**Aim:**

**Create an android application to display available Wi-Fi devices and Paired Wi-Fi devices by using Wi-Fi Service.**

Activity\_Main.xml file:

*<?*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" tools:context="com.example.hi.wifiapp.MainActivity">

<LinearLayout android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:orientation="horizontal">

<TextView android:layout\_width="0dp" android:layout\_height="wrap\_content" android:layout\_weight="0.5" android:text="WIFI" android:gravity="center" android:textSize="25sp"/> <Switch android:id="@+id/sw\_wifi" android:layout\_width="0dp" android:layout\_height="wrap\_content" android:layout\_weight="0.5"/> </LinearLayout> <LinearLayout android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:orientation="horizontal">

<Button android:layout\_width="0dp" android:layout\_height="wrap\_content" android:layout\_weight="0.5" android:id="@+id/btn\_get\_wifi\_device" android:text="GET\_WIFI\_DEVICE" android:onClick="getWifiDevice"/>

<Button android:layout\_width="0dp" android:layout\_height="wrap\_content" android:layout\_weight="0.5" android:id="@+id/btn\_get\_paired\_wifi" android:text="PAIRED\_WIFI\_DEVICE" android:onClick="getPairedWifiDevice"/> </LinearLayout> <ListView android:layout\_width="match\_parent" android:layout\_height="match\_parent" android:id="@+id/lview"> </ListView>

</LinearLayout>

MainActivity.java file:

package com.example.hi.wifiapp; import android.content.Context; import android.net.wifi.ScanResult; import android.net.wifi.WifiConfiguration; import android.net.wifi.WifiManager; import android.support.v7.app.AppCompatActivity; import android.os.Bundle; import android.view.View; import android.widget.ArrayAdapter; import android.widget.CompoundButton; import android.widget.ListView; import android.widget.Switch; import java.util.ArrayList; import java.util.List; public class MainActivity extends AppCompatActivity { Switch sw1;

ListView lview; WifiManager wManager; @Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.*activity\_main*); sw1=(Switch)findViewById(R.id.*sw\_wifi*); lview=(ListView)findViewById(R.id.*lview*); wManager=(WifiManager)getApplicationContext().getSystemService(Context.

*WIFI\_SERVICE*); int wifi\_status=wManager.getWifiState(); if(wifi\_status== 0 || wifi\_status== 1){ sw1.setChecked(false); } else if(wifi\_status== 2 || wifi\_status== 3){ sw1.setChecked(true); }

sw1.setOnCheckedChangeListener(new

CompoundButton.OnCheckedChangeListener() { @Override public void onCheckedChanged(CompoundButton buttonView,

boolean isChecked) { if(isChecked){ wManager.setWifiEnabled(true); } else { wManager.setWifiEnabled(false); } } }); } public void getWifiDevice(View v){ ArrayList<String> list=new ArrayList<>();

ArrayAdapter adapter=new ArrayAdapter(this,android.R.layout.*simple\_list\_item\_single\_choice*, list); lview.setAdapter(adapter); List<ScanResult>sResult=wManager.getScanResults(); for (ScanResult item :sResult){ list.add(item.SSID +"\t\t"+ item.frequency); adapter.notifyDataSetChanged(); }

} public void getPairedWifiDevice(View v){ ArrayList<String>list=new ArrayList<>(); ArrayAdapter adapter=new ArrayAdapter(this,

android.R.layout.*simple\_list\_item\_single\_choice*, list);

lview.setAdapter(adapter); List<WifiConfiguration>wifiConfigurationList=wManager.getConfiguredNetworks(); for (WifiConfiguration item:wifiConfigurationList){ list.add(item.SSID +"\t\t"+item.status); adapter.notifyDataSetChanged(); } } }

String.xml file:

<resources> <string name="app\_name">WifiApp</string> <string name="wifi\_name">Wifi</string> <string name="get\_wifi\_device"></string> <string name="paired\_wifi\_device"></string> </resources>

androidManifest.xml file:

*<?*xml version="1.0" encoding="utf-8"*?>* <manifest xmlns:android="http://schemas.android.com/apk/res/android" package="com.example.hi.wifiapp">

<uses-permission android:name="android.permission.ACCESS\_WIFI\_STATE"/> <uses-permission android:name="android.permission.CHANGE\_WIFI\_STATE"/> <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/AppTheme">

<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:**

