



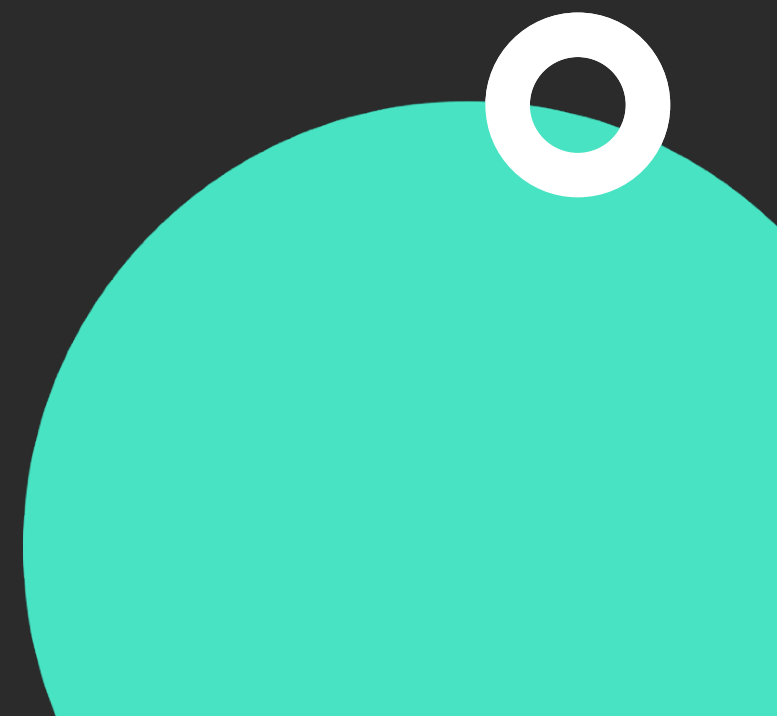
# Creating and Styling Widget



Piotr Prus

 @piotr\_prus

 in/piotrprus



# Section Overview

- Create widget provider class
- Configure widget in app manifest
- Create XML files needed by widget
- Overview of available UI elements and modifiers
- Create basic widget UI
- Use themes and colors in widget
- Display widget with static data on home screen
- Summary





# Create widget provider class



# WeatherWidgetReceiver.kt

```
import androidx.glance.appwidget.GlanceAppWidget
import androidx.glance.appwidget.GlanceAppWidgetReceiver

class WeatherWidgetReceiver : GlanceAppWidgetReceiver() {
    override val glanceAppWidget: GlanceAppWidget
        get() = WeatherWidget()
}
```





# Configure widget in app manifest



# AndroidManifest.xml

```
<application
- - -
  <receiver
    android:name=".widget.WeatherWidgetReceiver"
    android:exported="false"
    android:label="Weather widget">
    <intent-filter>
      <action android:name="android.appwidget.action.APPWIDGET_UPDATE" />
    </intent-filter>
    <meta-data
      android:name="android.appwidget.provider"
      android:resource="@xml/weather_widget_provider" />
  </receiver>
</application>
```





# Create XML files needed by widget



# weather\_widget\_provider.xml

```
<?xml version="1.0" encoding="utf-8"?>
<appwidget-provider xmlns:android="http://schemas.android.com/apk/res/android"
    android:initialLayout="@layout/initial_widget_layout"
    android:minWidth="100dp"
    android:minHeight="40dp"
    android:previewImage="@drawable/widget_preview"
    android:resizeMode="horizontal|vertical"
    android:updatePeriodMillis="1800000"
    android:widgetCategory="home_screen">
</appwidget-provider>
```





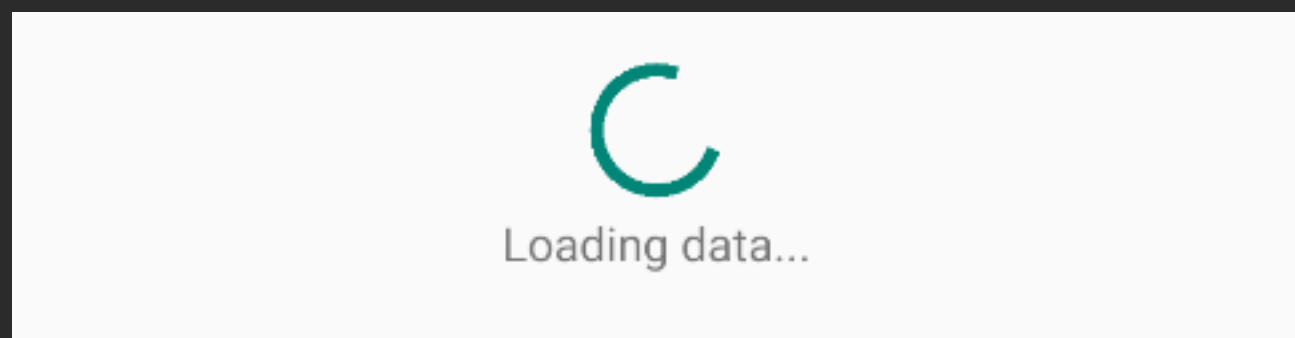
# initial\_widget\_layout.xml

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="12dp">
    <ProgressBar
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:text="Loading data ... " />
</LinearLayout>
```





# initial\_widget\_layout.xml



## @drawable/widget\_preview





# Overview of available UI elements and modifiers



# Glance components

- Column
- LazyColumn
- Row
- Box
- Image
- CircularProgressIndicator
- Text
- Button
- Spacer

# Glance modifiers

- Height
- Width
- Size
- Padding
- Background
- Corner radius
- Visibility
- Clickable



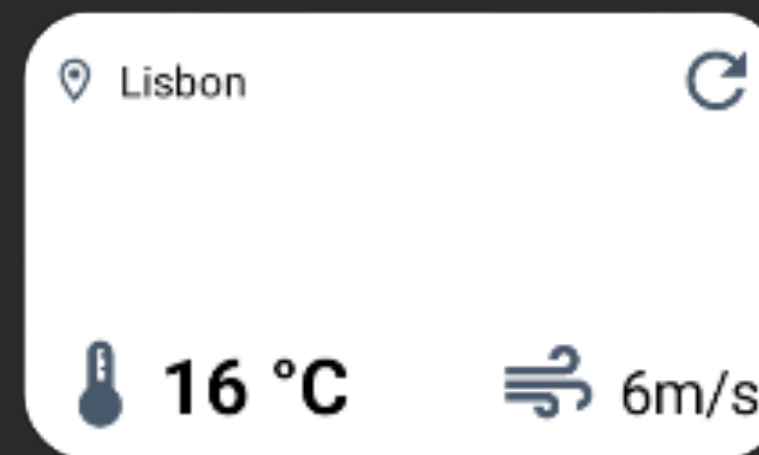


# Create a basic Widget UI





```
@Composable
fun WidgetBody() {
    Column() {
        Row() {
            Image()
            Spacer()
            Text()
            Spacer()
            Image()
        }
        Spacer()
        Row() {
            Image()
            Spacer()
            Text()
            Spacer()
            Image()
            Spacer()
            Text()
        }
    }
}
```





# Code in Android Studio





# Summary







# Managing Widget States

Up Next

