What is Android

Android is a mobile operating system based on a modified version of the Linux kernel and other open source software, designed primarily for touchscreen mobile devices such as smartphones and tablets.

We can develop apps for android using Kotlin, Java, and C++.

Why Kotlin?

…and not Java

- Null Safety
- Compact and fluent syntax
- String templates
- Data Classes
- Coroutines
- Singletons

… and so much more

Java

```java
import java.util.Scanner;


class Addition {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int a = input.nextInt();
        int b = input.nextInt();


        System.out.println(a + " + " + b + " = " + (a+b));
    }
}
```

Kotlin

```kotlin
fun main() {
    val a = readLine()?.toInt() ?: 0
    val b = readLine()?.toInt() ?: 0


    println("$a + $b = ${a + b}")
}
```

Java

```java
class Point {
    int x;
    int y;

    @Override
    public boolean equals(Object obj) {
        if (!obj.getClass().equals(Point.class)) return false;
        Point other = (Point) obj;
        return (other.x == x && other.y == y);
    }

    @Override
    public String toString() {
        return "Point(x=" + x + ", y=" + y + ")";
    }
}
```

Kotlin

```kotlin
data class Point(
    val x: Int,
    val y: Int,
)
```
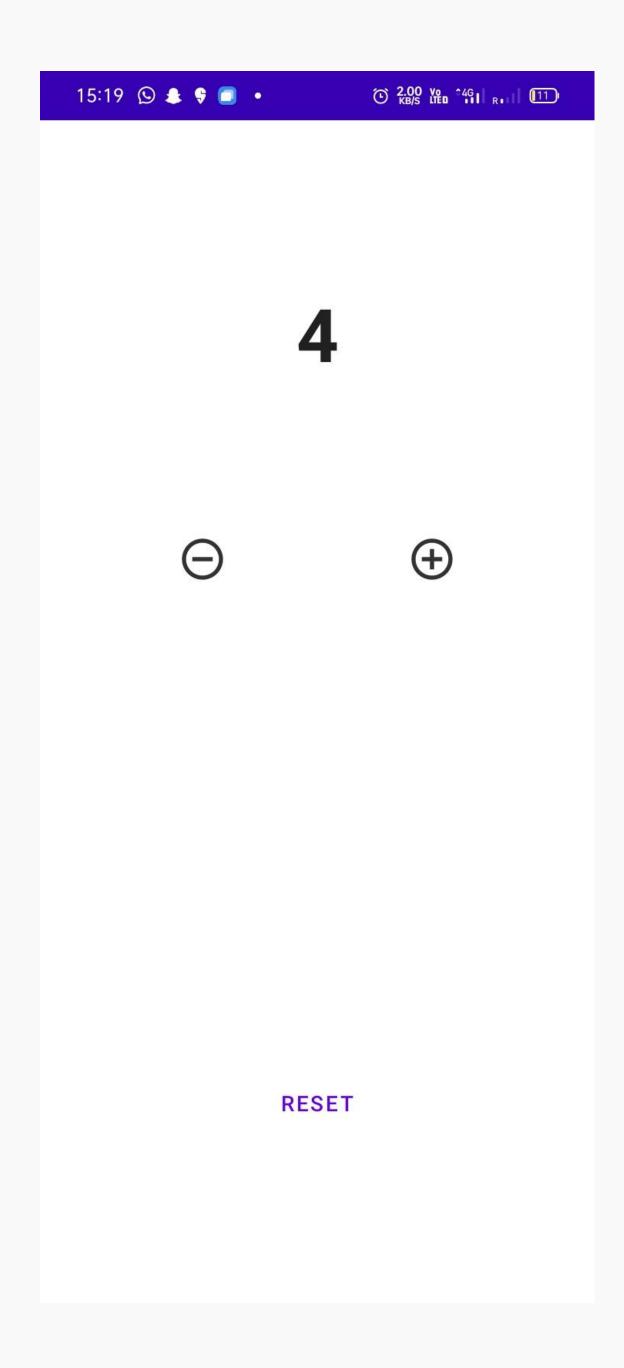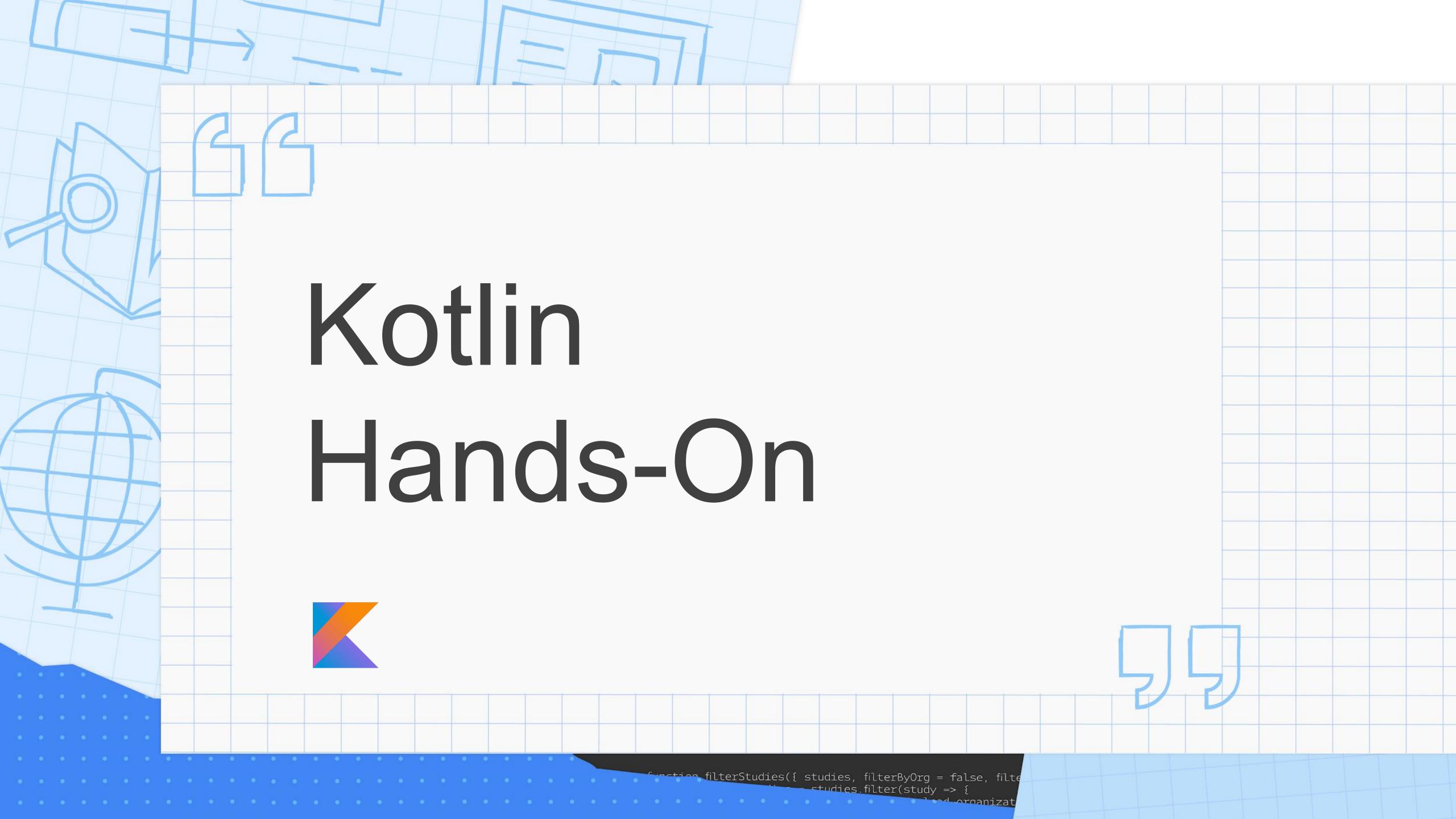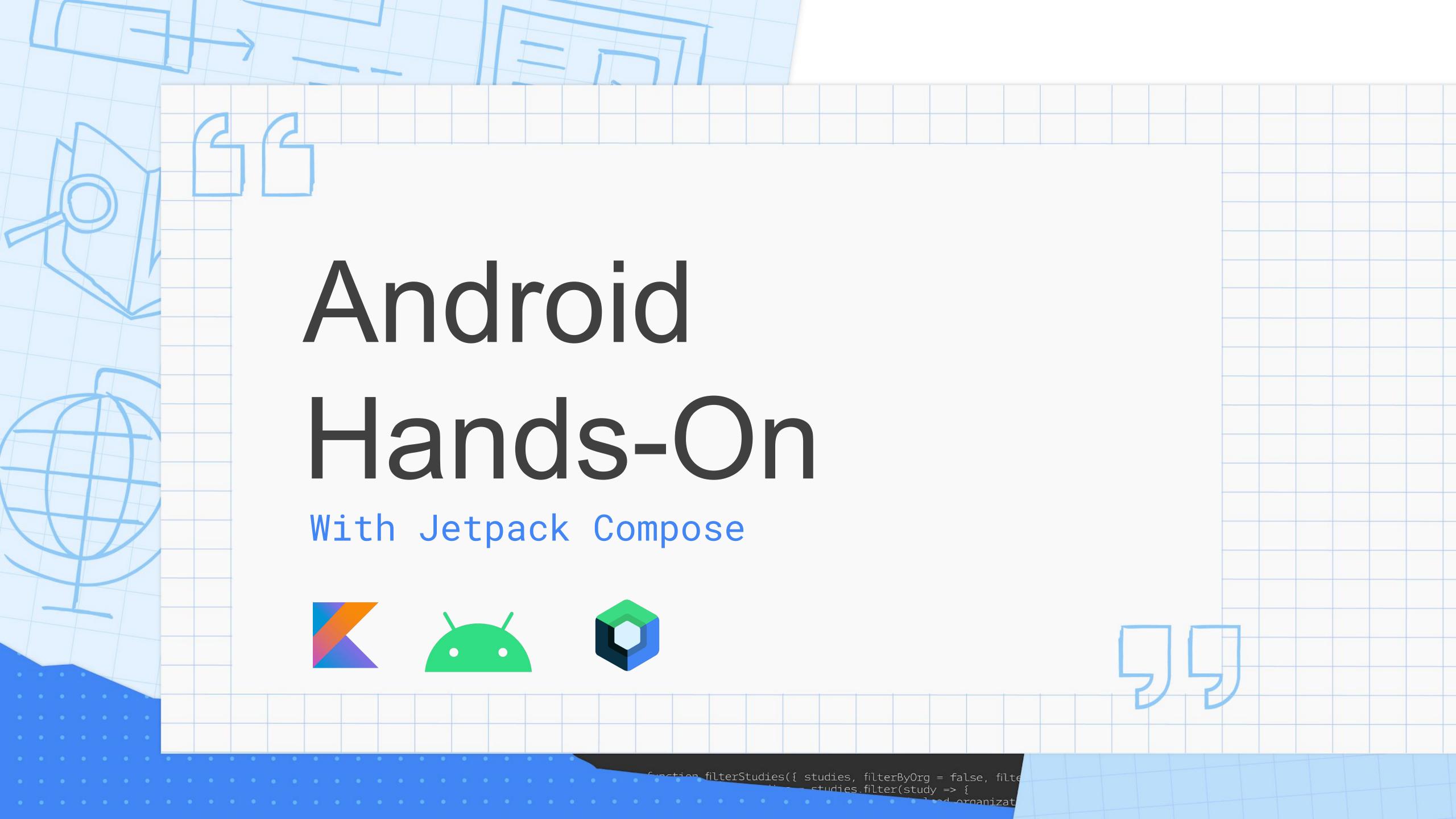
Counter App

