**UI and Practice Homework2**

**20142332**

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**1. MainActivity**

package com.example.khk.homework2;

import android.app.FragmentManager;

import android.content.Intent;

import android.content.SharedPreferences;

import android.graphics.Color;

import android.preference.PreferenceManager;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;

import android.widget.Toast;

import java.io.FileInputStream;

import java.io.FileOutputStream;

import java.io.InputStreamReader;

import java.io.OutputStreamWriter;

import java.util.Random;

public class MainActivity extends AppCompatActivity {

public static int READ\_BLOCK\_SIZE = 100;

Button Rock,Scissor,Paper,Setting,Save,Load;

TextView HumanPoint,AIPoint,TurnCount;

Button AIWeapon;

public static String Winner; //승자 이름을 넣기위한 변수

public static String Winner\_Save=""; //Winner값을 저장하는 임시 변수

String HumanName; //플레이어 이름

String AIName = "AI"; //AI이름

String SaveData; //저장할 데이터값을 모아서 문자열로 처리

int Weapon[] = {R.drawable.rock,R.drawable.scissor,R.drawable.paper};

int HumanScore=0,AIScore=0,Turn=0,TotalTurn=0; //TotalTurn의 디폴트 값은 3으로 한다

int HumanData = 3,AIData=3; //default는 3으로 초기화, 0은 바위, 1은 가위, 2는 보

int SaveWeapon; //가위,바위,보 그림을 저장할 값

boolean PrefClick = false; //Preference Setting을 클릭했는가 안했는가에 대한 변수

FragmentManager[] fm = new FragmentManager[3];

private static final int SETTINGS\_RESULT = 1;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

Rock = (Button)findViewById(R.id.Rock);

Scissor = (Button)findViewById(R.id.Scissor);

Paper = (Button)findViewById(R.id.Paper);

Setting = (Button)findViewById(R.id.Setting);

Save = (Button)findViewById(R.id.Save);

Load = (Button)findViewById(R.id.Load);

AIWeapon = (Button)findViewById(R.id.EnemyWeapon);

HumanPoint = (TextView)findViewById(R.id.HumanScore);

AIPoint = (TextView)findViewById(R.id.AIScore);

TurnCount = (TextView)findViewById(R.id.TurnCount);

for(int i=0;i<3;++i)

fm[i] = getFragmentManager(); //AlertFragment를 위한 fragmentmanager

if(PrefClick == false) //한번도 Preference Setting을 누르진 않았다면

{

Rock.setEnabled(false);

Scissor.setEnabled(false);

Paper.setEnabled(false); //가위바위보 셋을 비활성화 시킨다

}

Rock.setOnClickListener(new View.OnClickListener() { //바위일때

@Override

public void onClick(View v) {

Random random = new Random();

HumanData = 0; //바위

AIData = random.nextInt(3);

AIWeapon.setBackgroundResource(Weapon[AIData]);

SaveWeapon = Weapon[AIData];

if (AIData == 0) {

TurnCount.setText("Turn : "+ String.valueOf(++Turn));

} else if (AIData == 1) {

TurnCount.setText("Turn : "+ String.valueOf(++Turn));

HumanPoint.setText(String.valueOf(HumanScore+=1));

} else if (AIData == 2) {

TurnCount.setText("Turn : "+ String.valueOf(++Turn));

AIPoint.setText(String.valueOf(AIScore+=1));

}

if (Turn == TotalTurn && (AIScore > HumanScore)) //승부에서 졌을 때

{

Rock.setEnabled(false);

Scissor.setEnabled(false);

Paper.setEnabled(false);

AlertDFragment alertDfragment = new AlertDFragment();

Winner = AIName;

Turn = 0;

HumanData = 3;

AIData=3;

alertDfragment.show(fm[0], "Lose");

}

else if (Turn == TotalTurn && (AIScore < HumanScore)) //승부에서 이겼을 때

{

Rock.setEnabled(false);

Scissor.setEnabled(false);

Paper.setEnabled(false);

AlertDFragment alertDfragment = new AlertDFragment();

Winner = HumanName;

Turn = 0;

HumanData = 3;

AIData=3;

alertDfragment.show(fm[1], "Win");

}

else if (Turn == TotalTurn && (AIScore == HumanScore)) //비겼을때

{

Rock.setEnabled(false);

Scissor.setEnabled(false);

Paper.setEnabled(false);

Draw draw = new Draw();

Winner = "Draw";

Turn = 0;

HumanData = 3;

AIData=3;

draw.show(fm[2], "Draw");

}

}

});

Scissor.setOnClickListener(new View.OnClickListener() { //가위일때

@Override

public void onClick(View v) {

Random random = new Random();

HumanData = 1; //가위

AIData = random.nextInt(3);

AIWeapon.setBackgroundResource(Weapon[AIData]);

SaveWeapon = Weapon[AIData];

if (AIData == 1) {

TurnCount.setText("Turn : "+ String.valueOf(++Turn));

} else if (AIData == 0) {

TurnCount.setText("Turn : "+ String.valueOf(++Turn));

AIPoint.setText(String.valueOf(AIScore+=1));

} else if (AIData == 2) {

TurnCount.setText("Turn : "+ String.valueOf(++Turn));

HumanPoint.setText(String.valueOf(HumanScore+=1));

}

if (Turn == TotalTurn && (AIScore > HumanScore)) //승부에서 졌을 때

{

Rock.setEnabled(false);

Scissor.setEnabled(false);

Paper.setEnabled(false);

AlertDFragment alertDfragment = new AlertDFragment();

Winner = AIName;

Turn = 0;

HumanData = 3;

AIData=3;

alertDfragment.show(fm[0], "Lose");

}

else if (Turn == TotalTurn && (AIScore < HumanScore)) //승부에서 이겼을 때

{

Rock.setEnabled(false);

Scissor.setEnabled(false);

Paper.setEnabled(false);

SaveData = String.valueOf(TotalTurn)+String.valueOf(Turn)+String.valueOf(HumanScore)+String.valueOf(AIScore)+String.valueOf(HumanData)+String.valueOf(AIData);

AlertDFragment alertDfragment = new AlertDFragment();

Winner = HumanName;

Turn = 0;

HumanData = 3;

AIData=3;

alertDfragment.show(fm[1], "Win");

}

else if (Turn == TotalTurn && (AIScore == HumanScore))//비겼을때

{

Rock.setEnabled(false);

Scissor.setEnabled(false);

Paper.setEnabled(false);

Draw draw = new Draw();

Winner = "Draw";

Turn = 0;

HumanData = 3;

AIData=3;

draw.show(fm[2], "Draw");

}

}

});

Paper.setOnClickListener(new View.OnClickListener() { //보자기일때

@Override

public void onClick(View v) {

Random random = new Random();

HumanData = 2; //보자기

AIData = random.nextInt(3);

AIWeapon.setBackgroundResource(Weapon[AIData]);

SaveWeapon = Weapon[AIData];

if (AIData == 2) {

TurnCount.setText("Turn : "+ String.valueOf(++Turn));

} else if (AIData == 0) {

TurnCount.setText("Turn : "+ String.valueOf(++Turn));

HumanPoint.setText(String.valueOf(HumanScore+=1));

} else if (AIData == 1) {

TurnCount.setText("Turn : "+ String.valueOf(++Turn));

AIPoint.setText(String.valueOf(AIScore+=1));

}

if (Turn == TotalTurn && (AIScore > HumanScore)) //승부에서 졌을 때

{

Rock.setEnabled(false);

Scissor.setEnabled(false);

Paper.setEnabled(false);

AlertDFragment alertDfragment = new AlertDFragment();

Winner = AIName;

Turn = 0;

HumanData = 3;

AIData=3;

alertDfragment.show(fm[0], "Lose");

}

else if (Turn == TotalTurn && (AIScore < HumanScore)) //승부에서 이겼을 때

{

Rock.setEnabled(false);

Scissor.setEnabled(false);

Paper.setEnabled(false);

AlertDFragment alertDfragment = new AlertDFragment();

Winner = HumanName;

Turn = 0;

HumanData = 3;

AIData = 3;

alertDfragment.show(fm[1], "Win");

}

else if (Turn == TotalTurn && (AIScore == HumanScore))//비겼을때

{

Rock.setEnabled(false);

Scissor.setEnabled(false);

Paper.setEnabled(false);

Draw draw = new Draw();

Winner = "Draw";

Turn = 0;

HumanData = 3;

AIData=3;

draw.show(fm[2], "Draw");

}

}

});

Setting.setOnClickListener(new View.OnClickListener() { //Preference Setting

@Override

public void onClick(View v) {

Intent intent = new Intent(getApplicationContext(), settingactivity.class);

startActivityForResult(intent, SETTINGS\_RESULT);

Rock.setEnabled(true); //바위

Scissor.setEnabled(true); //가위

Paper.setEnabled(true); //보

//이 셋을 활성화 시킨다

HumanData = 3;

AIData=3;

HumanPoint.setText(String.valueOf(HumanScore = 0));

AIPoint.setText(String.valueOf(AIScore=0));

TurnCount.setText("Turn : "+ String.valueOf(Turn=0));

