Gravity and Layout Gravity

In Android, `gravity` and `layout\_gravity` are two distinct concepts related to the positioning of views inside layouts. Here's the difference:

### 1. \*\*`gravity`\*\*:

- \*\*Definition\*\*: `gravity` controls the alignment \*\*of the content\*\* within a view itself. It specifies how the content of the view (such as text or child views) is positioned inside its boundaries.

- \*\*Applicable To\*\*: Used within a view that contains content, such as a `TextView`, `Button`, or a `LinearLayout` that contains child views.

- \*\*Example\*\*:

```xml

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:gravity="center" <!-- Centers the text inside the TextView -->

android:text="Hello World" />

```

In the above example, the text "Hello World" will be centered inside the `TextView`.

### 2. \*\*`layout\_gravity`\*\*:

- \*\*Definition\*\*: `layout\_gravity` controls the alignment \*\*of the view itself\*\* within its parent container. It determines where the entire view will be positioned inside its parent.

- \*\*Applicable To\*\*: Used within a layout that supports child positioning, such as `LinearLayout`, `FrameLayout`, or `RelativeLayout`.

- \*\*Example\*\*:

```xml

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_gravity="center" <!-- Centers the TextView within its parent -->

android:text="Hello World" />

```

In this example, the entire `TextView` will be centered within its parent container (like a `LinearLayout` or `FrameLayout`).

### Key Differences:

- \*\*`gravity`\*\*: Aligns content \*\*inside\*\* a view (e.g., text inside a `TextView`).

- \*\*`layout\_gravity`\*\*: Aligns the \*\*entire view\*\* within its parent layout.

### Example Combining Both:

You can use both `gravity` and `layout\_gravity` at the same time:

```xml

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_gravity="center" <!-- Centers the TextView inside LinearLayout -->

android:gravity="center" <!-- Centers the text inside TextView -->

android:text="Hello World" />

</LinearLayout>

```

In this case:

- The `TextView` is centered in the parent `LinearLayout` using `layout\_gravity`.

- The text inside the `TextView` is centered using `gravity`.