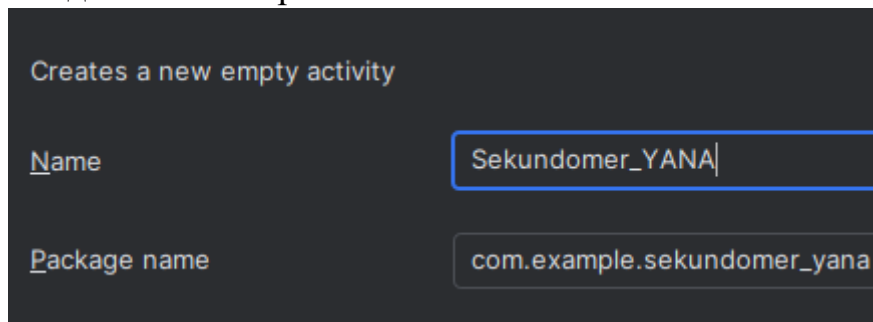
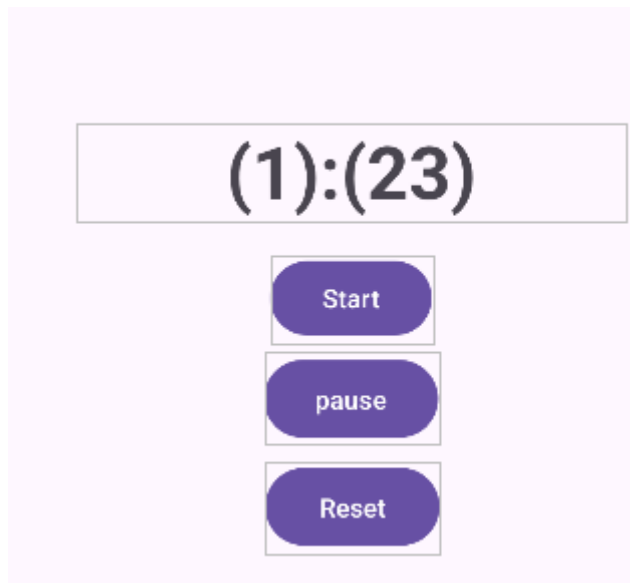


Практическая работа 6(Приложение секундомер). Духаниной Яна ИС222

1. Создала новый проект



2. Попыталась сама изменила макет по образцу, написав следующий код.



```
app:layout_constraintVertical_bias="0.534" />

<TextView
    android:id="@+id/tv1"
    android:layout_width="298dp"
    android:layout_height="53dp"
    android:layout_gravity="center"
    android:layout_margin="10dp"
    android:gravity="center"
    android:rotationX="-2"
    android:text="(1):(23)"
    android:textSize="40dp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.495"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.256" />
```

```

<Button
    android:id="@+id/btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_margin="10dp"
    android:text="Start"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.363" />

<Button
    android:id="@+id/btn2"
    android:layout_width="95dp"
    android:layout_height="50dp"
    android:layout_gravity="center"
    android:layout_margin="15dp"
    android:text="pause"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.444" />

<Button
    android:id="@+id/btn3"
    android:layout_width="95dp"
    android:layout_height="50dp"
    android:layout_gravity="center"
    android:layout_margin="15dp"
    android:text="Reset"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.444" />

```

3. Написала другой подходящий код. Результат:

```

    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.444" />

<Button
    android:id="@+id/btnReset"
    android:layout_width="95dp"
    android:layout_height="50dp"
    android:layout_gravity="center"
    android:layout_margin="15dp"
    android:text="Reset"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.534" />

</LinearLayout>

```

```

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    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"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <Chronometer
        android:id="@+id/textTime"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="80dp"
        android:layout_gravity="center"
    />

    <Button
        android:id="@+id/btnStart"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:text="Start"
        android:layout_gravity="center"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.363" />

    <Button
        android:id="@+id/btnPause"
        android:layout_width="95dp"
        android:layout_height="50dp"
        android:layout_margin="15dp"
        android:text="pause"
        android:layout_gravity="center"
        app:layout_constraintBottom_toBottomOf="parent"

```

(1):(23)

