Merhaba arkadaşlar

Android telefonumuz ve arduino kullanarak yaptığımız rc arabayı sizlerle paylaşmak istiyorum.Aşama aşama arabayı nasıl yaptığımı neler kullandığımı inceleyebilirsiniz.

Kullandığımız Malzemeler:

120x60mm 4mm Şaft Aparatlı Teker x 4

Arduino x 1

HC05 Bluetooth-Serial Modül x 1

12V 37mm 700Rpm Redüktörlü DC Motor x 4

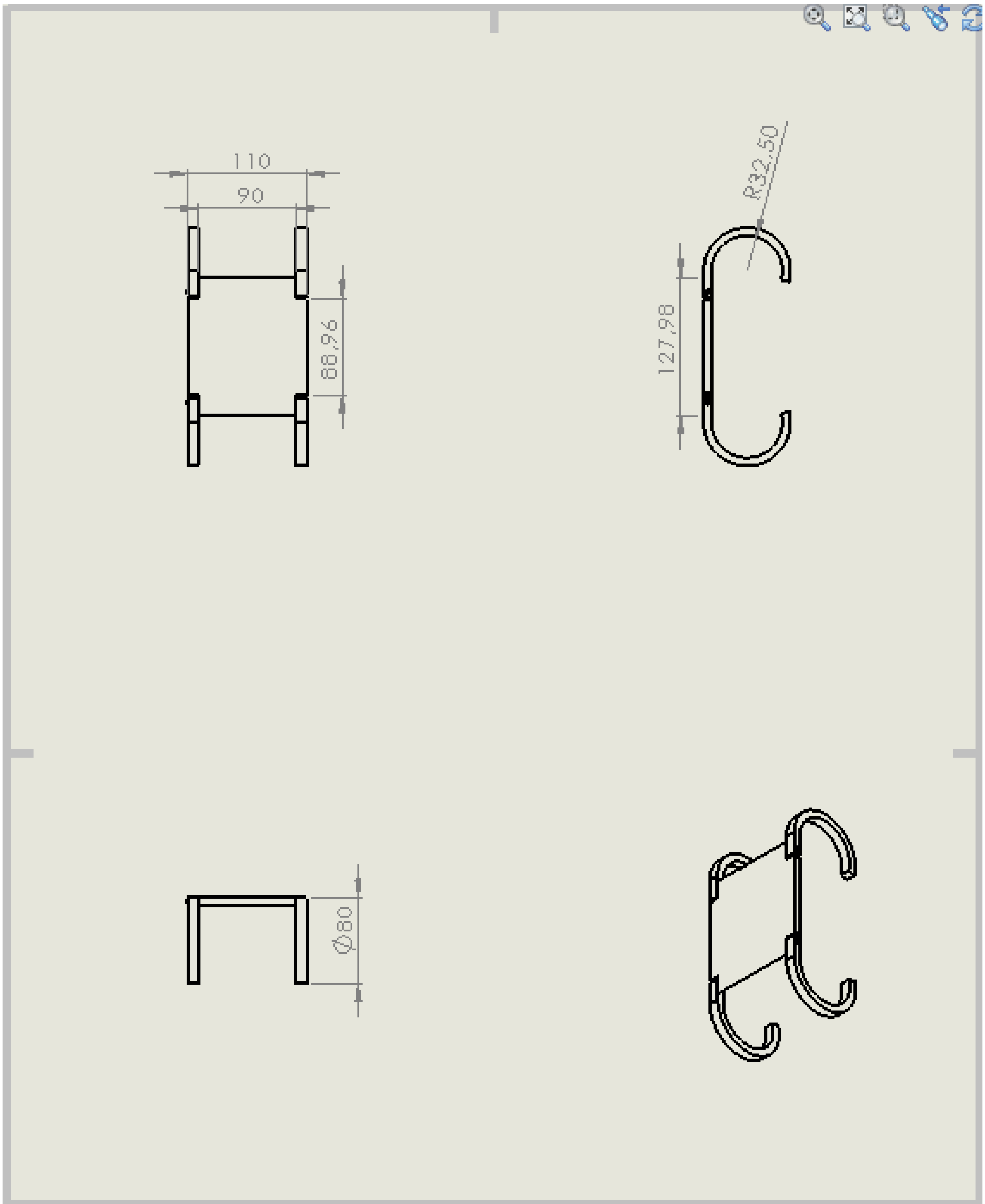
L298N Voltaj Regulatörlü Çift Motor Sürücü Kartı x 2

12v Lipo Pil x 1

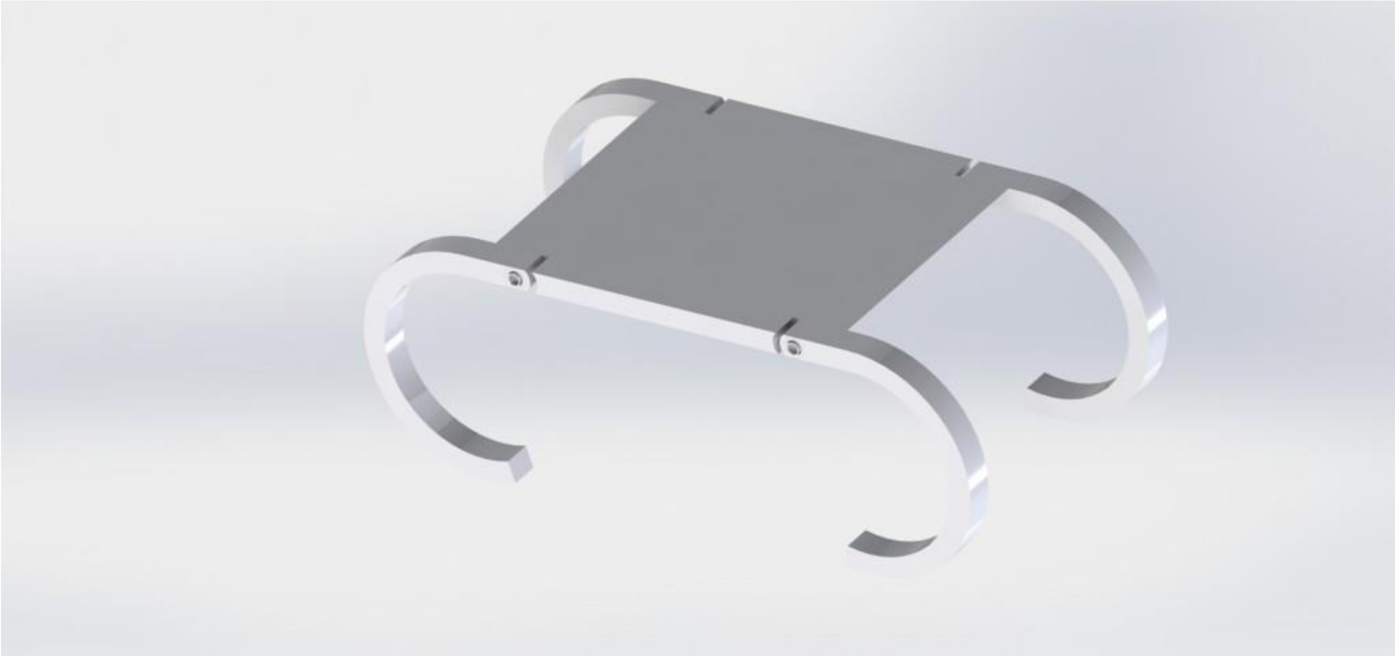
Erkek-Dişi M-M Jumper Kablo (40'lı satılıyor fiyatı 8tl arası)

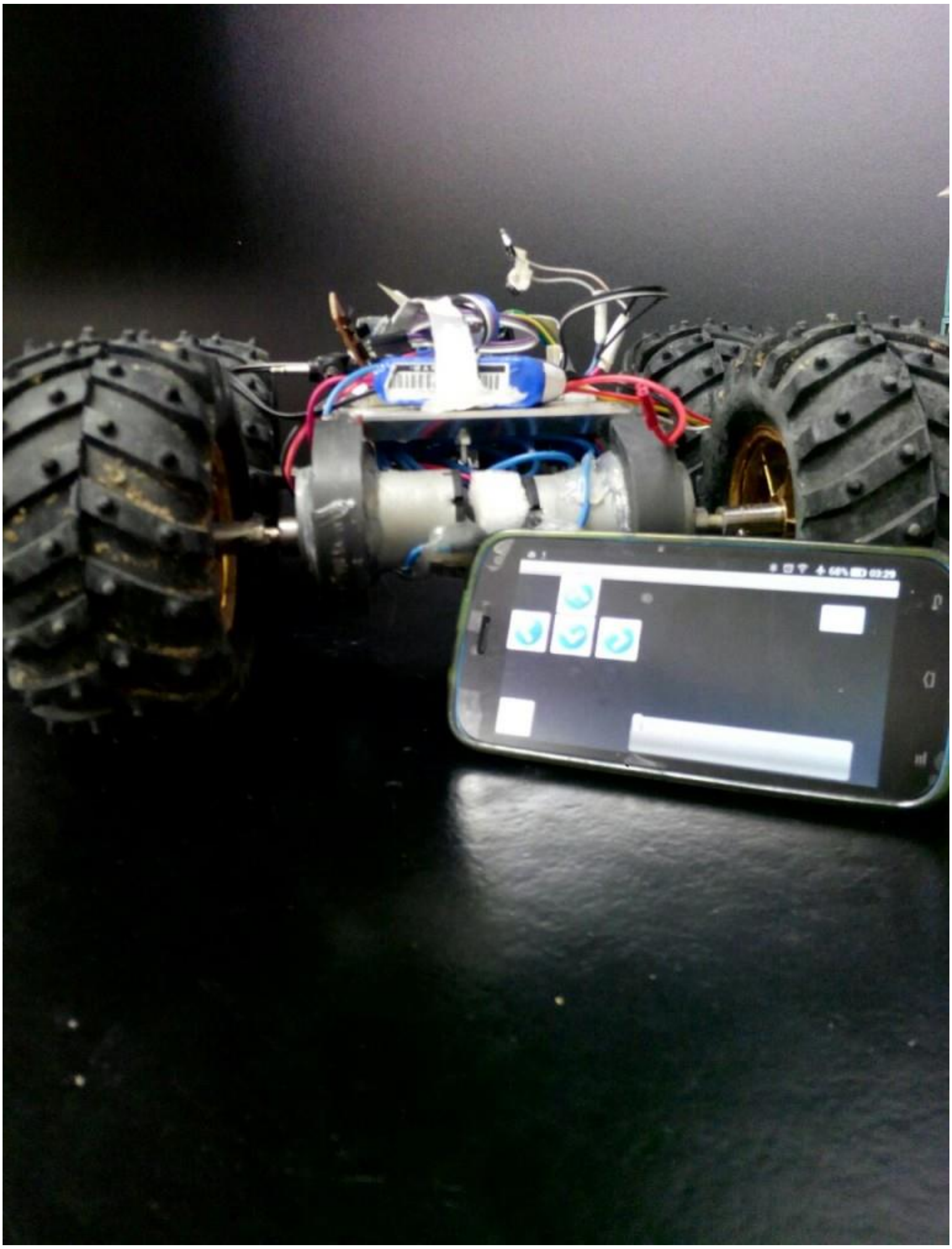
Ana gövde (Şase) size kalmış.İsterseniz ben aşağıda SolidWorks Çizimini paylaştım.

