Practical list-3

Practical :- 1

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:id="@+id/tv1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="@string/eid"
        android:textSize="18sp" />

    <EditText
        android:id="@+id/edt1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="textEmailAddress" />

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/tv2"
        android:text="@string/pwd"
        android:textSize="18dp"/>

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/edt2"
        android:inputType="textPassword"/>

    <CheckBox
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/chb1"
        android:text="@string/rm"
        android:textSize="18dp"/>

    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```
        android:id="@+id/btn1"
        android:text="@string/loginn"
        android:textSize="18dp"/>
</LinearLayout>
```

MainActivity.java

```
package com.example.practical_list_3_1;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

import java.util.Collections;

public class MainActivity extends AppCompatActivity {

    EditText EDT1,EDT2;
    TextView TV1,TV2;
    Button BTN1;
    CheckBox CHB1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        controlIns();
        eventHandler();
    }

    private void controlIns()
    {
        EDT1=findViewById(R.id.edt1);
        EDT2=findViewById(R.id.edt2);
        TV1=findViewById(R.id.tv1);
        TV2=findViewById(R.id.tv2);
        BTN1=findViewById(R.id.btn1);
        CHB1=(CheckBox) findViewById(R.id.chb1);
    }

    private void eventHandler()
    {
        BTN1.setOnClickListener(new View.OnClickListener() {
```

```
            @Override
            public void onClick(View v) {
                if(CHB1.isChecked())
                {
                    String email_id=EDT1.getText().toString();
                    String password=EDT2.getText().toString();

                    SharedPreferences spf=getSharedPreferences("myKey",MODE_PRIVATE);
                    SharedPreferences.Editor editor=spf.edit();
                    editor.putString("val1",email_id);
                    editor.apply();
                    Intent it=new Intent(MainActivity.this,Second_Activity.class);
                    startActivity(it);
                }
                else
                {
                    Intent it=new Intent(MainActivity.this,Second_Activity.class);
                    startActivity(it);
                }
            }
        });
    }
}
```

activity_second.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=".Second_Activity">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/tv4"
        android:textSize="18dp"/>

</LinearLayout>
```

Second_Activity.java

```
package com.example.practical_list_3_1;

import androidx.appcompat.app.AppCompatActivity;

import android.content.SharedPreferences;
```

```
import android.os.Bundle;
import android.widget.TextView;
import android.widget.Toast;

public class Second_Activity extends AppCompatActivity {

    TextView TV4;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second_);
        controlIns();
    }
    private void controlIns() {
        TV4 = findViewById(R.id.tv4);

        SharedPreferences spf = getSharedPreferences("myKey", MODE_PRIVATE);
        if (spf.contains("val1"))
        {
            TV4.setText("Welcome " + spf.getString("val1",""));
        }
        else
        {
            Toast.makeText(getApplicationContext(),"No",Toast.LENGTH_LONG).show();
        }

    }
}
```

Practical :- 2

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">

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/edt1"
        android:hint="Date..."/>

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```
        android:id="@+id/edt2"
        android:hint="Time"/>

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/edt3"
        android:lines="3"
        android:hint="Task Description..."/>

    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/btn1"
        android:text="Save"/>

</LinearLayout>
```

MainActivity.java

```
package com.example.practical_list_3_2;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

    EditText EDT1,EDT2,EDT3;
    Button BTN1;
    DatabaseHalper dh=new DatabaseHalper(this);
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        controlIns();
        eventHandler();
    }

    private void controlIns()
    {
        EDT1=findViewById(R.id.edt1);
        EDT2=findViewById(R.id.edt2);
        EDT3=findViewById(R.id.edt3);
        BTN1=findViewById(R.id.btn1);
    }

    private void eventHandler()
```

```
    {
        BTN1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                dh.addTask(new
Task(EDT1.getText().toString(),EDT2.getText().toString(),EDT3.getText().toString()));

