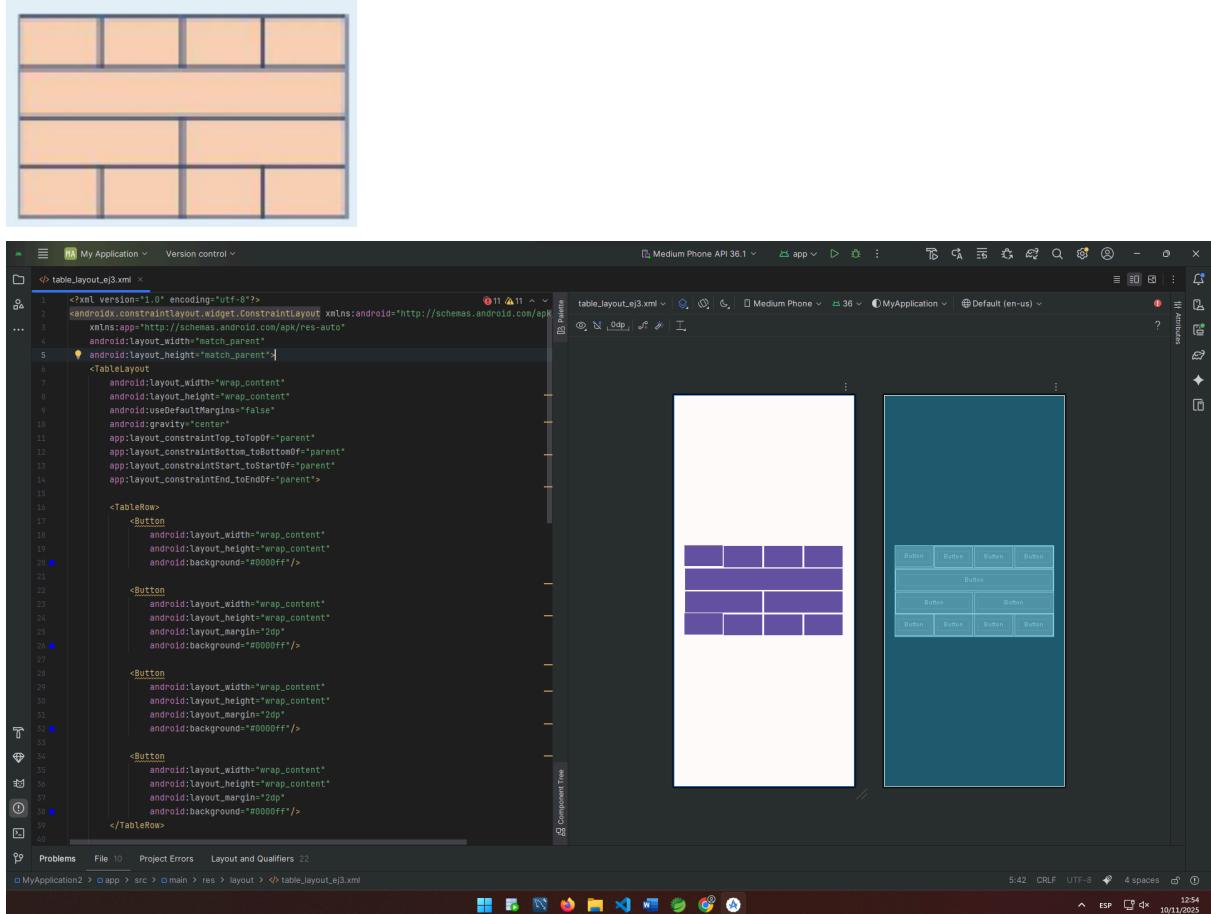
3. El código para posicionar los dos primeros layouts [fila superior] de la figura de la transparencia 16 es el que se expone a continuación. Realiza un proyecto cuya vista, además de estos, tenga todas las mostradas en dicha figura.

```
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:id="@+id/padre">
    <RelativeLayout
        android:id="@+id/hijo1"
        android:layout_width="100dp"
        android:layout_height="100dp"
        android:layout_alignParentTop="true"
        android:layout_alignParentRight="true"
        android:background="#FF0000">
    </RelativeLayout>
    <RelativeLayout
        android:id="@+id/hijo2"
        android:layout_width="200dp"
        android:layout_height="100dp"
        android:layout_alignParentTop="true"
        android:layout_toLeftOf="@+id/hijo1"
        android:background="#0000FF">
    </RelativeLayout>
</RelativeLayout>
```



