**COUNTER PROGRAM lab5**

<LinearLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:gravity="center">  
  
 <TextView  
 android:id="@+id/txt\_count"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:textSize="30dp"  
 android:text="Counter" />  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Start"  
 android:layout\_gravity="center"  
 android:id="@+id/btn\_start"/>  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Stop"  
 android:layout\_gravity="center"  
 android:id="@+id/btn\_stop"/>  
</LinearLayout>

**MainActivity.java**

package com.example.counter;  
  
import android.annotation.SuppressLint;  
import android.os.Bundle;  
import android.os.Handler;  
import android.os.Message;  
import android.app.Activity;  
import android.view.Menu;  
import android.view.View;  
import android.view.View.OnClickListener;  
import android.widget.Button;  
import android.widget.TextView;  
public class MainActivity extends Activity implements OnClickListener, Runnable {  
 int i=0;  
 TextView txtcount;  
 Button btnstart,btnstop;  
 Thread thread;  
 boolean running=false;  
 @SuppressLint("MissingInflatedId")  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 btnstart=(Button)findViewById(R.id.*btn\_start*);  
 btnstop=(Button)findViewById(R.id.*btn\_stop*);  
 btnstart.setOnClickListener(this);  
 btnstop.setOnClickListener(this);  
 txtcount=(TextView)findViewById(R.id.*txt\_count*);  
 }  
  
 @Override  
 public void onClick(View v) {  
// *TODO Auto-generated method* if(v.equals(btnstart))  
 {  
 running=true;  
 thread=new Thread(this);  
 thread.start();  
 }  
 else if(v.equals(btnstop))  
 { //thread.interrupt();  
 running=false;  
 }  
 }  
 Handler hand;  
  
 {  
 hand = new Handler() {  
 public void handleMessage(Message m) {  
 txtcount.setText("" + m.what);  
 }  
 };  
 }  
  
 @Override  
 public void run() {  
// *TODO Auto-generated method stub*//int i=0;  
 while(i<100 && running)  
 {  
 try {  
 Thread.*sleep*(1000);  
 } catch (InterruptedException e) {  
// *TODO Auto-generated catch* System.*out*.println(e);  
 }  
 hand.sendEmptyMessage(i);  
 i++;  
 }  
 }  
}

**Manifest.xml**

<?xml version="1.0" encoding="utf-8"?>

<manifest xmlns:android="http://schemas.android.com/apk/res/android"

package="com.example.p4" android:versionCode="1" android:versionName="1.0" >

<uses-sdk android:minSdkVersion="8" android:targetSdkVersion="18" />

<application

android:allowBackup="true"

android:icon="@drawable/ic\_launcher"

android:label="@string/app\_name"

android:theme="@style/AppTheme">

<activity

android:name="com.example.p4.MainActivity"

android:label="@string/app\_name">

<intent-filter>

<action android:name="android.intent.action.MAIN" />

<category android:name="android.intent.category.LAUNCHER" />

</intent-filter>

</activity>

</application>

</manifest>

**Lab-1**

**ii) Develop a simple application with one EditText so that the user can write some text in it. Create a button called “Convert Text to Speech” that converts the user input text into voice.**

<?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">  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="TEXT TO SPEECH APPLICATION"  
 android:textSize="18sp"  
 />  
 <EditText android:id="@+id/txt\_input"  
 android:layout\_width="237dp"  
 android:layout\_height="177dp"  
 />  
 <Button  
 android:id="@+id/btn\_txt2spch"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Convert Text to Speech"  
 />  
</LinearLayout>

**MainActivity.java**

package com.example.text2speech;  
  
import androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle;  
import android.speech.tts.TextToSpeech;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
import java.util.Locale;  
public class MainActivity extends AppCompatActivity {  
 TextToSpeech t1;  
 EditText txtinput;  
 Button txttospeech;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 txtinput = findViewById(R.id.*txt\_input*);  
 txttospeech = findViewById(R.id.*btn\_txt2spch*);  
 t1 = new TextToSpeech(getApplicationContext(), new TextToSpeech.OnInitListener() {  
 @Override  
 public void onInit(int status) {  
 if(status != TextToSpeech.*ERROR*) {  
 t1.setLanguage(Locale.*ENGLISH*);  
 }  
 }  
 });  
 txttospeech.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String tospeak = txtinput.getText().toString();  
 Toast.*makeText*(getBaseContext(),tospeak,Toast.*LENGTH\_SHORT*).show();  
  
 t1.speak(tospeak,TextToSpeech.*QUEUE\_FLUSH*, null);  
  
