1. Create a program in android that display dialog whether you want to close this application

*activity\_main.xml*

<**RelativeLayout 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:paddingLeft="@dimen/activity\_horizontal\_margin"  
 android:paddingRight="@dimen/activity\_horizontal\_margin"  
 android:paddingTop="@dimen/activity\_vertical\_margin"  
 android:paddingBottom="@dimen/activity\_vertical\_margin"**>  
  
 <**TextView  
 android:id="@+id/textView1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Close this app"  
 android:layout\_alignParentTop="true"  
 android:layout\_centerHorizontal="true"  
 android:textSize="30dp"** />  
  
</**RelativeLayout**>

*strings.xml*

<**resources**>  
 <**string name="app\_name"**>alertdialog</**string**>  
 <**string name="hello\_world"**>Hello world!</**string**>  
 <**string name="menu\_settings"**>Settings</**string**>  
 <**string name="dialog\_message"**>Welcome to Alert Dialog</**string**>  
 <**string name="dialog\_title"**>Javatpoint Alert Dialog</**string**>  
</**resources**>

*MainActivity.java*

**package** com.example.shajan\_lp.myapplication;  
import android.app.Dialog;  
import android.os.Bundle;  
import android.app.Activity;  
import android.app.AlertDialog;  
import android.content.DialogInterface;  
import android.view.Menu;  
import android.view.View;  
  
  
public class MainActivity extends Activity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
  
 AlertDialog.Builder builder = new AlertDialog.Builder(this);  
  
 builder.setMessage("Do you want to close this application ?")  
 .setCancelable(false)  
 .setPositiveButton("Yes", new DialogInterface.OnClickListener() {  
 public void onClick(DialogInterface dialog, int id) {  
 finish();  
 }  
 })  
 .setNegativeButton("No", new DialogInterface.OnClickListener() {  
 public void onClick(DialogInterface dialog, int id) {  
 // Action for 'NO' Button  
 dialog.cancel();  
 }  
 });  
 AlertDialog alert = builder.create();  
 //Setting the title manually  
 alert.setTitle("AlertDialogExample");  
 alert.show();  
 setContentView(R.layout.*activity\_main*);  
  
 }  
  
}

1. Write a program details about the invocation of life cycle methods of activity. display the content on the logcat.

*MainActivity.java*

**package** com.example.activitylifecycle;

**import** android.os.Bundle;

**import** android.app.Activity;

**import** android.util.Log;

**import** android.view.Menu;

**public** **class** MainActivity **extends** Activity {

    @Override

**protected** **void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

        setContentView(R.layout.activity\_main);

        Log.d("lifecycle","onCreate invoked");

    }

    @Override

**protected** **void** onStart() {

**super**.onStart();

         Log.d("lifecycle","onStart invoked");

    }

    @Override

**protected** **void** onResume() {

**super**.onResume();

         Log.d("lifecycle","onResume invoked");

    }

    @Override

**protected** **void** onPause() {

**super**.onPause();

         Log.d("lifecycle","onPause invoked");

    }

    @Override

**protected** **void** onStop() {

**super**.onStop();

         Log.d("lifecycle","onStop invoked");

    }

       @Override

**protected** **void** onRestart() {

**super**.onRestart();

         Log.d("lifecycle","onRestart invoked");

    }

    @Override

**protected** **void** onDestroy() {

**super**.onDestroy();

         Log.d("lifecycle","onDestroy invoked");

    }

}

# write a program to create a Context Menu

Android context menu appears when user press long click on the element. It is also known as floating menu.

*activity\_main.xml*

**<RelativeLayout** 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:paddingBottom="@dimen/activity\_vertical\_margin"

    android:paddingLeft="@dimen/activity\_horizontal\_margin"

    android:paddingRight="@dimen/activity\_horizontal\_margin"

    android:paddingTop="@dimen/activity\_vertical\_margin"

    tools:context=".MainActivity" **>**

**<ListView**

        android:id="@+id/listView1"

        android:layout\_width="match\_parent"

        android:layout\_height="wrap\_content"

        android:layout\_alignParentLeft="true"

        android:layout\_alignParentTop="true"

        android:layout\_marginLeft="66dp"

        android:layout\_marginTop="53dp" **>**

**</ListView>**

**</RelativeLayout>**

*MainActivity.java*

**package** com.javatpoint.contextmenu;

**import** android.os.Bundle;

**import** android.app.Activity;

**import** android.view.ContextMenu;

**import** android.view.ContextMenu.ContextMenuInfo;

**import** android.view.Menu;

**import** android.view.MenuItem;

**import** android.view.View;

**import** android.widget.AdapterView;

**import** android.widget.ArrayAdapter;

**import** android.widget.ListView;

**import** android.widget.Toast;

**public** **class** MainActivity **extends** Activity {

    ListView listView1;

    String contacts[]={"Ajay","Sachin","Sumit","Tarun","Yogesh"};

