

ZPO

LISTA 9

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PONIEDZIAŁEK, 13:15

```
package com.example.zpo_l9_rurociag;

import android.app.Activity;
import android.os.Bundle;
import android.os.Handler;
import android.view.View;
import android.widget.TextView;

import java.util.Locale;

public class MainActivity extends Activity {

    private int seconds;
    private boolean running;
    private double volume;
    private double h;
    private double D=0.2;
    private double ro=1.2;
    private double roM=780;
    private double fi=0.8;
    private String hString;
    private String volumeString;

    private boolean wasRunning;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        if(savedInstanceState != null){
            seconds=savedInstanceState.getInt("seconds");
            running=savedInstanceState.getBoolean("running");
            wasRunning=savedInstanceState.getBoolean("wasRunning");
            volume=savedInstanceState.getDouble("volume");
        }

        runTimer();
    }

    @Override
    protected void onSaveInstanceState(Bundle savedInstanceState){
        savedInstanceState.putInt("seconds", seconds);
        savedInstanceState.putBoolean("running", running);
    }
}
```

```

        savedInstanceState.putBoolean("wasRunning", wasRunning);
        savedInstanceState.putDouble("volume", volume);

    }

    @Override
    protected void onStart() {
        super.onStart();
        wasRunning=running;
        running=false;
    }

    @Override
    protected void onStop() {
        super.onStop();
        if(wasRunning){
            running=true;
        }
    }

    private void runTimer(){
        final TextView timeView = (TextView) findViewById(R.id.time_view);
        final TextView textVievH= (TextView) findViewById(R.id.parametr);
        final TextView textViewV= (TextView)
findViewById(R.id.objetosc_view);

        final Handler handler = new Handler();

        handler.post(new Runnable() {
            @Override
            public void run() {

                int hours = seconds/3600;
                int minutes = (seconds%3600/60);
                int secs = seconds%60;

                String time =
String.format(Locale.getDefault(), "%d:%02d:%02d", hours, minutes, secs);

                if(running){
                    hString= textVievH.getText().toString();
                    System.out.println(hString);
                    h=Double.parseDouble(hString);
                    volume= seconds*fi*Math.sqrt(2*9.8*h*(roM-
ro)*1/ro)*Math.PI*Math.pow(D,2)/4;
                    seconds++;
                    textViewV.setText(String.valueOf(volume));
                    timeView.setText(time);

                }

                handler.postDelayed(this,1000);

            }
        });
    }

```

```

    }

    public void onClickStart(View view) {
        running=true;
    }

    public void onClickStop(View view) {
        running=false;
    }

    public void onClickReset(View view) {
        running=false;
        seconds=0;
        volume=0;
        final TextView textViewV= (TextView)
findViewById(R.id.objetosc_view);
        textViewV.setText(String.valueOf(volume));
    }
}

```

---

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:textAlignment="center">

    <Button
        android:id="@+id/start_button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:onClick="onClickStart"
        android:text="@string/buttonStartLabel"
        android:textAppearance="@android:style/TextAppearance.Medium" />

    <Button
        android:id="@+id/stop_button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:layout_marginTop="10dp"
        android:onClick="onClickStop"
        android:text="@string/buttonStopLabel" />

    <Button
        android:id="@+id/reset_button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:layout_marginTop="10dp"
        android:onClick="onClickReset"
        android:text="@string/buttonResetLabel" />

    <TextView
        android:id="@+id/napisCzas"
        android:layout_width="wrap_content"

```

```
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="czas:"
        android:textAlignment="center"
        android:textAppearance="@android:style/TextAppearance.Medium" />
        android:textAlignment="center" />
```

```
<TextView
    android:id="@+id/time_view"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="t"
    android:textAlignment="center"
    android:textAppearance="@android:style/TextAppearance.Medium"
    android:textSize="56dp" />
```

```
<TextView
    android:id="@+id/napisCzas2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:ems="10"
    android:inputType="textPersonName"
    android:text="objętość:"
    android:textAlignment="center" />
```

```
<TextView
    android:id="@+id/objetosc_view"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="V"
    android:textAlignment="center"
    android:textAppearance="@android:style/TextAppearance.Large"
    android:textSize="56dp" />
```