                Intent it=new Intent(MainActivity.this,activity_2.class);
                startActivity(it);
            }
        });
    }
}
```

activity_2.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=".activity_2">

    <ListView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/lv1"/>

</LinearLayout>
```

activity_2.java

```
package com.example.practical_list_3_2;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.ContextMenu;
import android.view.MenuItem;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ListView;

import java.util.ArrayList;
import java.util.PrimitiveIterator;
```

```
public class activity_2 extends AppCompatActivity {

    ListView LV1;
    ArrayList<String> tasks;
    ArrayAdapter adp;
    DatabaseHalper dh;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_2);
        controlIns();
    }

    private void controlIns()
    {
        LV1=findViewById(R.id.lv1);
    }

    private void viewData()
    {
        tasks=dh.getTasks();
        adp=new ArrayAdapter(getApplicationContext(),
android.R.layout.simple_list_item_1);
        LV1.setAdapter(adp);
        registerForContextMenu(LV1);
    }

    public void onCreateContextMenu(ContextMenu menu, View v,
ContextMenu.ContextMenuInfo menuInfo)
    {
        super.onCreateContextMenu(menu,v,menuInfo);
        menu.setHeaderTitle("Select Operation");
        menu.add(0,v.getId(),0,"View Task");
    }

    public boolean onContextItemSelected(@NonNull MenuItem item)
    {
        if (item.getTitle()=="View Task") {
            String ID=GetID(item);
            Task task=dh.getDetails(ID);
            Intent i=new Intent(getApplicationContext(),activity_2.class);
            i.putExtra("Date",task.getDate());
            i.putExtra("Time",task.getTime());
            i.putExtra("Desc",task.getDescription());
            startActivity(i);
        }
        return true;
    }

    private String GetID(MenuItem item) {
        AdapterView.AdapterContextMenuInfo
menuInfo=(AdapterView.AdapterContextMenuInfo)item.getMenuInfo();
        int Position=menuInfo.position;
```

```
        String selectedItems=adp.getItem(Position).toString();
        String[] selectedColumn=selectedItems.split(",");
        String Id=selectedColumn[0];
        return Id;
    }
}
```

activity_3.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=".activity_3">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/tv1"/>

</LinearLayout>
```

activity_3.java

```
package com.example.practical_list_3_2;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;

public class activity_3 extends AppCompatActivity {

    TextView TV1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_3);
        controlIns();
    }

    private void controlIns()
    {
        TV1=findViewById(R.id.tv1);

        Intent it=this.getIntent();
```

```
        TV1.setText(it.getExtras().getString("Date") + " " +
                it.getExtras().getString("Time") + " " +
                it.getExtras().getString("Desc"));
    }
}
```

DatabaseHalper.java

```
package com.example.practical_list_3_2;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import android.util.Log;

import androidx.annotation.Nullable;

import java.util.ArrayList;

public class DatabaseHalper extends SQLiteOpenHelper {
    private static final int VERSION=1;
    public static final String DATABASE_NAME="TMS";
    public static final String TABLE_NAME="task";

    public static final String ID="id";
    public static final String DATE="date";
    public static final String TIME="time";
    public static final String DESCRIPTION="description";

    public DatabaseHalper(@Nullable Context context) {
        super(context, DATABASE_NAME,null,VERSION);
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
        String query="create table " + TABLE_NAME + "( " + ID + " integer primary key
autoincrement," + DATE + " text," + TIME + " text," + DESCRIPTION + " text )";
        db.execSQL(query);
        Log.d("Hii","DB Created");
    }

    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
        //String query="drop table if exists " + TABLE_NAME;
        //db.execSQL(query);
        //onCreate(db);

    }

    public void addTask(Task task)
```

```
    {
        SQLiteDatabase db=getWritableDatabase();
        ContentValues cv=new ContentValues();
        cv.put(DATE,task.getDate());
        cv.put(TIME,task.getTime());
        cv.put(DESCRIPTION,task.getDescription());
        db.insert(TABLE_NAME,null,cv);
    }

    public ArrayList<String> getTasks()
    {
        ArrayList<String>taskList=new ArrayList<String>();

        String query="select " + DATE+ " from "+TABLE_NAME;

        SQLiteDatabase db=this.getWritableDatabase();
        Cursor cursor=db.rawQuery(query,null);

        if(cursor.moveToFirst())
        {
            do{
                taskList.add(cursor.getString(0));
            }while(cursor.moveToNext());
        }
        return taskList;
    }

    Task getDetails(String ID){
        SQLiteDatabase db=this.getWritableDatabase();

