**package** com.example.tut1;

**import** android.app.Activity;

**import** android.bluetooth.BluetoothSocket;

**import** android.content.Intent;

**import** android.content.pm.ActivityInfo;

**import** android.graphics.Color;

**import** android.os.Bundle;

**import** android.os.Handler;

**import** android.os.Message;

**import** android.util.Log;

**import** android.view.View;

**import** android.view.Window;

**import** android.view.WindowManager;

**import** android.widget.Button;

**import** android.widget.LinearLayout;

**import** android.widget.Toast;

**import** android.widget.ToggleButton;

**import** com.jjoe64.graphview.GraphView;

**import** com.jjoe64.graphview.GraphView.GraphViewData;

**import** com.jjoe64.graphview.GraphView.LegendAlign;

**import** com.jjoe64.graphview.GraphViewSeries;

**import** com.jjoe64.graphview.GraphViewSeries.GraphViewStyle;

**import** com.jjoe64.graphview.LineGraphView;

**import** java.text.SimpleDateFormat;

**import** java.util.Date;

**public class** MainActivity **extends** Activity **implements** View.OnClickListener{

@Override

**public void** onBackPressed() {

*//* ***TODO Auto-generated method stub***

**if** (Bluetooth.*connectedThread* != **null**) {

Bluetooth.*connectedThread*.write(**"Q"**);}*//Stop streaming*

**super**.onBackPressed();

}

*//toggle Button*

**static boolean** *Lock*;*//whether lock the x-axis to 0-5*

**static boolean** *AutoScrollX*;*//auto scroll to the last x value*

**static boolean** *Stream*;*//Start or stop streaming*

*//Button init*

Button **bXminus**;

Button **bXplus**;

ToggleButton **tbLock**;

ToggleButton **tbScroll**;

ToggleButton **tbStream**;

*//GraphView init*

**static** LinearLayout *GraphView*;

**static** GraphView *graphView*;

**static** GraphViewSeries *Series*;

*//graph value*

**private static double** *graph2LastXValue* = 0;

**private static int** *Xview*=10;

**private** String **DBdata**;

**private int Count**;

Button **bConnect**, **bDisconnect**;

Handler **mHandler** = **new** Handler(){

@Override

**public void** handleMessage(Message msg) {

*//* ***TODO Auto-generated method stub***

**super**.handleMessage(msg);

**switch**(msg.**what**){

**case** Bluetooth.***SUCCESS\_CONNECT***:

Bluetooth.*connectedThread* = **new** Bluetooth.ConnectedThread((BluetoothSocket)msg.**obj**);

Toast.*makeText*(getApplicationContext(), **"Connected!"**, Toast.***LENGTH\_SHORT***).show();

String s = **"successfully connected"**;

Bluetooth.*connectedThread*.start();

**break**;

**case** Bluetooth.***MESSAGE\_READ***:

**byte**[] readBuf = (**byte**[]) msg.**obj**;

String strIncom = **new** String(readBuf, 0, 5); *// create string from bytes array*

Log.*d*(**"strIncom"**, strIncom);

**if** (strIncom.indexOf(**'.'**)==2 && strIncom.indexOf(**'s'**)==0){

strIncom = strIncom.replace(**"s"**, **""**);

**if** (isFloatNumber(strIncom)){

*Series*.appendData(**new** GraphViewData(*graph2LastXValue*, Double.*parseDouble*(strIncom)), *AutoScrollX*);

**Count**++;*//算次數*

SimpleDateFormat sdf = **new** SimpleDateFormat(**"yyyy-MM-dd HH:mm:ss"**);

Date dt=**new** Date();

String dts=sdf.format(dt);

**DBdata**+=**"(' "** + dts + **" ' , ' "** + Double.*parseDouble*(strIncom)\*512 + **" ' ),"**;

**if**(**Count**==20)

{

*//Bluetooth.connectedThread.write("Q");*

**Count**=0;

String i = **""**;

*//DBdata = DBdata.substring(0,DBdata.length()-1);*

*//DBdata += ";";*

*//i = DBconnect.db(DBdata);*

*//Bluetooth.connectedThread.write("E");*

*//DBdata = "INSERT INTO light VALUES" ;*

}

*//X-axis control*

**if** (*graph2LastXValue* >= *Xview* && *Lock* == **true**){

*Series*.resetData(**new** GraphViewData[] {});

*graph2LastXValue* = 0;

}**else** *graph2LastXValue* += 0.1;

**if**(*Lock* == **true**)

*graphView*.setViewPort(0, *Xview*);

**else**

*graphView*.setViewPort(*graph2LastXValue*-*Xview*, *Xview*);

*//refresh*

*GraphView*.removeView(*graphView*);

*GraphView*.addView(*graphView*);