AIWeapon.setBackgroundColor(Color.parseColor("#F0F000"));

}

});

Save.setOnClickListener(new View.OnClickListener() { //저장하기

@Override

public void onClick(View v) {

WriteBtn(v);

}

});

Load.setOnClickListener(new View.OnClickListener(){

@Override

public void onClick(View v) {

ReadBtn(v);

}

});

}

protected void onActivityResult(int requestCode,int resultCode, Intent data)

{

super.onActivityResult(requestCode, resultCode, data);

if(requestCode == SETTINGS\_RESULT)

{

displayUserSettings();

}

}

protected void displayUserSettings()

{

SharedPreferences sharedPrefs = PreferenceManager.getDefaultSharedPreferences(this);

String settings = " ";

settings = sharedPrefs.getString("prefSetting", "NOLIST");

HumanName = sharedPrefs.getString("preName","NoName"); //이용자의 이름을 받음

TotalTurn = Integer.parseInt(sharedPrefs.getString("prefSetting", "5")); //총 몇게임을 할 것인지 정한다.

Toast.makeText(getBaseContext(),settings+" Game"+"\n"+"Human Player : "+HumanName,Toast.LENGTH\_SHORT ).show();

}

public void WriteBtn(View v)

{

Winner\_Save += (Winner+"\n");

try{

FileOutputStream fileout = openFileOutput("Savefile.txt",MODE\_PRIVATE);

OutputStreamWriter outputWriter = new OutputStreamWriter(fileout);

outputWriter.write(Winner\_Save);

outputWriter.close();

Toast.makeText(getBaseContext(),"File saved successfully!", Toast.LENGTH\_SHORT).show();

} catch(Exception e)

{

e.printStackTrace();

}

}

public void ReadBtn(View v){

String result = "";

try{

FileInputStream fileIn = openFileInput("Savefile.txt");

InputStreamReader InputRead = new InputStreamReader(fileIn);

char[] inputBuffer = new char[READ\_BLOCK\_SIZE];

int intRead;

while((intRead = InputRead.read(inputBuffer))>0)

{

String string = String.copyValueOf(inputBuffer,0,intRead);

result += string;

}

InputRead.close();

Toast.makeText(getBaseContext(),"Winner : \n"+result, Toast.LENGTH\_SHORT).show();

}

catch(Exception e)

{

e.printStackTrace();

}

}

}

}  
**2. settingactivity**

package com.example.khk.homework2;

import android.os.Bundle;

import android.preference.PreferenceActivity;

public class settingactivity extends PreferenceActivity{

@Override

public void onCreate(Bundle savedInstanceState)

{

super.onCreate(savedInstanceState);

addPreferencesFromResource(R.xml.setting);

}

}

**3. AlertDFragment**

package com.example.khk.homework2;

import android.app.AlertDialog;

import android.app.Dialog;

import android.app.DialogFragment;

import android.content.DialogInterface;

import android.os.Bundle;

/\*\*

\* Created by KHK on 2015-10-20.

\*/

public class AlertDFragment extends DialogFragment {

public Dialog onCreateDialog(Bundle savedInstanceState) {

AlertDialog.Builder builder = new AlertDialog.Builder(getActivity());

builder.setTitle("Notice");

builder.setMessage("Congratulation! Winner is "+MainActivity.Winner);

builder.setPositiveButton("OK", new DialogInterface.OnClickListener() {

@Override

public void onClick(DialogInterface dialog, int which) {

return;

}

});

return builder.create();

}

}

**4. Draw**package com.example.khk.homework2;

import android.app.DialogFragment;

import android.os.Bundle;

import android.view.LayoutInflater;

import android.view.View;

import android.view.ViewGroup;

public class Draw extends DialogFragment

{

public View onCreateView (LayoutInflater inflater,ViewGroup container, Bundle savedInstanceState)

{

View rootView = inflater.inflate(R.layout.dialogfragment,container,false);

getDialog().setTitle("Draw game!");

return rootView;

