1.Sample Source Code

* 1. MainActivity

**package** com.example.v7.ui\_homework\_2\_rcp;  
  
**import** android.content.Intent;  
**import** android.content.SharedPreferences;  
**import** android.preference.PreferenceManager;  
**import** android.support.v7.app.AppCompatActivity;  
**import** android.os.Bundle;  
**import** android.util.Log;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
  
**import** java.io.FileInputStream;  
**import** java.io.FileNotFoundException;  
**import** java.io.FileOutputStream;  
**import** java.io.InputStreamReader;  
**import** java.io.OutputStream;  
**import** java.io.OutputStreamWriter;  
**import** java.util.Random;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
 **private static final int *SETTTING\_RESULT***=1;  
 **private static final int *ROCK*** = R.drawable.***rock***;  
 **private static final int *SCISSOR***= R.drawable.***scissor***;  
 **private static final int *PAPER*** = R.drawable.***paper***;  
 **private int cntRound**=-1;  
 **private int setRound**=3;  
 **private** Random **r**= **new** Random(3);  
 **private boolean finishGame**=**false**;  
 **private int**[] **player** = **new int**[100];  
 **private int**[] **ai** = **new int**[100];  
 **private int**[] **gameResult** = **new int**[100];  
 **private** String **WinnerName**;  
 **static final int *READ\_BLOCK\_SIZE***= 101;  
  
 Button **settingBtn**;  
 Button **rockBtn**;  
 Button **scissorBtn**;  
 Button **paperBtn**;  
 Button **aiBtn**;  
 Button **saveBtn**;  
 Button **readBtn**;  
  
 TextView **playerName**;  
 TextView **score**;  
 String **getScore**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {*//initialize all value* **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 **rockBtn** = (Button)findViewById(R.id.***buttonRock***);  
 **settingBtn** = (Button)findViewById(R.id.***buttonPref***);  
 **scissorBtn** = (Button)findViewById(R.id.***buttonScissor***);  
 **paperBtn** = (Button)findViewById(R.id.***buttonPaper***);  
 **aiBtn** = (Button)findViewById(R.id.***buttonAI***);  
 **saveBtn** = (Button)findViewById(R.id.***buttonSave***);  
 **readBtn** = (Button)findViewById(R.id.***buttonRead***);  
 **playerName** = (TextView)findViewById(R.id.***textViewHuman***);  
 **score** =(TextView)findViewById(R.id.***textViewScore***);  
 **score**.setText(**getScore**);  
 **settingBtn**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 Intent i = **new** Intent(getApplicationContext(), settingActivity.**class**);  
 startActivityForResult(i, ***SETTTING\_RESULT***);  
 }  
 });  
 **rockBtn**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 **int** temp = **r**.nextInt(3);  
 game(0,temp);  
 result(0, temp);  
 **score**.setText(**score**.getText().toString()+**" "**+**getScore**);  
 }  
 });  
 **scissorBtn**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 **int** temp = **r**.nextInt(3);  
 game(1,temp);  
 result(1, temp);  
 Log.*d*(**"temp:"**, **""** + temp);  
 **score**.setText(**score**.getText().toString() + **" "** + **getScore**);  
 }  
 });  
 **paperBtn**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 **int** temp = **r**.nextInt(3);  
 game(2,temp);  
 result(2, temp);  
 Log.*d*(**"temp:"**, **""** + temp);  
 **score**.setText(**score**.getText().toString()+**" "**+**getScore**);  
 }  
 });  
 **saveBtn**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 Save(v);  
 }  
 });  
 **readBtn**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 Read(v);  
 }  
 });  
 }  
  