}

}

**break**;

}

}

**public boolean** isFloatNumber(String num){

Log.*d*(**"checkfloatNum"**, num);

**try**{

Double.*parseDouble*(num);

} **catch**(NumberFormatException nfe) {

**return false**;

}

**return true**;

}

};

@Override

**public void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

**this**.setRequestedOrientation(ActivityInfo.***SCREEN\_ORIENTATION\_LANDSCAPE***);

requestWindowFeature(Window.***FEATURE\_NO\_TITLE***);*//Hide title*

**this**.getWindow().setFlags(WindowManager.LayoutParams.

***FLAG\_FULLSCREEN***,WindowManager.LayoutParams.***FLAG\_FULLSCREEN***);*//Hide Status bar*

setContentView(R.layout.***activity\_main***);

*//set background color*

LinearLayout background = (LinearLayout)findViewById(R.id.***bg***);

background.setBackgroundColor(Color.***BLACK***);

init();

ButtonInit();

}

**void** init(){

Bluetooth.*gethandler*(**mHandler**);

*//init graphview*

*GraphView* = (LinearLayout) findViewById(R.id.***Graph***);

*// init example series data-------------------*

*Series* = **new** GraphViewSeries(**"Signal"**,

**new** GraphViewStyle(Color.***YELLOW***, 2),*//color and thickness of the line*

**new** GraphViewData[] {**new** GraphViewData(0, 0)});

*graphView* = **new** LineGraphView(

**this** *// context*

, **"Graph"** *// heading*

);

*graphView*.setViewPort(0, *Xview*);

*graphView*.setScrollable(**true**);

*graphView*.setScalable(**true**);

*graphView*.setShowLegend(**true**);

*graphView*.setLegendAlign(LegendAlign.***BOTTOM***);

*graphView*.setManualYAxis(**true**);

*graphView*.setManualYAxisBounds(5, 0);

*graphView*.addSeries(*Series*); *// data*

*GraphView*.addView(*graphView*);

}

**void** ButtonInit(){

**bConnect** = (Button)findViewById(R.id.***bConnect***);

**bConnect**.setOnClickListener(**this**);

**bDisconnect** = (Button)findViewById(R.id.***bDisconnect***);

**bDisconnect**.setOnClickListener(**this**);

*//X-axis control button*

**bXminus** = (Button)findViewById(R.id.***bXminus***);

**bXminus**.setOnClickListener(**this**);

**bXplus** = (Button)findViewById(R.id.***bXplus***);

**bXplus**.setOnClickListener(**this**);

*//*

**tbLock** = (ToggleButton)findViewById(R.id.***tbLock***);

**tbLock**.setOnClickListener(**this**);

**tbScroll** = (ToggleButton)findViewById(R.id.***tbScroll***);

**tbScroll**.setOnClickListener(**this**);

**tbStream** = (ToggleButton)findViewById(R.id.***tbStream***);

**tbStream**.setOnClickListener(**this**);

*//init toggleButton*

*Lock*=**true**;

*AutoScrollX*=**true**;

*Stream*=**true**;

}

@Override

**public void** onClick(View v) {

*//* ***TODO Auto-generated method stub***

**switch**(v.getId()){

**case** R.id.***bConnect***:

startActivity(**new** Intent(**this**,Bluetooth.**class**));

**break**;

**case** R.id.***bDisconnect***:

Bluetooth.*disconnect*();

**break**;

**case** R.id.***bXminus***:

**if** (*Xview*>1) *Xview*--;

**break**;

**case** R.id.***bXplus***:

**if** (*Xview*<30) *Xview*++;

**break**;

**case** R.id.***tbLock***:

**if** (**tbLock**.isChecked()){

*Lock* = **true**;

}**else**{

*Lock* = **false**;

}

**break**;

**case** R.id.***tbScroll***:

**if** (**tbScroll**.isChecked()){

*AutoScrollX* = **true**;

}**else**{

*AutoScrollX* = **false**;

}

**break**;

**case** R.id.***tbStream***:

**if** (**tbStream**.isChecked()){

**if** (Bluetooth.*connectedThread* != **null**) {

Bluetooth.*connectedThread*.write(**"E"**);

**DBdata**= **"INSERT INTO light VALUES"** ;

}

}**else**{

**if** (Bluetooth.*connectedThread* != **null**) {

Bluetooth.*connectedThread*.write(**"Q"**);

String i=**""**;

**DBdata**=**DBdata**.substring(0,**DBdata**.length()-1);

**DBdata** += **";"**;

i=DBconnect.*db*(**DBdata**);

**Count**=0;*//歸零*

Toast.*makeText*(getApplicationContext(),**DBdata**+**"upload..."**+i,Toast.***LENGTH\_SHORT***).show();

}

}

**break**;

}

}

}