Arkadaşlar cihazın kontrol yazılımları geçmeden mekanik tasarımından ve nasıl yaptığıma dair ufak bir bilgi ve görsel paylaşım yapayım.Ana şaseyi bir arkadaşım özel olarak cnc'de üretmişti .Siz istediğiniz şekilde şase tasarımı yapabilirsiniz.Şase tasarımında dikkat etmeniz gereken yer motorların ve motor sürücülerin yerleşimine uygun bir şase yapmanız.Şasemizin SolidWorks çizimine buradan ulaşabilirsiniz.

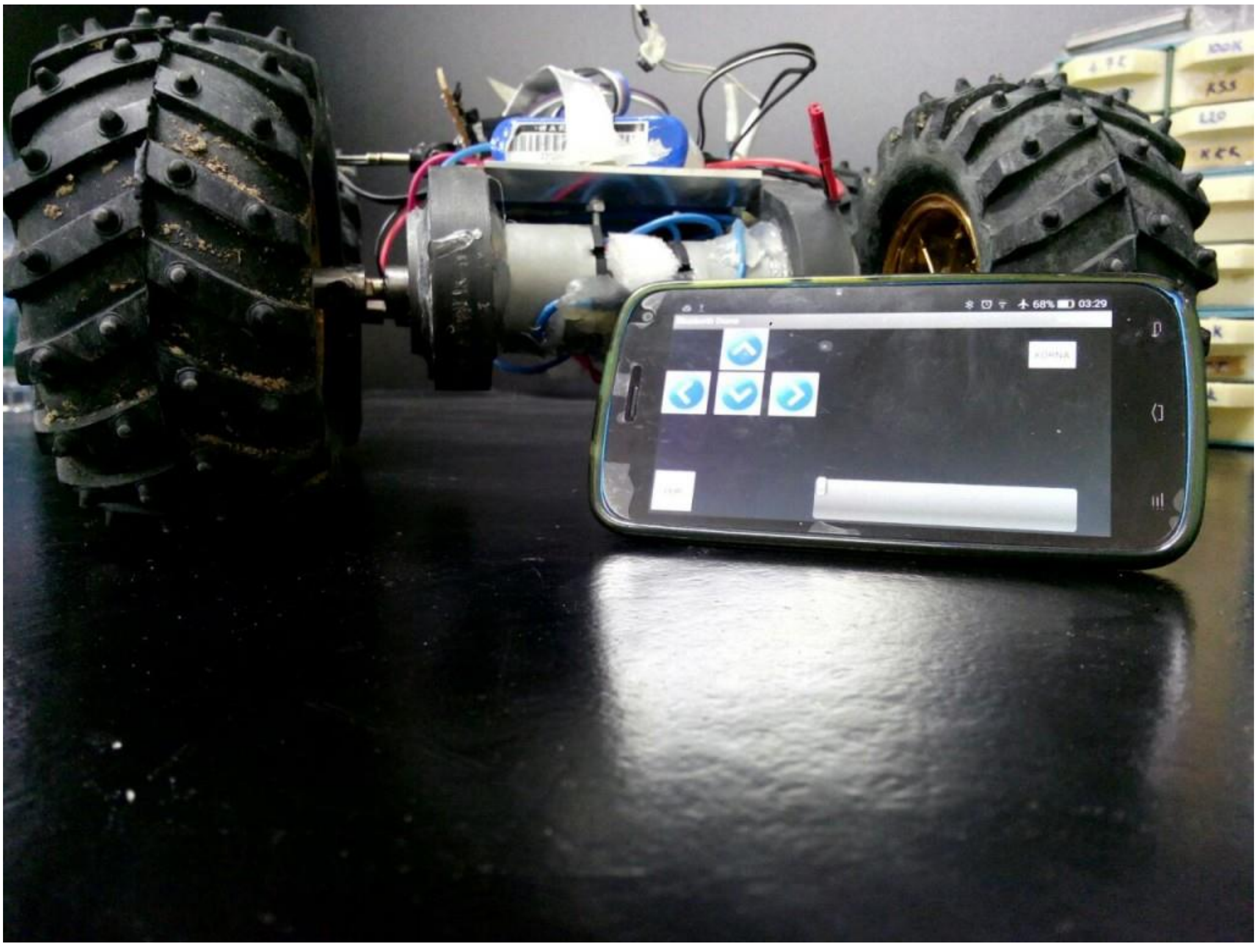


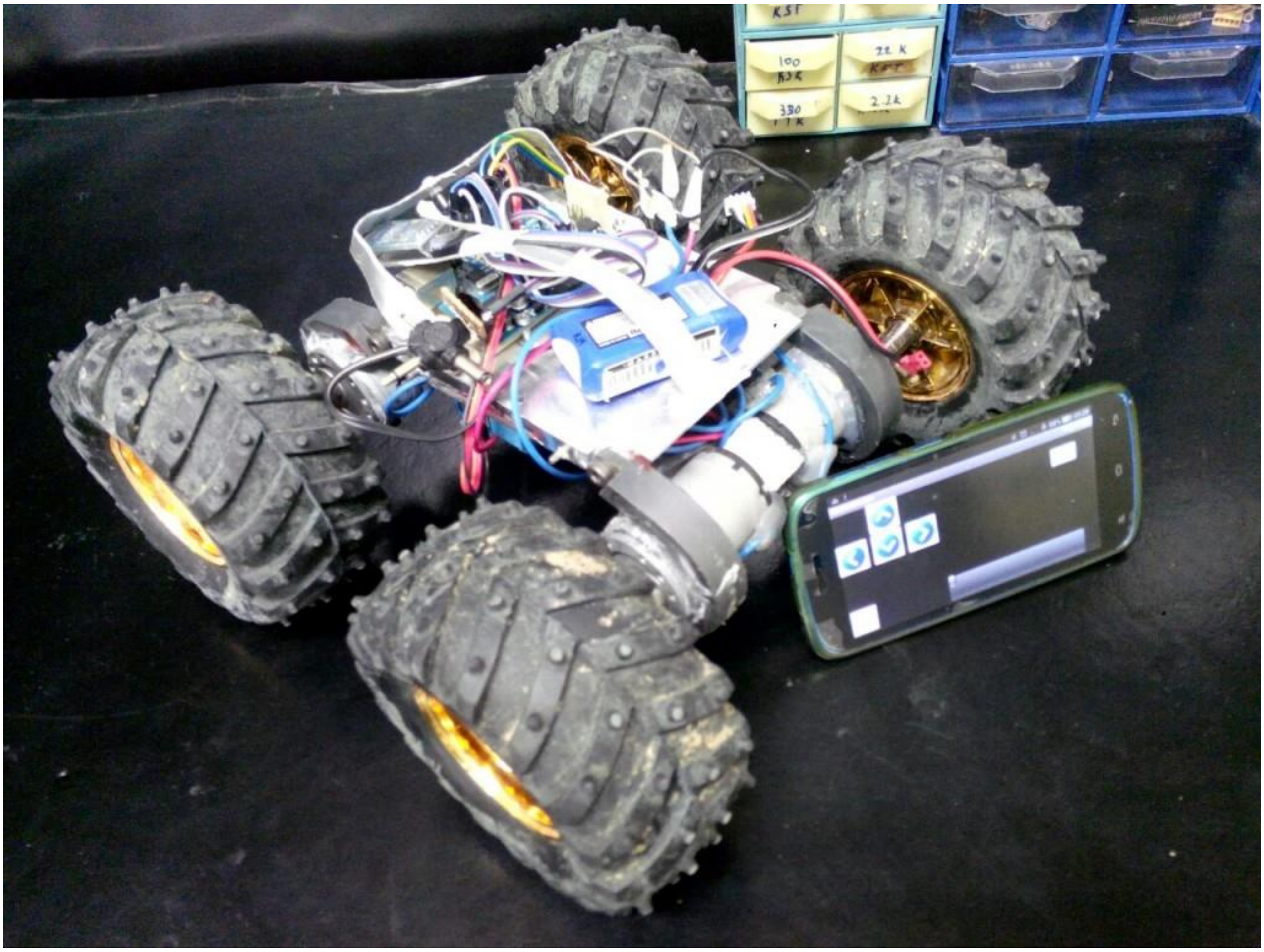
AKSİ BELİRTİLMEDİKÇE: BOYUTLAR MİLİMETREDİR YÜZEY CİLASI: TOLERANSLAR: DOĞRUSAL: AÇISAL:	BİTİRME:				KESKİN KENARLARI KAPLAYIN VE KIRIN	ÇİZİMİ ÖLÇEKLENDİRMEYİN / REVİZYON
	İSİM	İMZA	TARİH			
ÇİZEN						
DENET						
ONAY						
ÜRET						
KALİTE				MALZEME:		ÇİZİM NO.
						Assem1 / A3
				AĞIRLIK:		ÖLÇEK: / SAYFA 1 / 1