    @Override

**protected** **void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

        setContentView(R.layout.activity\_main);

        listView1=(ListView)findViewById(R.id.listView1);

        ArrayAdapter<String> adapter=**new** ArrayAdapter<String>(**this**,android.R.layout.simple\_list\_item\_1,contacts);

        listView1.setAdapter(adapter);

        // Register the ListView  for Context menu

        registerForContextMenu(listView1);

    }

    @Override

**public** **void** onCreateContextMenu(ContextMenu menu, View v, ContextMenuInfo menuInfo)

    {

**super**.onCreateContextMenu(menu, v, menuInfo);

            menu.setHeaderTitle("Select The Action");

            menu.add(0, v.getId(), 0, "Call");//groupId, itemId, order, title

            menu.add(0, v.getId(), 0, "SMS");

    }

    @Override

**public** **boolean** onContextItemSelected(MenuItem item){

**if**(item.getTitle()=="Call"){

                Toast.makeText(getApplicationContext(),"calling code",Toast.LENGTH\_LONG).show();

            }

**else** **if**(item.getTitle()=="SMS"){

                Toast.makeText(getApplicationContext(),"sending sms code",Toast.LENGTH\_LONG).show();

            }**else**{

**return** **false**;

            }

**return** **true**;

      }

    }

1. create a android application using implicit intent that displays a web page.

*File: activity\_main.xml*

**<RelativeLayout** xmlns:androclass="http://schemas.android.com/apk/res/android"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout\_width="match\_parent"

    android:layout\_height="match\_parent"

    tools:context=".MainActivity" **>**

**<EditText**

        android:id="@+id/editText1"

android:text="http://www.yahoo.com"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_alignParentTop="true"

        android:layout\_centerHorizontal="true"

        android:layout\_marginTop="44dp"

        android:ems="10" **/>**

**<Button**

        android:id="@+id/button1"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_below="@+id/editText1"

        android:layout\_centerHorizontal="true"

        android:layout\_marginTop="54dp"

        android:text="Visit" **/>**

**</RelativeLayout>**

*MainActivity.java*

**package** org.sssit.implicitintent;

**import** android.net.Uri;

**import** android.os.Bundle;

**import** android.app.Activity;

**import** android.content.Intent;

**import** android.view.View;

**import** android.view.View.OnClickListener;

**import** android.widget.Button;

**import** android.widget.EditText;

**public** **class** MainActivity **extends** Activity {

    @Override

**protected** **void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

        setContentView(R.layout.activity\_main);

**final** EditText editText1=(EditText)findViewById(R.id.editText1);

        Button button1=(Button)findViewById(R.id.button1);

        button1.setOnClickListener(**new** OnClickListener() {

            @Override

**public** **void** onClick(View arg0) {

                String url=editText1.getText().toString();

                Intent intent=**new** Intent(Intent.ACTION\_VIEW,Uri.parse(url));

                startActivity(intent);

            }

        });

    }

}

Explicit Intent

1. create a android app that calls another activity explicitly

**<RelativeLayout** xmlns:androclass="http://schemas.android.com/apk/res/android"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout\_width="match\_parent"

    android:layout\_height="match\_parent"

    tools:context=".MainActivity" **>**

**<Button**

        android:id="@+id/Button01"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_alignParentLeft="true"

        android:layout\_below="@+id/TextView01"

        android:layout\_marginLeft="65dp"

        android:layout\_marginTop="38dp"

        android:onClick="onClick"

        android:text="Call second activity" **/>**

**<TextView**

        android:id="@+id/TextView01"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_alignLeft="@+id/Button01"

        android:layout\_alignParentTop="true"

        android:layout\_marginLeft="18dp"

        android:layout\_marginTop="27dp"

        android:minHeight="60dip"

        android:text="First Activity"

        android:textSize="20sp" **/>**

**</RelativeLayout>**

*activitytwo\_main.xml*

**<RelativeLayout** xmlns:andro="http://schemas.android.com/apk/res/android"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout\_width="match\_parent"

    android:layout\_height="match\_parent"

    tools:context=".MainActivity" **>**

**<Button**

        android:id="@+id/Button01"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_alignParentLeft="true"

        android:layout\_below="@+id/TextView01"

        android:layout\_marginLeft="65dp"

        android:layout\_marginTop="38dp"

        android:onClick="onClick"

        android:text="Call First activity" **/>**

**<TextView**

        android:id="@+id/TextView01"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_alignLeft="@+id/Button01"

        android:layout\_alignParentTop="true"

        android:layout\_marginLeft="18dp"

        android:layout\_marginTop="27dp"

        android:minHeight="60dip"

        android:text="Second Activity"

        android:textSize="20sp" **/>**

**</RelativeLayout>**

*MainActivityOne.java*

**package** com.example.explicitintent2;

**import** android.os.Bundle;

**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.Toast;

**public** **class** ActivityOne **extends** Activity {

    /\*\* Called when the activity is first created. \*/

      @Override

**public** **void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

        setContentView(R.layout.activity\_main);

