**Bluetooth application**

1. Development of an android application to enable and disable Bluetooth in the device, also get information about the paired devices.

Sol:-

MainActivity.java:-

package com.example.androidprograminglec26oct;  
  
import oolean.appcompat.app.AppCompatActivity;  
  
import android.bluetooth.BluetoothAdapter;  
import android.bluetooth.BluetoothDevice;  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.TextView;  
import android.widget.Toast;  
  
import java.util.Set;  
  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 Button b1 = (Button)findViewById(R.id.*btn1*);  
 Button b2 = (Button)findViewById(R.id.*btn2*);  
 Button b3 = (Button)findViewById(R.id.*btn3*);  
 TextView t1 = (TextView)findViewById(R.id.*tv2*);  
  
 BluetoothAdapter ba = BluetoothAdapter.*getDefaultAdapter*();  
 b1.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 if(ba == null){  
 Toast.*makeText*(MainActivity.this, “Bluetooth is not supported”,Toast.*LENGTH\_LONG*).show();  
  
 }  
 else{  
 if(!ba.isEnabled()){  
 Intent ib = new Intent(BluetoothAdapter.*ACTION\_REQUEST\_ENABLE*);  
 startActivity(ib);  
  
 }  
 }  
 }  
 });  
 b2.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 ba.disable();  
 }  
 });  
 b3.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 if(ba == null){  
 Toast.*makeText*(MainActivity.this, “Bluetooth is not supported”,Toast.*LENGTH\_LONG*).show();  
  
 }  
 else{  
 final Set<BluetoothDevice> pD = ba.getBondedDevices();  
 if(pD.size()>0){  
 for(BluetoothDevice device : pD )  
 {  
 String dname = device.getName();  
 String daddress = device.getAddress();  
 t1.setText(“Name of the paired device “+dname+” “+”Address of paired device “+daddress);  
  
  
 }  
 }  
 }  
 }  
 });  
  
 }  
}

Activity\_main.xml:-

<?xml version=”1.0” encoding=”utf-8”?>  
<RelativeLayout  
 xmlns:android=”http://schemas.android.com/apk/res/android”  
 xmlns:app=”http://schemas.android.com/apk/res-auto”  
 xmlns:tools=”http://schemas.android.com/tools”  
 android:layout\_width=”match\_parent”  
 android:layout\_height=”match\_parent”  
 tools:context=”.MainActivity”>  
  
 <TextView  
 android:layout\_width=”wrap\_content”  
 android:layout\_height=”wrap\_content”  
 android:text=”Bluetooth Adapter”  
 android:id=”@+id/tv1”  
 android:layout\_centerHorizontal=”true”  
 android:layout\_marginTop=”30dp”  
 />  
  
 <Button  
 android:id=”@+id/btn1”  
 android:layout\_width=”wrap\_content”  
 android:layout\_height=”wrap\_content”  
 android:layout\_below=”@id/tv1”  
 android:layout\_centerHorizontal=”true”  
 android:layout\_marginTop=”30dp”  
 android:fontFamily=”monospace”  
 android:text=”Switch on ooleanh”  
 android:textColor=”@color/black”  
 android:textStyle=”bold”  
 app:backgroundTint=”#0091EA”  
 app:strokeColor=”@color/black”  
 app:strokeWidth=”2px” />  
  
 <Button  
 android:id=”@+id/btn2”  
 android:layout\_width=”wrap\_content”  
 android:layout\_height=”wrap\_content”  
 android:layout\_below=”@id/btn1”  
 android:layout\_centerHorizontal=”true”  
 android:layout\_marginTop=”30dp”  
 android:fontFamily=”monospace”  
 android:text=”Switch off ooleanh”  
 android:textColor=”@color/black”  
 android:textStyle=”bold”  
 app:backgroundTint=”#0091EA”  
 app:strokeColor=”@color/black”  
 app:strokeWidth=”2px” />  
  
 <Button  
 android:id=”@+id/btn3”  
 android:layout\_width=”wrap\_content”  
 android:layout\_height=”wrap\_content”  
 android:layout\_below=”@id/btn2”  
 android:layout\_centerHorizontal=”true”  
 android:layout\_marginTop=”30dp”  
 android:fontFamily=”monospace”  
 android:text=”Pair devices”  
 android:textColor=”@color/black”  
 android:textStyle=”bold”  
 app:backgroundTint=”#0091EA”  
 app:strokeColor=”@color/black”  
 app:strokeWidth=”2px” />  
  
 <TextView  
 android:layout\_width=”wrap\_content”  
 android:layout\_height=”wrap\_content”  
 android:id=”@+id/tv2”  
 android:hint=”List of paired device”  
 android:layout\_below=”@id/btn3”  
 android:layout\_centerHorizontal=”true”  
 android:layout\_marginTop=”40dp”  
 />  
  
  
  
</RelativeLayout>

AndroidManifest.xml:-

<?xml version=”1.0” encoding=”utf-8”?>  
<manifest xmlns:android=”http://schemas.android.com/apk/res/android”  
 package=”com.example.androidprograminglec26oct”>  
 <uses-permission android:name=”android.permission.BLUETOOTH”/>  
 <uses-permission android:name=”android.permission.BLUETOOTH\_ADMIN”/>  
 <uses-permission android:name=”android.permission.ACCESS\_COARSE\_LOCATION”/>  
  
  
 <application  
 android:allowBackup=”true”  
 android:icon=”@mipmap/ic\_launcher”  
 android:label=”@string/app\_name”  
 android:roundIcon=”@mipmap/ic\_launcher\_round”  
 android:supportsRtl=”true”  
 android:theme=”@style/Theme.AndroidProgramingLec26Oct”>  
 <activity android:name=”.MainActivity”>  
 <intent-filter>  
 <action android:name=”android.intent.action.MAIN” />  
  
 <category android:name=”android.intent.category.LAUNCHER” />  
 </intent-filter>  
 </activity>  
 </application>  
  
</manifest>

Output:-

Application:-

Graphical user interface, application

Description automatically generated

Before switching on Bluetooth:-

A picture containing text, monitor, several

Description automatically generated

After switching on Bluetooth:-

Graphical user interface, text, application

Description automatically generated

A screenshot of a cell phone

Description automatically generated with medium confidence

List of paired devices:-

Graphical user interface, text, application

Description automatically generated