Mobile application development(CSE 3075)

20211CSE0223

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5CSE4

EXPERIMENT 9: LIST VIEW

1.Design (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"
    android:background="@drawable/img">

    <TextView
        android:id="@+id/textView"
        android:layout_width="222dp"
        android:layout_height="32dp"
        android:fontFamily="sans-serif-condensed"
        android:foregroundGravity="center"
        android:gravity="center"
        android:text="STUDENT DETAILS"
        android:textColor="#C5900E"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.201"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.074" />

    <ListView
        android:id="@+id/listView"
        android:layout_width="228dp"
        android:layout_height="194dp"
        android:layout_marginTop="97dp"
        android:layout_marginBottom="70dp"
        app:layout_constraintBottom_toTopOf="@+id/fragmentContainerView"
        app:layout_constraintEnd_toEndOf="@+id/textView"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="@+id/textView"
        app:layout_constraintTop_toTopOf="parent"
```

```xml
            app:layout_constraintVertical_bias="0.082" />

    <androidx.fragment.app.FragmentContainerView
        android:id="@+id/fragmentContainerView"
        android:name="com.example.listview.BlankFragment"
        android:layout_width="403dp"
        android:layout_height="220dp"
        android:layout_marginBottom="140dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="@+id/_dynamic"
        app:layout_constraintHorizontal_bias="0.296"
        app:layout_constraintStart_toStartOf="@+id/_dynamic"
        app:layout_constraintTop_toBottomOf="@+id/_dynamic"
        tools:ignore="UnknownId" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

2.JAVA File(MainActivity.java)

```java
package com.example.listview;

import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.FragmentContainerView;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentManager;
import androidx.fragment.app.FragmentTransaction;

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


public class MainActivity extends AppCompatActivity {
ListView listView;
FragmentContainerView fragmentContainerView;
String[] StuID ={"101","102","103","104","105"};
int pos;
String idString;


    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        listView=findViewById(R.id.listView);
        fragmentContainerView=findViewById(R.id.fragmentContainerView);
        ArrayAdapter adapter=new ArrayAdapter(this,
android.R.layout.simple_list_item_1,StuID);
        listView.setAdapter(adapter);
        listView.setOnItemClickListener(new
AdapterView.OnItemClickListener() {
            @Override
```

```java
            public void onItemClick(AdapterView<?> parent, View view, int
position, long id) {
                pos=position;
                idString=StuID[pos];
                Fragment fragment;
                FragmentManager
fragmentManager=getSupportFragmentManager();
                FragmentTransaction
fragmentTransaction=fragmentManager.beginTransaction();
                fragment=new BlankFragment(pos,idString);

fragmentTransaction.replace(R.id.fragmentContainerView,fragment).commit();
            }
        });

    }
}
```

3.Design (fragment_blank.xml)

```xml
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout 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=".BlankFragment"
    android:background="@drawable/img_1">

    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:id="@+id/tv1"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_gravity="center"
        android:fontFamily="sans-serif-condensed"
        android:gravity="center"
        android:textColor="#870707"
        android:textIsSelectable="false"
        android:textSize="20sp"
        android:textStyle="bold" />

</FrameLayout>
```

4.JAVA File (BlankFragment.java)

```java
package com.example.listview;

import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
```

```java
import android.view.View;
import android.view.ViewGroup;
import android.widget.TextView;

/**
 * A simple {@link Fragment} subclass.
 * Use the {@link BlankFragment#newInstance} factory method to
 * create an instance of this fragment.
 */
public class BlankFragment extends Fragment {
    int pos;
    String idString;
    String[] stuName={"Madhu C","Soundarya R","Vishal M","Krishna
V","Bhavana A"};
    String[] stuSection={"5CSE1","5CSE2","5CSE3","5CSE5","5CSE6"};
TextView tv1;

    // TODO: Rename parameter arguments, choose names that match
    // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
    private static final String ARG_PARAM1 = "param1";
    private static final String ARG_PARAM2 = "param2";

    // TODO: Rename and change types of parameters
    private String mParam1;
    private String mParam2;

    public BlankFragment() {
        // Required empty public constructor
    }
BlankFragment(int pos,String idString) {
        this.pos=pos;
        this.idString=idString;
}
    /**
     * Use this factory method to create a new instance of
     * this fragment using the provided parameters.
     *
     * @param param1 Parameter 1.
     * @param param2 Parameter 2.
     * @return A new instance of fragment BlankFragment.
     */
    // TODO: Rename and change types and number of parameters
    public static BlankFragment newInstance(String param1, String param2) {
        BlankFragment fragment = new BlankFragment();
        Bundle args = new Bundle();
        args.putString(ARG_PARAM1, param1);
        args.putString(ARG_PARAM2, param2);
        fragment.setArguments(args);
        return fragment;
    }

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        if (getArguments() != null) {
            mParam1 = getArguments().getString(ARG_PARAM1);
            mParam2 = getArguments().getString(ARG_PARAM2);
        }
    }

    @Override
```

```java
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
                             Bundle savedInstanceState) {
        // Inflate the layout for this fragment
        // return inflater.inflate(R.layout.fragment_blank, container,
false);
        View view=inflater.inflate(R.layout.fragment_blank, container,
false);
        tv1=view.findViewById(R.id.tv1);
        tv1.setText("STUDENT NAME: "+stuName[pos]+"\nSTUDENT ROLL NUMBER:
"+idString+"\nSTUDENT SECTION: "+stuSection[pos]);
        return  view;
    }
}
```

AndroidManifest.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.ListView"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true"
            android:icon="@mipmap/img">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER"
/>
            </intent-filter>
        </activity>
    </application>

</manifest>
```

5.Output in the emulator

STUDENT DETAILS

101

102

103

104

STUDENT NAME: Madhu C
STUDENT ROLL NUMBER: null
STUDENT SECTION: 5CSE1

STUDENT DETAILS

101

102

103

104

STUDENT NAME: Madhu C
STUDENT ROLL NUMBER: 101
STUDENT SECTION: 5CSE1

STUDENT DETAILS

101

102

103

104

STUDENT NAME: Soundarya R
STUDENT ROLL NUMBER: 102
STUDENT SECTION: 5CSE2

STUDENT DETAILS

101

102

103

104

STUDENT NAME: Vishal M
STUDENT ROLL NUMBER: 103
STUDENT SECTION: 5CSE3

STUDENT DETAILS

101

102

103

104

STUDENT NAME: Krishna V
STUDENT ROLL NUMBER: 104
STUDENT SECTION: 5CSE5

STUDENT DETAILS

102

103

104

105

STUDENT NAME: Bhavana A
STUDENT ROLL NUMBER: 105
STUDENT SECTION: 5CSE6