**User Interface and Practice**

**HW1 2015**

Index

**1. XML**1) activity\_main.xml  
2) dialogfragment.xml  
3) printtext.xml  
4) requirename.xml **2. Java**

1) AlertDFragment

2) Draw

3) MainActivity

4) PrintSet

5) RequireName

**1. XML**

**1) activity\_main.xml**  
<?xml version="1.0" encoding="utf-8"?>

<LinearLayout 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.homework1.MainActivity">

<fragment

android:layout\_width="match\_parent"

android:layout\_height="86dp"

android:name = "com.example.khk.homework1.PrintSet"

android:id = "@+id/fragment1"/>

<TableLayout

android:layout\_width="match\_parent"

android:layout\_height="match\_parent">

<TableRow>

<Button

android:id="@+id/num1"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num2"

android:layout\_width="72dp"

android:layout\_height="80dp"/>

<Button

android:id="@+id/num3"

android:layout\_width="72dp"

android:layout\_height="80dp"/>

<Button

android:id="@+id/num4"

android:layout\_width="72dp"

android:layout\_height="80dp"/>

<Button

android:id="@+id/num5"

android:layout\_width="72dp"

android:layout\_height="80dp"/>

</TableRow>

<TableRow>

<Button

android:id="@+id/num6"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num7"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num8"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num9"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num10"

android:layout\_width="72dp"

android:layout\_height="80dp" />

</TableRow>

<TableRow android:layout\_width="80dp"

android:layout\_height="80dp">

<Button

android:id="@+id/num11"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num12"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num13"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num14"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num15"

android:layout\_width="72dp"

android:layout\_height="80dp" />

</TableRow>

<TableRow>

<Button

android:id="@+id/num16"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num17"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num18"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num19"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num20"

android:layout\_width="72dp"

android:layout\_height="80dp" />

</TableRow>

<TableRow>

<Button

android:id="@+id/num21"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num22"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num23"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num24"

android:layout\_width="72dp"

android:layout\_height="80dp" />

<Button

android:id="@+id/num25"

android:layout\_width="72dp"

android:layout\_height="80dp" />

</TableRow>

<Button

android:id="@+id/exit"

android:layout\_width="50dp"

android:layout\_height="80dp"

android:background="#96707f8c"

android:text = "Exit"

android:textSize="30dp"

android:textColor="#fbff36" />

</TableLayout>

</LinearLayout>

**2) 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="#AFFF00"

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>

**3) printtext.xml**<?xml version="1.0" encoding="utf-8"?>

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

android:orientation="vertical"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:weightSum="1">

<TextView

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

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

android:text="Turn : 0"

android:id="@+id/textView"

android:textSize="50dp" />

</LinearLayout>

**4) requirename.xml**

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

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

android:orientation="vertical"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent">

<EditText

android:id="@+id/name"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginTop="16dp"

android:layout\_marginLeft="4dp"

android:layout\_marginRight="4dp"

android:layout\_marginBottom="4dp"

android:hint = "Input Your Name"/>

</LinearLayout>

**2. Java**

**1) AlertDFragment**

package com.example.khk.homework1;

import android.app.AlertDialog;

import android.app.Dialog;

import android.app.DialogFragment;

import android.content.DialogInterface;

import android.os.Bundle;

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 " +RequireName.Name +"("+MainActivity.piece+")");

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

@Override

public void onClick(DialogInterface dialog, int which) {

return;

}

});

return builder.create();

}

}

**2) Draw**

package com.example.khk.homework1;

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;

}

}

**3) MainActivity**

package com.example.khk.homework1;

import android.app.FragmentManager;

import android.graphics.Color;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.Menu;

import android.view.MenuItem;

import android.view.View;

import android.widget.Button;

public class MainActivity extends AppCompatActivity {

public static String piece;

int turn=0; //턴 수는 1부터 시작

int[] choice = new int[26]; //중복클릭횟수 검사에 대한 배열

boolean change\_turn = true; //턴을 넘기기 위한 변수

String num, turn\_num; //num은 버튼의 번호

final int[] inputed = new int[26]; //inputed는 각 버튼에 들어간 말의 종류를 저장한다.

Button[] btn = new Button[26]; //버튼 26개 생성

int[] buttonId = {R.id.num1,R.id.num2,R.id.num3,R.id.num4,R.id.num5,R.id.num6,R.id.num7,R.id.num8,R.id.num9,R.id.num10,R.id.num11,R.id.num12,R.id.num13,R.id.num14,R.id.num15,R.id.num16,R.id.num17,R.id.num18,R.id.num19,R.id.num20,R.id.num21,R.id.num22,R.id.num23,R.id.num24,R.id.num25,R.id.exit};

//buttonId는 각 버튼에대한 id를 모은 배열

FragmentManager[] fm = new FragmentManager[13];

String tmp;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

for(int i=0;i<13;++i)

fm[i] = getFragmentManager();

//btn은 각 id를 저장하는 배열, choice는 중복선택을 검사하기 위한 요소의 배열

for(int i=0;i<26;++i)

{

btn[i] = (Button)findViewById(buttonId[i]);

choice[i] = 0; //모든 choice의 인덱스를 0으로 초기화

inputed[i] = 2; //어떠한 말도 등록되지 않은 default값을 2로 초기화

}

for(int i=0;i<26;++i)

{

final PrintSet printset = (PrintSet)getFragmentManager().findFragmentById(R.id.fragment1); //Turn수를 확인시켜 준다

final RequireName name = new RequireName();

final Draw draw = new Draw();

final int index = i;

btn[i].setOnClickListener(new View.OnClickListener() {

public void onClick(View view) {

++choice[index]; //이미 눌렀던 번호의 클릭횟수를 증가시킴

tmp = String.valueOf(inputed[index]);

num = String.valueOf(index + 1); //setText에 넣기위해 String으로 변환

turn\_num = String.valueOf(turn); //setText 넣기위해 String으로 변환

if (change\_turn == true)

{

if (choice[index] > 1)

{

inputed[index] = 0;

return;

}

turn\_num = String.valueOf(++turn); //setText 넣기위해 String으로 변환

printset.change(turn\_num); //턴 수를 출력

piece = "O"; //말 종류는 O

btn[index].setText(piece); //O로 지정

inputed[index] = 1; //inputed 배열에 true를 저장

change\_turn = false;

}

else if (change\_turn == false)

{

if (choice[index] > 1)

{

inputed[index] = 1;

return;

}

turn\_num = String.valueOf(++turn); //setText 넣기위해 String으로 변환

printset.change(turn\_num); //턴 수를 출력

piece = "X"; //말 종류는 "X"

btn[index].setText(piece); //X로 지정

inputed[index] = 0; //inputed 배열에 false를 저장

change\_turn = true;

}

//승부가 났을 경우 어떠한 칸이 승리조건에 만족하는지 표시해준다

if ((inputed[0] == 1 && inputed[1] == 1 && inputed[2] == 1 && inputed[3] == 1 && inputed[4] == 1) || (inputed[0] == 0 && inputed[1] == 0 && inputed[2] == 0 && inputed[3] == 0 && inputed[4] == 0))

{

name.show(fm[0], " ");

btn[0].setBackgroundColor(Color.parseColor("#7085ff"));

btn[1].setBackgroundColor(Color.parseColor("#7085ff"));

btn[2].setBackgroundColor(Color.parseColor("#7085ff"));

btn[3].setBackgroundColor(Color.parseColor("#7085ff"));

btn[4].setBackgroundColor(Color.parseColor("#7085ff"));

}

else if ((inputed[5] == 1 && inputed[6] == 1 && inputed[7] == 1 && inputed[8] == 1 && inputed[9] == 1) || (inputed[5] == 0 && inputed[6] == 0 && inputed[7] == 0 && inputed[8] == 0 && inputed[9] == 0))

{

name.show(fm[1], " ");

btn[5].setBackgroundColor(Color.parseColor("#7085ff"));

btn[6].setBackgroundColor(Color.parseColor("#7085ff"));

btn[7].setBackgroundColor(Color.parseColor("#7085ff"));

btn[8].setBackgroundColor(Color.parseColor("#7085ff"));

btn[9].setBackgroundColor(Color.parseColor("#7085ff"));

}

else if ((inputed[10] == 1 && inputed[11] == 1 && inputed[12] == 1 && inputed[13] == 1 && inputed[14] == 1) || (inputed[10] == 0 && inputed[11] == 0 && inputed[12] == 0 && inputed[13] == 0 && inputed[14] == 0))

{

name.show(fm[2], " ");

btn[10].setBackgroundColor(Color.parseColor("#7085ff"));

btn[11].setBackgroundColor(Color.parseColor("#7085ff"));

btn[12].setBackgroundColor(Color.parseColor("#7085ff"));

btn[13].setBackgroundColor(Color.parseColor("#7085ff"));

btn[14].setBackgroundColor(Color.parseColor("#7085ff"));

}

else if ((inputed[15] == 1 && inputed[16] == 1 && inputed[17] == 1 && inputed[18] == 1 && inputed[19] == 1) || (inputed[15] == 0 && inputed[16] == 0 && inputed[17] == 0 && inputed[18] == 0 && inputed[19] == 0))

{

name.show(fm[3], " ");

btn[15].setBackgroundColor(Color.parseColor("#7085ff"));

btn[16].setBackgroundColor(Color.parseColor("#7085ff"));

btn[17].setBackgroundColor(Color.parseColor("#7085ff"));

btn[18].setBackgroundColor(Color.parseColor("#7085ff"));

btn[19].setBackgroundColor(Color.parseColor("#7085ff"));

}

else if ((inputed[20] == 1 && inputed[21] == 1 && inputed[22] == 1 && inputed[23] == 1 && inputed[24] == 1) || (inputed[20] == 0 && inputed[21] == 0 && inputed[22] == 0 && inputed[23] == 0 && inputed[24] == 0))

{

name.show(fm[4], " ");

btn[20].setBackgroundColor(Color.parseColor("#7085ff"));

btn[21].setBackgroundColor(Color.parseColor("#7085ff"));

btn[22].setBackgroundColor(Color.parseColor("#7085ff"));

btn[23].setBackgroundColor(Color.parseColor("#7085ff"));

btn[24].setBackgroundColor(Color.parseColor("#7085ff"));

}

else if ((inputed[0] == 1 && inputed[5] == 1 && inputed[10] == 1 && inputed[15] == 1 && inputed[20] == 1) || (inputed[0] == 0 && inputed[5] == 0 && inputed[10] == 0 && inputed[15] == 0 && inputed[20] == 0))

{

name.show(fm[5], " ");

btn[0].setBackgroundColor(Color.parseColor("#7085ff"));

btn[5].setBackgroundColor(Color.parseColor("#7085ff"));

btn[10].setBackgroundColor(Color.parseColor("#7085ff"));

btn[15].setBackgroundColor(Color.parseColor("#7085ff"));

btn[20].setBackgroundColor(Color.parseColor("#7085ff"));

}

else if ((inputed[1] == 1 && inputed[6] == 1 && inputed[11] == 1 && inputed[16] == 1 && inputed[21] == 1) || (inputed[1] == 0 && inputed[6] == 0 && inputed[11] == 0 && inputed[16] == 0 && inputed[21] == 0))

{

name.show(fm[6], " ");

btn[1].setBackgroundColor(Color.parseColor("#7085ff"));

btn[6].setBackgroundColor(Color.parseColor("#7085ff"));

btn[11].setBackgroundColor(Color.parseColor("#7085ff"));

btn[16].setBackgroundColor(Color.parseColor("#7085ff"));

btn[21].setBackgroundColor(Color.parseColor("#7085ff"));

}

else if ((inputed[2] == 1 && inputed[7] == 1 && inputed[12] == 1 && inputed[17] == 1 && inputed[22] == 1) || (inputed[2] == 0 && inputed[7] == 0 && inputed[12] == 0 && inputed[17] == 0 && inputed[22] == 0))

{

name.show(fm[7], " ");

btn[2].setBackgroundColor(Color.parseColor("#7085ff"));

btn[7].setBackgroundColor(Color.parseColor("#7085ff"));

btn[12].setBackgroundColor(Color.parseColor("#7085ff"));

btn[17].setBackgroundColor(Color.parseColor("#7085ff"));

btn[22].setBackgroundColor(Color.parseColor("#7085ff"));

}

else if ((inputed[3] == 1 && inputed[8] == 1 && inputed[13] == 1 && inputed[18] == 1 && inputed[23] == 1) || (inputed[3] == 0 && inputed[8] == 0 && inputed[13] == 0 && inputed[18] == 0 && inputed[23] == 0))

{

name.show(fm[8], " ");

btn[20].setBackgroundColor(Color.parseColor("#7085ff"));

btn[21].setBackgroundColor(Color.parseColor("#7085ff"));

btn[22].setBackgroundColor(Color.parseColor("#7085ff"));

btn[23].setBackgroundColor(Color.parseColor("#7085ff"));

btn[24].setBackgroundColor(Color.parseColor("#7085ff"));

}

else if ((inputed[4] == 1 && inputed[9] == 1 && inputed[14] == 1 && inputed[19] == 1 && inputed[24] == 1) || (inputed[4] == 0 && inputed[9] == 0 && inputed[14] == 0 && inputed[19] == 0 && inputed[24] == 0))

{

name.show(fm[9], " ");

btn[4].setBackgroundColor(Color.parseColor("#7085ff"));

btn[9].setBackgroundColor(Color.parseColor("#7085ff"));

btn[14].setBackgroundColor(Color.parseColor("#7085ff"));

btn[19].setBackgroundColor(Color.parseColor("#7085ff"));

btn[24].setBackgroundColor(Color.parseColor("#7085ff"));

}

else if ((inputed[0] == 1 && inputed[6] == 1 && inputed[12] == 1 && inputed[18] == 1 && inputed[24] == 1) || (inputed[0] == 0 && inputed[6] == 0 && inputed[12] == 0 && inputed[18] == 0 && inputed[24] == 0))

{

name.show(fm[10], " ");

btn[0].setBackgroundColor(Color.parseColor("#7085ff"));

btn[6].setBackgroundColor(Color.parseColor("#7085ff"));

btn[12].setBackgroundColor(Color.parseColor("#7085ff"));

btn[18].setBackgroundColor(Color.parseColor("#7085ff"));

btn[24].setBackgroundColor(Color.parseColor("#7085ff"));

}

else if ((inputed[4] == 1 && inputed[8] == 1 && inputed[12] == 1 && inputed[16] == 1 && inputed[20] == 1) || (inputed[4] == 0 && inputed[8] == 0 && inputed[12] == 0 && inputed[16] == 0 && inputed[20] == 0))

{

name.show(fm[11], " ");

btn[4].setBackgroundColor(Color.parseColor("#7085ff"));

btn[8].setBackgroundColor(Color.parseColor("#7085ff"));

btn[12].setBackgroundColor(Color.parseColor("#7085ff"));

btn[16].setBackgroundColor(Color.parseColor("#7085ff"));

btn[20].setBackgroundColor(Color.parseColor("#7085ff"));

}

//만약 비겼다면 모든 칸을 색칠한다.

else if (turn == 25) {

draw.show(fm[12]," ");

for(int k=0;k<25;++k)

btn[k].setBackgroundColor(Color.parseColor("#AFFF00"));

}

if(index == 25)

{

moveTaskToBack(true);

finish();

android.os.Process.killProcess(android.os.Process.myPid());

}

}

});

}

}

**4) PrintSet**

package com.example.khk.homework1;

import android.app.Fragment;

import android.os.Bundle;

import android.view.LayoutInflater;

import android.view.View;

import android.view.ViewGroup;

import android.widget.TextView;

public class PrintSet extends Fragment {

TextView mView;

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

{

View view = inflater.inflate(R.layout.printtext, container, false);

mView = (TextView)view.findViewById(R.id.textView);

//Inflate the layout for this fragment

return view;

}

public void change(String txt)

{

mView.setText("Turn : "+txt);

}

}

**5) RequireName**

package com.example.khk.homework1;

import android.app.AlertDialog;

import android.app.Dialog;

import android.app.DialogFragment;

import android.app.FragmentManager;

import android.content.DialogInterface;

import android.os.Bundle;

import android.view.LayoutInflater;

import android.view.View;

import android.widget.EditText;

public class RequireName extends DialogFragment{

EditText mEdit;

public static String Name;

public Dialog onCreateDialog(final Bundle savedInstanceState) {

final FragmentManager fm = getFragmentManager();

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

LayoutInflater inflater = getActivity().getLayoutInflater();

View layout = inflater.inflate(R.layout.requirename, null);

builder.setView(layout);

mEdit = (EditText)layout.findViewById(R.id.name);

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

@Override

public void onClick(DialogInterface dialog, int which) {

Name = mEdit.getText().toString();

AlertDFragment frag = new AlertDFragment();

frag.show(fm," ");

}

});

return builder.create();

}

}