 }  
 });  
 }  
 public void onPause()  
 {  
 if(t1 != null)  
 {  
 t1.stop();  
 t1.shutdown();  
 }  
 super.onPause(); }  
}

**PHONE DIALER PROG. Lab9**

<LinearLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:gravity="center"  
 android:orientation="vertical"  
 >  
 <RelativeLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content">  
  
<Button  
 android:id="@+id/btn\_del"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Del"  
 android:layout\_alignParentRight="true"  
 />  
 <EditText  
 android:id="@+id/txt\_display"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_toLeftOf="@id/btn\_del"  
 android:layout\_alignBaseline="@id/btn\_del" />  
</RelativeLayout>  
<LinearLayout  
android:layout\_width="wrap\_content"  
android:layout\_height="wrap\_content"  
android:layout\_gravity="center"  
android:orientation="horizontal" >  
  
 <Button  
 android:id="@+id/btn\_one"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="1" />  
 <Button  
 android:id="@+id/btn\_two"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="2" />  
 <Button  
 android:id="@+id/btn\_three"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="3" />  
</LinearLayout>  
 <LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:orientation="horizontal" >  
 <Button  
 android:id="@+id/btn\_four"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="4" />  
 <Button  
 android:id="@+id/btn\_five"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="5" />  
 <Button  
 android:id="@+id/btn\_six"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="6" />  
 </LinearLayout>  
 <LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:orientation="horizontal" >  
 <Button  
 android:id="@+id/btn\_seven"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="7" />  
 <Button  
 android:id="@+id/btn\_eight"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="8" />  
 <Button  
 android:id="@+id/btn\_nine"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="9" />  
 </LinearLayout>  
 <LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:orientation="horizontal" >  
 <Button  
 android:id="@+id/btn\_star"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="\*" />  
 <Button  
 android:id="@+id/btn\_zero"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="0" />  
 <Button  
 android:id="@+id/btn\_ash"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="#" />  
 </LinearLayout>  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:gravity="center"  
 android:orientation="horizontal" >  
 <Button  
 android:id="@+id/btn\_call"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:gravity="center"  
 android:text="call" />  
 <Button  
 android:id="@+id/btn\_save"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="save" />  
 </LinearLayout>  
</LinearLayout>

**MAINACTIVITY.java**

package com.example.lab9;  
  