        Button button1=(Button)findViewById(R.id.Button01);

        button1.setOnClickListener(**new** OnClickListener(){

**public** **void** onClick(View view) {

          Intent i = **new** Intent(getApplicationContext(), ActivityTwo.**class**);

          i.putExtra("Value1", "Android By Javatpoint");

          i.putExtra("Value2", "Simple Tutorial");

          // Set the request code to any code you like, you can identify the

          // callback via this code

          startActivity(i);

         }

         });

      }

    }

*MainActivityTwo.java*

**package** com.example.explicitintent2;

**import** android.app.Activity;

**import** android.content.Intent;

**import** android.os.Bundle;

**import** android.view.View;

**import** android.view.View.OnClickListener;

**import** android.widget.Button;

**import** android.widget.EditText;

**import** android.widget.TextView;

**import** android.widget.Toast;

**public** **class** ActivityTwo **extends** Activity {

/\*\* Called when the activity is first created. \*/

  @Override

**public** **void** onCreate(Bundle bundle) {

**super**.onCreate(bundle);

    TextView tv=**new** TextView(**this**);

    tv.setText("second activity");

    setContentView(R.layout.activity\_two);

    Bundle extras = getIntent().getExtras();

    String value1 = extras.getString("Value1");

    String value2 = extras.getString("Value2");

    Toast.makeText(getApplicationContext(),"Values are:\n First value: "+value1+

         "\n Second Value: "+value2,Toast.LENGTH\_LONG).show();

    Button button1=(Button)findViewById(R.id.Button01);

    button1.setOnClickListener(**new** OnClickListener(){

**public** **void** onClick(View view) {

            Intent i = **new** Intent(getApplicationContext(), ActivityOne.**class**);

            startActivity(i);

          }

    });

  }

}

1. create a popup menu in android

*activity\_main.xml*

**<RelativeLayout** xmlns:androclass="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:paddingBottom="@dimen/activity\_vertical\_margin"

    android:paddingLeft="@dimen/activity\_horizontal\_margin"

    android:paddingRight="@dimen/activity\_horizontal\_margin"

    android:paddingTop="@dimen/activity\_vertical\_margin"

    tools:context=".MainActivity" **>**

**<Button**

        android:id="@+id/button1"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_alignParentLeft="true"

        android:layout\_alignParentTop="true"

        android:layout\_marginLeft="62dp"

        android:layout\_marginTop="50dp"

        android:text="Show Popup" **/>**

**</RelativeLayout>**

*poupup\_menu.xml*

**<menu** xmlns:androclass="http://schemas.android.com/apk/res/android" **>**

**<item**

        android:id="@+id/one"

        android:title="One"**/>**

**<item**

        android:id="@+id/two"

        android:title="Two"**/>**

**<item**

        android:id="@+id/three"

        android:title="Three"**/>**

**</menu>**

*MainActivity.java*

**package** com.javatpoint.popupmenu;

**import** android.os.Bundle;

**import** android.app.Activity;

**import** android.view.Menu;

**import** android.view.MenuItem;

**import** android.view.View;

**import** android.view.View.OnClickListener;

**import** android.widget.Button;

**import** android.widget.PopupMenu;

**import** android.widget.Toast;

**public** **class** MainActivity **extends** Activity {

Button button1;

         @Override

**protected** **void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

          setContentView(R.layout.activity\_main);

          button1 = (Button) findViewById(R.id.button1);

          button1.setOnClickListener(**new** OnClickListener() {

           @Override

**public** **void** onClick(View v) {

            //Creating the instance of PopupMenu

            PopupMenu popup = **new** PopupMenu(MainActivity.**this**, button1);

            //Inflating the Popup using xml file

            popup.getMenuInflater().inflate(R.menu.popup\_menu, popup.getMenu());

            //registering popup with OnMenuItemClickListener

            popup.setOnMenuItemClickListener(**new** PopupMenu.OnMenuItemClickListener() {

**public** **boolean** onMenuItemClick(MenuItem item) {

              Toast.makeText(MainActivity.**this**,"You Clicked : " + item.getTitle(),Toast.LENGTH\_SHORT).show();

**return** **true**;

             }

            });

            popup.show();//showing popup menu

           }

          });//closing the setOnClickListener method

         }

    }

1. Create an android program using datepicker widget in android.

activity\_main.xml

*File: activity\_main.xml*

**<RelativeLayout** xmlns:androclass="http://schemas.android.com/apk/res/android"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout\_width="match\_parent"

    android:layout\_height="match\_parent"

    tools:context=".MainActivity" **>**

**<TextView**

        android:id="@+id/textView1"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_alignParentLeft="true"

        android:layout\_alignParentTop="true"

        android:layout\_marginLeft="50dp"

        android:layout\_marginTop="36dp"

        android:text="Current Date:" **/>**

**<Button**

        android:id="@+id/button1"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_alignParentBottom="true"

        android:layout\_centerHorizontal="true"

        android:layout\_marginBottom="140dp"

        android:text="Change Date" **/>**

**<DatePicker**

        android:id="@+id/datePicker1"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_above="@+id/button1"

        android:layout\_centerHorizontal="true"

        android:layout\_marginBottom="30dp" **/>**

**</RelativeLayout>**

*File: MainActivity.java*

**package** com.example.datepicker2;

**import** android.os.Bundle;

**import** android.app.Activity;

**import** android.view.Menu;

**import** android.view.View;

**import** android.view.View.OnClickListener;

**import** android.widget.Button;

**import** android.widget.DatePicker;

**import** android.widget.TextView;

**import** android.widget.Toast;

**public** **class** MainActivity **extends** Activity {

    DatePicker picker;

    Button displayDate;

    TextView textview1;

    @Override

**protected** **void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

        setContentView(R.layout.activity\_main);

        textview1=(TextView)findViewById(R.id.textView1);

        picker=(DatePicker)findViewById(R.id.datePicker1);

        displayDate=(Button)findViewById(R.id.button1);

        textview1.setText(getCurrentDate());

        displayDate.setOnClickListener(**new** OnClickListener(){

            @Override

**public** **void** onClick(View view) {

                textview1.setText(getCurrentDate());

            }

        });

    }

**public** String getCurrentDate(){

        StringBuilder builder=**new** StringBuilder();

        builder.append("Current Date: ");

        builder.append((picker.getMonth() + 1)+"/");//month is 0 based

        builder.append(picker.getDayOfMonth()+"/");

        builder.append(picker.getYear());

**return** builder.toString();

    }

    @Override

**public** **boolean** onCreateOptionsMenu(Menu menu) {

        // Inflate the menu; this adds items to the action bar if it is present.

        getMenuInflater().inflate(R.menu.activity\_main, menu);

**return** **true**;

    }

}

1. Create a simple code to add and display the string content on spinner using sqlite database.

#### **activity\_main.xml**

*File: activity\_main.xml*

**<RelativeLayout** xmlns:androclass="http://schemas.android.com/apk/res/android"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout\_width="match\_parent"

    android:layout\_height="match\_parent"

    tools:context=".MainActivity" **>**

     <!-- Label -->

**<TextView**

        android:layout\_width="fill\_parent"

        android:layout\_height="wrap\_content"

        android:text="Add New Label"

        android:padding="8dip" **/>**

    <!-- Input Text -->

**<EditText** android:id="@+id/input\_label"

        android:layout\_width="fill\_parent"

        android:layout\_height="wrap\_content"

        android:layout\_marginLeft="8dip"

        android:layout\_marginRight="8dip"**/>**

**<Spinner**

        android:id="@+id/spinner"

        android:layout\_width="fill\_parent"

        android:layout\_height="wrap\_content"

        android:layout\_alignParentLeft="true"

        android:layout\_below="@+id/btn\_add"

        android:layout\_marginTop="23dp" **/>**

**<Button**

        android:id="@+id/btn\_add"

        android:layout\_width="wrap\_content"

        android:layout\_height="wrap\_content"

        android:layout\_below="@+id/input\_label"

        android:layout\_centerHorizontal="true"

        android:text="Add Item" **/>**

**</RelativeLayout>**

#### **Activity class**

*File: MainActivity.java*

**package** com.example.sqlitespinner;

**import** android.os.Bundle;

**import** android.app.Activity;

**import** android.view.Menu;

**import** java.util.List;

**import** android.content.Context;

**import** android.view.View;

**import** android.view.inputmethod.InputMethodManager;

**import** android.widget.AdapterView;

**import** android.widget.AdapterView.OnItemSelectedListener;

**import** android.widget.ArrayAdapter;

**import** android.widget.Button;

**import** android.widget.EditText;

**import** android.widget.Spinner;

**import** android.widget.Toast;

**public** **class** MainActivity **extends** Activity **implements** OnItemSelectedListener{

    Spinner spinner;

    Button btnAdd;

    EditText inputLabel;

    @Override

**public** **void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

        setContentView(R.layout.activity\_main);

        spinner = (Spinner) findViewById(R.id.spinner);

        btnAdd = (Button) findViewById(R.id.btn\_add);

        inputLabel = (EditText) findViewById(R.id.input\_label);

        spinner.setOnItemSelectedListener(**this**);

        // Loading spinner data from database

        loadSpinnerData();

        btnAdd.setOnClickListener(**new** View.OnClickListener() {

            @Override

**public** **void** onClick(View arg0) {

                String label = inputLabel.getText().toString();

