QUE 1. Write a program to capture an image and display it using image view.

ActivityMain.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
   android:orientation="vertical"
   android:gravity="center"
   tools:context=".MainActivity">
   <ImageView  android:id="@+id/img1"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_weight="1"
      tools:srcCompat="@tools:sample/avatars" />
   <Button        android:id="@+id/bt1"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Start Camera"/>
</LinearLayout>
```

MainActivity.java

```
package com.example.bluetoothfinalcode;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;
import androidx.core.content.ContextCompat;
import android.bluetooth.BluetoothAdapter;
import android.bluetooth.BluetoothDevice;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.os.Bundle;
import android.view.View;
import android.widget.Toast;
import android.Manifest;
import android.widget.Button;
import android.widget.TextView;
import java.util.Set;
public class MainActivity extends AppCompatActivity {
   Button b1,b2,b3;
   TextView t1;
   Set<BluetoothDevice> ad;
   BluetoothAdapter adapter;
   private static final int REQUEST_ENABLE_BLUETOOTH = 2;
   public void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
```

```
    b1=findViewById(R.id.on);
    b2=findViewById(R.id.off);
    b3=findViewById(R.id.get_devices);
    t1=findViewById(R.id.t1);
    adapter = BluetoothAdapter.getDefaultAdapter();
    if (adapter == null) {
      Toast.makeText(this, "bluetooth is unsupported", Toast.LENGTH_LONG).show();  }
    b1.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        if (!adapter.isEnabled()) {
          Intent i = new Intent(BluetoothAdapter.ACTION_REQUEST_ENABLE);
          if (ContextCompat.checkSelfPermission(MainActivity.this,
Manifest.permission.BLUETOOTH_CONNECT) != PackageManager.PERMISSION_GRANTED) {
            ActivityCompat.requestPermissions(MainActivity.this, new
String[]{Manifest.permission.BLUETOOTH_CONNECT}, 100);}
          startActivityForResult(i, REQUEST_ENABLE_BLUETOOTH);}
      }});
    b2.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        if (ContextCompat.checkSelfPermission(MainActivity.this,
Manifest.permission.BLUETOOTH_CONNECT) != PackageManager.PERMISSION_GRANTED) {
          ActivityCompat.requestPermissions(MainActivity.this, new
String[]{Manifest.permission.BLUETOOTH_CONNECT}, 100);
        }
        adapter.disable();}
    });
    b3.setOnClickListener(new View.OnClickListener(){
      public void onClick(View view)
      {
        if (ContextCompat.checkSelfPermission(MainActivity.this,
Manifest.permission.BLUETOOTH_CONNECT) != PackageManager.PERMISSION_GRANTED) {
          ActivityCompat.requestPermissions(MainActivity.this, new
String[]{Manifest.permission.BLUETOOTH_CONNECT}, 100);
        }
        StringBuilder sb=new StringBuilder();
        ad=adapter.getBondedDevices();
        for(BluetoothDevice temp:ad) {
          sb.append("\n" + temp.getName() + "\n");
        }
        t1.setText(sb.toString());
      }
    });
  }
}
```

Manifest.java

```
<uses-permission android:name="android.permission.BLUETOOTH"/>
<uses-permission android:name="android.permission.BLUETOOTH_CONNECT"/>
<uses-permission android:name="android.permission.BLUETOOTH_ADMIN"/>
<uses-permission android:name="android.permission.ACCESS_FINE_LOCATION"/>
<uses-permission android:name="android.permission.ACCESS_COARSE_LOCATION"/>
<uses-permission android:name="android.permission.ACCESS_COARSE_LOCATION"/>
```

QUE2. Write a program to display the following output.

ActivityMain.xml

```
<?xml version="1.0" encoding="utf-8"?>
<AbsoluteLayout 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="300dp"
    android:layout_height="50dp"
    android:textSize="30dp"
    android:textStyle="bold"
    android:text="BLUETOOTH"/>
  <Button
    android:layout_width="200dp"
    android:layout_height="89dp"
    android:layout_x="2dp"
    android:layout_y="125dp"
    android:text="Turn On"
    android:id="@+id/on"
    android:textSize="30dp"
    android:onClick="on"/>
  <Button
    android:layout_width="200dp"
    android:layout_height="89dp"
    android:layout_x="12dp"
    android:layout_y="247dp"
    android:onClick="listvisible"
    android:id="@+id/off"
    android:text="off"
    android:textSize="30dp" />
  <Button
    android:layout_width="200dp"
    android:layout_height="89dp"
    android:layout_x="9dp"
    android:layout_y="359dp"
    android:onClick="List Visible"
    android:id="@+id/get_devices"
```

```
    android:text="List Visible"
    android:textSize="30dp"
    tools:ignore="OnClick" />
  <TextView
    android:layout_width="match_parent"
    android:layout_height="200dp"
    android:layout_x="0dp"
    android:layout_y="478dp"
    android:id="@+id/t1"/>
</AbsoluteLayout>
```

OUTPUT: