Introduction

**### 1. package com.anirudha.androidjavaapp;**

- This line defines the package name for your Android app. A package is a namespace that organizes a set of related classes and interfaces. Here, your project is named `androidjavaapp`, and it's under your name `com.anirudha`.

**### 2. import android.os.Bundle;**

- This imports the `Bundle` class from the Android SDK. A `Bundle` is generally used to pass data between activities or to save the state of an activity.

**### 3. import androidx.activity.EdgeToEdge;**

- This imports the `EdgeToEdge` class from the `androidx.activity` package. This class is part of the `AndroidX` library and provides helper methods to enable edge-to-edge UI, meaning that your app content will extend into the system's status and navigation bars.

**### 4. import androidx.appcompat.app.AppCompatActivity;**

- This imports the `AppCompatActivity` class from the `androidx.appcompat` library. `AppCompatActivity` is a compatibility class that allows you to use modern Android features (such as the ActionBar) on older versions of Android by falling back to compatible implementations.

**### 5. import androidx.core.graphics.Insets;**

- This imports the `Insets` class from the `androidx.core.graphics` package. `Insets` represent the area of the system bars that your content might need to account for, such as the status bar, navigation bar, etc.

**### 6. import androidx.core.view.ViewCompat;**

- This imports the `ViewCompat` class from the `androidx.core.view` package. `ViewCompat` is a utility class that provides backward-compatible methods for working with views, like setting listeners for window insets.

**### 7. import androidx.core.view.WindowInsetsCompat;**

- This imports `WindowInsetsCompat` from the `androidx.core.view` package. It represents the system's window insets (i.e., areas taken up by system bars such as status and navigation bars) in a backward-compatible way.

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**### Main Class**

**public class MainActivity extends AppCompatActivity {**

- This defines the `MainActivity` class, which extends `AppCompatActivity`, making it the entry point of your Android app and compatible with older Android versions.

**### `onCreate()` Method**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

- The `onCreate()` method is called when the activity is first created. This is where you initialize your activity. `Bundle savedInstanceState` is used to restore the state of the activity in case it was previously paused or stopped.

**### `EdgeToEdge.enable(this);`**

- This enables edge-to-edge mode for the current activity. Edge-to-edge mode allows the app's UI to extend into the system bars (status bar, navigation bar), making the app feel more immersive.

**### `setContentView(R.layout.activity\_main);`**

- This method sets the layout for the activity from the `activity\_main.xml` file. It inflates the layout and binds it to the activity, which displays the UI defined in that XML.

**### Applying Window Insets Listener**

**ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {**

- This sets a listener to the view with the ID `main` (defined in your XML). The listener listens for changes in the window insets, which could happen when the system bars (status, navigation bars) change their visibility or size.

**Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());**

- This line retrieves the system bars' insets (the areas taken up by the status bar and navigation bar) using `WindowInsetsCompat.Type.systemBars()`.

**v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);**

- This line sets padding for the view (referenced as `v`) so that it doesn't overlap with the system bars. The padding values are set for the left, top, right, and bottom based on the system bars' dimensions.

**return insets;**- Finally, this returns the `insets` object, which ensures that the listener handles the insets properly.

### Purpose Summary:

- The purpose of this code is to create an Android activity that runs in edge-to-edge mode. It adjusts the padding of the main view in response to the system window insets (i.e., the areas occupied by the status and navigation bars) to ensure the content is correctly positioned.