

```
ly_main.xml × AndroidManifest.xml × strings.xml × MainActivity.kt ×

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/
    <Chronometer
        android:layout_marginBottom="18dp"
        android:textAlignment="center"
        android:textSize="80sp"
        android:layout_gravity="center"
        app:layout_constraintBottom_toTopOf="@+id/button1"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="1.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.312"
        tools:ignore="NotSibling" />

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:text="Start"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.486"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.268" />

    <Button
        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:text="Pause"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
```

```
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/
    app:layout_constraintVertical_bias="0.268" />

<Button
    android:id="@+id/button3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:text="Pause"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.486"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.337" />

<Button
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Reset"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.486"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    android:layout_gravity="center"
    app:layout_constraintVertical_bias="0.412" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

```

import ...

class MainActivity : AppCompatActivity() {
    lateinit var chronometer: Chronometer
    var running : Boolean = false
    var offset : Long = 0
    val OFFSET_KEY = "offset"
    val RUNNING_KEY="running"
    val BASE_KEY="base_key"

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        enableEdgeToEdge()
        setContentView(R.layout.activity_main)
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main)) { v, insets ->
            val systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars())
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom)
            insets
        }

        chronometer = findViewById(R.id.button1)
        val btnStart = findViewById<Button>(R.id.button2)
        val btnPause = findViewById<Button>(R.id.button3)
        val btnReset = findViewById<Button>(R.id.button4)
        if (savedInstanceState != null){
            offset = savedInstanceState.getLong(OFFSET_KEY)
            running = savedInstanceState.getBoolean(RUNNING_KEY)
            if (running){
                chronometer.base = savedInstanceState.getLong(BASE_KEY)
                chronometer.start()
            }else setBaseTime()
        }

        btnStart.setOnClickListener {

```

```

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        btnStart.setOnClickListener {
            if (!running){
                setBaseTime()
                chronometer.start()
                running = true
            }
        }
        btnPause.setOnClickListener {
            if (running){
                saveOffset()
                chronometer.stop()
                running = false
            }
        }
        btnReset.setOnClickListener {
            offset = 0
            setBaseTime()
            running = false
        }
    }

    private fun setBaseTime() {
        offset = SystemClock.elapsedRealtime() - chronometer.base
    }

    private fun saveOffset() {
        chronometer.base = SystemClock.elapsedRealtime() - offset
    }

    override fun onSaveInstanceState(savedInstanceState: Bundle) {
        savedInstanceState.putLong("offset", offset)
        savedInstanceState.putBoolean("key: running", running)
        savedInstanceState.putLong("base_key", chronometer.base)
        super.onSaveInstanceState(savedInstanceState)
    }
}

```

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res-
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="763dp"
        android:layout_height="934dp"
        android:background="@drawable/a"
        android:textSize="60sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.671"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0" />

    <Chronometer
        android:id="@+id/button1"
        android:layout_width="359dp"
        android:layout_height="281dp"
        android:layout_marginStart="27dp"
        android:layout_marginTop="63dp"
        android:layout_marginEnd="26dp"
        android:layout_marginBottom="18dp"
        android:textAlignment="center"
        android:textSize="80sp"
        android:layout_gravity="center"
        app:layout_constraintBottom_toTopOf="@+id/button1"
        app:layout_constraintEnd_toEndOf="parent"
```