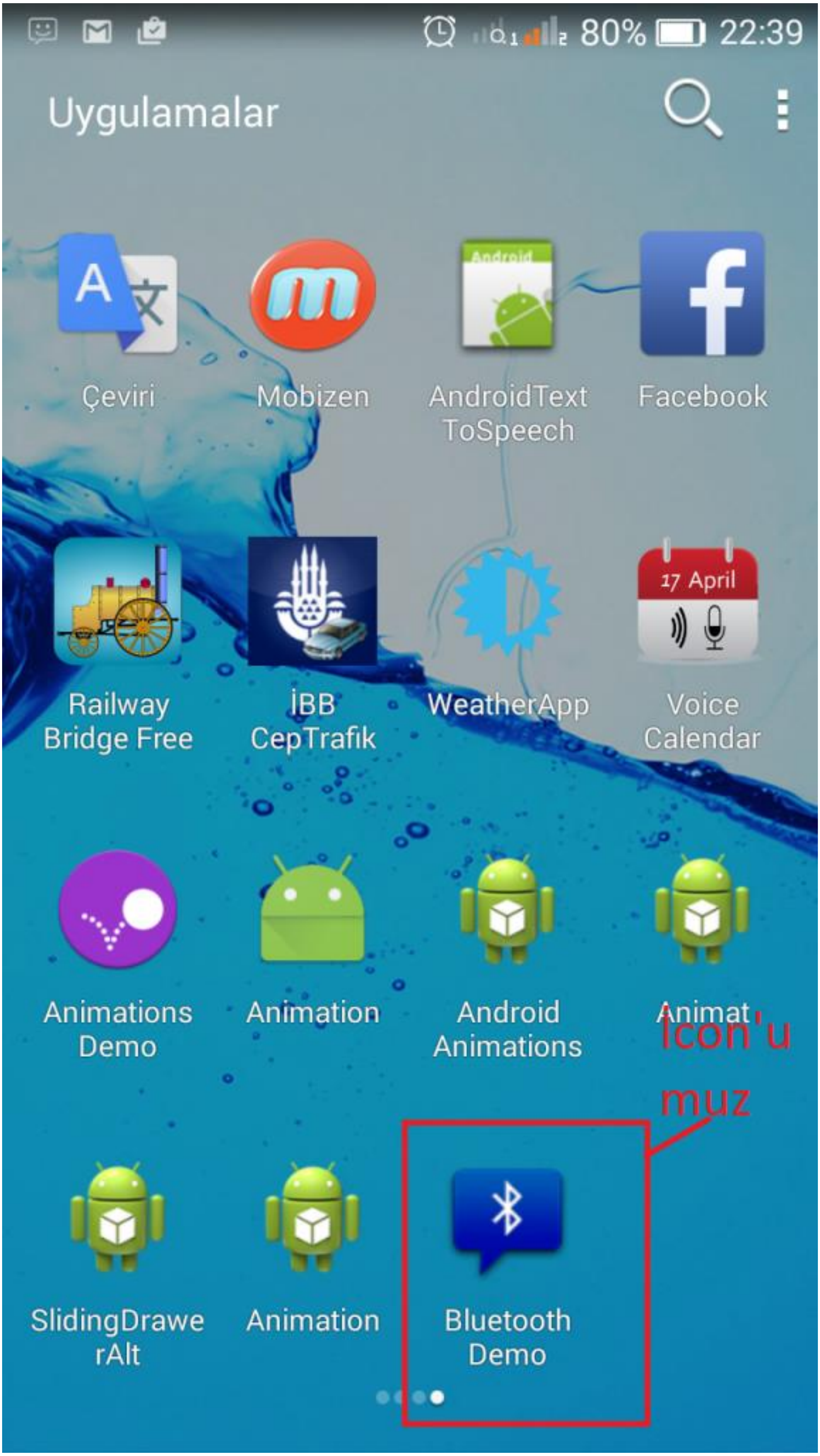


/

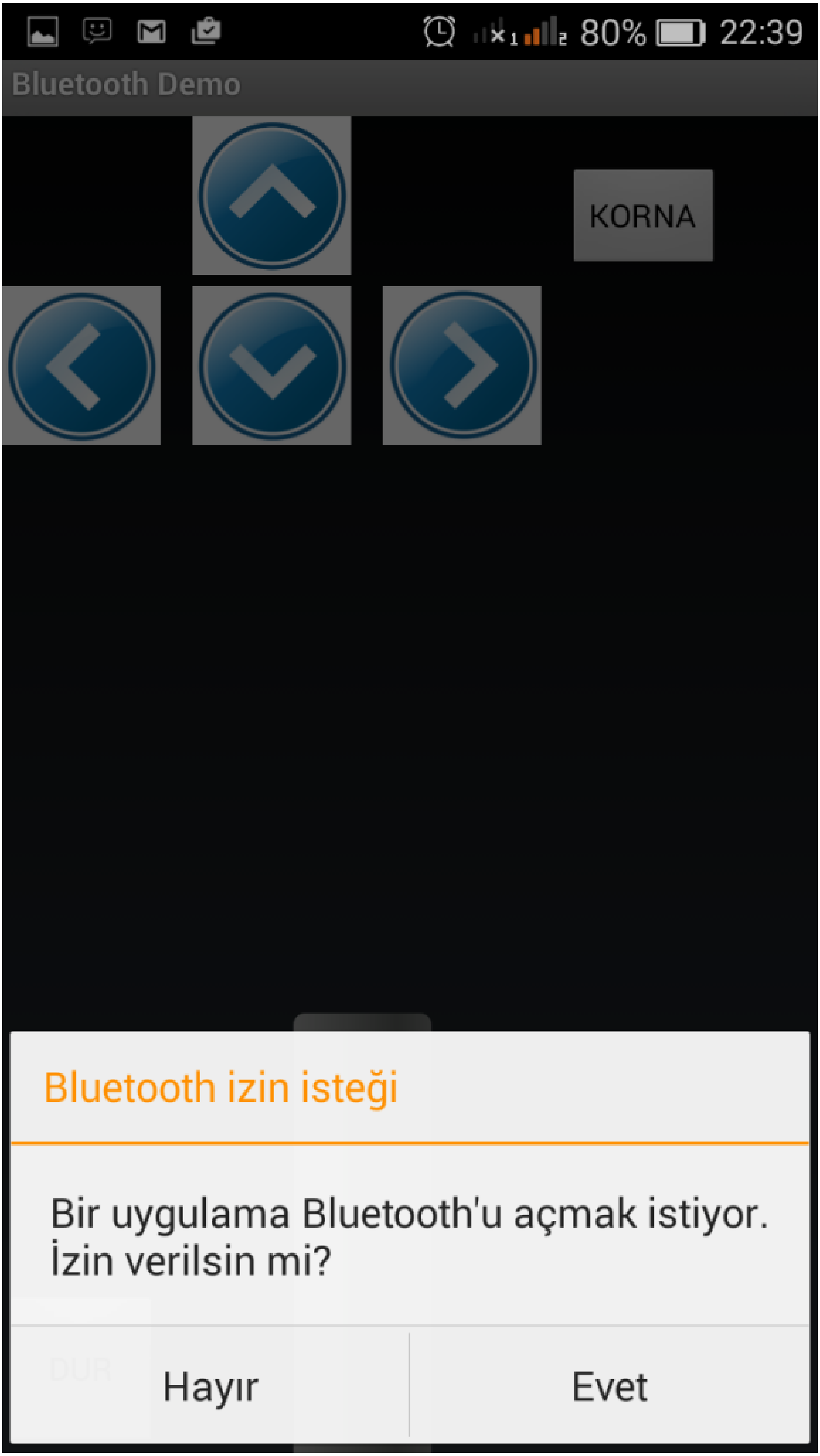

68% 03:29
KORNA
100K
4.7K



Uygulama Görselleri:

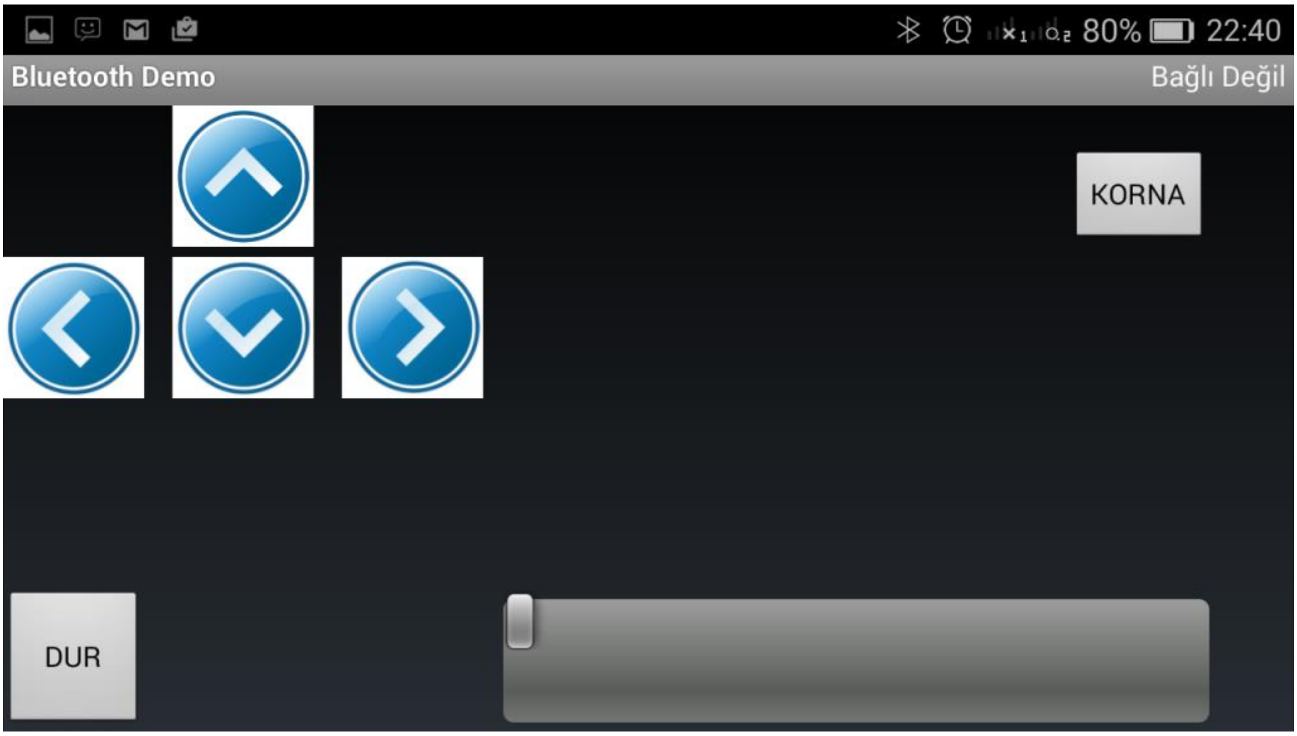

80%
22:39
Uygulamalar
Çeviri
Mobizen
AndroidText ToSpeech
Facebook
17 April
Railway Bridge Free
İBB CepTrafik
WeatherApp
Voice Calendar
Animations Demo
Animation
Android Animations
Animat
SlidingDrawerAlt
Animation
Bluetooth Demo

Icon'umuz



Bluetooth izin isteği

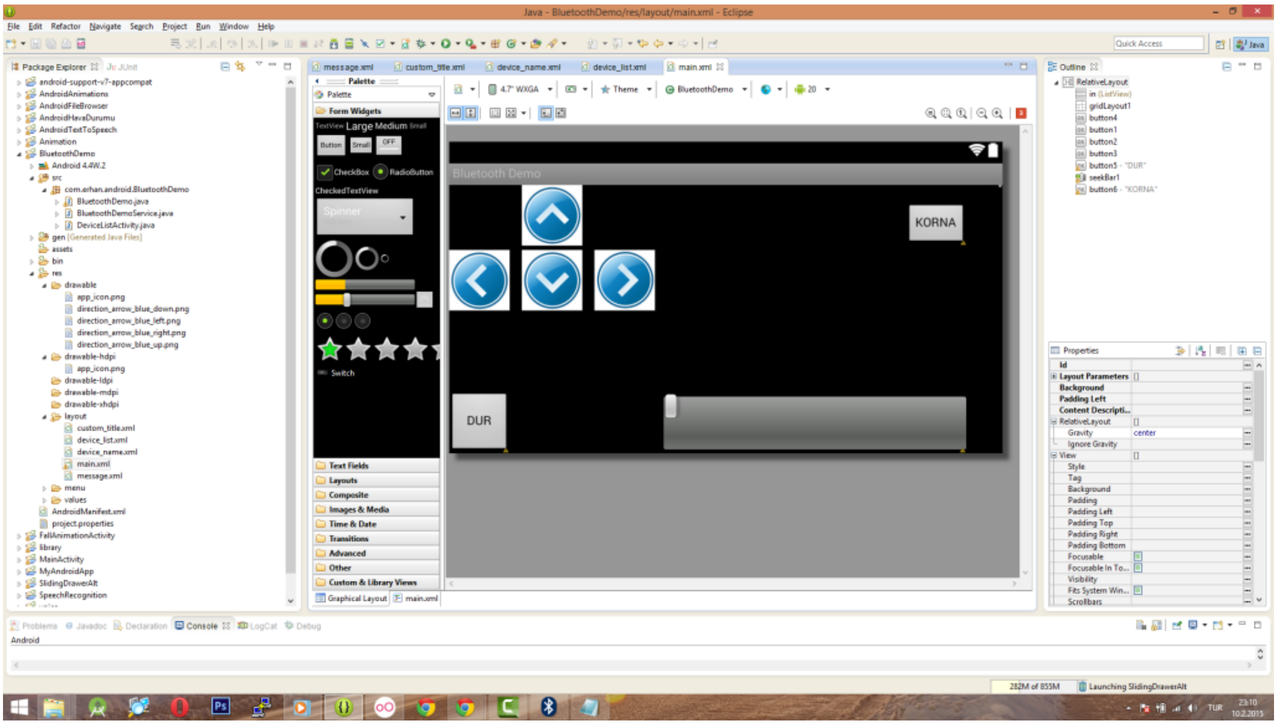
Bir uygulama Bluetooth'u açmak istiyor. İzin verilsin mi?



