

Name: Prashant Bhosale

Roll No: 804

EXPERIMENT 9

WORKING WITH BLUETOOTH

AIM: To create an application which enables and disables Bluetooth in your mobile

THEORY:

Android provides Bluetooth API to perform these different operations.

- Scan for other Bluetooth devices
- Get a list of paired devices
- Connect to other devices through service discovery

Android provides BluetoothAdapter class to communicate with Bluetooth. Create an object of this calling by calling the static method getDefaultAdapter(). Its syntax is given below.

```
private BluetoothAdapter BA;  
BA = BluetoothAdapter.getDefaultAdapter();
```

In order to enable the Bluetooth of your device, call the intent with the following Bluetooth constant ACTION_REQUEST_ENABLE. Its syntax is.

```
Intent turnOn = new Intent(BluetoothAdapter.ACTION_REQUEST_ENABLE);  
startActivityForResult(turnOn, 0);
```

Apart from this constant, there are other constants provided the API, that supports different tasks. They are listed below.

ACTION_REQUEST_DISCOVERABLE - This constant is used for turn on discovering of Bluetooth

ACTION_STATE_CHANGED - This constant will notify that Bluetooth state has been changed.

ACTION_FOUND - This constant is used for receiving information about each device that is discovered.

disable() - This method disables the adapter.

getName() - This method returns the name of the Bluetooth adapter.

enable() - This method enables the adapter if not enabled.

getState() - This method returns the current state of the Bluetooth Adapter.

ASSIGNMENT

1. Create an application in android that enables and disables Bluetooth in your mobile.

CODE

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WITHOUT INTENT

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="B-L-U-E-T-O-O-T-H"
        android:textSize="30dp"
        android:textStyle="bold"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="10dp"
        android:id="@+id/textV1" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Turn On"
        android:textSize="25sp"
        android:textStyle="bold"
        android:layout_below="@id/textV1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="30dp"
        android:id="@+id/btnTurnOn"
    />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Visible"
        android:textSize="25sp"
        android:textStyle="bold"
        android:layout_below="@id/btnTurnOn"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="30dp"
        android:id="@+id/btnVisible"
    />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Turn Off"
        android:textSize="25sp"
        android:textStyle="bold"
        android:layout_below="@id/btnVisible"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="30dp"
        android:id="@+id/btnTurnOff"
    />
```

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</RelativeLayout>

MainActivity.java

```
package com.example.mca1634.bluetooth;
import android.bluetooth.BluetoothAdapter;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    Button btnVisible,btnTurnOff,btnTurnOn;
    BluetoothAdapter BA;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        btnVisible=(Button)findViewById(R.id.btnVisible);
        btnTurnOn=(Button)findViewById(R.id.btnTurnOn);
        btnTurnOff=(Button)findViewById(R.id.btnTurnOff);
        BA=BluetoothAdapter.getDefaultAdapter();
        btnTurnOn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                BA.enable();
                Toast.makeText(getApplicationContext(),"Bluetooth is
ON",Toast.LENGTH_SHORT).show();
            }
        });
        btnTurnOff.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                BA.disable();
                Toast.makeText(getApplicationContext(),"Bluetooth is
OFF",Toast.LENGTH_SHORT).show();
            }
        });
        btnVisible.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(getApplicationContext(),"Bluetooth is
VISIBLE",Toast.LENGTH_SHORT).show();
            }
        });
    }
}
```

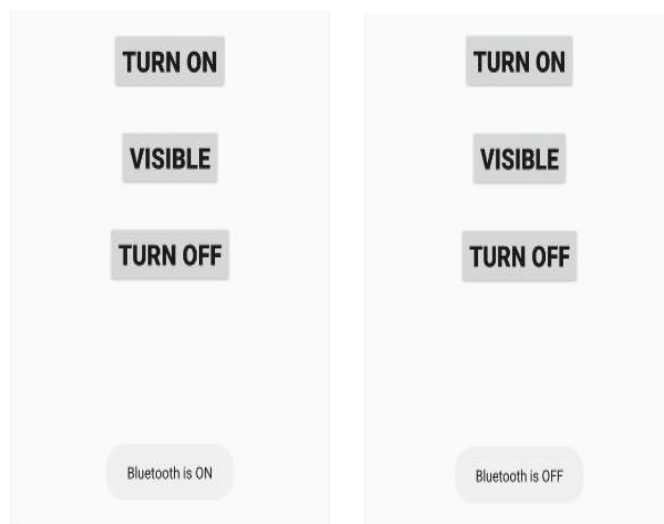
AndroidManifest.xml

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

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OUTPUT



CODE

WITH INTENT

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="B-L-U-E-T-O-O-T-H"
        android:textSize="30dp"
        android:textStyle="bold"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="10dp"
        android:id="@+id/textV1" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Turn On"
        android:textSize="25sp"
```

