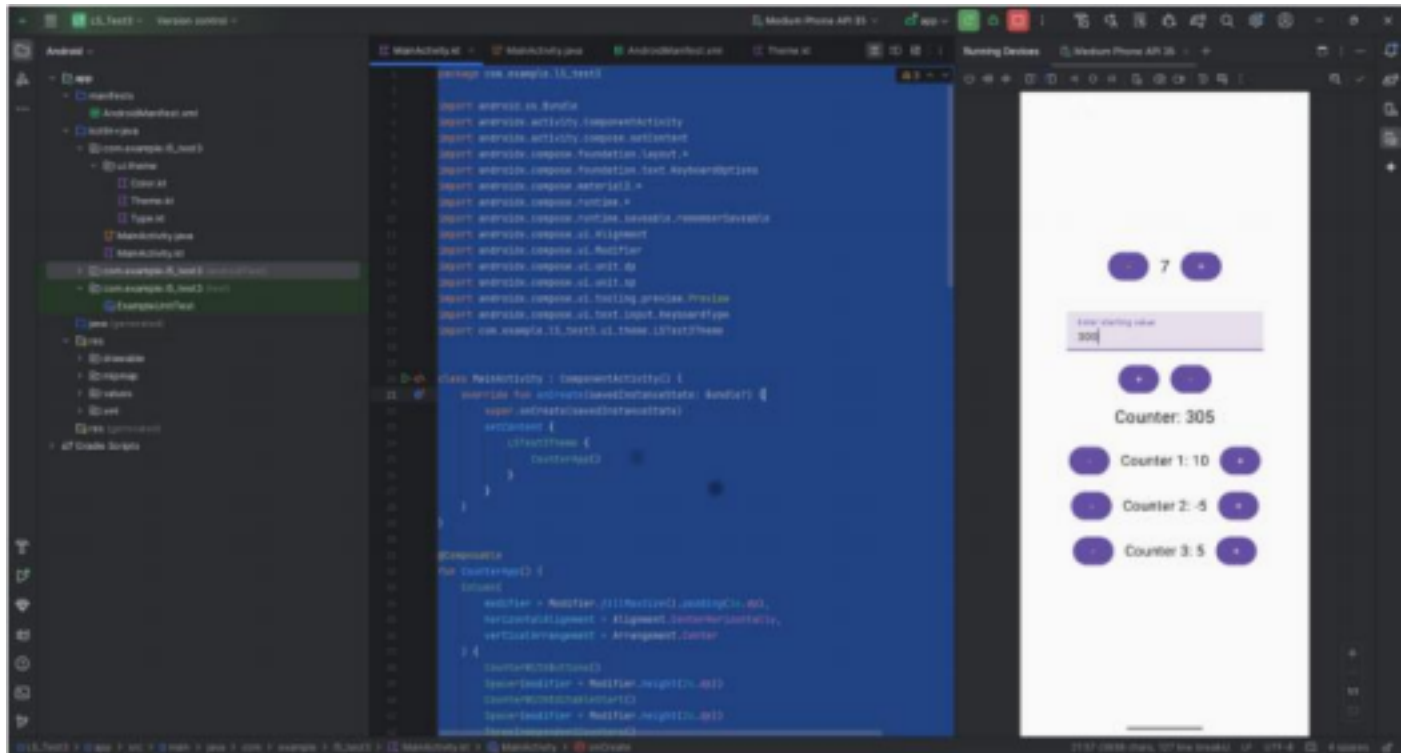SAVONIA

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Mobile Technology and Programming

Assignment L5_EX1

Code

```kotlin
package com.example.l5_test3
import android.os.Bundle
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
import androidx.compose.foundation.layout.*
import androidx.compose.foundation.text.KeyboardOptions import androidx.compose.material3.*
import androidx.compose.runtime.*
import androidx.compose.runtime.saveable.rememberSaveable import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import androidx.compose.ui.tooling.preview.Preview import androidx.compose.ui.text.input.KeyboardType import com.example.l5_test3.ui.theme.L5Test3Theme
class MainActivity : ComponentActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContent {
            L5Test3Theme {
                CounterApp()
            }
        }
    }
}
```

```kotlin
    }
}
@Composable
fun CounterApp() {
    Column(
        modifier = Modifier.fillMaxSize().padding(16.dp), horizontalAlignment
        = Alignment.CenterHorizontally, verticalArrangement =
        Arrangement.Center
    ) {
        CounterWithButtons()
        Spacer(modifier = Modifier.height(24.dp))
        CounterWithEditableStart()
        Spacer(modifier = Modifier.height(24.dp))
        ThreeIndependentCounters()
    }
}
@Composable
fun CounterWithButtons() {
    var count by rememberSaveable { mutableStateOf(0) }
    Row(verticalAlignment = Alignment.CenterVertically) { Button(onClick = {
    count-- }) { Text("-") } Spacer(modifier = Modifier.width(16.dp))
        Text(text = "$count", fontSize = 24.sp)
        Spacer(modifier = Modifier.width(16.dp))
        Button(onClick = { count++ }) { Text("+") } }
}
@Composable
fun CounterWithEditableStart(){
    var count by rememberSaveable { mutableStateOf(0) } var startingValue by
    rememberSaveable { mutableStateOf("0") } Column(
        horizontalAlignment = Alignment.CenterHorizontally,
        verticalArrangement = Arrangement.Center,
        modifier = Modifier.fillMaxWidth()
    ) {
    TextField(
    value = startingValue,
    onValueChange = { newValue ->
    // starting value = valid number
    if (newValue.all { it.isDigit() || it == '-' }) { startingValue =
    newValue
    count = newValue.toIntOrNull() ?: 0
    }
    },
    label = { Text("Enter starting value") },
    keyboardOptions = KeyboardOptions.Default.copy(keyboardType =
    KeyboardType.Number),
        modifier = Modifier.padding(16.dp)
    )
    Row(
    horizontalArrangement = Arrangement.Center, verticalAlignment
    = Alignment.CenterVertically
    ) {
    Button(onClick = { count++ }) {
```

```kotlin
                Text("+")
            }
            Spacer(modifier = Modifier.width(16.dp))
            Button(onClick = { count-- }) {
                Text("-")
            }
        }
        Spacer(modifier = Modifier.height(16.dp))
        Text(
            text = "Counter: $count", fontSize = 24.sp) }
    }

@Composable
fun ThreeIndependentCounters() {
    Column(horizontalAlignment = Alignment.CenterHorizontally) { repeat(3) { index
    ->
        var count by rememberSaveable { mutableStateOf(0) }
        Row(verticalAlignment = Alignment.CenterVertically) { Button(onClick = {
        count-- }) { Text("-") } Spacer(modifier = Modifier.width(16.dp))
        Text(text = "Counter ${index + 1}: $count", fontSize = 20.sp) Spacer(modifier =
        Modifier.width(16.dp))
            Button(onClick = { count++ }) { Text("+") } }
        Spacer(modifier = Modifier.height(16.dp))
        }
    }
}

@Preview(showBackground = true)
@Composable
fun DefaultPreview() {
    L5Test3Theme {
        CounterApp()
    }
}
```