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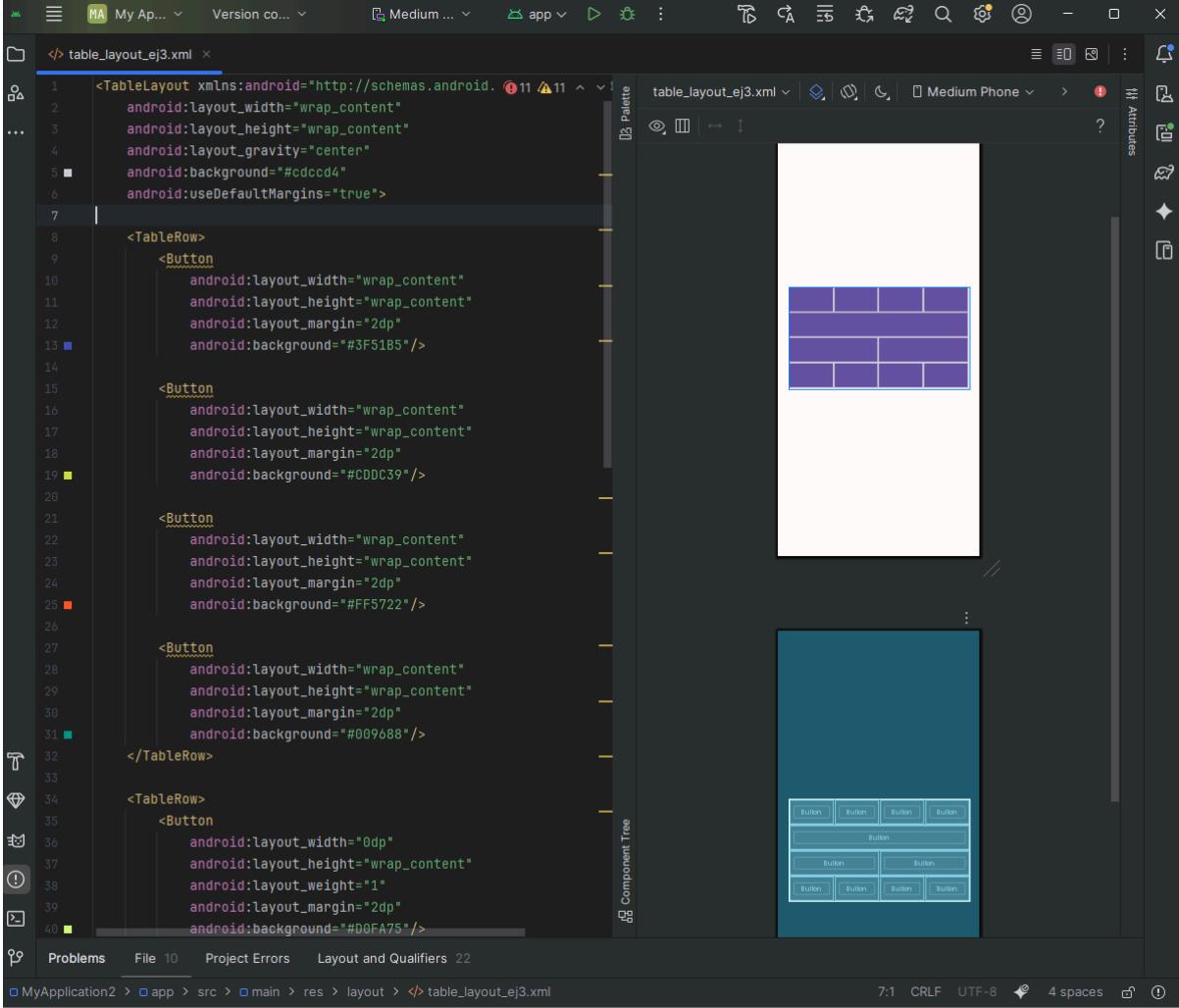
4. Realiza una aplicación con una actividad cuya vista contenga un TableLayout con la estructura mostrada a continuación. Puedes usar los botones como objetos incluidos en el interior de la tabla (siguiendo el ejemplo de la transparencia 19).