Kısaca Android arayüzümüzü anlatacak olursam. Dur butonu(hız verdikden sonra elinizi hızdan çekseniz bile aracın aldığı ivme ile belirli bir süre devam etmesini engellemek için koydum) ,Korna(arabamıza bir tane buzzer koydum:) korna amaçlı güzelde:)),hız kontrol seekbar'ı(Aracımızın hızı arttırmak ve azaltmak için).Sağ-sol-ileri-geri(yön tuşları). Arayüzümüzün hepsi bunlardan ibaret.

Önce android kısmından başlayalım:

Uygulamamızın eclipse dosya yapısı ve uygulamanın android arayüz tasarımı resimdeki gibi.



BluetoothDemo.java

Arkadaşlar bu dosyada çalışmaya ilk başladığımdan itibaren programlama aşamalarım var.Bilerek silmedim önce motorları kontrol etmeden ledleri yakıp söndürneye çalıştım.Sizde yeni başlıyorsanız tavsiye ederim.Gerçi bu yazıyı tamamen uyguladığınız taktirde sorunsuz birşekilde android ile bluetooth üzerinden rc araba kontrol etmeyi başarabilirsiniz.

```
/*
 * Copyright (C) 2009 The Android Open Source Project

 */

package com.stackcuriosity.android.BluetoothDemo;

import android.annotation.SuppressLint;
import android.app.Activity;
import android.bluetooth.BluetoothAdapter;
import android.bluetooth.BluetoothDevice;
import android.content.Intent;
import android.os.Bundle;
import android.os.Handler;
import android.os.Message;
import android.util.Log;
//import android.util.Log;
//import android.view.KeyEvent;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.view.MotionEvent;
import android.view.View;
import android.view.View.OnLongClickListener;
import android.view.View.OnTouchListener;
import android.view.Window;
import android.view.View.OnClickListener;
//import android.view.inputmethod.EditorInfo;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
//import android.widget.EditText;
import android.widget.ListView;
import android.widget.ProgressBar;
import android.widget.RadioButton;
import android.widget.SeekBar;
import android.widget.SeekBar.OnSeekBarChangeListener;
import android.widget.TextView;
import android.widget.Toast;
import android.widget.ToggleButton;

/**
 * This is the main Activity that displays the current chat session.
 */
public class BluetoothDemo extends Activity {
    // Debugging
    //private static final String TAG = "BluetoothDemo";
    //private static final boolean D = true;

        //BluetoothChatService Handler dan gönderilen mesaj tipleri

    public static final int MESSAGE_STATE_CHANGE = 1;
    public static final int MESSAGE_READ = 2;
    public static final int MESSAGE_WRITE = 3;
    public static final int MESSAGE_DEVICE_NAME = 4;
    public static final int MESSAGE_TOAST = 5;
// BluetoothChatService Handler'dan Anahtar kelimelerin alınması için

    public static final String DEVICE_NAME = "device_name";
    public static final String TOAST = "toast";

    // Intent  kodları
    private static final int REQUEST_CONNECT_DEVICE = 1;
    private static final int REQUEST_ENABLE_BT = 2;

    // Layout ekran görünümü için
    private TextView mTitle;
    private ListView mConversationView;
    //private EditText mOutEditText;
    //private Button mSendButton;
    private SeekBar seekbar;
    private EditText edt;
    private Button SagButon;
    private Button SolButon;
    private Button IleriButon;
    private Button GeriButon;
    private Button AcilStop;
    private Button Korna;
   /* private RadioButton Led1;
    private RadioButton Led2;
    private ProgressBar sicaklik;
    private ToggleButton durum;
    private TextView isidegeri;*/
    /*private boolean LED1check=false;
    private boolean LED2check=false;
    private byte[] veri = new byte[1];  //1 byte veri gönderme değişkeni
    */

    //Bağlı aygıtın adı
    private String mConnectedDeviceName = null;
    // Array adapter'ı bluetooghtla iletişim için kullanıyoruz.
    private ArrayAdapter<String> mConversationArrayAdapter;
    // String buffer for outgoing messages
    //private StringBuffer mOutStringBuffer;
    // Local Bluetooth adapter
    private BluetoothAdapter mBluetoothAdapter = null;
    // Bluetoothla iletşim servisi tanımlama
    private BluetoothDemoService mChatService = null;


    @SuppressLint("NewApi")
        @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        //if(D) Log.e(TAG, "+++ ON CREATE +++");

        //layout pencereli kurmak için
        requestWindowFeature(Window.FEATURE_CUSTOM_TITLE);
        setContentView(R.layout.main);
        getWindow().setFeatureInt(Window.FEATURE_CUSTOM_TITLE,
R.layout.custom_title);


        // text view ımızı tanıttık
        mTitle = (TextView) findViewById(R.id.title_left_text);
        mTitle.setText(R.string.app_name);

        // Takılı Bluetooth adapter'ımızı aldık.
        mBluetoothAdapter = BluetoothAdapter.getDefaultAdapter();

        // Adaptör null ise o zaman, Bluetooth desteklenmiyordur.
        if (mBluetoothAdapter == null) {
            Toast.makeText(this, "Bluetooth mevcut değil",
Toast.LENGTH_LONG).show();
            finish();
            return;
        }

    }


    @SuppressLint("NewApi")
        @Override
    public void onStart() {
        super.onStart();
        //if(D) Log.e(TAG, "++ ON START ++");


        if (!mBluetoothAdapter.isEnabled()) {
            Intent enableIntent = new
Intent(BluetoothAdapter.ACTION_REQUEST_ENABLE);
            startActivityForResult(enableIntent, REQUEST_ENABLE_BT);
        // Otherwise, setup the chat session
        } else {
            if (mChatService == null) setupChat();
        }
    }

    @Override
    public synchronized void onResume() {
        super.onResume();

        try {
          //Log.i("zms", "buluetooth bağlandıı");
```

```
              // Performing this check in onResume() covers the case in which
BT was
              // not enabled during onStart(), so we were paused to enable
it...
              // onResume() will be called when ACTION_REQUEST_ENABLE activity
returns.
              if (mChatService != null) {
                  // Only if the state is STATE_NONE, do we know that we
haven't started already
                  if (mChatService.getState() ==
BluetoothDemoService.STATE_NONE) {
                    // Start the Bluetooth chat services
                    mChatService.start();
                  }
              }

                } catch (Exception e) {
                        // TODO: handle exception
                }

    }

    private void setupChat() {
        try {


        //Log.d(TAG, "setupChat()");

        // konuşma thread için dizi adaptörünü başlatmak
       mConversationArrayAdapter = new ArrayAdapter<String>(this,
R.layout.message);
        mConversationView = (ListView) findViewById(R.id.in);
        mConversationView.setAdapter(mConversationArrayAdapter);
        seekbar = (SeekBar) findViewById(R.id.seekBar1);

        seekbar.setMax(255);
        seekbar.setRotation(0);

        //seekbar.setScrollX(50);

        seekbar.setOnSeekBarChangeListener(new OnSeekBarChangeListener() {

        public void onStopTrackingTouch(SeekBar seekBar) {
        // TODO Auto-generated method stub
        }

        public void onStartTrackingTouch(SeekBar seekBar) {
        // TODO Auto-generated method stub
        }

        public void onProgressChanged(SeekBar seekBar, int progress,
        boolean fromUser) {
        // TODO Auto-generated method stub
        //deger.setText("SeekBar Değeri : "+progress);
                Log.i("progress değeri", ""+progress);
                sendMessage(""+progress);
        }
        });


        //Buton1'e basıldığında LED1 in durumuna göre LED1 yakılır veya
söndürülür.

        SagButon = (Button) findViewById(R.id.button2);
        SagButon.setOnClickListener(new OnClickListener() {
            public void onClick(View v) {
                /*if(LED1check){
                veri[0] &= ~(1);}
                else
                {veri[0] |= 1;}
                sendData(veri);*/
                sendMessage("801");
                seekbar.setProgress(0);
                //sendMessage("0");
                Toast.makeText(getApplicationContext(), "SAĞA DÖNN",
Toast.LENGTH_LONG).show();
            }
        });
                //Buton2'ye basıldığında LED2 in durumuna göre LED2 yakılır
veya söndürülür.
        SolButon = (Button) findViewById(R.id.button1);
        SolButon.setOnClickListener(new OnClickListener() {
            public void onClick(View v) {
                /*if(LED2check){
                        veri[0] &= ~(0);}
                else
                {veri[0] |= 0;}
                sendData(veri);*/
                sendMessage("802");
                seekbar.setProgress(0);
                //sendMessage("0");
                Toast.makeText(getApplicationContext(), "SOLA DÖNN",
Toast.LENGTH_LONG).show();
            }
        });

        IleriButon = (Button) findViewById(R.id.button4);
        IleriButon.setOnClickListener(new OnClickListener() {

                        public void onClick(View v) {
                                // TODO Auto-generated method stub
                                sendMessage("803");
                                seekbar.setProgress(0);
                                //sendMessage("0");
                Toast.makeText(getApplicationContext(), "İLERİ MARŞŞ",
Toast.LENGTH_LONG).show();
                        }
                });

        GeriButon = (Button)findViewById(R.id.button3);
        GeriButon.setOnClickListener(new OnClickListener() {

                        public void onClick(View v) {
                                sendMessage("804");
                                seekbar.setProgress(0);
                                //sendMessage("0");
                Toast.makeText(getApplicationContext(), "GERİ DÖN LAAA",
Toast.LENGTH_LONG).show();

                        }
                });

        AcilStop =(Button)findViewById(R.id.button5);
        AcilStop.setOnTouchListener(new OnTouchListener() {

                        public boolean onTouch(View v, MotionEvent event) {
                                 if (event.getAction() ==
MotionEvent.ACTION_DOWN ) {
                                         sendMessage("808");
                            return true;
                        }
                                 else if (event.getAction() ==
MotionEvent.ACTION_UP ) {
                                         sendMessage("805");

                            return true;
                        }
                                return false;
                        }
                });
       /* AcilStop.setOnLongClickListener(new OnLongClickListener() {

                        public boolean onLongClick(View v) {
                                sendMessage("808");
                                return false;
                        }
                });
       AcilStop.setOnClickListener(new OnClickListener() {

                public void onClick(View v) {
                        // TODO Auto-generated method stub

                        sendMessage("805");
                        seekbar.setProgress(0);

                        Toast.makeText(getApplicationContext(), "DURSANA LANN",
Toast.LENGTH_SHORT).show();
                }
        });*/

       Korna=(Button)findViewById(R.id.button6);
       Korna.setOnClickListener(new OnClickListener() {

                public void onClick(View v) {
                        // TODO Auto-generated method stub
                        sendMessage("806");
                        Toast.makeText(getApplicationContext(), "GAÇIN
ULANNNN",Toast.LENGTH_SHORT).show();
                        sendMessage("807");
                }
        });
        // Bluetooth bağlantıları gerçekleştirmek için BluetoothChatService
başlatılmalı
        mChatService = new BluetoothDemoService(this, mHandler);

        // Initialize the buffer for outgoing messages
        //mOutStringBuffer = new StringBuffer("");
        } catch (Exception e) {
                // TODO: handle exception
        }
    }

    @Override
    public synchronized void onPause() {
        super.onPause();
        //if(D) Log.e(TAG, "- ON PAUSE -");
    }

    @Override
    public void onStop() {
        super.onStop();
        //if(D) Log.e(TAG, "-- ON STOP --");
    }

    @Override
    public void onDestroy() {
        super.onDestroy();
        //Bluetooth iletişim servislerini durdurmak için
        if (mChatService != null) mChatService.stop();
        //if(D) Log.e(TAG, "--- ON DESTROY ---");
    }

    @SuppressLint("NewApi")
        private void ensureDiscoverable() {
        if (mBluetoothAdapter.getScanMode() !=
            BluetoothAdapter.SCAN_MODE_CONNECTABLE_DISCOVERABLE) {
            Intent discoverableIntent = new
Intent(BluetoothAdapter.ACTION_REQUEST_DISCOVERABLE);

discoverableIntent.putExtra(BluetoothAdapter.EXTRA_DISCOVERABLE_DURATION, 300);
            startActivity(discoverableIntent);
        }
    }

  private void sendData(byte[] send){
          if (mChatService.getState() != BluetoothDemoService.STATE_CONNECTED)
{
          Toast.makeText(this, R.string.not_connected,
Toast.LENGTH_SHORT).show();
          return;
      }


          if(send.length>0)
                  mChatService.write(send);
  }

    /**
     * Sends a message.
     * @param message  A string of text to send.
     */
    private void sendMessage(String message) {
        // Check that we're actually connected before trying anything
        if (mChatService.getState() != BluetoothDemoService.STATE_CONNECTED) {
            Toast.makeText(this, R.string.not_connected,
Toast.LENGTH_SHORT).show();
            return;
        }

        // Check that there's actually something to send
        if (message.length() > 0) {
            // Get the message bytes and tell the BluetoothChatService to write
            byte[] send = message.getBytes();
            mChatService.write(send);
        }
    }


        //Handler, BluetoothChatService den geri dönen bilgileri yakalar.
    private final Handler mHandler = new Handler() {
        @Override
        public void handleMessage(Message msg) {
            switch (msg.what) {
            case MESSAGE_STATE_CHANGE:
                //if(D) Log.i(TAG, "MESSAGE_STATE_CHANGE: " + msg.arg1);
                switch (msg.arg1) {
                case BluetoothDemoService.STATE_CONNECTED:
                    mTitle.setText(R.string.title_connected_to);
                    mTitle.append(mConnectedDeviceName);
                    mConversationArrayAdapter.clear();
                    break;
                case BluetoothDemoService.STATE_CONNECTING:
                    mTitle.setText(R.string.title_connecting);
                    break;
                case BluetoothDemoService.STATE_LISTEN:
                case BluetoothDemoService.STATE_NONE:
                    mTitle.setText(R.string.title_not_connected);
                    break;
                }
                break;
            /*case MESSAGE_WRITE:
                byte[] writeBuf = (byte[]) msg.obj;
                //Toast.makeText(getApplicationContext(), "Bilgi 
gönderildi",Toast.LENGTH_SHORT).show();
                // construct a string from the buffer
                String writeMessage = new String(writeBuf);
                mConversationArrayAdapter.add("Me:  " + writeMessage);
                break;*/
           /*case MESSAGE_READ:
                byte[] readBuf = (byte[]) msg.obj;*/
                /*Led1 = (RadioButton) findViewById(R.id.LED1);
                Led2 = (RadioButton) findViewById(R.id.LED2);
                sicaklik = (ProgressBar) findViewById(R.id.progressBar1);
                durum = (ToggleButton) findViewById(R.id.toggleButton1);
                isidegeri = (TextView) findViewById(R.id.sicaklik);*/
                //Gelen verinin 8. biti 1 ise veri LED ve Buton durum bilgisi 
olarak değerlendirilir.
               /* if((readBuf[0] & 0x80) == 0x80){
                                //Gelen verinin 1. bitini durumuna göre LED1 
göstergesi düzenlenir.
                if((readBuf[0] & 0x01) == 0x01){
                Led1.setChecked(true);
                LED1check=true;}
                else {
                Led1.setChecked(false);
                LED1check=false;}
                //Gelen verinin 2. bitinin durumuna göre LED2 göstergesi 
düzenlenir.
                if((readBuf[0] & 0x02)==0x02){
                Led2.setChecked(true);
                LED2check=true;}
                else{
                Led2.setChecked(false);
                LED2check=false;}
                //Gelen verinin 3. bitinin durumuna göre Buton durum göstergesi 
düzenlenir.
                if((readBuf[0] & 0x04)==0x04)
                durum.setChecked(true);
                    else
                    durum.setChecked(false);}
                                //Gelen verinin 8. biti sıfır ise gelen veri 
sıcaklık bilgisi olarak değerlendirilir.
                else {
                if(readBuf[0]>100) readBuf[0]=100;              //Sıcaklık 
değeri max 100 dereceyi aşmıcak şekilde ayarlanır.
                                //Sıcaklık bilgisi görüntülenir.
                                sicaklik.setProgress((int)readBuf[0]);

isidegeri.setText("Sıcaklık="+readBuf[0]+"°");}
                break;*/
            case MESSAGE_DEVICE_NAME:
                // save the connected device's name
                mConnectedDeviceName = msg.getData().getString(DEVICE_NAME);
               Toast.makeText(getApplicationContext(), "Connected to "
                              + mConnectedDeviceName,
Toast.LENGTH_SHORT).show();
                break;
            case MESSAGE_TOAST:
                Toast.makeText(getApplicationContext(),
msg.getData().getString(TOAST),
                              Toast.LENGTH_SHORT).show();
                break;
            }
        }
    };

    @SuppressLint("NewApi")
        public void onActivityResult(int requestCode, int resultCode, Intent
data) {
        //if(D) Log.d(TAG, "onActivityResult " + resultCode);
        switch (requestCode) {
        case REQUEST_CONNECT_DEVICE:
            // When DeviceListActivity returns with a device to connect
            if (resultCode == Activity.RESULT_OK) {
                // Get the device MAC address
                String address = data.getExtras()

.getString(DeviceListActivity.EXTRA_DEVICE_ADDRESS);
                // Get the BLuetoothDevice object
                BluetoothDevice device =
mBluetoothAdapter.getRemoteDevice(address);
                // Attempt to connect to the device
                mChatService.connect(device);
            }
            break;
        case REQUEST_ENABLE_BT:
            //
            if (resultCode == Activity.RESULT_OK) {
                // Bluetooth artık etkin
                setupChat();
            } else {
                //Log.d(TAG, "BT not enabled");
                Toast.makeText(this, R.string.bt_not_enabled_leaving,
Toast.LENGTH_SHORT).show();
                finish();
            }
        }
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        MenuInflater inflater = getMenuInflater();
        inflater.inflate(R.menu.option_menu, menu);
        return true;
    }

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        switch (item.getItemId()) {
        case R.id.scan:
        //Aygıtları görmek için DeviceListActivity başlatın ve tarama yaptırın
            Intent serverIntent = new Intent(this, DeviceListActivity.class);
            startActivityForResult(serverIntent, REQUEST_CONNECT_DEVICE);
            return true;
        case R.id.discoverable:
            //Bu cihaz başkaları tarafından görülebilir olduğundan emin olun
            ensureDiscoverable();
            return true;
        }
        return false;
    }

}
```

