activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    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"
    tools:context=".MainActivity">
    <!--  Toolbar  -->
    <androidx.appcompat.widget.Toolbar
        android:id="@+id/toolbar"
        android:layout_width="0dp"
        android:layout_height="?attr/actionBarSize"
        android:background="@android:color/system_error_400"
        android:theme="@style/ThemeOverlay.AppCompat.Dark.ActionBar"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"/>
    <!--  ListView  -->
    <ListView android:id="@+id/list_view"
        android:layout_width="0dp"
        android:layout_height="0dp"
        app:layout_constraintTop_toBottomOf="@id/toolbar"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

item_dialog.xml

```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="wrap_content"
    android:orientation="vertical"
    android:padding="16dp">
    <EditText android:id="@+id/etItem"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter item"
        android:inputType="text"/>
</LinearLayout>
```

MainActivity.java

```java
package com.example.ad5m;
```

```java
import android.annotation.SuppressLint;
import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.EditText;
import android.widget.ListView;
import android.widget.PopupMenu;
import android.widget.Toast;

import androidx.activity.EdgeToEdge;
import androidx.annotation.NonNull;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import androidx.appcompat.widget.Toolbar;
import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    EditText etItem;
    ArrayList<String> list = new ArrayList<>();
    ListView listView;
    ArrayAdapter<String> arrayAdapter;
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        // Set Toolbar as ActionBar
        @SuppressLint({"MissingInflatedId", "LocalSuppress"}) Toolbar toolbar =
findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);

        listView = findViewById(R.id.list_view);
        arrayAdapter = new ArrayAdapter<>(this,
android.R.layout.simple_list_item_1, list);
        listView.setAdapter(arrayAdapter);

        listView.setOnItemClickListener((parent, view, position, id) -> {
            PopupMenu popupMenu = new PopupMenu(MainActivity.this, view);
            popupMenu.getMenuInflater().inflate(R.menu.pop_up_menu,
popupMenu.getMenu());

            popupMenu.setOnMenuItemClickListener(item -> {
                int itemId = item.getItemId();
                if (itemId == R.id.item_update) {
```

```java
                showUpdateDialog(position);
            } else if (itemId == R.id.item_del) {
                list.remove(position);
                arrayAdapter.notifyDataSetChanged();
                Toast.makeText(MainActivity.this, "Item Deleted",
Toast.LENGTH_SHORT).show();
            }
            return true;
        });
        popupMenu.show();
    });
}

private void showUpdateDialog(final int position) {
    AlertDialog.Builder builder = new AlertDialog.Builder(this);
    View v = LayoutInflater.from(this).inflate(R.layout.item_dialog, null,
false);
    builder.setTitle("Update Item");
    final EditText editText = v.findViewById(R.id.etItem);
    editText.setText(list.get(position));
    builder.setView(v);

    builder.setPositiveButton("Update", (dialog, which) -> {
        String newItem = editText.getText().toString().trim();
        if (!newItem.isEmpty()) {
            list.set(position, newItem);
            arrayAdapter.notifyDataSetChanged();
            Toast.makeText(MainActivity.this, "Item Updated!",
Toast.LENGTH_SHORT).show();
        } else {
            editText.setError("Add item here!");
        }
    });
    builder.setNegativeButton("Cancel", (dialog, which) ->
dialog.dismiss());
    builder.show();
}

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    getMenuInflater().inflate(R.menu.main_menu, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(@NonNull MenuItem item) {
    if (item.getItemId() == R.id.add_item) {
        showAddItemDialog();
        return true;
```

```java
        }
        return super.onOptionsItemSelected(item);
    }

    private void showAddItemDialog() {
        AlertDialog.Builder builder = new AlertDialog.Builder(this);
        builder.setTitle("Add New Item");
        View v = LayoutInflater.from(this).inflate(R.layout.item_dialog, null,
false);
        builder.setView(v);
        @SuppressLint({"MissingInflatedId", "LocalSuppress"}) final EditText
etItem = v.findViewById(R.id.etItem);

        builder.setPositiveButton("Add", (dialog, which) -> {
            String newItem = etItem.getText().toString().trim();
            if (!newItem.isEmpty()) {
                list.add(newItem);
                arrayAdapter.notifyDataSetChanged();
            } else {
                etItem.setError("Add item here!");
            }
        });


        builder.setNegativeButton("Cancel", (dialog, which) ->
dialog.dismiss());
        builder.show();
    }
}
```

Res -> menu -> main_menu.xml

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

<menu xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto">
    <item android:id="@+id/add_item"
        android:title="Add New"
        android:icon="@android:drawable/ic_input_add"
        app:showAsAction="always"/>
</menu>
```

Res -> menu -> pop_uu_menu.xml

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

```
</menu>
```

```
</menu>
```