

## Canvas Pro: Jetpack Compose Drawing App

A lightweight, high-performance drawing application for Android built entirely with **Jetpack Compose**. It demonstrates how to handle complex touch gestures and real-time path rendering on a Canvas.

### Features

- **Freehand Drawing:** Smooth, low-latency drawing using the detectDragGestures API.
- **Dynamic Toolset:** \* **Color Palette:** Choose between multiple vibrant colors.
  - **Adjustable Brush:** Slider-controlled stroke width (5f to 80f).
  - **Undo Support:** Quickly remove the last stroke.
  - **Clear Canvas:** Reset the drawing board with one tap.
- **Polished Rendering:** Uses StrokeCap.Round and StrokeJoin.Round to ensure lines look professional and smooth.

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### 🔧 Technical Breakdown

The app utilizes a state-driven architecture to manage drawing data:

1. **Data Persistence:** A DrawLine data class stores the specific Path, Color, and strokeWidth for every individual stroke.
2. **Gesture Detection:** \* onDragStart: Initializes a new Path at the touch coordinate.
  - onDrag: Updates the path using lineTo as the finger moves.
  - onDragEnd: Finalizes the current stroke.
3. **State Management:** Uses mutableStateListOf to track all lines, ensuring the UI recomposes efficiently when a new line is added or undone.

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### 🚀 Getting Started

1. **Clone the repo:**

Bash

```
git clone https://github.com/[your-username]/CanvasPro.git
```

2. **Open in Android Studio:** Ensure you are using the latest version of Ladybug or newer for full Compose support.

3. **Sync & Run:** Deploy to an emulator or physical device running **Android 5.0 (API 21)** or higher.