Start

pause

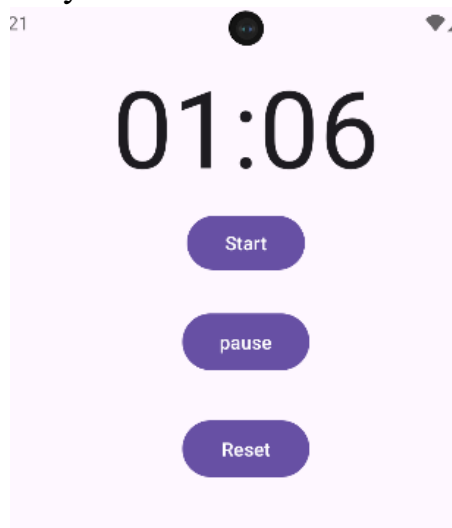
Reset

4. Написала следующий код в MainActivity

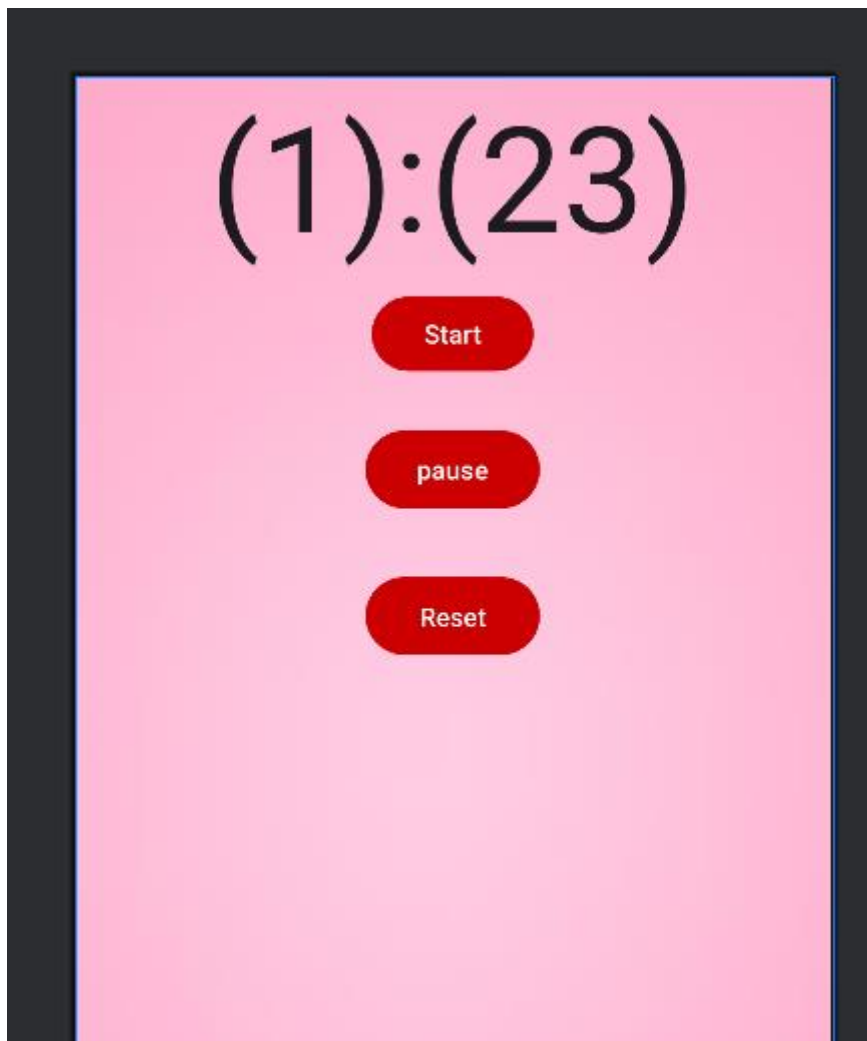
```
lateinit var chronometr: Chronometer
var running : Boolean = false
var offset: Long = 0
private fun saveOffset() {
    offset = SystemClock.elapsedRealtime() - chronometr.base
}
private fun setBaseTime() {
    chronometr.base = SystemClock.elapsedRealtime() - offset
}

chronometr = findViewById(R.id.textTime)
val btnStart = findViewById<Button>(R.id.btnStart)
val btnPause = findViewById<Button>(R.id.btnPause)
val btnReset = findViewById<Button>(R.id.btnReset)
btnStart.setOnClickListener{
    if (!running){
        setBaseTime()
        chronometr.start()
        running=true
    }
    btnPause.setOnClickListener{
        if (running){
            saveOffset()
            chronometr.stop()
            running=false
        }
        btnReset.setOnClickListener{
            offset = 0
            setBaseTime()
            running= false
        }
    }
}
```

5. Результат



6. Заменяла фон и поменяла цвет кнопок



7. Видоизменила код для корректной работы

```
val OFFSET_KEY = "offset"  
val RUNNING_KEY = "running"  
val BASE_KEY = "base_key"
```

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

```
if (savedInstanceState != null)  
{  
    offset = savedInstanceState.getLong(OFFSET_KEY)  
    running = savedInstanceState.getBoolean(RUNNING_KEY)  
    if(running) {  
        chronometr.base = savedInstanceState.getLong(BASE_KEY)  
        chronometr.start()  
    }  
    else setBaseTime()  
}
```

8. Результат:

