

Q.2] Write a Java Android Program to Demonstrate List View Activity with all operations Such as: Insert, Delete, Search

`activity_main.xml`

```
<?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:layout_width="match_parent"
```

```
    android:layout_height="match_parent"
```

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

```
    <EditText
```

```
        android:id="@+id/itemEditText"
```

```
        android:layout_width="match_parent"
```

```
        android:layout_height="wrap_content"
```

```
        android:hint="Enter item"
```

```
        android:layout_marginTop="16dp"
```

```
        android:layout_marginStart="16dp"
```

```
        android:layout_marginEnd="16dp"
```

```
        android:layout_alignParentTop="true" />
```

```
    <Button
```

```
        android:id="@+id/insertButton"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:text="Insert"
```

```
        android:layout_marginTop="8dp"
```

```
        android:layout_marginStart="16dp"
```

```
        android:layout_below="@+id/itemEditText" />
```

<Button

```
    android:id="@+id/deleteButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Delete"
    android:layout_marginTop="8dp"
    android:layout_toEndOf="@+id/insertButton"
    android:layout_below="@+id/itemEditText" />
```

<Button

```
    android:id="@+id/searchButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Search"
    android:layout_marginTop="8dp"
    android:layout_toEndOf="@+id/deleteButton"
    android:layout_below="@+id/itemEditText" />
```

<ListView

```
    android:id="@+id/itemListView"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="16dp"
    android:layout_marginStart="16dp"
    android:layout_marginEnd="16dp"
    android:layout_below="@+id/insertButton" />
```

</RelativeLayout>

//Java Code

import android.os.Bundle;

import android.view.View;

import android.widget.AdapterView;

import android.widget.Button;

import android.widget.EditText;

import android.widget.ListView;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {

EditText itemEditText;

ListView itemListView;

ArrayAdapter<String> itemAdapter;

ArrayList<String> itemList;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity_main);

itemEditText = findViewById(R.id.itemEditText);

itemListView = findViewById(R.id.itemListView);

```
Button insertButton = findViewById(R.id.insertButton);  
Button deleteButton = findViewById(R.id.deleteButton);  
Button searchButton = findViewById(R.id.searchButton);
```

```
itemList = new ArrayList<>();  
itemAdapter = new ArrayAdapter<>(this, android.R.layout.simple_list_item_1, itemList);  
itemListView.setAdapter(itemAdapter);
```

```
insertButton.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        String newItem = itemEditText.getText().toString().trim();  
        if (!newItem.isEmpty()) {  
            itemList.add(newItem);  
            itemAdapter.notifyDataSetChanged();  
            itemEditText.setText("");  
        }  
    }  
});
```

```
deleteButton.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        String selectedItem = itemEditText.getText().toString().trim();  
        if (!selectedItem.isEmpty()) {  
            if (itemList.contains(selectedItem)) {  
                itemList.remove(selectedItem);  
            }  
        }  
    }  
});
```

```

        itemAdapter.notifyDataSetChanged();

        itemEditText.setText("");
    } else {
        Toast.makeText(MainActivity.this, "Item not found",
Toast.LENGTH_SHORT).show();
    }
}
});

searchButton.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String searchString = itemEditText.getText().toString().trim();
        if (!searchString.isEmpty()) {
            if (itemList.contains(searchString)) {
                Toast.makeText(MainActivity.this, "Item found", Toast.LENGTH_SHORT).show();
            } else {
                Toast.makeText(MainActivity.this, "Item not found",
Toast.LENGTH_SHORT).show();
            }
        }
    }
});
}
}

```