Android 开发第九次实验

13331251 王嘉威

一.实验目的

1.学习使用 KSOAP2 访问 WebService;

2.了解 SOAP 协议基础知识;

二.实验内容

使用 Ksoap2,发送文字信息到指定网络 service 获得生成的验证码图片,并显示

出来。

三.实验步骤

1.创建 MainActivity 类,编写其界面:

```xml
<?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:paddingBottom="16dp"
    android:paddingLeft="16dp"
    android:paddingRight="16dp"
    android:paddingTop="16dp"
    tools:context="com.example.williamdking.homework_9.MainActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="请输入需要生成的验证码（支持中文、英文、符号和数字，最多支持8个字符"/>
        <EditText
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
```

2.在 MainActivity 类中创建线程类 Runnable,重载 run()方法,实现向
WebService 发送请求获取验证码图片:

```java
public class Download implements Runnable {
    private final String NAMESPACE = "http://WebXml.com.cn/";
    private final String METHODNAME = "enValidateByte";
    private final String SOAPACTION = "http://WebXml.com.cn/enValidateByte";
    private final String URL = "http://webservice.webxml.com.cn/WebServices/ValidateCodeWebService.asmx";
    Download() { super(); }
    @Override
    public void run() {
        SoapObject request = new SoapObject(NAMESPACE, METHODNAME);
        //Log.e("str", MainActivity.str);
        request.addProperty("byString", ((EditText)findViewById(R.id.confirm_code)).getText().toString());
        SoapSerializationEnvelope envelope = new SoapSerializationEnvelope(SoapEnvelope.VER10);
        envelope.dotNet = true;
        envelope.setOutputSoapObject(request);
        HttpTransportSE transportSE = new HttpTransportSE(URL, 120000);
        try {
            transportSE.call(SOAPACTION, envelope);
        } catch (Exception e) {
            e.printStackTrace();
        }
        Log.e("fault", envelope.bodyIn.toString());
        SoapObject result = (SoapObject)envelope.bodyIn;
        SoapPrimitive detail = (SoapPrimitive)result.getProperty("enValidateByteResult");

        Message message = new Message();
        message.what = UPDATE;
        message.obj = detail;
        handler.sendMessage(message);
    }
}
```

3.创建 handler 类,根据解码接收到的二进制流得出图片更新 UI:

```java
private ProgressDialog progressDialog = null;

private Handler handler = new Handler() {
    @Override
    public void handleMessage(Message message) {
        switch (message.what) {
            case UPDATE:
                progressDialog.cancel();
                byte[] data = Base64.decode((message.obj.toString()).getBytes(), Base64.DEFAULT);
                Bitmap bitmap = BitmapFactory.decodeByteArray(data, 0, data.length);
                ImageView image = (ImageView)findViewById(R.id.image);
                image.setImageBitmap(bitmap);
                break;
            default:
                break;
        }
    }
};
```