        Cursor c= db.query(TABLE_NAME,
                new String[]{ID,DATE,TIME,DESCRIPTION},
                ID+"=?",
                new String[]{String.valueOf(ID)},
                null,null,null);

        if(c!=null)
            c.moveToFirst();
        Task t=new
Task((c.getInt(0)),(c.getString(1)),(c.getString(2)),(c.getString(3)));
        return t;
    }

    Task getTask(int id) {
        SQLiteDatabase db = this.getReadableDatabase();

        Cursor cursor = db.query(TABLE_NAME, new String[] { ID,
                        DATE, TIME,DESCRIPTION}, ID+ "=?",
                new String[] { String.valueOf(id) }, null, null, null, null);
        if (cursor != null)
            cursor.moveToFirst();

        Task t = new Task(Integer.parseInt(cursor.getString(0)),
                cursor.getString(1), cursor.getString(2),cursor.getString(3));
        return t;
```

```
    }
}
```

Task.java

```
package com.example.practical_list_3_2;

public class Task {
    int id;
    String date;
    String time;
    String description;

    public Task(int id, String date, String time, String description) {
        this.id = id;
        this.date = date;
        this.time = time;
        this.description = description;
    }

    public Task() {

    }

    public Task(int id) {
        this.id = id;
    }

    public Task(String date, String time, String description) {
        this.date = date;
        this.time = time;
        this.description = description;
    }

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    public String getDate() {
        return date;
    }

    public void setDate(String date) {
        this.date = date;
    }

    public String getTime() {
        return time;
```

```
    }

    public void setTime(String time) {
        this.time = time;
    }

    public String getDescription() {
        return description;
    }

    public void setDescription(String description) {
        this.description = description;
    }
}
```

Practical :- 3

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">

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/edt1"/>

    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/btn1"
        android:text="Save"/>

</LinearLayout>
```

MainActivity.java

```
package com.example.practical_list_3_3;

import androidx.appcompat.app.AppCompatActivity;
```

```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.OutputStreamWriter;

public class MainActivity extends AppCompatActivity {

    EditText EDT1;
    Button BTN1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        controlIns();
        eventHandler();
    }

    private void controlIns()
    {
        EDT1=findViewById(R.id.edt1);
        BTN1=findViewById(R.id.btn1);
    }

    private void eventHandler()
    {
        BTN1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String ip=EDT1.getText().toString();

                try {
                    FileOutputStream
fos=openFileOutput("MyFirstFile.txt",MODE_APPEND);
                    OutputStreamWriter writer=new OutputStreamWriter(fos);

                    writer.write(ip);
                    writer.flush();
                    writer.close();
                    Toast.makeText(getApplicationContext(),"Data
save...",Toast.LENGTH_LONG).show();
                } catch (FileNotFoundException e) {
                    e.printStackTrace();
                } catch (IOException e) {
                    e.printStackTrace();
                }
            }
        });
```

```
    }
}
```

Practical :- 4

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">

    <ListView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/lv1"/>

</LinearLayout>
```

MainActivity.java

```
package com.example.practical_list_3_4;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;

import android.Manifest;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.database.Cursor;
import android.database.MatrixCursor;
import android.net.Uri;
import android.os.Bundle;
import android.provider.ContactsContract;
import android.util.Log;
import android.view.ContextMenu;
import android.view.MenuItem;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ListView;
import android.widget.SimpleCursorAdapter;

public class MainActivity extends AppCompatActivity {
```

```
    ListView LV1;
    SimpleCursorAdapter adapter;
    MatrixCursor matrixCursor;
    Cursor contactCursor;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        controlIns();
    }

    protected void controlIns()
    {
        LV1=findViewById(R.id.lv1);

        if (ActivityCompat.checkSelfPermission(this,
Manifest.permission.READ_CONTACTS) != PackageManager.PERMISSION_GRANTED)
        {
            ActivityCompat.requestPermissions(this, new
String[]{Manifest.permission.READ_CONTACTS}, 0);
        }
        else
        {
            matrixCursor=new MatrixCursor(new String[]{"_ID", "Name", "PhoneNo"});
            Uri contactUri = ContactsContract.Contacts.CONTENT_URI;
            Log.i("uri", contactUri.toString());

            contactCursor= getContentResolver().query(contactUri, null, null, null,
                    ContactsContract.Contacts.DISPLAY_NAME+ " DESC");

            if (contactCursor.moveToFirst()) {
                do {
                    long contactId =
contactCursor.getLong(contactCursor.getColumnIndex("_ID"));
                    String name =
contactCursor.getString(contactCursor.getColumnIndex(ContactsContract.Contacts.DISPLA
Y_NAME));
                    Integer hasPhone =
contactCursor.getInt(contactCursor.getColumnIndex(ContactsContract.Contacts.HAS_PHONE
_NUMBER));
                    String phoneNo = "";
                    if (hasPhone>0) {
                        Cursor c =
getContentResolver().query(ContactsContract.CommonDataKinds.Phone.CONTENT_URI, null,
                                ContactsContract.CommonDataKinds.Phone.CONTACT_ID+
"=?", new String[]{String.valueOf(contactId)}, null);
                        if (c != null &&c.moveToFirst()) {
                            phoneNo =
c.getString(c.getColumnIndex(ContactsContract.CommonDataKinds.Phone.NUMBER));
                        }
                    }
                    matrixCursor.addRow(new Object[]{Long.toString(contactId), name,
phoneNo});
                }
```

```
                while (contactCursor.moveToNext());
                adapter= new SimpleCursorAdapter(this, R.layout.layout_2,
matrixCursor, new String[]{"_ID", "Name", "PhoneNo"}, new int[]
                        {R.id.lblid, R.id.lblname, R.id.lblphoneno});
                LV1.setAdapter(adapter);
            }
        }
        registerForContextMenu(LV1);
    }

    @Override
    public void onCreateContextMenu(ContextMenu menu, View v,
ContextMenu.ContextMenuInfo menuInfo) {
        super.onCreateContextMenu(menu, v, menuInfo);
        menu.setHeaderTitle("Select Operation");
        menu.add("Send SMS");
    }

    public boolean onContextItemSelected(@NonNull MenuItem item) {

        if (item.getTitle().toString().equalsIgnoreCase("Send SMS")) {
            Intent intent=new Intent(Intent.ACTION_VIEW);
            intent.setData(Uri.parse("sms:"));
            intent.putExtra("address",GetID(item));
            startActivity(intent);
        }
        return super.onContextItemSelected(item);
    }

    private String GetID(MenuItem item) {
        String phoneNo = "";
        AdapterView.AdapterContextMenuInfo menuInfo =
(AdapterView.AdapterContextMenuInfo) item.getMenuInfo();
        int Position = menuInfo.position;
        int i = 0;
        MatrixCursor mc1 = new MatrixCursor(new String[]{"_ID", "Name", "PhoneNo"});
        Uri contactUri = ContactsContract.Contacts.CONTENT_URI;
        Log.i("uri", contactUri.toString());

        if (contactCursor.moveToFirst()) {
            do {
                long contactId =
contactCursor.getLong(contactCursor.getColumnIndex("_ID"));
                String name =
contactCursor.getString(contactCursor.getColumnIndex(ContactsContract.Contacts.DISPLA
Y_NAME));
                Integer hasPhone =
contactCursor.getInt(contactCursor.getColumnIndex(ContactsContract.Contacts.HAS_PHONE
_NUMBER));
                if (hasPhone>0) {
                    Cursor c =
getContentResolver().query(ContactsContract.CommonDataKinds.Phone.CONTENT_URI, null,
                            ContactsContract.CommonDataKinds.Phone.CONTACT_ID+ "=?",
new String[]{String.valueOf(contactId)}, null);
                    if (c != null &&c.moveToFirst()) {
```

```
                        phoneNo =
c.getString(c.getColumnIndex(ContactsContract.CommonDataKinds.Phone.NUMBER));
                    }
                }
                mc1.addRow(new Object[]{Long.toString(contactId), name, phoneNo});
                i++;
                if(i>Position)
                {
                    break;
                }
            }
            while (contactCursor.moveToNext());
        }
        return phoneNo;
    }
}
```

ud.xml

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
    <item
        android:id="@+id/send_sms"
        android:title="Send SMS"/>
</menu>
```

Layout_2.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/lblid"/>

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/lblname"/>

    <TextView
        android:layout_width="match_parent"
```

```
        android:layout_height="wrap_content"
        android:id="@+id/lblphoneno"/>


</LinearLayout>
```