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### Cambios en la orientación usando gravity



The screenshot shows the Android Studio interface with the XML code for a TableLayout in the left pane and a preview of the layout in landscape mode in the right pane.

**XML Code:**

```
<TableLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:background="#cdcccd4"
    android:useDefaultMargins="true">

    <TableRow>
        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#3F51B5"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#CDDC39"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#FF5722"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#009688"/>
    </TableRow>

    <TableRow>
        <Button
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:layout_margin="2dp"
            android:background="#D9FA75"/>
    </TableRow>

```

**Preview:** The preview shows a landscape-oriented screen with four rows and four columns of buttons. The buttons in the first three rows have a purple background (#3F51B5), while the button in the fourth row has a yellow-green background (#D9FA75). The buttons in the first three rows are centered horizontally, while the button in the fourth row spans the entire width of the row (indicated by the weight="1" attribute).

Orientación de gravity orientada a la derecha



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The screenshot shows the Android Studio interface with the following components:

- Left Panel (XML Editor):** Displays the XML code for `table_layout_ej3.xml`. The code defines a `TableLayout` with two `TableRow` children. Each `TableRow` contains four `Button` elements. The buttons have various background colors and margin specifications.
- Right Panel (Preview):** Shows a preview of the layout on a "Medium Phone" screen. The layout consists of two rows of four buttons each, with a purple header row and white content rows.
- Bottom Panel (Component Tree):** Shows a hierarchical tree of components for the current layout.
- Bottom Bar:** Includes tabs for Problems, File 11, Project Errors, Layout and Qualifiers 23, and other status indicators like 8:15, CRLF, UTF-8, 4 spaces, and a help icon.



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Orientación de gravity orientada a la izquierda

The screenshot shows the Android Studio interface with the XML code for a TableLayout in the left panel and its corresponding preview and component tree on the right.

**XML Code:**

```
<TableLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="left"
    android:background="#cdcccd4"
    android:useDefaultMargins="true">

    <TableRow>
        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#3F51B5"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#C0DC39"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#FF5722"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#009688"/>
    </TableRow>

    <TableRow>
        <Button
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:layout_margin="2dp"
            android:background="#D0FA75"/>
    </TableRow>

```

**Preview:** Shows a 4x3 grid of buttons. The first three columns have a light purple background, and the fourth column has a dark teal background. The buttons are white with black outlines.

**Component Tree:** Shows the structure of the layout, indicating four rows and four columns of buttons.



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Orientación de gravity orientada al centro de forma vertical

The screenshot shows the Android Studio interface with the XML code for a layout file named `table_layout_ej3.xml`. The code defines two `TableLayout` elements. The first `TableLayout` has `android:layout_gravity="center_vertical"`, which is highlighted with a yellow circle. It contains four `Button` elements arranged in a 2x2 grid. The second `TableLayout` has `android:layout_gravity="center"` and also contains four `Button` elements arranged in a single horizontal row. The preview window on the right shows the visual representation of the layout. The bottom right corner of the preview window displays a component tree diagram.

```
<TableLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center_vertical"
    android:background="#cdcccd4"
    android:useDefaultMargins="true">

    <TableRow>
        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#3F51B5"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#CDCDC39"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#FF5722"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#009688"/>
    </TableRow>

    <TableRow>
        <Button
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:layout_margin="2dp"
            android:background="#D0FA75"/>
    </TableRow>
</TableLayout>
```



