**计算机科学与工程学院实验报告**

**课程名称** 移动应用开发 **班级** 18软件2

**实验名称** 文件存储 **指导教师** 骆伟忠

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**一 实验目的**

掌握文件存储方法。

**二 实验环境**

Android studio

**三 实验过程**

**关键代码：**

**（MainActivity.java文件）**

**package** com.example.saveqq;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
**import** android.text.TextUtils;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.CheckBox;  
**import** android.widget.CompoundButton;  
**import** android.widget.EditText;  
**import** android.widget.RadioGroup;  
**import** android.widget.Toast;  
  
**import** java.util.Map;  
  
**public class** MainActivity **extends** AppCompatActivity **implements** View.OnClickListener {  
 EditText **etNumber**;  
 EditText **etPassword**;  
 Button **Login**;  
 CheckBox **rem\_user**;  
 CheckBox **rem\_password**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
  
  
 **etNumber** = (EditText) findViewById(R.id.***usernumber***);  
 **etPassword** = (EditText) findViewById(R.id.***userpassword***);  
 **Login** = (Button) findViewById(R.id.***login***);  
  
 *//判断之前用户是否保存了信息* Map<String, String> userInfo = SaveInformation.*getUserInfo*(**this**);  
 **if** (userInfo != **null**) {  
 **etNumber**.setText(userInfo.get(**"number"**));  
 **if** (userInfo.get(**"password"**).equals(**"-"**))  
 **etPassword**.setText(**""**);  
 **else  
 etPassword**.setText(userInfo.get(**"password"**));  
 }  
 **Login**.setOnClickListener(**this**);  
 }  
  
 @Override  
 **public void** onClick(View v) {  
 String number = **etNumber**.getText().toString().trim();  
 String password = **etPassword**.getText().toString().trim();  
 **if** (TextUtils.*isEmpty*(number)) {  
 Toast.*makeText*(**this**, **"请输入QQ账号"**, Toast.***LENGTH\_SHORT***).show();  
 **return**;  
 }  
 **if** (TextUtils.*isEmpty*(password)) {  
 Toast.*makeText*(**this**, **"请输入QQ密码"**, Toast.***LENGTH\_SHORT***).show();  
 **return**;  
 }  
  
  
 Toast.*makeText*(**this**, **"登陆成功"**, Toast.***LENGTH\_SHORT***).show();  
  
  
 *//判断保存类型* **rem\_user** = (CheckBox) findViewById(R.id.***rememberuser***);  
 **rem\_password** = (CheckBox) findViewById(R.id.***rememberpassword***);  
 *//如果用户名没选中，直接返回* **if** (!**rem\_user**.isChecked()) {  
 **return**;  
 }  
 *//如果用户名选中，密码未选中，则保存用户名与空密码即可* **else if** (!**rem\_password**.isChecked()) {  
 password = **"-"**;  
 }  
  
  
 *//保存用户信息* **boolean** isSaveSuccess = SaveInformation.*saveUserInfo*(**this**, number, password);  
 **if** (isSaveSuccess)  
 Toast.*makeText*(**this**, **"保存成功"**, Toast.***LENGTH\_SHORT***).show();  
 **else** Toast.*makeText*(**this**, **"保存失败"**, Toast.***LENGTH\_SHORT***).show();  
 }  
}

**（SaveInformation.java文件）**

**package** com.example.saveqq;  
  
**import** android.content.Context;  
**import** java.io.FileInputStream;  
**import** java.io.FileOutputStream;  
**import** java.util.HashMap;  
**import** java.util.Map;  
  
**public class** SaveInformation {  
 *//保存QQ登录信息 到data.txt* **public static boolean** saveUserInfo(Context context,String number,String password){  
 **try** {  
 *//通过上下文获取文件输出流* FileOutputStream fos = context.openFileOutput(**"data.txt"**, context.***MODE\_PRIVATE***);  
 *//把数据写入文件中* fos.write((number+**":"**+password).getBytes());  
 fos.close();  
 **return true**;  
 } **catch** (Exception e) {  
 e.printStackTrace();  
 }  
 **return false**;  
 }  
  
 *//从文件中读取信息* **public static** Map<String,String> getUserInfo(Context context){  
  
 **try** {  
 FileInputStream fis = context.openFileInput(**"data.txt"**);  
 **byte**[] buffer = **new byte**[fis.available()];  
 fis.read(buffer);  
 Map<String,String> userMap = **new** HashMap<String, String>();  
 String[] split = **new** String(buffer).split(**":"**);  
 userMap.put(**"number"**,split[0]);  
 userMap.put(**"password"**,split[1]);  
 fis.close();  
 **return** userMap;  
 } **catch** (Exception e) {  
 e.printStackTrace();  
 }  
 **return null**;  
 }  
}

**（activity\_main.xml文件）**

*<?***xml version="1.0" encoding="utf-8"***?>*<**RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#E6E6E6"  
 android:orientation="vertical"**>  
  
 <**ImageView  
 android:layout\_width="80dp"  
 android:layout\_height="80dp"  
 android:id="@+id/iv"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginTop="90dp"  
 android:background="@drawable/qq"** />  
  
 <**LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/number"  
 android:background="#FFFFFF"  
 android:layout\_below="@id/iv"  
 android:layout\_centerVertical="true"  
 android:layout\_marginTop="30dp"  
 android:layout\_marginBottom="5dp"  
 android:layout\_marginLeft="15dp"  
 android:layout\_marginRight="15dp"** >  
  
 <**TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="账号"  
 android:textSize="30dp"  
 android:layout\_marginLeft="10dp"  
 android:layout\_marginBottom="5dp"  
 android:layout\_marginTop="5dp"** />  
 <**EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/usernumber"  
 android:background="@null"  
 android:textSize="26dp"  
 android:layout\_gravity="center"  
 android:textColor="#000000"  
 android:layout\_marginLeft="10dp"  
 android:layout\_marginRight="10dp"  
 android:inputType="number"  
 android:maxLines="1"** />  
 </**LinearLayout**>  
  
 <**LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/password"  
 android:background="#FFFFFF"  
 android:layout\_below="@id/number"  
 android:layout\_centerVertical="true"  
 android:layout\_marginTop="5dp"  
 android:layout\_marginBottom="5dp"  
 android:layout\_marginLeft="15dp"  
 android:layout\_marginRight="15dp"** >  
  
 <**TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="密码"  
 android:textSize="30dp"  
 android:layout\_marginLeft="10dp"  
 android:layout\_marginBottom="5dp"  
 android:layout\_marginTop="5dp"** />  
 <**EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/userpassword"  
 android:background="@null"  
 android:textSize="26dp"  
 android:layout\_gravity="center"  
 android:textColor="#000000"  
 android:layout\_marginLeft="10dp"  
 android:layout\_marginRight="10dp"  
 android:inputType="textPassword"** />  
 </**LinearLayout**>  
 <**LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/remember"  
 android:layout\_below="@+id/password"  
 android:layout\_centerInParent="true"  
 android:layout\_marginTop="10dp"** >  
  
 <**CheckBox  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/rememberuser"  
 android:text="记住账号"  
 android:textColor="#3c82c4"  
 android:buttonTint="@color/colorAccent"** />  
 <**CheckBox  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/rememberpassword"  
 android:text="记住密码"  
 android:textColor="#3c82c4"  
 android:buttonTint="@color/colorAccent"** />  
 </**LinearLayout**>  
  
 <**Button  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/login"  
 android:layout\_marginLeft="30dp"  
 android:layout\_marginRight="30dp"  
 android:layout\_marginBottom="50dp"  
 android:layout\_alignParentBottom="true"  
 android:text="登 录"  
 android:textSize="20sp"  
 android:textColor="#FFFFFF"  
 android:background="#3c82c4"** />  
 <**LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/service"  
 android:layout\_alignParentBottom="true"  
 android:layout\_centerHorizontal="true"** >  
 <**Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/newuser"  
 android:text="新用户"  
 android:textColor="#3c82c4"  
 android:textSize="13sp"  
 android:background="@null"  
 android:layout\_marginRight="-10dp"** />  
 <**Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/forget"  
 android:text="忘记密码？"  
 android:textColor="#3c82c4"  
 android:textSize="13sp"  
 android:background="@null"  
 android:layout\_marginLeft="-10dp"** />  
 </**LinearLayout**>  
</**RelativeLayout**>

**运行截图：**



**四 实验总结**

本次实验，主要是学习通过I/O流的文件存储，通过学习视频资料和电子教材即可掌握，我考虑到现实QQ的问题，所以增添了两个CheckBox，当用户勾选记住账号和密码时，应用才会将信息存入data.txt文件中，否则直接登录，不储存信息，能够更好的模仿现实中的QQ app。通过以上实验，掌握了I/O流存储信息的方法。