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```
        android:textStyle="bold"
        android:layout_below="@id/textV1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="30dp"
        android:id="@+id/btnTurnOn"
    />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Visible"
        android:textSize="25sp"
        android:textStyle="bold"
        android:layout_below="@id/btnTurnOn"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="30dp"
        android:id="@+id/btnVisible"
    />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Turn Off"
        android:textSize="25sp"
        android:textStyle="bold"
        android:layout_below="@id/btnVisible"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="30dp"
        android:id="@+id/btnTurnOff"
    />
</RelativeLayout>
```

MainActivity.java

```
package com.example.mca1634.bluetooth;

import android.bluetooth.BluetoothAdapter;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    Button btnVisible, btnTurnOff, btnTurnOn;
    BluetoothAdapter BA;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        btnVisible= (Button) findViewById(R.id.btnVisible);
        btnTurnOn= (Button) findViewById(R.id.btnTurnOn);
        btnTurnOff= (Button) findViewById(R.id.btnTurnOff);
        BA=BluetoothAdapter.getDefaultAdapter();
        btnTurnOn.setOnClickListener(new View.OnClickListener() {
            @Override
```

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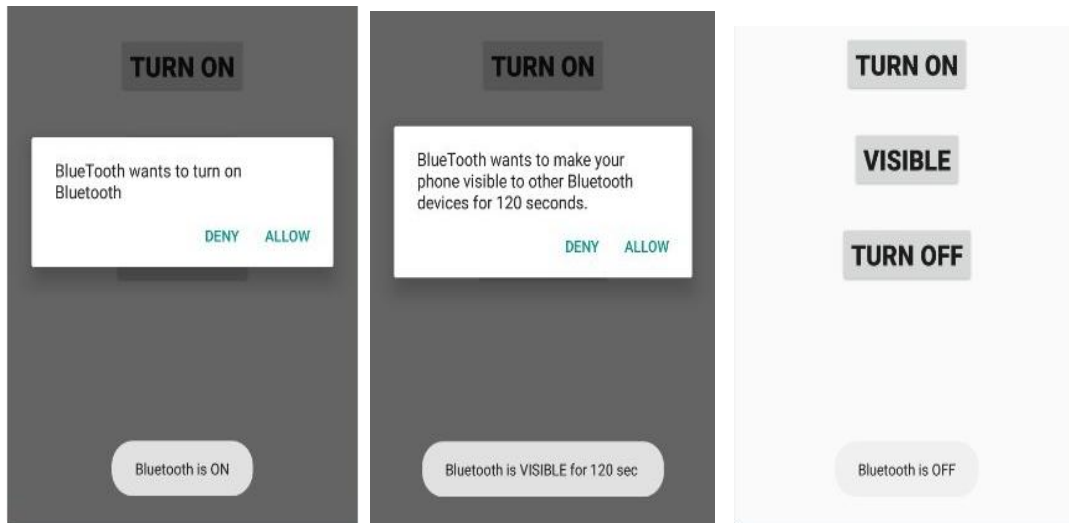
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```
        public void onClick(View v) {
            if(!BA.isEnabled()) {
                Intent turnon=new
Intent(BluetoothAdapter.ACTION_REQUEST_ENABLE);
                startActivityForResult(turnon,0);
                Toast.makeText(getApplicationContext(), "Bluetooth is ON",
Toast.LENGTH_SHORT).show();
            }
            else
            {
                Toast.makeText(getApplicationContext(), "Bluetooth is already
ON", Toast.LENGTH_SHORT).show();
            }
        }
    });
    btnTurnOff.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            BA.disable();
            Toast.makeText(getApplicationContext(), "Bluetooth is OFF",
Toast.LENGTH_SHORT).show();
        }
    });
    btnVisible.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            if(BA.isEnabled()) {
                Intent turnon=new
Intent(BluetoothAdapter.ACTION_REQUEST_DISCOVERABLE);
                startActivityForResult(turnon,1);
                Toast.makeText(getApplicationContext(), "Bluetooth is VISIBLE
for 120 sec ", Toast.LENGTH_SHORT).show();
            }
            else
            {
                Toast.makeText(getApplicationContext(), "Bluetooth is OFF",
Toast.LENGTH_SHORT).show();
            }
        }
    });
}
```

OUTPUT

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CONCLUSION: Successfully executed Bluetooth Program