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Orientación de gravity orientada al centro de forma horizontal

The screenshot shows the Android Studio interface with the following components:

- Left Panel (XML Editor):** Displays the XML code for `table_layout_ej3.xml`. The code defines a `TableLayout` with `layout_gravity="center_horizontal"` and two `TableRow` elements. Each `TableRow` contains four `Button` elements with various background colors and margins.
- Right Panel (Preview):** Shows a preview of the layout on a "Medium Phone" screen. The layout consists of two rows of four buttons each, centered horizontally.
- Bottom Panel (Component Tree):** Shows a hierarchical tree of components, starting from the `TableLayout` and branching down into the `TableRow` and `Button` components.

```
<TableLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center_horizontal"
    android:background="#cdcccd4"
    android:useDefaultMargins="true">

    <TableRow>
        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#3F51B5"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#CDDC39"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#FF5722"/>

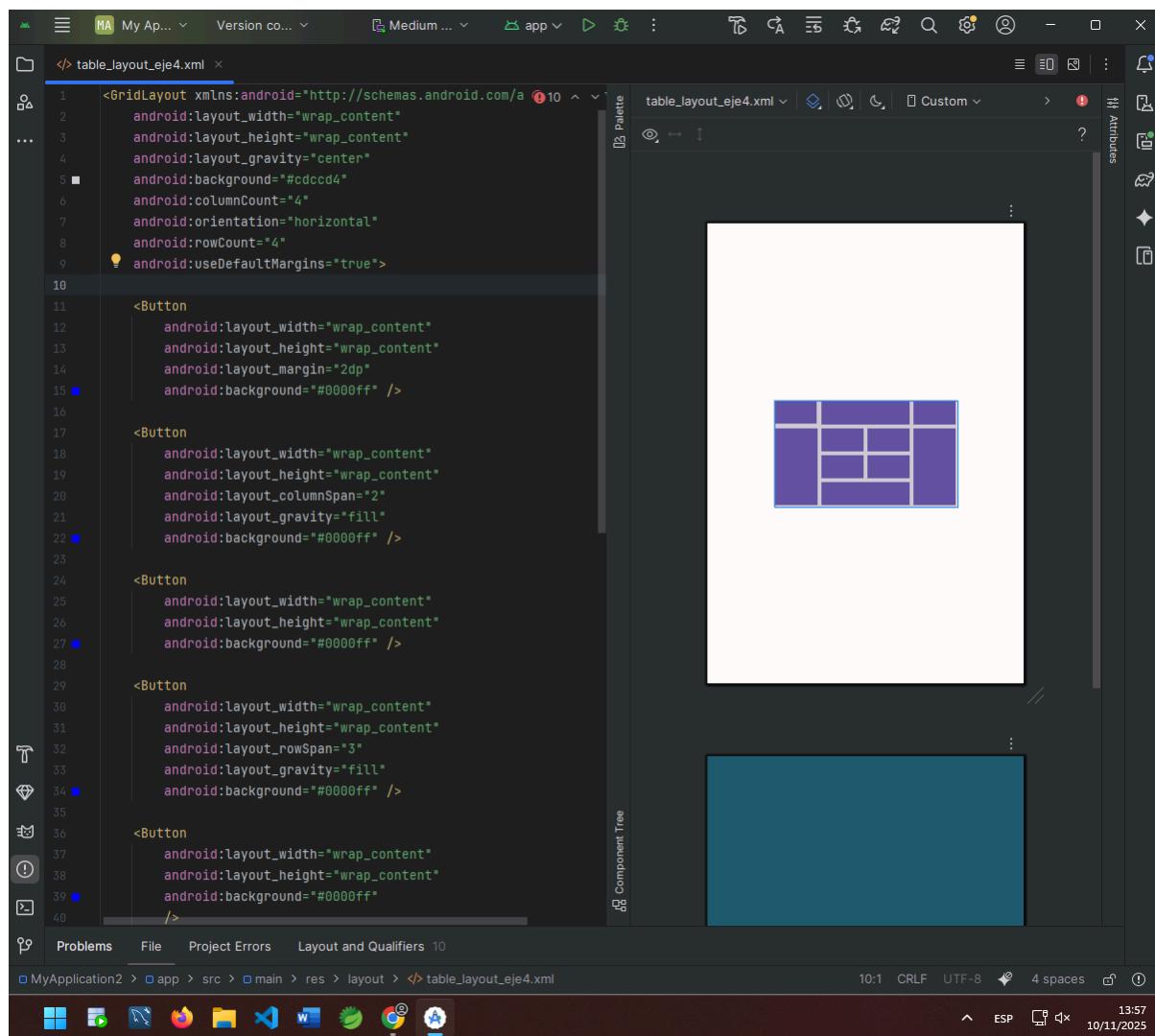
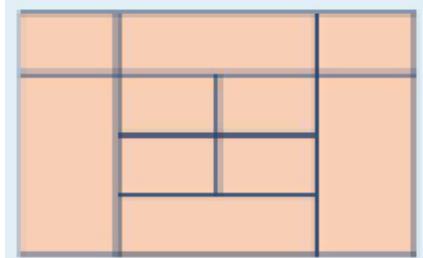
        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="2dp"
            android:background="#009688"/>
    </TableRow>

    <TableRow>
        <Button
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:layout_margin="2dp"
            android:background="#D9FA75"/>
    </TableRow>