}

}

**(layout)  
5. activity\_main.xml**

<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"

android:orientation="vertical"

tools:context = "com.example.khk.homework2.MainActivity"

android:weightSum="1">

<TextView

android:id="@+id/AI"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="AI Player"

android:layout\_marginStart="46dp"

android:layout\_alignTop="@+id/Human"

android:layout\_alignParentStart="true"

android:textColor="#ff514d" />

<TextView

android:id="@+id/Human"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="Human Player"

android:layout\_marginTop="32dp"

android:layout\_marginEnd="36dp"

android:layout\_alignParentTop="true"

android:layout\_alignParentEnd="true"

android:textColor="#4146ff" />

<Button

android:id="@+id/Rock"

style="?android:attr/buttonStyleSmall"

android:layout\_width="70dp"

android:layout\_height="70dp"

android:background="@drawable/rock"

android:layout\_marginEnd="35dp"

android:layout\_above="@+id/Scissor"

android:layout\_alignEnd="@+id/Human" />

<Button

android:id="@+id/Scissor"

style="?android:attr/buttonStyleSmall"

android:layout\_width="70dp"

android:layout\_height="70dp"

android:background="@drawable/scissor"

android:layout\_above="@+id/Paper"

android:layout\_alignStart="@+id/Rock" />

<Button

android:id="@+id/Paper"

style="?android:attr/buttonStyleSmall"

android:layout\_width="70dp"

android:layout\_height="70dp"

android:background="@drawable/paper"

android:layout\_centerVertical="true"

android:layout\_alignStart="@+id/Scissor" />

<Button

android:id="@+id/EnemyWeapon"

android:enabled = "false"

android:hint ="Enemy"

android:background = "#F0F000"

android:layout\_width="70dp"

android:layout\_height="70dp"

android:layout\_above="@+id/Paper"

android:layout\_alignEnd="@+id/AI" />

<Button

android:id="@+id/Setting"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Preference Setting"

android:layout\_marginBottom="71dp"

android:layout\_alignParentBottom="true"

android:layout\_alignParentStart="true"

android:layout\_alignParentEnd="true" />

<Button

android:id="@+id/Save"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Save to File"

android:layout\_alignParentBottom="true"

android:layout\_marginBottom="32dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentEnd="true" />

<TextView

android:id="@+id/AIScore"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="0"

android:layout\_marginTop="40dp"

android:layout\_below="@+id/Paper"

android:layout\_alignStart="@+id/EnemyWeapon"

android:textColor="#ff514d" />

<TextView

android:id="@+id/HumanScore"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="0"

android:layout\_alignTop="@+id/AIScore"

android:layout\_alignStart="@+id/Paper"

android:textColor="#4146ff" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceMedium"

android:text="Turn : 0"

android:id="@+id/TurnCount"

android:layout\_below="@+id/HumanScore"

android:layout\_above="@+id/Setting"

android:layout\_toStartOf="@+id/Human" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Load From File"

android:id="@+id/Load"

android:layout\_alignParentBottom="true"

android:layout\_alignParentEnd="true"

android:layout\_alignParentStart="true" />

</RelativeLayout>

**6. dialogfragment.xml**<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:background="#FFFFFF"

android:orientation="vertical"

>

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerInParent="true"

android:padding="10dp"

android:text = "Sorry, No Winner"

android:layout\_gravity="center\_horizontal" />

</LinearLayout>

**(xml)**

**7. setting.xml**

<?xml version="1.0" encoding="utf-8"?>

<PreferenceScreen xmlns:android="http://schemas.android.com/apk/res/android">

<PreferenceCategory android:title = "Setting Game Count">

<ListPreference

android:key = "prefSetting"

android:title = "PrefSetting"

android:summary = "Select Game Count"

android:entries = "@array/updateList"

android:entryValues="@array/updateListValues"/>

</PreferenceCategory>

<PreferenceCategory android:title = "Input Your Name">

<EditTextPreference

android:key = "preName"

android:title="InputName"

android:summary="Information of User" />

</PreferenceCategory>

</PreferenceScreen>

**(values)  
8. arrays.xml**

<?xml version="1.0" encoding="utf-8"?>

<resources>

<string-array name="updateList">

<item name = "3">3Game</item>

<item name = "5">5Game</item>

</string-array>

<string-array name="updateListValues">

<item name = "3">3</item>

<item name = "5">5</item>

</string-array>

</resources>

**(manifests)  
9. AndroidManifests.xml**

<?xml version="1.0" encoding="utf-8"?>

<manifest xmlns:android="http://schemas.android.com/apk/res/android"

package="com.example.khk.homework2" >

<application

android:allowBackup="true"

android:icon="@mipmap/ic\_launcher"

android:label="@string/app\_name"

android:theme="@style/AppTheme" >

<activity android:name = "com.example.khk.homework2.settingactivity"/>

<activity

android:name=".MainActivity"

android:label="@string/app\_name" >

<intent-filter>

<action android:name="android.intent.action.MAIN" />

<category android:name="android.intent.category.LAUNCHER" />

</intent-filter>

</activity>

</application>

<uses-permission android:name="android.permission.WRITE\_EXTERNAL\_STORAGE"></uses-permission>

<uses-permission android:name="android.permission.READ\_EXTERNAL\_STORAGE"></uses-permission>

</manifest>