**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 textVievV= (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**++;  
 textVievV.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 textVievV= (TextView) findViewById(R.id.***objetosc\_view***);  
 textVievV.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.

 