```

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5. Realiza una aplicación con una actividad cuya vista contenga un GridLayout con la estructura mostrada a continuación. Puedes usar los botones como objetos incluidos en el interior de la tabla (siguiendo el ejemplo de la transparencia 21).



The screenshot shows the Android Studio interface with the XML code editor open. The file is named "table\_layout\_eje4.xml". The code defines a 4x4 GridLayout with various button configurations. The preview pane on the right shows the visual representation of the layout, which matches the diagram above. The bottom status bar indicates the file is 10 lines long, uses CRLF line endings, and is saved in UTF-8 encoding.

```
<GridLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:background="#ddccdd"
    android:columnCount="4"
    android:orientation="horizontal"
    android:rowCount="4"
    android:useDefaultMargins="true">

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="2dp"
        android:background="#0000ff" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_columnSpan="2"
        android:layout_gravity="fill"
        android:background="#0000ff" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:background="#0000ff" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_rowSpan="3"
        android:layout_gravity="fill"
        android:background="#0000ff" />

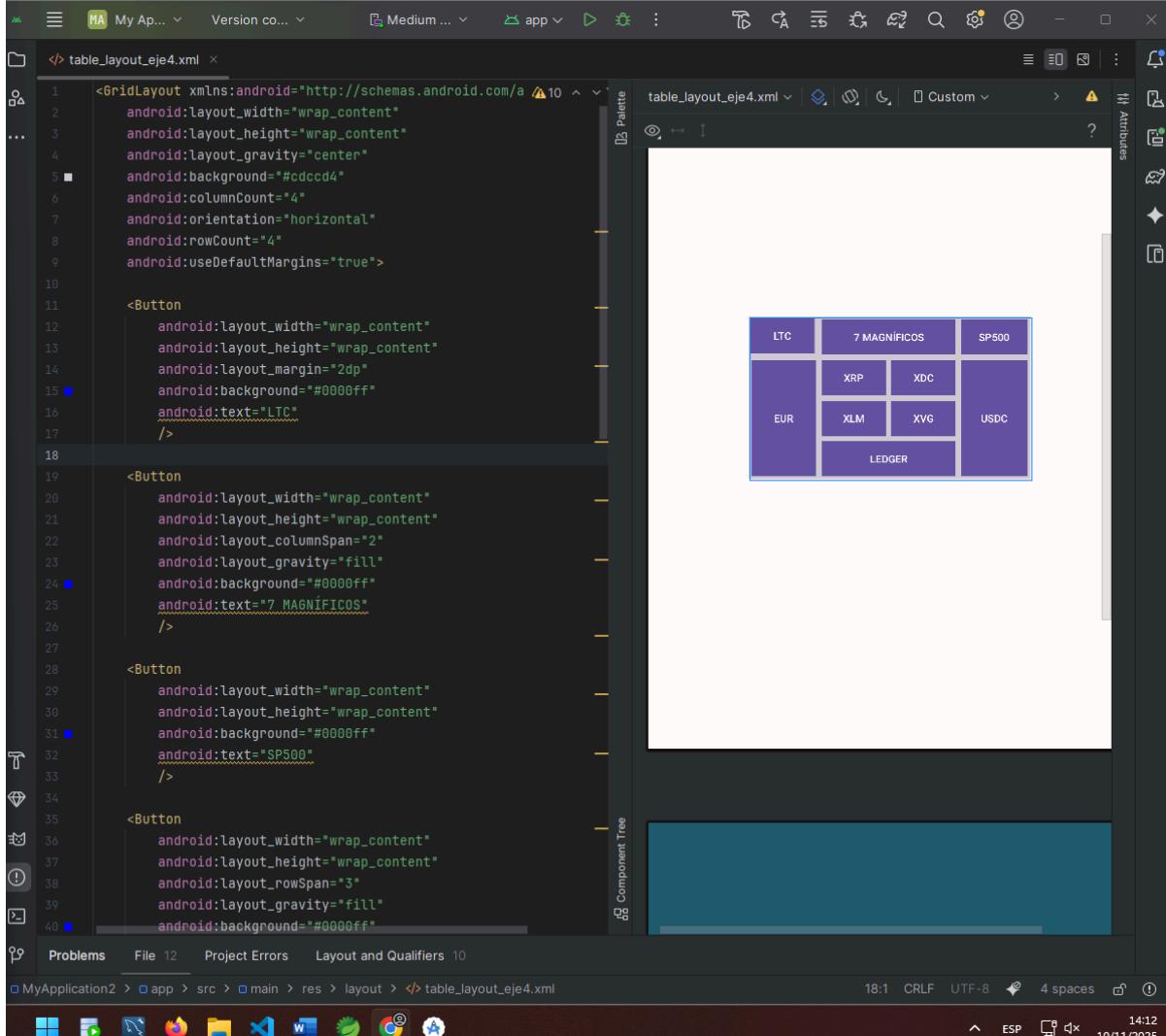
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:background="#0000ff" />
```



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También podemos agregar texto a cada botón con “`android:text="texto_a_insertar"`

**Ejemplo:**



The screenshot shows the Android Studio interface with the XML code for a GridLayout in the left panel and its preview in the right panel.

**XML Code:**

```
<GridLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:background="#cdcccd4"
    android:columnCount="4"
    android:orientation="horizontal"
    android:rowCount="4"
    android:useDefaultMargins="true">

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="2dp"
        android:background="#0000ff"
        android:text="LTC"
        />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_columnSpan="2"
        android:layout_gravity="fill"
        android:background="#0000ff"
        android:text="7 MAGNIFICOS"
        />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:background="#0000ff"
        android:text="SP500"
        />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_rowSpan="3"
        android:layout_gravity="fill"
        android:background="#0000ff"
        android:text="LEDGER"
        />
```

**Preview:**

The preview shows a 4x4 grid of buttons. The first button contains "LTC". The second button contains "7 MAGNIFICOS" and spans two columns. The third button contains "SP500". The fourth button contains "LEDGER" and spans three rows, with the next three cells in its row also highlighted in blue.

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Para darle algo de creatividad, he hecho todo lo de arriba, con una imagen de fondo en la carpeta drawable y usé el comando `android:scaleType="centerCrop"` para centrar la imagen. y `android:alpha="0.5" />` para darle transparencia.

