

Лабораторная работа № 1.

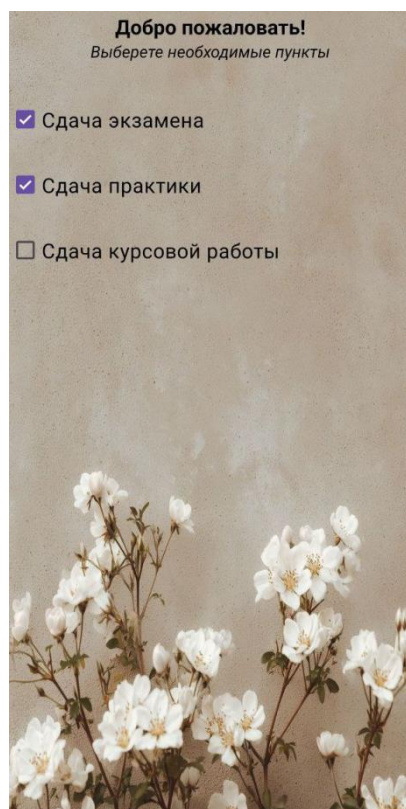
Практическая работа CheckBox

```
1  <?xml version="1.0" encoding="utf-8"?>
2  <androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
3      xmlns:app="http://schemas.android.com/apk/res-auto"
4      xmlns:tools="http://schemas.android.com/tools"
5      android:id="@+id/main"
6      android:layout_width="match_parent"
7      android:layout_height="match_parent"
8      android:background="@drawable/fff"
9      android:padding="16dp"
10     tools:context=".MainActivity">
11
12     <TextView
13         android:id="@+id/titleTextView"
14         android:layout_width="0dp"
15         android:layout_height="wrap_content"
16         android:gravity="center"
17         android:text="Добро пожаловать!"
18         android:textAllCaps="false"
19         android:textColor="@color/black"
20         android:textSize="20sp"
21         android:textStyle="bold"
22         app:layout_constraintEnd_toEndOf="parent"
23         app:layout_constraintStart_toStartOf="parent"
24         app:layout_constraintTop_toTopOf="parent" />
25
26     <TextView
27         android:id="@+id/subtitleTextView"
28         android:layout_width="0dp"
29         android:layout_height="wrap_content"
30         android:gravity="center"
31         android:text="Выберете необходимые пункты"
32         android:textAllCaps="false"
33         android:textColor="@color/black"
34         android:textSize="16sp"
35         android:textStyle="italic"
36         app:layout_constraintEnd_toEndOf="parent"
37         app:layout_constraintStart_toStartOf="parent"
38         app:layout_constraintTop_toBottomOf="@+id/titleTextView" />
39
40     <CheckBox
41         android:id="@+id/examCheckBox"
42         android:layout_width="0dp"
43         android:layout_height="wrap_content"
44         android:layout_marginTop="32dp"
45         android:text="Сдача экзамена"
46         android:textAllCaps="false"
47         android:textColor="@color/black"
48         android:textSize="20sp"
49         android:textStyle="normal"
50         app:layout_constraintEnd_toEndOf="parent"
51         app:layout_constraintStart_toStartOf="parent"
52         app:layout_constraintTop_toBottomOf="@+id/subtitleTextView" />
53
```

```

54     <CheckBox
55         android:id="@+id/practiceCheckBox"
56         android:layout_width="0dp"
57         android:layout_height="wrap_content"
58         android:layout_marginTop="16dp"
59         android:text="Сдача практики"
60         android:textAllCaps="false"
61         android:textColor="@color/black"
62         android:textSize="20sp"
63         android:textStyle="normal"
64         app:layout_constraintEnd_toEndOf="parent"
65         app:layout_constraintHorizontal_bias="0.0"
66         app:layout_constraintStart_toStartOf="parent"
67         app:layout_constraintTop_toBottomOf="@+id/examCheckBox" />
68
69     <CheckBox
70         android:id="@+id/courseworkCheckBox"
71         android:layout_width="0dp"
72         android:layout_height="wrap_content"
73         android:layout_marginTop="16dp"
74         android:text="Сдача курсовой работы"
75         android:textAllCaps="false"
76         android:textColor="@color/black"
77         android:textSize="20sp"
78         android:textStyle="normal"
79         app:layout_constraintEnd_toEndOf="parent"
80         app:layout_constraintStart_toStartOf="parent"
81         app:layout_constraintTop_toBottomOf="@+id/practiceCheckBox" />
82
83 </androidx.constraintlayout.widget.ConstraintLayout>
84

```



Практическая работа «Приложение секундомер»

Запустить у меня не получилось(((

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3      xmlns:tools="http://schemas.android.com/tools"
4      android:layout_width="match_parent"
5      android:layout_height="match_parent"
6      android:orientation="vertical"
7      android:gravity="center"
8      android:padding="16dp"
9      android:background="@drawable/cvb"
10     tools:context=".MainActivity">
11
12
13     <TextView
14         android:layout_width="wrap_content"
15         android:layout_height="wrap_content"
16         android:text="Секундомер"
17         android:textSize="32sp"
18         android:textStyle="bold"
19         android:textColor="@color/black"
20         android:layout_marginBottom="50dp" />
21
22

```

