**Practical No. 2**

**Title: Android program using different layouts and views**

**Aim: Create an application to demonstrate various layouts and views**

# Exercise - Create android application to demonstrate List View

**Implementation: Program:**

# MainActivity.java

package com.example.listview2;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle; import android.widget.ArrayAdapter; import android.widget.ListView;

public class MainActivity extends AppCompatActivity {

private ListView l1;

String arr1[]={"MCA","Mechanical","Electrical"};

@Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

l1=findViewById(R.id.listview1);

ArrayAdapter ad=new ArrayAdapter(MainActivity.this, android.R.layout.simple\_list\_item\_1,arr); l1.setAdapter(ad);

myadapter1 ma=new myadapter1(this,R.layout.mylayout,arr1); l1.setAdapter(ma);

}

}

# myadapter1.java

package com.example.listview2;

import android.content.Context; import android.view.LayoutInflater; import android.view.View; import android.view.ViewGroup; import android.widget.ArrayAdapter; import android.widget.TextView;

import androidx.annotation.NonNull; import androidx.annotation.Nullable;

public class myadapter1 extends ArrayAdapter<String> {

private String arr[];

public myadapter1(@NonNull Context context, int resource, @NonNull String[] arr) {

super(context, resource, arr); this.arr=arr;

}

@Nullable @Override

public String getItem(int position) { return arr[position];

}

@NonNull @Override

public View getView(int position, @Nullable View convertView, @NonNull ViewGroup parent) { convertView=

LayoutInflater.from(getContext()).inflate(R.layout.mylayout,parent,false); TextView t=convertView.findViewById(R.id.textView);

t.setText(getItem(position)); return convertView;

}

}

# activity\_main.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">

<ListView

android:id="@+id/listview1" android:layout\_width="0dp" android:layout\_height="0dp"

app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

# mylayout.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">

<LinearLayout

android:id="@+id/linearLayout" android:layout\_width="0dp" android:layout\_height="wrap\_content" android:layout\_marginStart="1dp" android:layout\_marginTop="1dp" android:layout\_marginEnd="1dp" android:orientation="horizontal" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent">

<ImageView

android:id="@+id/imageView2" android:layout\_width="40dp" android:layout\_height="50dp" android:layout\_weight="1"

app:srcCompat="@drawable/ic\_launcher\_background" />

<TextView

android:id="@+id/textView" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_gravity="center\_vertical" android:layout\_weight="1" android:gravity="center\_vertical" android:text="TextView" android:textSize="24sp" />

</LinearLayout>

</androidx.constraintlayout.widget.ConstraintLayout>

**Output:**

