Experiment No. : 3	TODO LIST APPLICATION	Date: 7/4/22

AIM: To design a To-do List Application.

Theory: This whole project has only one concept, that to record your daily task and to-do lists.
will add a task and also edit it.
You have to provide the task description. The whole project has a simple-looking UI design.
1. We need to define the layout of our views. In particular, we want to add Button, a EditText and a ListView to our Activity.

2. Add the string resources that provide the hint text and content description
included in step 1 to the strings.xml resource stored in the project's res/values folder.

3. We need to create a list of todo items to display and an adapter to display them in
our ListView within the Activity java file

4. Add an android:onClick handler to our layout XML file. Define an ArrayList of Strings to store each to-do list item. You can bind a ListView to an ArrayList using an ArrayAdapter. Create a new ArrayAdapter instance to bind the to-do item array to the ListView.

5. Add an onKeyListener to the EditText that listens for either a "D-pad center button" click or the Enter key being pressed. Either of these actions should add the contents of the EditText to the to-do list array created in step 4, and notify the ArrayAdapter of the change. Finally, clear the EditText to prepare for the next item.
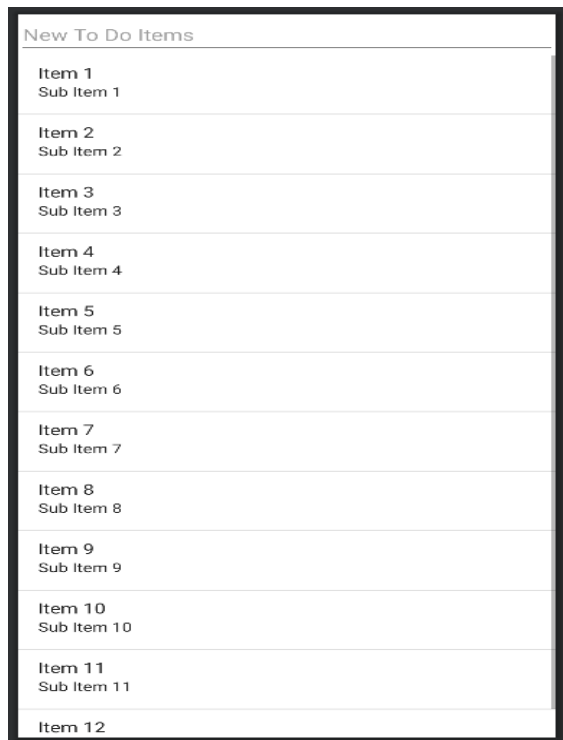
6. Run the application.

Layout Code:

```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:orientation="vertical"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/editText"
        android:hint="@string/addItemHint"
        android:contentDescription="@string/addItemDescription"
        />
    <ListView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/listView"
        />
</LinearLayout>
```

Layout Design:

Strings.xml Code:

```xml
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string name="app_name">ToDo List</string>
    <string name="addItemHint">New To Do Items</string>
    <string name="addItemDescription">Add New To Do List</string>
</resources>
```
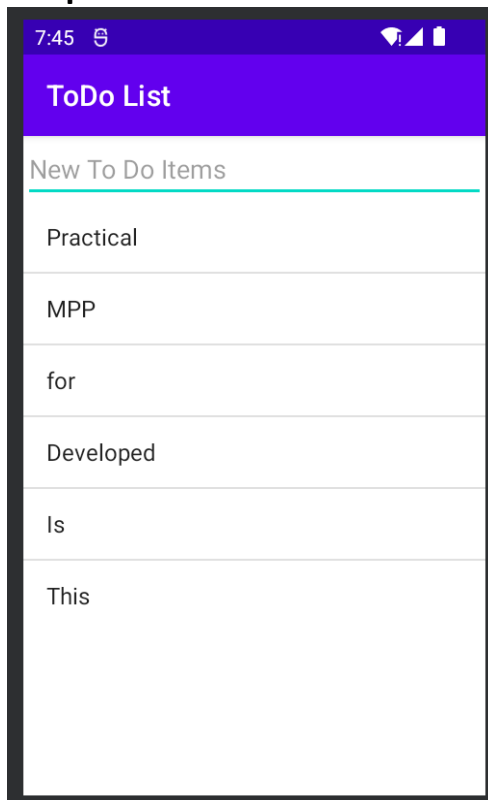
Main Java Code:

```java
package com.ramanand.todolist;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.KeyEvent;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.EditText;
import android.widget.ListView;
import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ListView listView = (ListView) findViewById(R.id.listView);
```

```java
        final EditText editText = (EditText) findViewById(R.id.editText);
        final ArrayList<String> todoItems = new ArrayList<String>();
        final ArrayAdapter<String> s;
        s = new  ArrayAdapter<String>(this, android.R.layout.simple_list_item_1, todoItems);
        listView.setAdapter(s);
        editText.setOnKeyListener(new View.OnKeyListener(){
            public boolean onKey(View v, int keyCode, KeyEvent event){
                if(event.getAction() == KeyEvent.ACTION_DOWN)
                    if ((keyCode == KeyEvent.KEYCODE_DPAD_CENTER) ||
                        (keyCode == KeyEvent.KEYCODE_ENTER)){
                        todoItems.add(0, editText.getText().toString());
                        s.notifyDataSetChanged();
                        editText.setText("");
                        return true;
                    }
                return false;
            }
        });
    }
}
```

Output:

Conclusion: The To-do list Application in Android studio was successfully implemented and tested.

Agnel Institute of Technology & Design Assagao, Goa. Department of ECE		
Programming	(2)	
Execution & Result	(3)	
Neatness	(2)	
Viva	(3)	
Total	(10)	
Faculty In-charge sign		