

```
1 package com.example.stopwatch
2
3 import android.os.Bundle
4 import androidx.activity.ComponentActivity
5 import androidx.activity.compose.setContent
6 import androidx.activity.enableEdgeToEdge
7 import androidx.compose.foundation.layout.Arrangement
8 import androidx.compose.foundation.layout.Column
9 import androidx.compose.foundation.layout.Row
10 import androidx.compose.foundation.layout.Spacer
11 import androidx.compose.foundation.layout.fillMaxSize
12 import androidx.compose.foundation.layout.height
13 import androidx.compose.foundation.layout.padding
14 import androidx.compose.foundation.layout.width
15 import androidx.compose.material3.Button
16 import androidx.compose.material3.MaterialTheme
17 import androidx.compose.material3.Text
18 import androidx.compose.runtime.Composable
19 import androidx.compose.runtime.getValue
20 import androidx.compose.runtime.mutableStateOf
21 import androidx.compose.runtime.remember
22 import androidx.compose.runtime.rememberCoroutineScope
23 import androidx.compose.runtime.setValue
24 import androidx.compose.ui.Alignment
25 import androidx.compose.ui.Modifier
26 import androidx.compose.ui.unit.dp
27 import com.example.stopwatch.ui.theme.StopWatchTheme
28 import kotlinx.coroutines.Job
29 import kotlinx.coroutines.delay
30 import kotlinx.coroutines.launch
31
32 class MainActivity : ComponentActivity() {
33     override fun onCreate(savedInstanceState: Bundle?) {
34         super.onCreate(savedInstanceState)
35         enableEdgeToEdge()
36         setContent {
37             StopWatchTheme {
38                 StopwatchApp()
39             }
40         }
41     }
42 }
43
44 @Composable
45 fun StopwatchApp() {
46     var time by remember { mutableStateOf(0) }
47     var isRunning by remember { mutableStateOf(false) }
48     val scope = rememberCoroutineScope()
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49     var job: Job? by remember { mutableStateOf(null) } // Store
    the Job
50
51     Column(
52         modifier = Modifier
53             .fillMaxSize()
54             .padding(16.dp),
55         horizontalAlignment = Alignment.CenterHorizontally,
56         verticalArrangement = Arrangement.Center
57     ) {
58         Text(
59             text = formatTime(time),
60             style = MaterialTheme.typography.bodyLarge
61         )
62         Spacer(modifier = Modifier.height(16.dp))
63         Row {
64             Button(onClick = {
65                 isRunning = !isRunning
66                 if (isRunning) {
67                     job = scope.launch {
68                         while (isRunning) {
69                             delay(1000)
70                             time++
71                         }
72                     }
73                 } else {
74                     job?.cancel()
75                     job = null
76                 }
77             }) {
78                 Text(if (isRunning) "Stop" else "Start")
79             }
80             Spacer(modifier = Modifier.width(8.dp))
81             Button(onClick = {
82                 time = 0
83                 isRunning = false // Ensure isRunning is also
reset!
84                 job?.cancel() // Cancel any existing job
85                 job = null // Clear the job reference
86             }) {
87                 Text("Reset")
88             }
89         }
90     }
91 }
92
93
94 fun formatTime(time: Int): String {

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95     val seconds = time % 60
96     val minutes = (time / 60) % 60
97     val hours = time / 3600
98     return String.format("%02d:%02d:%02d", hours, minutes,
    seconds)
99 }
100
```