DEPARTMENT OF
COMPUTER SCIENCE AND ENGINEERING

Title: List View

MOBILE APPLICATION DEVELOPMENT
CSE 402

GREEN UNIVERSITY OF BANGLADESH

1 Objective(s)

- To implement ListView for showing components in a list.

- To add external fonts in an Android application.

2 Problem analysis

Android ListView is a view which groups several items and display them in vertical scrollable list. The View is a base class for all UI components in android. For example, the EditText class is used to accept the input from users in android apps, which is a subclass of View .Android ListView is used to display the list of items in multiple rows and contains an adapter that automatically inserts the items into the list. The list items are automatically inserted to the list using an Adapter that pulls content from a source such as an array or database.

3 Implementation of Code for Adding External Fonts

3.1 XML Code of ListView

```
1  <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
2      xmlns:app="http://schemas.android.com/apk/res-auto"
3      xmlns:tools="http://schemas.android.com/tools"
4      android:layout_width="match_parent"
5      android:layout_height="match_parent"
6      android:orientation="vertical"
7      tools:context=".MainActivity">
8      <EditText
9          android:id="@+id/etInput"
10         android:layout_width="match_parent"
11         android:layout_height="wrap_content"
12         android:ems="10"
13         android:inputType="textPersonName"
14         android:hint="Enter the text name"
15          />
16     <ListView
17         android:id="@+id/listFont"
18         android:layout_width="match_parent"
19         android:layout_height="wrap_content">
20     </ListView>
21 </LinearLayout>
```

3.2 Adding Fonts to the Project

- Create assets sub directory in res

- Right click res -> New -> Folder -> New Assets Folder

- Right click assets -> New -> Directory -> Enter the directory name (fonts)

- Paste the font types in fonts directory

3.3 JAVA code for Adding List Items

```
1  package com.example.lab2_182da;
2
3  import androidx.appcompat.app.AppCompatActivity;
4
5  import android.graphics.Typeface;
```

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

public class MainActivity extends AppCompatActivity {
    EditText etInput;
    ListView listFont;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        listFont=(ListView)findViewById(R.id.listFont);
        etInput=(EditText)findViewById(R.id.etInput);

        // Adding fonts name to the list
        String[] values = new String[] {"Angilla Tattoo",
                "Cantate Beveled","Krinkes Decor PERSONAL",
                "Krinkes Regular PERSONAL","Silent Reaction"};
        ArrayAdapter<String> adapter= new ArrayAdapter<String>(this,android.R.
            layout.simple_dropdown_item_1line,values);
        listFont.setAdapter(adapter);

        listFont.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> parent, View view, int
                position, long id) {
                String itemValue=(String) listFont.getItemAtPosition(position);

                if(itemValue.equals("Angilla Tattoo")){

                    // Setting up the path of the fonts
                    String fontPath="fonts/AngillaTattoo.ttf";
                    Typeface tf=Typeface.createFromAsset(getAssets(),fontPath);

                    etInput.getText().toString();
                    etInput.setTypeface(tf);
                }
                else if(itemValue.equals("Cantate Beveled")){
                    String fontPath="fonts/CantateBeveled.ttf";
                    Typeface tf=Typeface.createFromAsset(getAssets(),fontPath);

                    etInput.getText().toString();
                    etInput.setTypeface(tf);
                }
                else if(itemValue.equals("Krinkes Decor PERSONAL")){
                    String fontPath="fonts/KrinkesDecorPERSONAL.ttf";
                    Typeface tf=Typeface.createFromAsset(getAssets(),fontPath);

                    etInput.getText().toString();
                    etInput.setTypeface(tf);
                }
                else if(itemValue.equals("Krinkes Regular PERSONAL")){
                    String fontPath="fonts/KrinkesRegularPERSONAL.ttf";
```

```
62              Typeface tf=Typeface.createFromAsset(getAssets(),fontPath);
63
64              etInput.getText().toString();
65              etInput.setTypeface(tf);
66          }
67          else if(itemValue.equals("Silent Reaction")){
68              String fontPath="fonts/Silent Reaction.ttf";
69              Typeface tf=Typeface.createFromAsset(getAssets(),fontPath);
70
71              etInput.getText().toString();
72              etInput.setTypeface(tf);
73          }
74      }
75  });
76
77  }
78 }
```

4   Input/Output

Run the code and observe the output in the virtual device.

5   Discussion & Conclusion

From this experiment, we learnt about adding elements in a list. How ListView works to give the UI of a list to user, how to set up names, event listeners for list elements are showed in this experiment for better understanding of organizing lists.

6   Lab Task (Please implement yourself and show the output to the instructor)

1. Create a list where you can dynamically add list elements to the list from user input.

6.1   Problem analysis

Create an EditText, a Button and a ListView in an XML. Setup the references in java. Create a list in java using ArrayAdapter and ArrayList. When the button is clicked after writing in the EditText field, the input will be showed as an item of the list.

7   Lab Exercise (Submit as a report)

- Implement a list where you can add both image and name of that image in the same row.

8   Policy

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