**if** (label.trim().length() > 0) {

                    DatabaseHandler db = **new** DatabaseHandler(getApplicationContext());

                    db.insertLabel(label);

                    // making input filed text to blank

                    inputLabel.setText("");

                    // Hiding the keyboard

                    InputMethodManager imm = (InputMethodManager)

                          getSystemService(Context.INPUT\_METHOD\_SERVICE);

                    imm.hideSoftInputFromWindow(inputLabel.getWindowToken(), 0);

                    // loading spinner with newly added data

                    loadSpinnerData();

                } **else** {

                    Toast.makeText(getApplicationContext(), "Please enter label name",

                            Toast.LENGTH\_SHORT).show();

                }

            }

        });

    }

    /\*\*

     \* Function to load the spinner data from SQLite database

     \* \*/

**private** **void** loadSpinnerData() {

        DatabaseHandler db = **new** DatabaseHandler(getApplicationContext());

        List<String> labels = db.getAllLabels();

        // Creating adapter for spinner

        ArrayAdapter<String> dataAdapter = **new** ArrayAdapter<String>(**this**,android.R.layout.simple\_spinner\_item, labels);

        // Drop down layout style - list view with radio button

        dataAdapter.setDropDownViewResource(android.R.layout.simple\_spinner\_dropdown\_item);

        // attaching data adapter to spinner

        spinner.setAdapter(dataAdapter);

    }

    @Override

**public** **void** onItemSelected(AdapterView<?> parent, View view, **int** position,

**long** id) {

        // On selecting a spinner item

        String label = parent.getItemAtPosition(position).toString();

        // Showing selected spinner item

        Toast.makeText(parent.getContext(), "You selected: " + label,

                Toast.LENGTH\_LONG).show();

    }

    @Override

**public** **void** onNothingSelected(AdapterView<?> arg0) {

        // TODO Auto-generated method stub

    }

    @Override

**public** **boolean** onCreateOptionsMenu(Menu menu) {

        // Inflate the menu; this adds items to the action bar if it is present.

        getMenuInflater().inflate(R.menu.activity\_main, menu);

**return** **true**;

    }

}

*File: DatabaseHandler.java*

**package** com.example.sqlitespinner2;

**import** java.util.ArrayList;

**import** java.util.List;

**import** android.content.ContentValues;

**import** android.content.Context;

**import** android.database.Cursor;

**import** android.database.sqlite.SQLiteDatabase;

**import** android.database.sqlite.SQLiteOpenHelper;

**public** **class** DatabaseHandler **extends** SQLiteOpenHelper {

**private** **static** **final** **int** DATABASE\_VERSION = 1;

**private** **static** **final** String DATABASE\_NAME = "spinnerExample";

**private** **static** **final** String TABLE\_NAME = "labels";

**private** **static** **final** String COLUMN\_ID = "id";

**private** **static** **final** String COLUMN\_NAME = "name";

**public** DatabaseHandler(Context context) {

**super**(context, DATABASE\_NAME, **null**, DATABASE\_VERSION);

    }

    // Creating Tables

    @Override

**public** **void** onCreate(SQLiteDatabase db) {

        // Category table create query

        String CREATE\_ITEM\_TABLE = "CREATE TABLE " + TABLE\_NAME + "("

                + COLUMN\_ID + " INTEGER PRIMARY KEY," + COLUMN\_NAME + " TEXT)";

        db.execSQL(CREATE\_ITEM\_TABLE);

    }

    // Upgrading database

    @Override

**public** **void** onUpgrade(SQLiteDatabase db, **int** oldVersion, **int** newVersion) {

        // Drop older table if existed

        db.execSQL("DROP TABLE IF EXISTS " + TABLE\_NAME);

        // Create tables again

        onCreate(db);

    }

    /\*\*

     \* Inserting new lable into lables table

     \* \*/

**public** **void** insertLabel(String label){

        SQLiteDatabase db = **this**.getWritableDatabase();

        ContentValues values = **new** ContentValues();

        values.put(COLUMN\_NAME, label);//column name, column value

        // Inserting Row

        db.insert(TABLE\_NAME, **null**, values);//tableName, nullColumnHack, CotentValues

        db.close(); // Closing database connection

    }

    /\*\*

     \* Getting all labels

     \* returns list of labels

     \* \*/

**public** List<String> getAllLabels(){

        List<String> list = **new** ArrayList<String>();

        // Select All Query

        String selectQuery = "SELECT  \* FROM " + TABLE\_NAME;

        SQLiteDatabase db = **this**.getReadableDatabase();

        Cursor cursor = db.rawQuery(selectQuery, **null**);//selectQuery,selectedArguments

        // looping through all rows and adding to list

**if** (cursor.moveToFirst()) {

**do** {

                list.add(cursor.getString(1));//adding 2nd column data

            } **while** (cursor.moveToNext());

        }

        // closing connection

        cursor.close();

        db.close();