BluetoothDemoService.java

```
/*
 * Copyright (C) 2009 The Android Open Source Project
 *
 * Licensed under the Apache License, Version 2.0 (the "License");
 * you may not use this file except in compliance with the License.
 * You may obtain a copy of the License at
 *
 *      http://www.apache.org/licenses/LICENSE-2.0
 *
 * Unless required by applicable law or agreed to in writing, software
 * distributed under the License is distributed on an "AS IS" BASIS,
 * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
 * See the License for the specific language governing permissions and
 * limitations under the License.
 */

package com.stackcuriosity.android.BluetoothDemo;

import java.io.IOException;
import java.io.InputStream;
import java.io.OutputStream;
import java.util.UUID;

import android.bluetooth.BluetoothAdapter;
import android.bluetooth.BluetoothDevice;
import android.bluetooth.BluetoothServerSocket;
import android.bluetooth.BluetoothSocket;
import android.content.Context;
import android.os.Bundle;
import android.os.Handler;
import android.os.Message;
//import android.util.Log;

/**
 * This class does all the work for setting up and managing Bluetooth
 * connections with other devices. It has a thread that listens for
 * incoming connections, a thread for connecting with a device, and a
 * thread for performing data transmissions when connected.
 */
public class BluetoothDemoService {
    // Debugging
    //private static final String TAG = "BluetoothChatService";
    //private static final boolean D = true;

    // Sunucu soketi oluştururken SDP kayıdı için Ad
    private static final String NAME = "BluetoothRcCar";

    // Bu uygulama için benzersiz UUID'si
    private static final UUID MY_UUID = UUID.fromString("00001101-0000-1000-
8000-00805F9B34FB");

    // Member fields
    private final BluetoothAdapter mAdapter;
    private final Handler mHandler;
    private AcceptThread mAcceptThread;
    private ConnectThread mConnectThread;
    private ConnectedThread mConnectedThread;
    private int mState;

    // Constants that indicate the current connection state
    public static final int STATE_NONE = 0;       //bağlantı boşta
    public static final int STATE_LISTEN = 1;     // gelen bağlantılar için
dinleme
    public static final int STATE_CONNECTING = 2; // Bağlantı kurulurken
    public static final int STATE_CONNECTED = 3;  // Şimdi bluetooth cihazına
bağlandı

    /**
     * Constructor. Prepares a new BluetoothChat session.
     * @param context  The UI Activity Context
     * @param handler  A Handler to send messages back to the UI Activity
     */
    public BluetoothDemoService(Context context, Handler handler) {
        mAdapter = BluetoothAdapter.getDefaultAdapter();
        mState = STATE_NONE;
        mHandler = handler;
    }

    /**
     * Set the current state of the chat connection
     * @param state  An integer defining the current connection state
     */
    private synchronized void setState(int state) {
        //if (D) Log.d(TAG, "setState() " + mState + " -> " + state);
        mState = state;

        //UI Etkinliği güncelleme böylece Handler için yeni durum ataması
yapılır
        mHandler.obtainMessage(BluetoothDemo.MESSAGE_STATE_CHANGE, state, -
1).sendToTarget();
    }

    /**
     * Return the current connection state. */
    public synchronized int getState() {
        return mState;
    }

    /**
     * Start the chat service. Specifically start AcceptThread to begin a
     * session in listening (server) mode. Called by the Activity onResume() */
    public synchronized void start() {
        //if (D) Log.d(TAG, "start");

       //Bir bağlantı yapılırken başka bağlantıyı iptal etmek için
        if (mConnectThread != null) {mConnectThread.cancel(); mConnectThread =
null;}

        // Şu anda bir bağlantı çalıştıran herhangi bir parçacığı iptal için
        if (mConnectedThread != null) {mConnectedThread.cancel();
mConnectedThread = null;}

        // BluetoothServerSocket i dinlemek için thread başlangıcı
        if (mAcceptThread == null) {
            mAcceptThread = new AcceptThread();
            mAcceptThread.start();
        }
        setState(STATE_LISTEN);
    }

    /**
     * Start the ConnectThread to initiate a connection to a remote device.
     * @param device  The BluetoothDevice to connect
     */
    public synchronized void connect(BluetoothDevice device) {
        //if (D) Log.d(TAG, "connect to: " + device);

        // Cancel any thread attempting to make a connection
        if (mState == STATE_CONNECTING) {
            if (mConnectThread != null) {mConnectThread.cancel(); 
mConnectThread = null;}
        }

        // Cancel any thread currently running a connection
        if (mConnectedThread != null) {mConnectedThread.cancel(); 
mConnectedThread = null;}

        // Start the thread to connect with the given device
        mConnectThread = new ConnectThread(device);
        mConnectThread.start();
        setState(STATE_CONNECTING);
    }

    /**
     * Start the ConnectedThread to begin managing a Bluetooth connection
     * @param socket  The BluetoothSocket on which the connection was made
     * @param device  The BluetoothDevice that has been connected
     */
    public synchronized void connected(BluetoothSocket socket, BluetoothDevice 
device) {
        //if (D) Log.d(TAG, "connected");

        // Bağlantıyı tamamladı thread iptal
        if (mConnectThread != null) {mConnectThread.cancel(); mConnectThread = 
null;}

        // Şu anda bir bağlantı çalıştıran herhangi bir parçacığı iptal
        if (mConnectedThread != null) {mConnectedThread.cancel(); 
mConnectedThread = null;}

        // Cancel the accept thread because we only want to connect to one 
device
        if (mAcceptThread != null) {mAcceptThread.cancel(); mAcceptThread = 
null;}

        // Bağlantıyı yönetmek ve yayınlar gerçekleştirmek için thread başlatın
        mConnectedThread = new ConnectedThread(socket);
        mConnectedThread.start();

        // Bağlı aygıtın adını gönderin
        Message msg = 
mHandler.obtainMessage(BluetoothDemo.MESSAGE_DEVICE_NAME);
        Bundle bundle = new Bundle();
        bundle.putString(BluetoothDemo.DEVICE_NAME, device.getName());
        msg.setData(bundle);
        mHandler.sendMessage(msg);

        setState(STATE_CONNECTED);
    }

    /**
     * Stop all threads
     */
    public synchronized void stop() {
        //if (D) Log.d(TAG, "stop");
        if (mConnectThread != null) {mConnectThread.cancel(); mConnectThread = 
null;}
```

```
        if (mConnectedThread != null) {mConnectedThread.cancel();
mConnectedThread = null;}
        if (mAcceptThread != null) {mAcceptThread.cancel(); mAcceptThread =
null;}
        setState(STATE_NONE);
    }

    /**
     * Write to the ConnectedThread in an unsynchronized manner
     * @param out The bytes to write
     * @see ConnectedThread#write(byte[])
     */
    public void write(byte[] out) {
        // Create temporary object
        ConnectedThread r;
        //
        synchronized (this) {
            if (mState != STATE_CONNECTED) return;
            r = mConnectedThread;
        }
        //
        r.write(out);
    }

    /**
     * Indicate that the connection attempt failed and notify the UI Activity.
     */
    private void connectionFailed() {
        setState(STATE_LISTEN);

        // Send a failure message back to the Activity
        Message msg = mHandler.obtainMessage(BluetoothDemo.MESSAGE_TOAST);
        Bundle bundle = new Bundle();
        bundle.putString(BluetoothDemo.TOAST, "Unable to connect device");
        msg.setData(bundle);
        mHandler.sendMessage(msg);
    }

    /**
     * Indicate that the connection was lost and notify the UI Activity.
     */
    private void connectionLost() {
        setState(STATE_LISTEN);

        // Send a failure message back to the Activity
        Message msg = mHandler.obtainMessage(BluetoothDemo.MESSAGE_TOAST);
        Bundle bundle = new Bundle();
        bundle.putString(BluetoothDemo.TOAST, "Device connection was lost");
        msg.setData(bundle);
        mHandler.sendMessage(msg);
    }

    /**
     * This thread runs while listening for incoming connections. It behaves
     * like a server-side client. It runs until a connection is accepted
     * (or until cancelled).
     */
    private class AcceptThread extends Thread {
        // The local server socket
        private final BluetoothServerSocket mmServerSocket;

        public AcceptThread() {
            BluetoothServerSocket tmp = null;

            // Create a new listening server socket
            try {
                tmp = mAdapter.listenUsingRfcommWithServiceRecord(NAME,
MY_UUID);
            } catch (IOException e) {
                //Log.e(TAG, "listen() failed", e);
            }
            mmServerSocket = tmp;
        }

        public void run() {
            //if (D) Log.d(TAG, "BEGIN mAcceptThread" + this);
            setName("AcceptThread");
            BluetoothSocket socket = null;

            // Listen to the server socket if we're not connected
            while (mState != STATE_CONNECTED) {
                try {
                    // This is a blocking call and will only return on a
                    // successful connection or an exception
                    socket = mmServerSocket.accept();
                } catch (IOException e) {
                    //Log.e(TAG, "accept() failed", e);
                    break;
                }

                // If a connection was accepted
                if (socket != null) {
                    synchronized (BluetoothDemoService.this) {
                        switch (mState) {
                        case STATE_LISTEN:
                        case STATE_CONNECTING:
                            // Situation normal. Start the connected thread.
                            connected(socket, socket.getRemoteDevice());
                            break;
                        case STATE_NONE:
                        case STATE_CONNECTED:
                            // Either not ready or already connected. Terminate
new socket.
                            try {
                                socket.close();
                            } catch (IOException e) {
                                //Log.e(TAG, "Could not close unwanted socket",
e);
                            }
                            break;
                        }
                    }
                }
            }
            //if (D) Log.i(TAG, "END mAcceptThread");
        }

        public void cancel() {
            //if (D) Log.d(TAG, "cancel " + this);
            try {
                mmServerSocket.close();
            } catch (IOException e) {
                //Log.e(TAG, "close() of server failed", e);
            }
        }
    }


    /**
     * This thread runs while attempting to make an outgoing connection
     * with a device. It runs straight through; the connection either
     * succeeds or fails.
     */
    private class ConnectThread extends Thread {
        private final BluetoothSocket mmSocket;
        private final BluetoothDevice mmDevice;

        public ConnectThread(BluetoothDevice device) {
            mmDevice = device;
            BluetoothSocket tmp = null;

            // Get a BluetoothSocket for a connection with the
            // given BluetoothDevice
            try {
                tmp = device.createRfcommSocketToServiceRecord(MY_UUID);
            } catch (IOException e) {
                //Log.e(TAG, "create() failed", e);
            }
            mmSocket = tmp;
        }

        public void run() {
            //Log.i(TAG, "BEGIN mConnectThread");
            setName("ConnectThread");

            // Always cancel discovery because it will slow down a connection
            mAdapter.cancelDiscovery();

            // Make a connection to the BluetoothSocket
            try {
                // This is a blocking call and will only return on a
                // successful connection or an exception
                mmSocket.connect();
            } catch (IOException e) {
                connectionFailed();
                // Close the socket
                try {
                    mmSocket.close();
                } catch (IOException e2) {
                    //Log.e(TAG, "unable to close() socket during connection
failure", e2);
                }
                // Start the service over to restart listening mode
                BluetoothDemoService.this.start();
                return;
            }

            // Reset the ConnectThread because we're done
            synchronized (BluetoothDemoService.this) {
                mConnectThread = null;
            }

            // Start the connected thread
            connected(mmSocket, mmDevice);
        }

        public void cancel() {
            try {
                mmSocket.close();
            } catch (IOException e) {
                //Log.e(TAG, "close() of connect socket failed", e);
            }
        }
    }
    /**
     * This thread runs during a connection with a remote device.
     * It handles all incoming and outgoing transmissions.
     */
    private class ConnectedThread extends Thread {
        private final BluetoothSocket mmSocket;
        private final InputStream mmInStream;
        private final OutputStream mmOutStream;

        public ConnectedThread(BluetoothSocket socket) {
            //Log.d(TAG, "create ConnectedThread");
            mmSocket = socket;
            InputStream tmpIn = null;
            OutputStream tmpOut = null;

            // Get the BluetoothSocket input and output streams
            try {
                tmpIn = socket.getInputStream();
                tmpOut = socket.getOutputStream();
            } catch (IOException e) {
                //Log.e(TAG, "temp sockets not created", e);
            }

            mmInStream = tmpIn;
            mmOutStream = tmpOut;
        }

        public void run() {
            //Log.i(TAG, "BEGIN mConnectedThread");
            byte[] buffer = new byte[1024];
            int bytes;

            // Keep listening to the InputStream while connected
            while (true) {
                try {
                    // Read from the InputStream
                    bytes = mmInStream.read(buffer);

                    // Send the obtained bytes to the UI Activity
                    mHandler.obtainMessage(BluetoothDemo.MESSAGE_READ, bytes, -
1, buffer)
                            .sendToTarget();
                } catch (IOException e) {
                    //Log.e(TAG, "disconnected", e);
                    connectionLost();
                    break;
                }
            }
        }

        /**
         * Write to the connected OutStream.
         * @param buffer  The bytes to write
         */
        public void write(byte[] buffer) {
            try {
                mmOutStream.write(buffer);

                // Share the sent message back to the UI Activity
                mHandler.obtainMessage(BluetoothDemo.MESSAGE_WRITE, -1, -1,
buffer)
                        .sendToTarget();
            } catch (IOException e) {
                //Log.e(TAG, "Exception during write", e);
            }
        }

        public void cancel() {
            try {
                mmSocket.close();
            } catch (IOException e) {
                //Log.e(TAG, "close() of connect socket failed", e);
            }
        }
    }
}
```