We'll create a simple android app to get you started with android development.
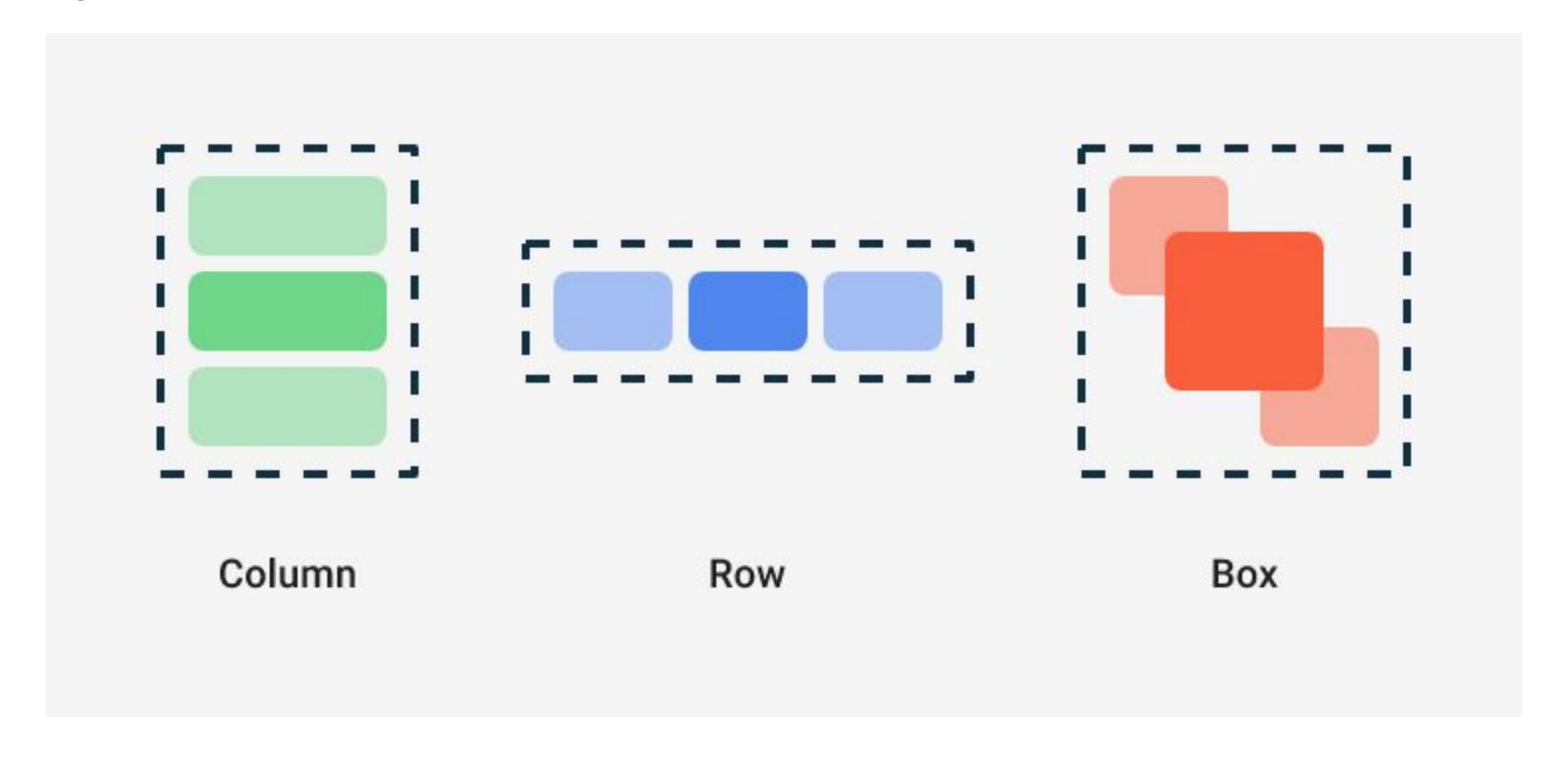
Topics

- Variables
- String Templates
- Conditionals
- **when** expression
- Loops
- Lists
- Functions
- Higher Order Functions

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What is Jetpack Compose?

Jetpack Compose is Android's modern toolkit for building native UI. It simplifies and accelerates UI development on Android - Google

Basic Layouts

Column   Row   Box

Counter App: Layout

COLUMN

TEXT

4

ROW

ICON BUTTON

TEXT BUTTON

RESET

ROW

ICON BUTTON

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