        // returning lables

**return** list;

    }

}

1. Create a application to store and read data

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

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

**xmlns:tools="http://schemas.android.com/tools"**

**android:id="@+id/activity\_main"**

**android:layout\_width="match\_parent"**

**android:layout\_height="match\_parent"**

**android:paddingBottom="@dimen/activity\_vertical\_margin"**

**android:paddingLeft="@dimen/activity\_horizontal\_margin"**

**android:paddingRight="@dimen/activity\_horizontal\_margin"**

**android:paddingTop="@dimen/activity\_vertical\_margin"**

**tools:context="com.workshop.myapplication.MainActivity"**>

<**LinearLayout**

**android:layout\_width="match\_parent"**

**android:layout\_height="600dp"**

**android:orientation="vertical"**

**android:id="@+id/datLayout"**>

</**LinearLayout**>

</**RelativeLayout**>

**package** com.workshop.myapplication;

**import** android.app.ActionBar;

**import** android.database.Cursor;

**import** android.database.sqlite.SQLiteDatabase;

**import** android.support.v7.app.AppCompatActivity;

**import** android.os.Bundle;

**import** android.view.ViewGroup;

**import** android.widget.LinearLayout;

**import** android.widget.TextView;

**public class** MainActivity **extends** AppCompatActivity {

@Override

**protected void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

setContentView(R.layout.***activity\_main***);

SQLiteDatabase db=**this**.openOrCreateDatabase(**"mydb"**,***MODE\_PRIVATE*** ,**null**);

db.execSQL(**"CREATE TABLE IF NOT EXISTS data(name VARCHAR, age INT(3));"**);

**for**(**int** i=1;i<3;i++)

db.execSQL(**"INSERT INTO data(name, age)VALUES"**+**"('SNGCEMCA'"**+**","**+String.*valueOf*(i)+**");"** );

Cursor c=db.rawQuery(**"select \* FROM data"**,**null**);

LinearLayout datLayout=(LinearLayout)findViewById(R.id.***datLayout***);

**while**(c.moveToNext()) {

String Name = c.getString(0);

**int** Age = c.getInt(1);

LinearLayout viewContainer= **new** LinearLayout(**this**.getApplicationContext());

viewContainer.setLayoutParams(**new** LinearLayout.LayoutParams(ViewGroup.LayoutParams.***MATCH\_PARENT***, ViewGroup.LayoutParams.***WRAP\_CONTENT***));

viewContainer.setOrientation(LinearLayout.***HORIZONTAL***);

TextView nameView = **new** TextView(**this**);

nameView.setText(Name);

TextView AgeView = **new** TextView(**this**);

AgeView.setText(String.*valueOf*(Age));

viewContainer.addView(nameView);

viewContainer.addView(AgeView);

datLayout.addView(viewContainer.getRootView());

}

}

}

**Application development**

1. create an Android application which will query Android contacts content provider to retrieve the contacts available in the phone and list those contacts in a listview with various details such as name, mobile number, home number, work email id, photo etc

things to do

* Open Project Explorer by Clicking “Window -> Show View -> Project Explorer”
* Right click this project
* Then from popup window, Click “Android Tools -> Add Support Library “

**Create a new folder namely “drawable” under the filder “res”**

**Download the given below file to res/drawable folder**

http://wptrafficanalyzer.in/blog/wp-content/plugins/download-manager/file-type-icons/png.png

**A Blank Transparent Image**0.18 KB

[**Download Image**](http://wptrafficanalyzer.in/blog/?wpdmdl=9257)

**/strings.xml**

|  |
| --- |
| <resources>      <string name="app\_name">ContactsContentProvider</string>      <string name="hello\_world">Hello world!</string>      <string name="menu\_settings">Settings</string>      <string name="title\_activity\_main">Contacts Content Provider</string>  </resources> |

**activity\_main.xml**

|  |
| --- |
| <RelativeLayout 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" >        <ListView          android:id="@+id/lst\_contacts"          android:layout\_width="wrap\_content"          android:layout\_height="wrap\_content" />    </RelativeLayout> |

**lv\_layout.xml**

|  |
| --- |
| <?xml version="1.0" encoding="utf-8"?>  <RelativeLayout xmlns:android="<http://schemas.android.com/apk/res/android>"      android:layout\_width="match\_parent"      android:layout\_height="match\_parent" >        <TextView          android:id="@+id/tv\_name"          android:layout\_width="wrap\_content"          android:layout\_height="wrap\_content"          android:layout\_centerHorizontal="true"          android:textSize="20dp"          android:textStyle="bold" />        <ImageView          android:id="@+id/iv\_photo"          android:layout\_width="wrap\_content"          android:layout\_height="wrap\_content"          android:layout\_below="@id/tv\_name"          android:layout\_centerHorizontal="true"          android:padding="5dp" />        <TextView          android:id="@+id/tv\_details"          android:layout\_width="wrap\_content"          android:layout\_height="wrap\_content"          android:layout\_below="@id/iv\_photo"  />  </RelativeLayout> |