DeviceListActivity.java

```
/*
 * Copyright (C) 2009 The Android Open Source Project
 *
 * Licensed under the Apache License, Version 2.0 (the "License");
 * you may not use this file except in compliance with the License.
 * You may obtain a copy of the License at
 *
 *      http://www.apache.org/licenses/LICENSE-2.0
 *
 * Unless required by applicable law or agreed to in writing, software
 * distributed under the License is distributed on an "AS IS" BASIS,
 * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
 * See the License for the specific language governing permissions and
 * limitations under the License.
 */

package com.stackcuriosity.android.BluetoothDemo;

import java.util.Set;

import android.app.Activity;
import android.bluetooth.BluetoothAdapter;
import android.bluetooth.BluetoothDevice;
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.content.IntentFilter;
import android.os.Bundle;
//import android.util.Log;
import android.view.View;
import android.view.Window;
import android.view.View.OnClickListener;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.ListView;
import android.widget.TextView;
import android.widget.AdapterView.OnItemClickListener;

/**
 * This Activity appears as a dialog. It lists any paired devices and
 * devices detected in the area after discovery. When a device is chosen
 * by the user, the MAC address of the device is sent back to the parent
 * Activity in the result Intent.
 */
public class DeviceListActivity extends Activity {
    // Debugging
    //private static final String TAG = "DeviceListActivity";
    //private static final boolean D = true;

    // Return Intent extra
    public static String EXTRA_DEVICE_ADDRESS = "device_address";

    // Member fields
    private BluetoothAdapter mBtAdapter;
    private ArrayAdapter<String> mPairedDevicesArrayAdapter;
    private ArrayAdapter<String> mNewDevicesArrayAdapter;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        // layout ekran atamaları
        requestWindowFeature(Window.FEATURE_INDETERMINATE_PROGRESS);
        setContentView(R.layout.device_list);

        //
        setResult(Activity.RESULT_CANCELED);

        // Cihaz aramayı gerçekleştirmek için
        Button scanButton = (Button) findViewById(R.id.button_scan);
        scanButton.setOnClickListener(new OnClickListener() {
            public void onClick(View v) {
                doDiscovery();
                v.setVisibility(View.GONE);
            }
        });

        // Initialize array adapters. One for already paired devices and
        // one for newly discovered devices
        mPairedDevicesArrayAdapter = new ArrayAdapter<String>(this,
R.layout.device_name);
        mNewDevicesArrayAdapter = new ArrayAdapter<String>(this,
R.layout.device_name);

        // arama ve eşleştirilmiş cihazları listelemek için
        ListView pairedListView = (ListView) findViewById(R.id.paired_devices);
        pairedListView.setAdapter(mPairedDevicesArrayAdapter);
        pairedListView.setOnItemClickListener(mDeviceClickListener);


        ListView newDevicesListView = (ListView)
findViewById(R.id.new_devices);
        newDevicesListView.setAdapter(mNewDevicesArrayAdapter);
        newDevicesListView.setOnItemClickListener(mDeviceClickListener);

        // Cihaz bulunduğu zman kaydetmek için
        IntentFilter filter = new IntentFilter(BluetoothDevice.ACTION_FOUND);
        this.registerReceiver(mReceiver, filter);
        filter = new IntentFilter(BluetoothAdapter.ACTION_DISCOVERY_FINISHED);
        this.registerReceiver(mReceiver, filter);


        mBtAdapter = BluetoothAdapter.getDefaultAdapter();


        Set<BluetoothDevice> pairedDevices = mBtAdapter.getBondedDevices();

        //Eşleştirilmiş cihazlar varsa, ArrayAdapter'a her birini eklemek için
        if (pairedDevices.size() > 0) {
```

```
findViewById(R.id.title_paired_devices).setVisibility(View.VISIBLE);
            for (BluetoothDevice device : pairedDevices) {
                mPairedDevicesArrayAdapter.add(device.getName() + "\n" +
device.getAddress());
            }
        } else {
            String noDevices =
getResources().getText(R.string.none_paired).toString();
            mPairedDevicesArrayAdapter.add(noDevices);
        }
    }

    @Override
    protected void onDestroy() {
        super.onDestroy();


        if (mBtAdapter != null) {
            mBtAdapter.cancelDiscovery();
        }


        this.unregisterReceiver(mReceiver);
    }

    /**
     * Start device discover with the BluetoothAdapter
     */
    private void doDiscovery() {
        //if (D) Log.d(TAG, "doDiscovery()");


        setProgressBarIndeterminateVisibility(true);
        setTitle(R.string.scanning);


        findViewById(R.id.title_new_devices).setVisibility(View.VISIBLE);


        if (mBtAdapter.isDiscovering()) {
            mBtAdapter.cancelDiscovery();
        }


        mBtAdapter.startDiscovery();
    }
//listview de listelediğimiz cihazlar için tıklama dinleyici

    private OnItemClickListener mDeviceClickListener = new
OnItemClickListener() {
        public void onItemClick(AdapterView<?> av, View v, int arg2, long arg3)
{
            // Cancel discovery because it's costly and we're about to connect
            mBtAdapter.cancelDiscovery();


            String info = ((TextView) v).getText().toString();
            String address = info.substring(info.length() - 17);


            Intent intent = new Intent();
            intent.putExtra(EXTRA_DEVICE_ADDRESS, address);
            setResult(Activity.RESULT_OK, intent);
            finish();
        }
    };


    private final BroadcastReceiver mReceiver = new BroadcastReceiver() {
        @Override
        public void onReceive(Context context, Intent intent) {
            String action = intent.getAction();


            if (BluetoothDevice.ACTION_FOUND.equals(action)) {

                BluetoothDevice device = 
intent.getParcelableExtra(BluetoothDevice.EXTRA_DEVICE);

                if (device.getBondState() != BluetoothDevice.BOND_BONDED) {
                    mNewDevicesArrayAdapter.add(device.getName() + "\n" + 
device.getAddress());
                }
                //arama tamamlandığında Activite başlığını değiştirmek için
            } else if 
(BluetoothAdapter.ACTION_DISCOVERY_FINISHED.equals(action)) {
                setProgressBarIndeterminateVisibility(false);
                setTitle(R.string.select_device);
                if (mNewDevicesArrayAdapter.getCount() == 0) {
                    String noDevices = 
getResources().getText(R.string.none_found).toString();
                    mNewDevicesArrayAdapter.add(noDevices);
                }
            }
        }
    };

}
```