import android.net.Uri;  
import android.os.Bundle;  
import android.provider.ContactsContract;  
import android.app.Activity;  
import android.content.Intent;  
import android.view.Menu;  
import android.view.View;  
import android.view.View.OnClickListener;  
import android.widget.Button;  
import android.widget.EditText;  
public class MainActivity extends Activity implements OnClickListener {  
 EditText txtNumber;  
 Button  
 btnOne,btnTwo,btnThree,btnFour,btnFive,btnSix,btnSeven,btnEight,btnNine,btnZero,btnCall,  
 btnSave,btnDel,btnStar,btnHash;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 txtNumber=(EditText)findViewById(R.id.*txt\_display*);  
 btnOne=(Button)findViewById(R.id.*btn\_one*);  
 btnOne.setOnClickListener(this);  
 btnTwo=(Button)findViewById(R.id.*btn\_two*);  
 btnTwo.setOnClickListener(this);  
 btnThree=(Button)findViewById(R.id.*btn\_three*);  
 btnThree.setOnClickListener(this);  
 btnFour=(Button)findViewById(R.id.*btn\_four*);  
 btnFour.setOnClickListener(this);  
 btnFive=(Button)findViewById(R.id.*btn\_five*);  
 btnFive.setOnClickListener(this);  
 btnSix=(Button)findViewById(R.id.*btn\_six*);  
 btnSix.setOnClickListener(this);  
 btnSeven=(Button)findViewById(R.id.*btn\_seven*);  
 btnSeven.setOnClickListener(this);  
 btnEight=(Button)findViewById(R.id.*btn\_eight*);  
 btnEight.setOnClickListener(this);  
 btnNine=(Button)findViewById(R.id.*btn\_nine*);  
 btnNine.setOnClickListener(this);  
 btnZero=(Button)findViewById(R.id.*btn\_zero*);  
 btnZero.setOnClickListener(this);  
 btnSave=(Button)findViewById(R.id.*btn\_save*);  
 btnSave.setOnClickListener(this);  
 btnCall=(Button)findViewById(R.id.*btn\_call*);  
 btnCall.setOnClickListener(this);  
 btnStar=(Button)findViewById(R.id.*btn\_star*);  
 btnStar.setOnClickListener(this);  
 btnHash=(Button)findViewById(R.id.*btn\_ash*);  
 btnHash.setOnClickListener(this);  
 btnDel=(Button)findViewById(R.id.*btn\_del*);  
 btnDel.setOnClickListener(this);  
 }  
 @Override  
 public boolean onCreateOptionsMenu(Menu menu) {  
// Inflate the menu; this adds items to the action bar if it is present.  
 getMenuInflater().inflate(R.menu.*main*, menu);  
 return true;  
 }  
 @Override  
 public void onClick(View v) {  
// *TODO Auto-generated method stub* if(v.equals(btnOne))  
 {  
 txtNumber.append("1");  
 }  
 else if(v.equals(btnTwo))  
 {  
 txtNumber.append("2");  
 }  
 else if(v.equals(btnThree))  
 {  
 txtNumber.append("3");  
 }  
 else if(v.equals(btnFour))  
 {  
 txtNumber.append("4");  
 }  
 else if(v.equals(btnFive))  
 {  
 txtNumber.append("5");  
 }  
 else if(v.equals(btnSix))  
 {  
 txtNumber.append("6");  
 }  
 else if(v.equals(btnSeven))  
 {  
 txtNumber.append("7");  
 }  
 else if(v.equals(btnEight))  
 {  
 txtNumber.append("8");  
 }  
 else if(v.equals(btnNine))  
 {  
 txtNumber.append("9");  
 }  
 else if(v.equals(btnZero))  
 {  
 txtNumber.append("0");  
 }  
 else if(v.equals(btnStar))  
 {  
 txtNumber.append("\*");  
 }  
 else if(v.equals(btnHash))  
 {  
 txtNumber.append("#");  
 }  
 else if(v.equals(btnDel))  
 {  
 String  
 num=txtNumber.getText().toString();  
 if(num.length()>0)  
 {  
 num=num.substring(0,num.length()-1);  
 }  
 txtNumber.setText(num);  
 }  
 else if(v.equals(btnCall))  
 {String  
 num=txtNumber.getText().toString();  
 Intent it=new  
 Intent(Intent.*ACTION\_CALL*);  
 it.setData(Uri.*parse*("tel:"+num));  
 startActivity(it);  
 }  
 else if(v.equals(btnSave))  
 {  
 String num=txtNumber.getText().toString();  
 Intent intent = new  
 Intent(Intent.*ACTION\_INSERT*,  
 ContactsContract.Contacts.*CONTENT\_URI*);  
 intent.putExtra(ContactsContract.Intents.Insert.*PHONE*,num);  
 startActivity(intent);  
 }  
 }  
}

**Manifest.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools">  
 **<uses-permission android:name="android.permission.CALL\_PHONE" />**  
 <application  
 android:allowBackup="true"  
 android:dataExtractionRules="@xml/data\_extraction\_rules"  
 android:fullBackupContent="@xml/backup\_rules"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.CallerApp"  
 tools:targetApi="31">  
  
 <activity  
 android:name=".MainActivity"  
 android:exported="true">  
  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
 <category android:name="android.intent.category.LAUNCHER"/>  
 </intent-filter>  
  
 <meta-data  
 android:name="android.app.lib\_name"  
 android:value="" />  
 </activity>  
 </application>  
  
</manifest>

**Lab Program - 2**

**Write a program to create an Activity to read Employee Details (EmpId, Name, Age, Address) from user and store to database and create a menu with menu item (Show Details) on pressing menu details it must go to another activity with employee id search box and search button and display the employee details on the screen.**

**Acticity\_main.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:layout\_gravity="center"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Enter your employee ID"  
 />  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/emp\_id" />  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Enter your employee Name"  
 />  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/emp\_name" />  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Enter your Age"  
 />  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/emp\_age" />  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Enter your employee Address"  
 />  
  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/emp\_address" />  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Submit"  
 android:id="@+id/btn\_sub"/>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Search"  
 android:id="@+id/btn\_search"/>  
  
</LinearLayout>

**MainActivity.java**

package com.example.database;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.ContentValues;  
import android.content.Intent;  
import android.database.sqlite.SQLiteDatabase;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity implements View.OnClickListener {  
Button btnsub, btnsearch;  
EditText empID, empName, empAge, empAddress;  
  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 btnsearch=findViewById(R.id.*btn\_search*);  
 btnsub=findViewById(R.id.*btn\_sub*);  
 empID=findViewById(R.id.*emp\_id*);  
 empName=findViewById(R.id.*emp\_name*);  
 empAddress=findViewById(R.id.*emp\_address*);  
 empAge=findViewById(R.id.*emp\_age*);  
 btnsearch.setOnClickListener((View.OnClickListener) this);  
 btnsub.setOnClickListener((View.OnClickListener) this);  
 }  
  
// @Override  
// public boolean onCreateOptionsMenu(Menu menu) {  
// getMenuInflater().inflate(R.menu.main, menu);  
// return true;  
// }  
  
 @Override  
 public void onClick(View v) {  
 Toast.*makeText*(this, "buttonclicked", Toast.*LENGTH\_SHORT*).show();  
 if(v.equals(btnsub))  
 {  
 String sid=empID.getText().toString();  
 String sname=empName.getText().toString();  
 String sage=empAge.getText().toString();  
 String saddress=empAddress.getText().toString();  
 MyDatabase dat=new MyDatabase(this,MyDatabase.*DATABASE\_NAME*, null,1);  
 SQLiteDatabase database=dat.getWritableDatabase();  
 ContentValues cv= new ContentValues();  
 cv.put("id", sid);  
 cv.put("name", sname);  
 cv.put("age",sage );  
 cv.put("address",saddress);  
 database.insert("Employee", null, cv);database.close();  
 Toast.*makeText*(this, "Data Inserted successfully", Toast.*LENGTH\_SHORT*).show();  
 }  
 else if(v.equals(btnsearch))  
 {  
 Intent it=new Intent(this,RetrivalfromDatabase.class);  
 startActivity(it);  
 }  
 }  
}

**Activity\_retrivalfrom\_database.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=".RetrivalfromDatabase">  
  
 <TextView  
 android:layout\_width="fill\_parent"  
 android:layout\_height="wrap\_content"  
 android:textStyle="bold"  
 android:textSize="20dp"  
 android:textColor="@color/black"  
 android:text="Enter Employee id" />  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/txt\_empid"/>  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Search"  
 android:layout\_gravity="center"  
 android:id="@+id/txt\_search"/>  
 <TextView  
 android:layout\_width="fill\_parent"  
 android:layout\_height="wrap\_content"  
 android:gravity="center"  
 android:text="Text view"  
 android:id="@+id/txt\_display"/>  
  
</LinearLayout>

**RetrivalfromDatabase.java**

package com.example.database;  
  
import android.app.Activity;  
import android.database.Cursor;  
import android.database.sqlite.SQLiteDatabase;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
import android.widget.Toast;  
public class RetrivalfromDatabase extends Activity implements View.OnClickListener{  
 EditText txtempid;  
 Button btnsearch;  
 TextView txtdisplay;  
 public void onCreate(Bundle b)  
 {  
 super.onCreate(b);  
 setContentView(R.layout.*activity\_retrivalfrom\_database*);  
 txtempid=(EditText)findViewById(R.id.*txt\_empid*);  
 btnsearch=(Button)findViewById(R.id.*txt\_search*);  
 txtdisplay=(TextView)findViewById(R.id.*txt\_display*);  
 btnsearch.setOnClickListener(this);  
 }  
 @Override  
 public void onClick(View v) {  
// *TODO Auto-generated method stub* Toast.*makeText*(this, "Button clicked",Toast.*LENGTH\_SHORT*).show(); if(v.equals(btnsearch))  
 {  
 String eid=txtempid.getText().toString();  
 MyDatabase dat=new MyDatabase(this, MyDatabase.*DATABASE\_NAME*, null,1);  
 SQLiteDatabase database=dat.getReadableDatabase();  
 String[] columns=new String[]{"id","name","age ","address"};  
 String where="id=?";  
 String[] value= new String[] { eid.trim() };  
 Cursor cu=database.query(MyDatabase.*EMPLOYEE\_TABLE*, columns, where,value, null, null, null);  
 txtdisplay.setText("");  
 if(cu.moveToNext())  
 {  
 String id=cu.getString(0);  
 String name=cu.getString(1);  
 String age=cu.getString(2);  
 String address=cu.getString(3);  
 txtdisplay.append(id+ " " +name+ " "+age+ " "+address+"\n");  
 }  
 else  
 {  
 Toast.*makeText*(this, "No Id Exist",Toast.*LENGTH\_SHORT*).show();  
 }  
 }  
 }  
}

**Mydatabase.java**

package com.example.database;  
  
import android.content.Context;  
import android.database.sqlite.SQLiteDatabase;  
import android.database.sqlite.SQLiteDatabase.CursorFactory;  
import android.database.sqlite.SQLiteOpenHelper;  
class MyDatabase extends SQLiteOpenHelper  
{  
 public static String *DATABASE\_NAME*="Employee.db";  
 public static String *EMPLOYEE\_TABLE*="employee";  
  
 public MyDatabase(Context context, String name, CursorFactory factory, int version)  
 {  
 super(context, name, factory, version);  
 }  
  
 @Override  
 public void onCreate(SQLiteDatabase db) {  
 db.execSQL("create table employee (id TEXT,name TEXT,age TEXT,address TEXT)");  
 }  
  
 @Override  
 public void onUpgrade(SQLiteDatabase arg0, int arg1, int arg2) {  
 }  
}

**AndroidManifest.xml**

<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools">  
  
 <application  
 android:allowBackup="true"  
 android:dataExtractionRules="@xml/data\_extraction\_rules"  
 android:fullBackupContent="@xml/backup\_rules"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.DATABASE"  
 tools:targetApi="31">  
 <activity  
 android:name=".RetrivalfromDatabase"  
 android:exported="false">  
 <meta-data  
 android:name="android.app.lib\_name"  
 android:value="" />  
 </activity>  
 <activity  
 android:name=".MainActivity"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
  
 <meta-data  
 android:name="android.app.lib\_name"  
 android:value="" />  
 </activity>  
 </application>  
  
</manifest>

**JSON program lab-10**

Activity\_main.xml

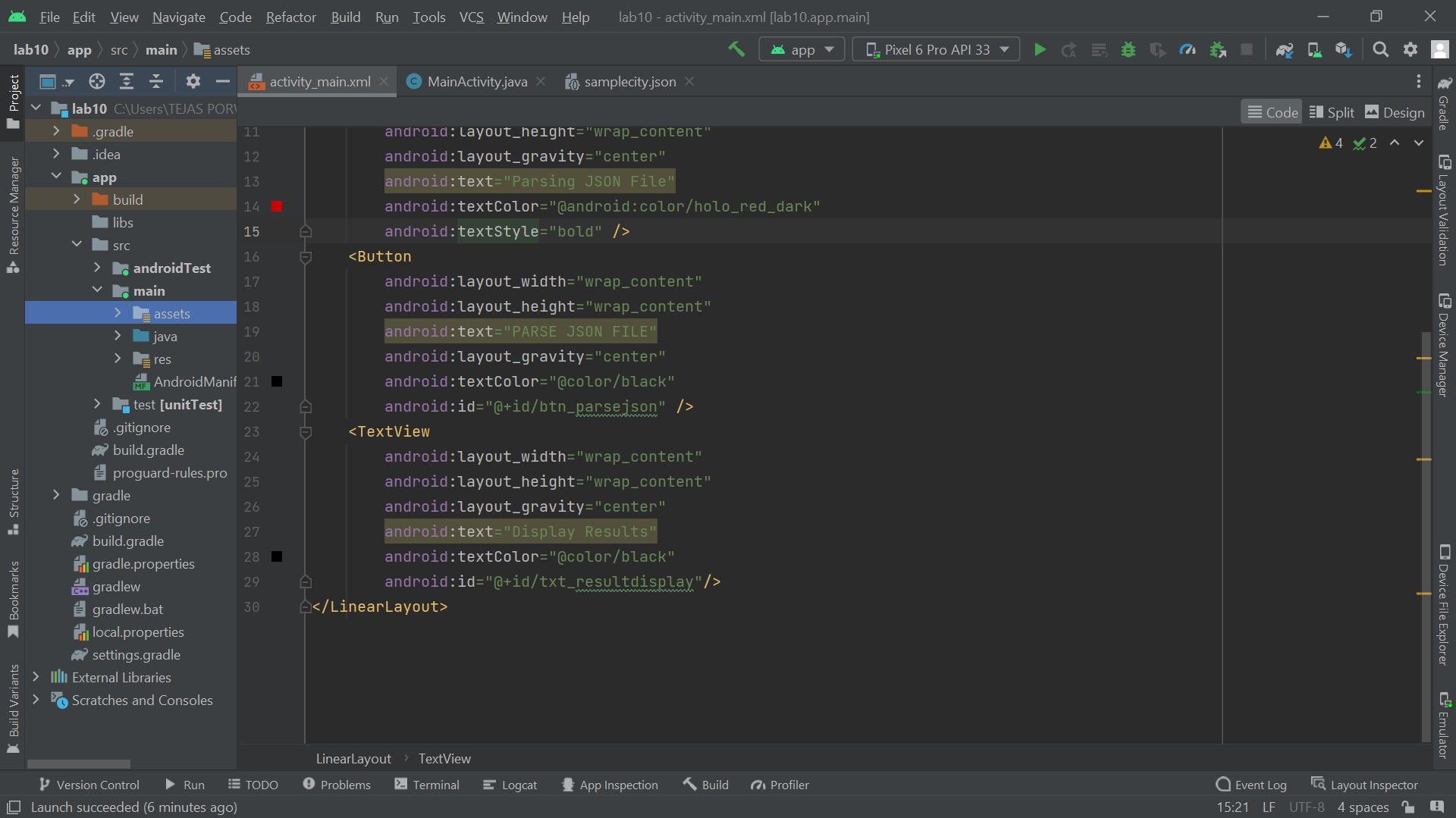
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 tools:context=".MainActivity">  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="Parsing JSON File"  
 android:textColor="@android:color/holo\_red\_dark"  
 android:textStyle="bold" />  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="PARSE JSON FILE"  
 android:layout\_gravity="center"  
 android:textColor="@color/black"  
 android:id="@+id/btn\_parsejson" />  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="Display Results"  
 android:textColor="@color/black"  
 android:id="@+id/txt\_resultdisplay"/>  
</LinearLayout>

Main\_Activity.java

package com.example.lab10;  
import android.app.Activity;  
import android.content.res.AssetManager;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.TextView;  
import org.json.JSONArray;  
import org.json.JSONObject;  
import java.io.InputStream;  
public class MainActivity extends Activity implements View.OnClickListener {  
 Button btnjson;  
 TextView txtresult;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 btnjson=findViewById(R.id.*btn\_parsejson*);  
 btnjson.setOnClickListener(this);  
 txtresult=findViewById(R.id.*txt\_resultdisplay*);  
 }  
 public void onClick(View v){  
 try {  
 InputStream is = getAssets().open("samplecity.json");  
 int size=is.available();  
 byte[] buffer=new byte[size];  
 is.read(buffer);  
 is.close();  
 String json=new String(buffer,"UTF-8");  
 JSONArray jsonArray=new JSONArray(json);  
 txtresult.setText("");  
 for(int i=0;i<jsonArray.length();i++){  
 JSONObject obj = jsonArray.getJSONObject(i);  
 txtresult.setText(txtresult.getText() + "\n Name: " + obj.getString("name")+ "\n");  
 txtresult.setText(txtresult.getText() + " Latitude: " + obj.getString("lat")+ "\n");  
 txtresult.setText(txtresult.getText() + " Longitude: " +obj.getString("long")+ "\n");  
 txtresult.setText(txtresult.getText() + " Temperature: " +obj.getString("temperature")+ "\n");  
 txtresult.setText(txtresult.getText() + " Humidity: " +obj.getString("humidity")+ "\n");  
 txtresult.setText(txtresult.getText() + "---------------------------- ");  
 }  
 }  
 catch (Exception e){  
 }  
 }  
}

**samplecity.json**

[  
 { "name": "Mysore ",  
 "lat": "12.295 ",  
 "long": "76.639 ",  
 "temperature":"22 ",  
 "humidity": "92 %"  
 },  
 { "name": "Bangalore",  
 "lat": "12.97165 ",  
 "long": "77.5946 ",  
 "temperature":"25 ",  
 "humidity": "74 %"  
 }  
]



**Lab-7**

**Write a program to create a service that will put a notification on the screen every 5 seconds.**

**Activity\_main.xml**

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:gravity="center" >  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Start Notification"  
 android:layout\_gravity="center"  
 android:id="@+id/btn\_start"/>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
  
 android:text="Stop Notification"  
 android:layout\_gravity="center"  
 android:id="@+id/btn\_stop"/>  
</LinearLayout>

**Android\_manifest.xml**

<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools" >  
  
 <application  
 android:allowBackup="true"  
 android:dataExtractionRules="@xml/data\_extraction\_rules"  
 android:fullBackupContent="@xml/backup\_rules"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.Notification"  
 tools:targetApi="31" >  
 <activity  
 android:name=".MainActivity"  
 android:exported="true" >  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
  
 <meta-data  
 android:name="android.app.lib\_name"  
 android:value="" />  
 </activity>  
 <service android:name="ServiceClass"></service>  
 </application>  
  
</manifest>

**MainActivity.java**

package com.example.lab7;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
  
public class MainActivity extends AppCompatActivity implements View.OnClickListener {  
 Button btnstart,btnstop;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
 btnstart=(Button)findViewById(R.id.btn\_start);  
 btnstart.setOnClickListener(this);  
 btnstop=(Button)findViewById(R.id.btn\_stop);  
 btnstop.setOnClickListener(this);  
 }  
  
 @Override  
 public void onClick(View v) {  
 if(v.equals(btnstart))  
 {  
 Intent it=new Intent(this,ServiceClass.class);  
 Bundle b=new Bundle();  
 b.putBoolean("stop", true);  
 it.putExtra("data", b);  
 startService(it);  
 }  
 else  
 {  
 Intent it=new Intent(this,ServiceClass.class);  
 stopService(it);  
 }  
 }  
}

**ServiceClass.java**

package com.example.lab7;  
  
import android.app.Notification;  
import android.app.NotificationManager;  
import android.app.PendingIntent;  
import android.app.Service;  
import android.content.Intent;  
import android.os.Bundle;  
import android.os.Handler;  
import android.os.IBinder;  
import android.os.Message;  
//import android.support.v4.app.NotificationCompat;  
import android.widget.Toast;  
import androidx.core.app.NotificationCompat;  
  
public class ServiceClass extends Service{  
 boolean  
 running=false;  
 MyThread thread;  
 public void onCreate()  
 {  
 super.onCreate();  
 Toast.*makeText*(getBaseContext(), "Service Created",Toast.*LENGTH\_LONG*).show();  
 running=true;  
 thread=new  
 MyThread();  
 thread.start();  
 }  
 public int onStartCommand(Intent intent, int flags,int startId)  
 {  
 super.onStartCommand(intent, flags, startId);  
 Toast.*makeText*(getBaseContext(), "Service started",  
 Toast.*LENGTH\_LONG*).show();  
 Bundle b=intent.getBundleExtra("data");  
 running=b.getBoolean("stop");  
 if(!thread.isAlive())  
 {  
 thread=new MyThread();  
 thread.start();  
 }  
 return Service.*START\_NOT\_STICKY*;  
 }  
 @Override  
 public IBinder onBind(Intent arg0) {  
// *TODO Auto-generated method* return null;  
 }  
 public void onDestroy()  
 {  
 running=false;  
 Toast.*makeText*(getBaseContext(), "Service stoped", Toast.*LENGTH\_LONG*).show();  
 super.onDestroy();  
 }  
 Handler hand=new Handler()  
 {  
 public void handleMessage(Message m)  
 {  
 NotificationManager manager=(NotificationManager)getSystemService(*NOTIFICATION\_SERVICE*);  
 NotificationCompat.Builder builder=new NotificationCompat.Builder(getBaseContext());  
 builder.setContentTitle("From Service");  
 builder.setContentText("Hai " +m.what);  
// builder.setSmallIcon(R.drawable.ic\_launcher);  
 builder.setContentIntent(PendingIntent.*getActivity*(getBaseContext(), 1,new Intent(getBaseContext(),MainActivity.class),Intent.*FILL\_IN\_ACTION*));  
 Notification nof=builder.build();  
 manager.notify(100, nof);  
 }  
 };  
 class MyThread extends Thread  
 {  
 public void run()  
 {  
 int i=0;  
 while(running)  
 {  
 try {  
 Thread.*sleep*(5000);  
 } catch (InterruptedException e) {  
// *TODO Auto-generated catch* e.printStackTrace();  
 }  
 hand.sendEmptyMessage(i++);  
 }  
 }  
 }  
}

**LAB-6**

**Create a program to receive the incoming SMS to the phone and put a notification on screen, on clicking the notification it must display sender number and message content on screen.**

**activity\_main.xml**

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:gravity="center">  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Sender Number"  
 android:paddingBottom="50px"  
 android:id="@+id/lbl\_number"/>  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Message content"  
 android:id="@+id/lbl\_message"/>  
</LinearLayout>

**MainActivity.java**

import android.os.Bundle;  
import android.app.Activity;  
import android.view.Menu;  
import android.widget.TextView;  
public class MainActivity extends Activity {  
 TextView lblnumber,lblmessage;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 lblnumber=(TextView)findViewById(R.id.*lbl\_number*);  
 lblmessage=(TextView)findViewById(R.id.*lbl\_message*);  
 Bundle b= getIntent().getBundleExtra("data");  
 if(b!=null)  
 {  
 String number=b.getString("number");  
 String content=b.getString("content");  
 lblnumber.setText(number);  
 lblmessage.setText(content);  
 }  
 }  
 @Override  
 public boolean onCreateOptionsMenu(Menu menu) {  
// Inflate the menu; this adds items to the action bar if it is present.  
 getMenuInflater().inflate(R.menu.*main*, menu);  
 return true;  
 }  
}

**MySmsReceiver.java**

import android.content.BroadcastReceiver;  
import android.content.Context;  
import android.content.Intent;  
import android.os.Bundle;  
import android.telephony.SmsMessage;  
public class MySmsReceiver extends BroadcastReceiver{  
 @Override  
 public void onReceive(Context arg0, Intent arg1) {  
// *TODO Auto-generated method stub* Object[] objmessages=(Object[])arg1.getExtras().get("pdus");  
 for(int i=0; i<objmessages.length;i++)  
 {  
 SmsMessage m=SmsMessage.*createFromPdu*((byte[])objmessages[i]);  
 Bundle b1=new Bundle();  
 b1.putString("number", m.getOriginatingAddress());  
 b1.putString("content", m.getMessageBody());  
 Intent it=new Intent(arg0, MainActivity.class);  
 it.putExtra("data", b1);  
 it.setFlags(Intent.*FLAG\_ACTIVITY\_NEW\_TASK*);arg0.startActivity(it);  
 break;  
 }  
 }  
}

**AndroidManifest.xml**

<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools">  
 <uses-permission android:name="android.permission.RECEIVE\_SMS"/>  
 <application  
 android:allowBackup="true"  
 android:dataExtractionRules="@xml/data\_extraction\_rules"  
 android:fullBackupContent="@xml/backup\_rules"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.MyApplication"  
 tools:targetApi="31">  
 <activity  
 android:name=".MainActivity"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
 </activity>  
 <receiver android:name="com.example.myapplication.MySmsReceiver"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.provider.Telephony.SMS\_RECEIVED"/>  
 </intent-filter>  
 </receiver>  
 </application>  
  
</manifest>

**Lab-**