**styles.xml (res/values/styles.xml)**

|  |
| --- |
| <resources>      <style name="AppTheme" parent="android:Theme" />  </resources> |

**Update the file res/values-v11/styles.xml**

<resources>

    <style name="AppTheme" parent="android:Theme.Holo" />

</resources>

**update the file res/values-v14/styles.xml**

<resources>

    <style name="AppTheme" parent="android:Theme.Holo" />

</resources>

**Update the class MainActivity in the file src/in/wptrafficanalyzer/listviewcontacts/MainActivity.java**

|  |
| --- |
| package in.wptrafficanalzer.listviewcontacts;    import java.io.File;  import java.io.FileOutputStream;    import android.app.Activity;  import android.database.Cursor;  import android.database.MatrixCursor;  import android.graphics.Bitmap;  import android.graphics.BitmapFactory;  import android.net.Uri;  import android.os.AsyncTask;  import android.os.Bundle;  import android.provider.ContactsContract;  import android.support.v4.widget.SimpleCursorAdapter;  import android.view.Menu;  import android.widget.ListView;    public class MainActivity extends Activity {        SimpleCursorAdapter mAdapter;      MatrixCursor mMatrixCursor;        @Override      public void onCreate(Bundle savedInstanceState) {          super.onCreate(savedInstanceState);          setContentView(R.layout.activity\_main);            // The contacts from the contacts content provider is stored in this cursor          mMatrixCursor = new MatrixCursor(new String[] { "\_id","name","photo","details"} );            // Adapter to set data in the listview          mAdapter = new SimpleCursorAdapter(getBaseContext(),              R.layout.lv\_layout,              null,              new String[] { "name","photo","details"},              new int[] { R.id.tv\_name,R.id.iv\_photo,R.id.tv\_details}, 0);            // Getting reference to listview          ListView lstContacts = (ListView) findViewById(R.id.lst\_contacts);            // Setting the adapter to listview          lstContacts.setAdapter(mAdapter);            // Creating an AsyncTask object to retrieve and load listview with contacts          ListViewContactsLoader listViewContactsLoader = new ListViewContactsLoader();            // Starting the AsyncTask process to retrieve and load listview with contacts          listViewContactsLoader.execute();      }        /\*\* An AsyncTask class to retrieve and load listview with contacts \*/      private class ListViewContactsLoader extends AsyncTask<Void, Void, Cursor>{            @Override          protected Cursor doInBackground(Void... params) {              Uri contactsUri = ContactsContract.Contacts.CONTENT\_URI;                // Querying the table ContactsContract.Contacts to retrieve all the contacts              Cursor contactsCursor = getContentResolver().query(contactsUri, null, null, null,              ContactsContract.Contacts.DISPLAY\_NAME + " ASC ");                if(contactsCursor.moveToFirst()){                  do{                      long contactId = contactsCursor.getLong(contactsCursor.getColumnIndex("\_ID"));                        Uri dataUri = ContactsContract.Data.CONTENT\_URI;                        // Querying the table ContactsContract.Data to retrieve individual items like                      // home phone, mobile phone, work email etc corresponding to each contact                      Cursor dataCursor = getContentResolver().query(dataUri, null,                                          ContactsContract.Data.CONTACT\_ID + "=" + contactId,                                          null, null);                        String displayName="";                      String nickName="";                      String homePhone="";                      String mobilePhone="";                      String workPhone="";                      String photoPath="" + R.drawable.blank;                      byte[] photoByte=null;                      String homeEmail="";                      String workEmail="";                      String companyName="";                      String title="";                        if(dataCursor.moveToFirst()){                          // Getting Display Name                          displayName = dataCursor.getString(dataCursor.getColumnIndex(ContactsContract.Data.DISPLAY\_NAME ));                          do{                                // Getting NickName                              if(dataCursor.getString(dataCursor.getColumnIndex("mimetype")).equals(ContactsContract.CommonDataKinds.Nickname.CONTENT\_ITEM\_TYPE))                                  nickName = dataCursor.getString(dataCursor.getColumnIndex("data1"));                                // Getting Phone numbers                              if(dataCursor.getString(dataCursor.getColumnIndex("mimetype")).equals(ContactsContract.CommonDataKinds.Phone.CONTENT\_ITEM\_TYPE)){                                  switch(dataCursor.getInt(dataCursor.getColumnIndex("data2"))){                                      case ContactsContract.CommonDataKinds.Phone.TYPE\_HOME :                                          homePhone = dataCursor.getString(dataCursor.getColumnIndex("data1"));                                          break;                                      case ContactsContract.CommonDataKinds.Phone.TYPE\_MOBILE :                                          mobilePhone = dataCursor.getString(dataCursor.getColumnIndex("data1"));                                          break;                                      case ContactsContract.CommonDataKinds.Phone.TYPE\_WORK :                                          workPhone = dataCursor.getString(dataCursor.getColumnIndex("data1"));                                          break;                                  }                              }                                // Getting EMails                              if(dataCursor.getString(dataCursor.getColumnIndex("mimetype")).equals(ContactsContract.CommonDataKinds.Email.CONTENT\_ITEM\_TYPE ) ) {                                  