Ekran arayüz tasarımı:Layout dosyamız:

custom_title.xml

```
<?xml version="1.0" encoding="utf-8"?>
<!-- Copyright (C) 2009 The Android Open Source Project

     Licensed under the Apache License, Version 2.0 (the "License");
     you may not use this file except in compliance with the License.
     You may obtain a copy of the License at

          http://www.apache.org/licenses/LICENSE-2.0

     Unless required by applicable law or agreed to in writing, software
     distributed under the License is distributed on an "AS IS" BASIS,
     WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
     See the License for the specific language governing permissions and
     limitations under the License.
-->
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center_vertical"
  >
  <TextView android:id="@+id/title_left_text"
      android:layout_alignParentLeft="true"
      android:ellipsize="end"
      android:singleLine="true"
      style="?android:attr/windowTitleStyle"
      android:layout_width="wrap_content"
      android:layout_height="match_parent"
      android:layout_weight="1"
    />
    <TextView android:id="@+id/title_right_text"
        android:layout_alignParentRight="true"
        android:ellipsize="end"
        android:singleLine="true"
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:textColor="#fff"
        android:layout_weight="1"
    />
</RelativeLayout>
```

device_list.xml

```
<?xml version="1.0" encoding="utf-8"?>
<!-- Copyright (C) 2009 The Android Open Source Project

     Licensed under the Apache License, Version 2.0 (the "License");
     you may not use this file except in compliance with the License.
     You may obtain a copy of the License at

          http://www.apache.org/licenses/LICENSE-2.0

     Unless required by applicable law or agreed to in writing, software
     distributed under the License is distributed on an "AS IS" BASIS,
     WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
     See the License for the specific language governing permissions and
     limitations under the License.
-->
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    >
    <TextView android:id="@+id/title_paired_devices"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="@string/title_paired_devices"
        android:visibility="gone"
        android:background="#666"
        android:textColor="#fff"
        android:paddingLeft="5dp"
    />
    <ListView android:id="@+id/paired_devices"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:stackFromBottom="true"
        android:layout_weight="1"
    />
    <TextView android:id="@+id/title_new_devices"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="@string/title_other_devices"
        android:visibility="gone"
        android:background="#666"
        android:textColor="#fff"
        android:paddingLeft="5dp"
    />
    <ListView android:id="@+id/new_devices"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:stackFromBottom="true"
        android:layout_weight="2"
    />
    <Button android:id="@+id/button_scan"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="@string/button_scan"
    />
</LinearLayout>
```

device_name.xml

```
<?xml version="1.0" encoding="utf-8"?>
<!-- Copyright (C) 2009 The Android Open Source Project

     Licensed under the Apache License, Version 2.0 (the "License");
     you may not use this file except in compliance with the License.
     You may obtain a copy of the License at

          http://www.apache.org/licenses/LICENSE-2.0

     Unless required by applicable law or agreed to in writing, software
     distributed under the License is distributed on an "AS IS" BASIS,
     WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
     See the License for the specific language governing permissions and
     limitations under the License.
-->
<TextView xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="18sp"
    android:padding="5dp"
/>
```

main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<!--
     Copyright (C) 2009 The Android Open Source Project

     Licensed under the Apache License, Version 2.0 (the "License");
     you may not use this file except in compliance with the License.
     You may obtain a copy of the License at

          http://www.apache.org/licenses/LICENSE-2.0

     Unless required by applicable law or agreed to in writing, software
     distributed under the License is distributed on an "AS IS" BASIS,
     WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
     See the License for the specific language governing permissions and
     limitations under the License.
-->
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
```

```
android:orientation="vertical" >

<ListView
    android:id="@+id/in"
    android:layout_width="match_parent"
    android:layout_height="5dp"
    android:layout_alignParentTop="true"
    android:stackFromBottom="true"
    android:transcriptMode="alwaysScroll" >

</ListView>

<GridLayout
    android:id="@+id/gridLayout1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_below="@+id/in"
    android:layout_marginTop="70dp"
    android:columnCount="1" >
</GridLayout>

<Button
    android:id="@+id/button4"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:layout_alignParentTop="true"
    android:layout_toLeftOf="@+id/button2"
    android:text=""
    android:background="@drawable/direction_arrow_blue_up" />

<Button
    android:id="@+id/button1"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:layout_alignTop="@+id/gridLayout1"
    android:layout_toRightOf="@+id/gridLayout1"
    android:text=""
    android:background="@drawable/direction_arrow_blue_left"  />

<Button
    android:id="@+id/button2"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:layout_alignBaseline="@+id/button1"
    android:layout_alignBottom="@+id/button1"
    android:layout_marginLeft="14dp"
    android:layout_toRightOf="@+id/button3"
    android:text=""
    android:background="@drawable/direction_arrow_blue_right"  />

