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Class : TY CS Div A

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Aim : Develop an android application demonstrating the implementation of simple listview. Perform Add, Update, Delete and Display operations on listview.

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:id="@+id/edittext"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Enter Element"
        android:inputType="textPersonName" />

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">

        <Button
            android:id="@+id/btn_add"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:onClick="add_element"
            android:text="ADD" />

        <Button
            android:id="@+id/btn_update"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:onClick="update_element"
            android:text="UPDATE" />

        <Button
            android:id="@+id/btn_delete"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:onClick="delete_element"
            android:text="DELETE" />
    
```

```
</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical">

    <ListView
        android:id="@+id/listview"
        android:layout_width="match_parent"
        android:layout_height="match_parent" />
</LinearLayout>

</LinearLayout>
```

MainActivity.java

```
package com.example.listview;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ListView;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    EditText ed1;
    ListView lst1;
    Button add,update,delete;
    ArrayList<String> arrlist = new ArrayList<>();
    Integer pos;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        ed1 = findViewById(R.id.edittext);
        lst1 = findViewById(R.id.listview);
        add = findViewById(R.id.btn_add);
        update = findViewById(R.id.btn_update);
        delete = findViewById(R.id.btn_delete);

        lst1.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> parent, View view, int position, long id) {
                String x = arrlist.get(position);
                ed1.setText(x);
                pos = position;
            }
        });
    }
}
```

```
}

public void add_element(View view) {
    arrlist.add(ed1.getText().toString());
    ArrayAdapter<String> adp = new ArrayAdapter<>(this,
    android.R.layout.simple_list_item_1,arrlist);
    lst1.setAdapter(adp);
}

public void update_element(View view) {
    arrlist.set(pos, ed1.getText().toString());
    ArrayAdapter<String> adp = new ArrayAdapter<>(this,
    android.R.layout.simple_list_item_1,arrlist);
    lst1.setAdapter(adp);
}

public void delete_element(View view) {
    Object remove = arrlist.get(pos);
    arrlist.remove(remove);
    ArrayAdapter<String> adp = new ArrayAdapter<>(this,
    android.R.layout.simple_list_item_1,arrlist);
    lst1.setAdapter(adp);
}
}
```