switch(dataCursor.getInt(dataCursor.getColumnIndex("data2"))){                                      case ContactsContract.CommonDataKinds.Email.TYPE\_HOME :                                          homeEmail = dataCursor.getString(dataCursor.getColumnIndex("data1"));                                          break;                                      case ContactsContract.CommonDataKinds.Email.TYPE\_WORK :                                          workEmail = dataCursor.getString(dataCursor.getColumnIndex("data1"));                                          break;                                  }                              }                                // Getting Organization details                              if(dataCursor.getString(dataCursor.getColumnIndex("mimetype")).equals(ContactsContract.CommonDataKinds.Organization.CONTENT\_ITEM\_TYPE)){                                  companyName = dataCursor.getString(dataCursor.getColumnIndex("data1"));                                  title = dataCursor.getString(dataCursor.getColumnIndex("data4"));                              }                                // Getting Photo                              if(dataCursor.getString(dataCursor.getColumnIndex("mimetype")).equals(ContactsContract.CommonDataKinds.Photo.CONTENT\_ITEM\_TYPE)){                                  photoByte = dataCursor.getBlob(dataCursor.getColumnIndex("data15"));                                    if(photoByte != null) {                                      Bitmap bitmap = BitmapFactory.decodeByteArray(photoByte, 0, photoByte.length);                                        // Getting Caching directory                                      File cacheDirectory = getBaseContext().getCacheDir();                                        // Temporary file to store the contact image                                      File tmpFile = new File(cacheDirectory.getPath() + "/wpta\_"+contactId+".png");                                        // The FileOutputStream to the temporary file                                      try {                                          FileOutputStream fOutStream = new FileOutputStream(tmpFile);                                            // Writing the bitmap to the temporary file as png file                                          bitmap.compress(Bitmap.CompressFormat.PNG,100, fOutStream);                                            // Flush the FileOutputStream                                          fOutStream.flush();                                            //Close the FileOutputStream                                          fOutStream.close();                                        } catch (Exception e) {                                          e.printStackTrace();                                      }                                      photoPath = tmpFile.getPath();                                  }                              }                          }while(dataCursor.moveToNext());                          String details = "";                            // Concatenating various information to single string                          if(homePhone != null && !homePhone.equals("") )                              details = "HomePhone : " + homePhone + "\n";                          if(mobilePhone != null && !mobilePhone.equals("") )                              details += "MobilePhone : " + mobilePhone + "\n";                          if(workPhone != null && !workPhone.equals("") )                              details += "WorkPhone : " + workPhone + "\n";                          if(nickName != null && !nickName.equals("") )                              details += "NickName : " + nickName + "\n";                          if(homeEmail != null && !homeEmail.equals("") )                              details += "HomeEmail : " + homeEmail + "\n";                          if(workEmail != null && !workEmail.equals("") )                              details += "WorkEmail : " + workEmail + "\n";                          if(companyName != null && !companyName.equals("") )                              details += "CompanyName : " + companyName + "\n";                          if(title != null && !title.equals("") )                              details += "Title : " + title + "\n";                            // Adding id, display name, path to photo and other details to cursor                          mMatrixCursor.addRow(new Object[]{ Long.toString(contactId),displayName,photoPath,details});                      }                  }while(contactsCursor.moveToNext());              }              return mMatrixCursor;          }            @Override          protected void onPostExecute(Cursor result) {              // Setting the cursor containing contacts to listview              mAdapter.swapCursor(result);          }      }        @Override      public boolean onCreateOptionsMenu(Menu menu) {          getMenuInflater().inflate(R.menu.activity\_main, menu);          return true;      }  } |

**Update the file AndroidManifest.xml**

|  |
| --- |
| <manifest xmlns:android="<http://schemas.android.com/apk/res/android>"      package="in.wptrafficanalzer.listviewcontacts"      android:versionCode="1"      android:versionName="1.0" >        <uses-sdk          android:minSdkVersion="5"          android:targetSdkVersion="15" />        <uses-permission           android:name="android.permission.READ\_CONTACTS" />        <application          android:icon="@drawable/ic\_launcher"          android:label="@string/app\_name"          android:theme="@style/AppTheme" >          <activity              android:name=".MainActivity"              android:label="@string/title\_activity\_main" >              <intent-filter>                  <action android:name="android.intent.action.MAIN" />                  <category android:name="android.intent.category.LAUNCHER" />              </intent-filter>          </activity>      </application>  </manifest> |