<Button
    android:id="@+id/button3"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:layout_below="@+id/gridLayout1"
    android:layout_marginLeft="14dp"
    android:layout_toRightOf="@+id/button1"
    android:text=""
    android:background="@drawable/direction_arrow_blue_down"  />

<Button
    android:id="@+id/button5"
    android:layout_width="70dp"
    android:layout_height="70dp"
```

```
        android:layout_alignParentBottom="true"
        android:layout_alignParentLeft="true"
        android:text="DUR" />

    <SeekBar
        android:id="@+id/seekBar1"
        android:layout_width="350dp"
        android:layout_height="70dp"
        android:layout_alignParentBottom="true"
        android:layout_alignParentRight="true"
        android:layout_marginRight="42dp"
        android:layout_weight="1"
        android:rotation="270"
        />

    <Button
        android:id="@+id/button6"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/button4"
        android:layout_alignRight="@+id/seekBar1"
        android:text="KORNA" />

</RelativeLayout>
```

message.xml

```
<?xml version="1.0" encoding="utf-8"?>
<!-- Copyright (C) 2009 The Android Open Source Project

     Licensed under the Apache License, Version 2.0 (the "License");
     you may not use this file except in compliance with the License.
     You may obtain a copy of the License at

          http://www.apache.org/licenses/LICENSE-2.0

     Unless required by applicable law or agreed to in writing, software
     distributed under the License is distributed on an "AS IS" BASIS,
     WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
     See the License for the specific language governing permissions and
     limitations under the License.
-->
<TextView xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="18sp"
    android:padding="5dp"
/>
```

Son olarak buda values klasörümüzde tanımladığımız isimler

strings.xml

```
<?xml version="1.0" encoding="utf-8"?>
<!-- Copyright (C) 2009 The Android Open Source Project

     Licensed under the Apache License, Version 2.0 (the "License");
     you may not use this file except in compliance with the License.
     You may obtain a copy of the License at

          http://www.apache.org/licenses/LICENSE-2.0
     Unless required by applicable law or agreed to in writing, software
     distributed under the License is distributed on an "AS IS" BASIS,
     WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
     See the License for the specific language governing permissions and
     limitations under the License.
-->

<resources>
    <string name="app_name">Bluetooth Demo</string>

    <!--  BluetoothChat -->
    <string name="send">Send</string>
    <string name="not_connected">Cihaza Bağlı değilsiniz.</string>
    <string name="bt_not_enabled_leaving">Bluetooth açık değil, uygulamadan
çıkılıyor...</string>
    <string name="title_connecting">Bağlanıyor...</string>
    <string name="title_connected_to">Bağlandı: </string>
    <string name="title_not_connected">Bağlı Değil</string>

    <!--  DeviceListActivity -->
    <string name="scanning">Cihazlar taranıyor...</string>
    <string name="select_device">Bağlanacak cihazı seçin</string>
    <string name="none_paired">Eşleşilmiş Cihaz Yok</string>
    <string name="none_found">Cihaz Bulunamadı</string>
    <string name="title_paired_devices">Eşleşilmiş Cihazlar</string>
    <string name="title_other_devices">Diğer Uygun Cihazlar</string>
    <string name="button_scan">Cihaz Tara</string>

    <!-- Options Menu -->
    <string name="connect">Cihaza Bağlan</string>
    <string name="discoverable">Görünür Yap</string>
</resources>
```

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<!-- Copyright (C) 2009 The Android Open Source Project

     Licensed under the Apache License, Version 2.0 (the "License");
     you may not use this file except in compliance with the License.
     You may obtain a copy of the License at

          http://www.apache.org/licenses/LICENSE-2.0

     Unless required by applicable law or agreed to in writing, software
     distributed under the License is distributed on an "AS IS" BASIS,
     WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
     See the License for the specific language governing permissions and
     limitations under the License.
-->
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
      package="com.stackcuriosity.android.BluetoothDemo"
      android:versionName="1.0">

     <uses-sdk
        android:minSdkVersion="14"
        android:targetSdkVersion="21"
        />


    <uses-permission android:name="android.permission.BLUETOOTH_ADMIN" />
    <uses-permission android:name="android.permission.BLUETOOTH" />

    <application android:label="@string/app_name"
```

```
                 android:icon="@drawable/app_icon"
                  >

        <activity android:name=".BluetoothDemo"
                  android:label="@string/app_name"
                  android:configChanges="orientation|keyboardHidden"
                  android:screenOrientation="landscape"
                  android:theme="@android:style/Theme"
                  >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <activity android:name=".DeviceListActivity"
                  android:label="@string/select_device"
                  android:theme="@android:style/Theme.Dialog"
                  android:configChanges="orientation|keyboardHidden" />
    </application>
</manifest>
```

Evet arkadaşlar android arayüzü bukadar.Burada sadece sizin için eksik olarak butonlara hareketleri göstermesi bakımından sağ-sol-ileri-geri yön tuşları şeklinde bir .png resim koymuştum.Atadığımız bu görsel resimler yok.Bunları siz kendi zevkinize göre ayarlarsınız.İstediğiniz şekilde butonlara resim ataya bilirsiniz.

Arduino ya geçecek olursak

Arduino.cc

```
#include <SoftwareSerial.h>// import the serial library
//Genotronex adında SoftwareSerial özel komutu kullanarak yazılımsal bir seri
port haberleşme ayarlanıyor.
//RX pini 10'uncu TX pinide 11 pin olarak ayarlıyorz
SoftwareSerial Genotronex(10,11); // RX, TX

//Değişkenlerinimizi tanımladık
//Arkadaşlar arduino uno gibi düşük ram'a sahip cihazlarda programlama
//yaparken en az ram kullanımı önemli olduğunda bellekte yer tutacak
değişkenlerimizi
//asgari boyutta tanımlamalıyız.
boolean ileri=false;
boolean geri=false;
boolean sag=false;
boolean sol=false;
boolean dur=false;
boolean korna=false;
boolean sonDurum=false;
boolean aDur=false;
int enson;
int hiz=0;
int dizi[30];
int i=0;
int x=0;
String stringOne;
```

```
void setup() {

  Serial.begin(9600);
  Genotronex.begin(9600);
  Genotronex.println("zafer");
  //pinlerin durumlarını çıkış olarak atadık
  pinMode(5,OUTPUT);
  pinMode(6,OUTPUT);
  pinMode(8,OUTPUT);
  pinMode(3,OUTPUT);
  pinMode(4,OUTPUT);
  pinMode(7,OUTPUT);
  pinMode(12, OUTPUT);
  //pinlerimizin hepsini başlangıcta lojic 0 olarak ayarladık
  digitalWrite(8,0);
  digitalWrite(3,0);
  digitalWrite(4,0);
  digitalWrite(7,0);
  digitalWrite(12,0);
}

void loop() {

  i=0;
  stringOne = "";
  //Seri porttan okudumuz dataları diziye attık
  //-48 yapmamızın sebebi ASCII kodları decimal'e çevirmek için kullandık
   while (Genotronex.available()){
  dizi[i]=Genotronex.read()-48;
  i++;

}
//Dizinin her bir elemanını string bir değişkenimizin içerisinde yan yana
birleştirdik.
for(int j=0;j<i && i>0;j++){
  stringOne += dizi[j];

}


while(!Genotronex.available()){
     Serial.println(stringOne);
     //Telefonumuz üzerinden gelen dataları filtrelemek için  her datanın
öncesinde sırayla 8 ve 0 rakamlarını gönderdik.
     //filtrelememizdeki amaç parazit olarak gelen tek haneli rakamları
engellemek.
     //Devamındaki komutlar gelen datalara göre rc-arabaya yön verme
komutlarıdır.
    if(stringOne=="803")
    {
      ileri= true;
      sag=false;
      sol=false;
      geri=false;
      dur=false;
      aDur=false;
      hiz=0;
    }
    else if(stringOne=="801"){
      ileri= false;
      sag=true;
      sol=false;
      geri=false;
      dur=false;
      aDur=false;
    }
    else if(stringOne=="802"){
      ileri= false;
      sag=false;
      sol=true;
      geri=false;
      dur=false;
      aDur=false;
    }
    else if(stringOne=="804"){
      ileri= false;
      sag=false;
      sol=false;
      geri=true;
      dur=false;
      aDur=false;
    }
    else if(stringOne=="805"){
      ileri= false;
      sag=false;
      sol=false;
      geri=false;
      dur=true;
      aDur=false;
    }
    else if(stringOne=="808"){
      ileri= false;
      sag=false;
      sol=false;
      geri=false;
      dur=false;
      aDur=true;
    }
    else if(stringOne=="806"){
      digitalWrite(12, !digitalRead(12));
      delay(20);
    }
    else if(stringOne.toInt()<=255)
    {
      hiz=stringOne.toInt();
      Serial.println(hiz);
    }

    if(ileri==true&&geri==false&&sag==false&&sol==false&&dur==false){

      digitalWrite(8,1);
      digitalWrite(3,0);
      analogWrite(5,hiz);
      digitalWrite(4,1);
      digitalWrite(7,0);
      analogWrite(6,hiz);
      enson=0;
      sonDurum=true;
    }

    else if(ileri==false&&geri==true&&sag==false&&sol==false&&dur==false){

      digitalWrite(8,0);
      digitalWrite(3,1);
      analogWrite(5,hiz);
      digitalWrite(4,0);
      digitalWrite(7,1);
      analogWrite(6,hiz);
      enson=1;
```

```
      sonDurum=true;
    }

    else if(ileri==false&&geri==false&&sag==true&&sol==false&&dur==false){

      digitalWrite(8,1);
      digitalWrite(3,0);
      analogWrite(5,hiz);
      digitalWrite(4,0);
      digitalWrite(7,1);
      analogWrite(6,hiz);
      enson=2;
    }

    else if(ileri==false&&geri==false&&sag==false&&sol==true&&dur==false){

      digitalWrite(8,0);
      digitalWrite(3,1);
      analogWrite(5,hiz);
      digitalWrite(4,1);
      digitalWrite(7,0);
      analogWrite(6,hiz);
      enson=3;
    }
    else if(aDur==true){
      if(enson==0&&sonDurum==true){
      digitalWrite(8,0);
      digitalWrite(3,1);
      analogWrite(5,200);
      digitalWrite(4,0);
      digitalWrite(7,1);
      analogWrite(6,200);
      delay(50);
      sonDurum=false;
      }
      else if(enson==1&&sonDurum==true){
      digitalWrite(8,1);
      digitalWrite(3,0);
      analogWrite(5,200);
      digitalWrite(4,1);
      digitalWrite(7,0);
      analogWrite(6,200);
      delay(50);
      sonDurum=false;
      }
    }
    else if(dur==true){
      Serial.println("durdaaaa");
      digitalWrite(8,0);
      digitalWrite(3,0);
      analogWrite(5,0);
      digitalWrite(4,0);
      digitalWrite(7,0);
      analogWrite(6,0);
    }
  }
}
```