```

23     <TextView
24         android:id="@+id/tvTimer"
25         android:layout_width="wrap_content"
26         android:layout_height="wrap_content"
27         android:text="00:00"
28         android:textSize="48sp"
29         android:textStyle="bold"
30         android:textColor="@color/black"
31         android:layout_marginBottom="50dp" />
32
33
34     <LinearLayout
35         android:layout_width="match_parent"
36         android:layout_height="wrap_content"
37         android:orientation="horizontal"
38         android:gravity="center">
39
40
41         <Button
42             android:id="@+id/btnStart"
43             android:layout_width="wrap_content"
44             android:layout_height="wrap_content"
45             android:text="Start"
46             android:layout_margin="8dp"
47             android:padding="16dp"
48             android:backgroundTint="@color/black"/>
49
50

```

```

51         <Button
52             android:id="@+id/btnPause"
53             android:layout_width="wrap_content"
54             android:layout_height="wrap_content"
55             android:text="Pause"
56             android:layout_margin="8dp"
57             android:padding="16dp"
58             android:backgroundTint="@color/black"/>
59
60
61         <Button
62             android:id="@+id/btnReset"
63             android:layout_width="wrap_content"
64             android:layout_height="wrap_content"
65             android:text="Reset"
66             android:layout_margin="8dp"
67             android:padding="16dp"
68             android:backgroundTint="@color/black"/>
69
70     </LinearLayout>
71
72 </LinearLayout>

```

```

<> activity_main.xml  MainActivity.java  MainActivity.kt x
1      import android.os.Bundle
2      import android.os.Handler
3      import android.os.Looper
4      import android.widget.Button
5      import android.widget.TextView
6      import androidx.appcompat.app.AppCompatActivity
7      import com.example.myapplication.R
8
9  <> class MainActivity : AppCompatActivity() {
10
11
12      2 Usages
13      private lateinit var tvTimer: TextView
14      2 Usages
15      private lateinit var btnStart: Button
16      2 Usages
17      private lateinit var btnPause: Button
18      2 Usages
19      private lateinit var btnReset: Button
20
21      6 Usages
22      private var seconds = 0
23      9 Usages
24      private var isRunning = false
25      4 Usages
26      private var wasRunning = false
27
28      2 Usages
29      private val handler = Handler(Looper.getMainLooper())
30
31      1 Usage
32      private val runnable = object : Runnable {
33          override fun run() {
34              if (isRunning) {
35                  seconds++
36                  updateTimerView()
37              }
38
39              handler.postDelayed( r = this, delayMillis = 1000)
40          }
41      }
42
43      override fun onCreate(savedInstanceState: Bundle?) {
44          super.onCreate(savedInstanceState)
45          setContentView(R.layout.activity_main)
46
47          initView()
48
49          if (savedInstanceState != null) {
50              seconds = savedInstanceState.getInt( key = "seconds")
51              isRunning = savedInstanceState.getBoolean( key = "isRunning")
52              wasRunning = savedInstanceState.getBoolean( key = "wasRunning")

```



```

51         updateTimerView()
52     }
53
54
55     @Override
56     override fun onResume() {
57         super.onResume()
58
59         if (wasRunning) {
60             isRunning = true
61         }
62
63         handler.post({ r = runnable })
64     }
65
66     @Override
67     override fun onPause() {
68         super.onPause()
69
70         wasRunning = isRunning
71         isRunning = false
72     }
73
74     @Override
75     override fun onSaveInstanceState(outState: Bundle) {
76         super.onSaveInstanceState(outState)
77
78         outState.putInt("seconds", seconds)
79         outState.putBoolean("isRunning", isRunning)
80         outState.putBoolean("wasRunning", wasRunning)
81     }

```

```

</> activity_main.xml  MainActivity.java  MainActivity.kt  x
9      class MainActivity : AppCompatActivity() {
10
11          1 Usage
12          private fun initViews() {
13
14              tvTimer = findViewById( id = R.id.tvTimer)
15              btnStart = findViewById( id = R.id.btnStart)
16              btnPause = findViewById( id = R.id.btnPause)
17              btnReset = findViewById( id = R.id.btnReset)
18
19              btnStart.setOnClickListener {
20                  startTimer()
21              }
22
23              btnPause.setOnClickListener {
24                  pauseTimer()
25              }
26
27              btnReset.setOnClickListener {
28                  resetTimer()
29              }
30          }
31
32          1 Usage
33          private fun startTimer() {
34              isRunning = true
35          }
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104

```

```

105          1 Usage
106          private fun pauseTimer() {
107              isRunning = false
108          }
109
110          1 Usage
111          private fun resetTimer() {
112              isRunning = false
113              seconds = 0
114              updateTimerView()
115          }
116
117          3 Usages
118          private fun updateTimerView() {
119
120              val minutes = seconds / 60
121              val secs = seconds % 60
122
123              val time = String.format("%02d:%02d", minutes, secs)
124
125              tvTimer.text = time
126          }

```