  
 **public void** Save(View view){*//save function to save result and winner name.* **try**{  
 FileOutputStream fileOutputStream = openFileOutput(**"mytext.txt"**,***MODE\_PRIVATE***);  
 OutputStreamWriter outputStreamWriter = **new** OutputStreamWriter(fileOutputStream);  
 outputStreamWriter.write(**WinnerName**+**" "**);  
 **for**(**int** i=0; i<**cntRound**; i++){  
 **if**(**gameResult**[i]==0){  
 outputStreamWriter.write(**""**+**"Draw"**+**" "**);  
 }  
 **else if**(**gameResult**[i]==-1){  
 outputStreamWriter.write(**""**+**"Lose"**+**" "**);  
 }  
 **else** {  
 outputStreamWriter.write(**""**+**"Win"**+**" "**);  
 }  
 }  
 Toast.*makeText*(getApplicationContext(),**"File saved safely!!"**,Toast.***LENGTH\_LONG***).show();  
 outputStreamWriter.close();  
 } **catch** (Exception e) {  
 e.printStackTrace();  
 }  
 }  
 **public void** Read(View view){  
 **try**{  
 FileInputStream fileInputStream = openFileInput(**"mytext.txt"**);  
 InputStreamReader inputStreamReader = **new** InputStreamReader(fileInputStream);  
 **char**[] inputBuffer = **new char**[***READ\_BLOCK\_SIZE***];  
 String s = **""**;  
 **int** charRead;  
 **while**((charRead=inputStreamReader.read(inputBuffer))>0){  
 String readstring = String.*copyValueOf*(inputBuffer,0,charRead);  
 s+=readstring;  
 }  
 inputStreamReader.close();  
 Toast.*makeText*(getApplicationContext(),s,Toast.***LENGTH\_LONG***).show();  
  
 } **catch** (Exception e) {  
 e.printStackTrace();  
 }  
 }  
 @Override  
 **protected void** onActivityResult(**int** requestCode, **int** resultCode, Intent data) {  
 **super**.onActivityResult(requestCode, resultCode, data);  
 **if**(requestCode==***SETTTING\_RESULT***){  
 displayUserSetting();  
 }  
 }  
 **public void** displayUserSetting(){  
 SharedPreferences sharedPreferences = PreferenceManager.*getDefaultSharedPreferences*(**this**);  
 **playerName**.setText(sharedPreferences.getString(**"prefUserName"**, **"defalutUserName"**));  
 }  
  
 **public void** setName(){ *//To show player name in textview to use preference* SharedPreferences sharedPreferences = PreferenceManager.*getDefaultSharedPreferences*(**this**);  
 **playerName**.setText(sharedPreferences.getString(**"prefUserName"**, **"ANOMYNOUS"**));  
 }  
 **public void** game(**int** playerRCP, **int** aiRCP){ *//Get player and ai rock,scissor paper > count round and check win lose draw* SharedPreferences sharedPreferences = PreferenceManager.*getDefaultSharedPreferences*(**this**);  
 String temp = sharedPreferences.getString(**"prefRoundCount"**, **"3"**);  
 **cntRound**++;  
 **setRound** = Integer.*parseInt*(temp);  
 Log.*d*(**"setRound:"**,**"setRound:"**+**setRound**);  
 Log.*d*(**"cntRound"**,**"cntRound:"**+**cntRound**);  
 **if**(**cntRound** == **setRound**){  
 *//dialog띄워서 끝내는 부분.* dialogfrag df = **new** dialogfrag();  
 **if**(userWin()){  
 **WinnerName** = sharedPreferences.getString(**"prefUserName"**,**"ANOMYNOUS"**);  
 df.changeName(**WinnerName**);  
 }  
 **else**{  
 **WinnerName** = **"AI"**;  
 df.changeName(**WinnerName**);  
 }  
 df.show(getFragmentManager(),**"Check"**);  
 Log.*d*(**"check"**, **"This is the check"**);  
 }  
 **player**[**cntRound**] = playerRCP;  
 **ai**[**cntRound**] = aiRCP;  
 Log.*d*(**"log"**, **"ai[cntRound]="** + **ai**[**cntRound**]);  
 **if**(**ai**[**cntRound**]==0){  
 **aiBtn**.setBackgroundResource(***ROCK***);  
 }  
 **else if**(**ai**[**cntRound**]==1){  
 **aiBtn**.setBackgroundResource(***SCISSOR***);  
 }  
 **else**{  
 **aiBtn**.setBackgroundResource(***PAPER***);  
 }  
  
 }  
 **public void** result(**int** player, **int** ai){ *//to save the 1 round result in array* **if**(player==ai){  
 **gameResult**[**cntRound**]= 0; *// draw* **setRound**++;  
 **getScore** = **"Draw"**;  
 }  
 **else if**(player==2&&ai==0){  
 **gameResult**[**cntRound**]= 1;  
 **getScore** = **"Win"**;  
 }  
 **else if**(ai==0&&player==2){  
 **gameResult**[**cntRound**]= -1;  
 **getScore** = **"Lose"**;  
 }  
 **else**{  
 **if**(player>ai){  
 **gameResult**[**cntRound**]= -1;*//lose* **getScore** = **"Lose"**;  
 }  
 **else**{  
 **gameResult**[**cntRound**]= 1;*// win* **getScore** = **"Win"**;  
 }  
 }  
 }  
  
 **public boolean** userWin(){ *//Consider who is the winner of this game* **int** Win=0,Lose=0;  
 **for**(**int** i=0; i<**cntRound**;i++){  
 **if**(**gameResult**[i]==1){  
 Win++;  
 }  
 **else if**(**gameResult**[i]==-1){  
 Lose++;  
 }  
 }  
 **if**(Win>=Lose) **return true**;  
 **else return false**;  
 }  
}

* 1. Dialogfrag

**package** com.example.v7.ui\_homework\_2\_rcp;  
  
**import** android.app.DialogFragment;  
**import** android.content.SharedPreferences;  
**import** android.os.Bundle;  
**import** android.preference.PreferenceManager;  
**import** android.support.annotation.Nullable;  
**import** android.view.LayoutInflater;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
**import** android.widget.TextView;  
  
*/\*\*  
 \* Created by v7 on 2015. 11. 30..  
 \*/***public class** dialogfrag **extends** DialogFragment {  
  
 String **name**;  
 @Nullable  
 @Override  
  
 **public** View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {  
  
 View rootView;  
 rootView = inflater.inflate(R.layout.***dialogfragment***,container,**false**);  
 getDialog().setTitle(**"The Winner is"**);  
 TextView nametext = (TextView)rootView.findViewById(R.id.***nameText***);  
 nametext.setText(**name**);  
 **return** rootView;  
 }  
  
 **public void** changeName(String getS){  
 **name**=getS;  
 }*//To convert textview.*}

* 1. settingActivity

**package** com.example.v7.ui\_homework\_2\_rcp;  
  
**import** android.os.Bundle;  
**import** android.preference.PreferenceActivity;  
  
*/\*\*  
 \* Created by v7 on 2015. 11. 29..  
 \*/***public class** settingActivity **extends** PreferenceActivity {*//just for preference* @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 addPreferencesFromResource(R.xml.***setting***);  
 }  
}

* 1. activity\_main

*<?***xml version="1.0" encoding="utf-8"***?>*<**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:paddingLeft="@dimen/activity\_horizontal\_margin"  
 android:paddingRight="@dimen/activity\_horizontal\_margin"  
 android:paddingTop="@dimen/activity\_vertical\_margin"  
 android:paddingBottom="@dimen/activity\_vertical\_margin"  
 tools:context="com.example.v7.ui\_homework\_2\_rcp.MainActivity"**>  
  
  
 <**Button  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:id="@+id/buttonRock"  
 android:layout\_marginTop="65dp"  
 android:layout\_marginRight="40dp"  
 android:layout\_marginEnd="40dp"  
 android:layout\_alignParentTop="true"  
 android:layout\_alignParentRight="true"  
 android:layout\_alignParentEnd="true"  
 android:background="@drawable/rock"**/>  
  
 <**Button  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:id="@+id/buttonScissor"  
 android:layout\_below="@+id/buttonRock"  
 android:layout\_alignRight="@+id/buttonRock"  
 android:layout\_alignEnd="@+id/buttonRock"  
 android:layout\_marginTop="48dp"  
 android:background="@drawable/scissor"**/>  
  
 <**Button  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:id="@+id/buttonPaper"  
 android:layout\_marginTop="51dp"  
 android:layout\_below="@+id/buttonScissor"  
 android:layout\_alignLeft="@+id/buttonScissor"  
 android:layout\_alignStart="@+id/buttonScissor"  
 android:background="@drawable/paper"**/>  
  
 <**Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/buttonAI"  
 android:layout\_above="@+id/buttonPaper"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentStart="true"  
 android:background="@drawable/paper"**/>  
  
 <**TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textAppearance="?android:attr/textAppearanceLarge"  
 android:text="Human Player"  
 android:id="@+id/textViewHuman"  
 android:layout\_alignParentTop="true"  
 android:layout\_alignLeft="@+id/buttonRock"  
 android:layout\_alignStart="@+id/buttonRock"** />  
  
 <**TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textAppearance="?android:attr/textAppearanceLarge"  
 android:text="AI player"  
 android:id="@+id/textViewAI"  
 android:layout\_alignParentTop="true"  
 android:layout\_alignRight="@+id/buttonAI"  
 android:layout\_alignEnd="@+id/buttonAI"** />  
  
 <**Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Preference Setting"  
 android:id="@+id/buttonPref"  
 android:layout\_below="@+id/buttonPaper"  
 android:layout\_alignLeft="@+id/buttonSave"  
 android:layout\_alignStart="@+id/buttonSave"  
 android:layout\_marginTop="30dp"** />  
  
 <**Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Save"  
 android:id="@+id/buttonSave"  
 android:layout\_below="@+id/buttonPref"  
 android:layout\_toRightOf="@+id/buttonAI"  
 android:layout\_toEndOf="@+id/buttonAI"** />  
  
 <**Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Read"  
 android:id="@+id/buttonRead"  
 android:layout\_alignBottom="@+id/buttonSave"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentStart="true"** />  
  
 <**TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textAppearance="?android:attr/textAppearanceLarge"  
 android:id="@+id/textViewScore"  
 android:layout\_alignTop="@+id/buttonPaper"  
 android:layout\_toLeftOf="@+id/buttonPref"  
 android:layout\_toStartOf="@+id/buttonPref"  
 android:text="Result"  
 android:gravity="left"**/>  
</**RelativeLayout**>

* 1. dialogfragment

*<?***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"**>  
  
 <**TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textAppearance="?android:attr/textAppearanceLarge"  
 android:text="Large Text"  
 android:id="@+id/nameText"  
 android:layout\_gravity="center\_horizontal"** />  
</**LinearLayout**>

* 1. setting

*<?***xml version="1.0" encoding="utf-8"***?>*<**PreferenceScreen xmlns:android="http://schemas.android.com/apk/res/android"**>  
  
 <**PreferenceCategory android:title="NameSetting"**>  
 <**EditTextPreference  
 android:title="UserName"  
 android:summary="Set Your Name"  
 android:key="prefUserName"**/>  
  
 </**PreferenceCategory**>  
 <**PreferenceCategory android:title="RoundSetting"**>  
 <**ListPreference  
 android:title="RoundCount"  
 android:summary="Set Round cycle"  
 android:key="prefRoundCount"  
 android:entries="@array/roundCount"  
 android:entryValues="@array/roundCountValues"**/>  
 </**PreferenceCategory**>  
  
</**PreferenceScreen**>