```
<TextView
    android:id="@+id/textViewUstaw"
    android:layout_width="154dp"
    android:layout_height="41dp"
    android:layout_gravity="center"
    android:text="ustaw parametr h"
    android:textAlignment="center" />
```

```
<EditText
    android:id="@+id/parametr"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:ems="10"
    android:inputType="textPersonName"
    android:textAlignment="center" />
```

```
</LinearLayout>
```

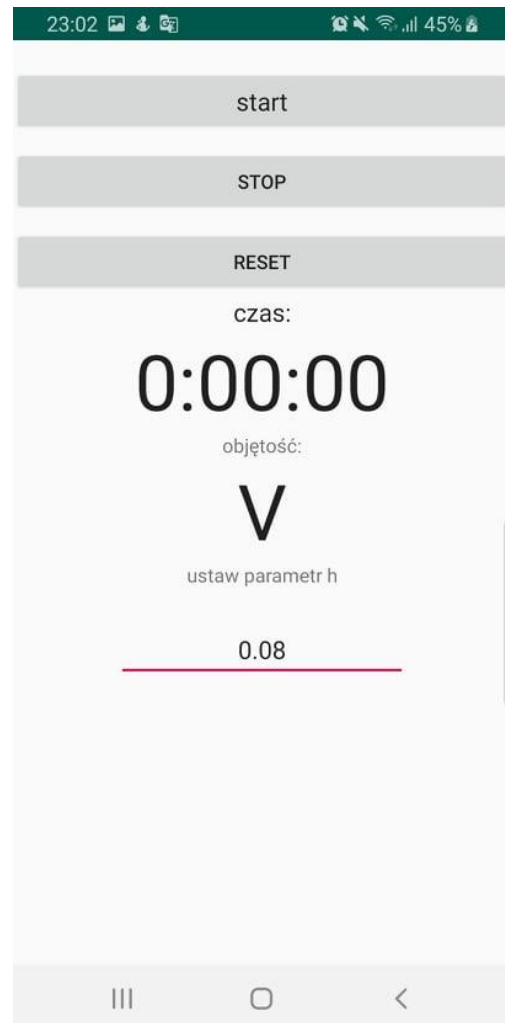
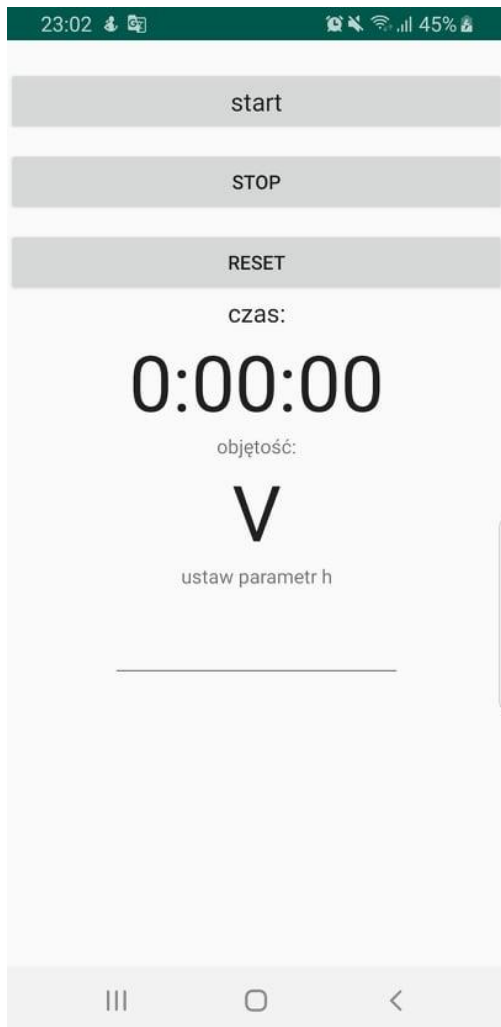
```
<resources>
```

```
    <string name="app_name">ZPO_L9_rurociag</string>
    <string name="buttonStartLabel">start</string>
    <string name="buttonResetLabel">reset</string>
```

```
<string name="buttonStopLabel">stop</string>  
</resources>
```

---

W plikach załączam filmik prezentujący działanie przycisków stop oraz reset.



23:02

45%

start

STOP

RESET

czas:

0:00:05

objętość:

4.0087155580  
58839

ustaw parametr h

0.08

III

□

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