4.绑定控件点击发送请求的事件并显示进度窗:

```java
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        confirmCode = (EditText)findViewById(R.id.confirm_code);
        create = (Button)findViewById(R.id.create);

        create.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                sendHttpRequest();
                if (progressDialog == null) progressDialog = new ProgressDialog(MainActivity.this);
                progressDialog.setTitle("Requesting");
                progressDialog.setMessage("requesting....");
                progressDialog.setIndeterminate(true);
                progressDialog.show();
            }
        });
    }

    private void sendHttpRequest() { (new Thread(new Download())).start(); }
}
```
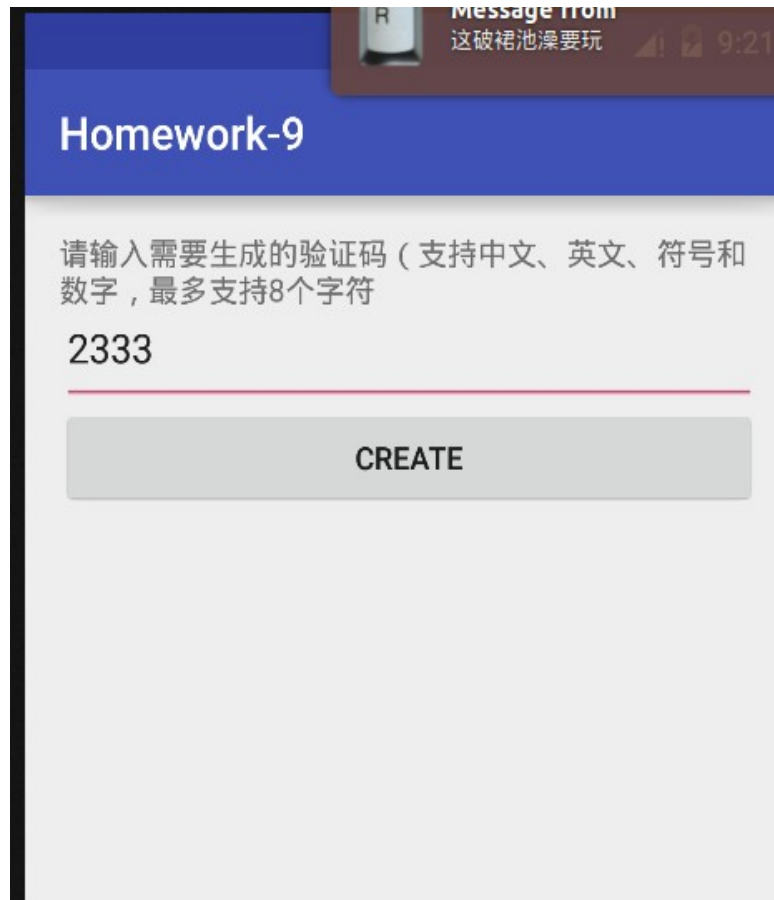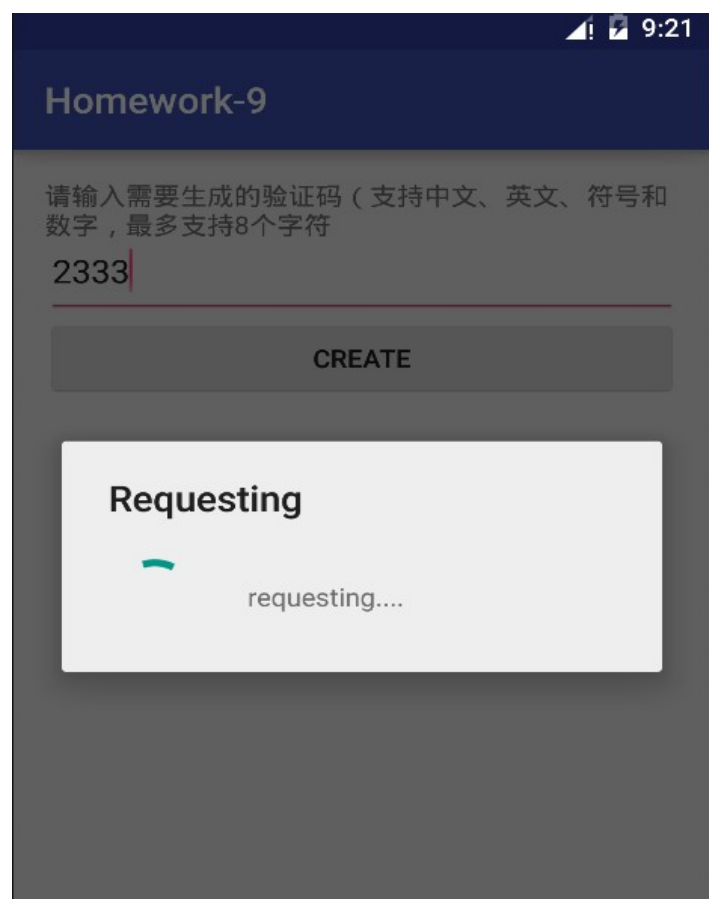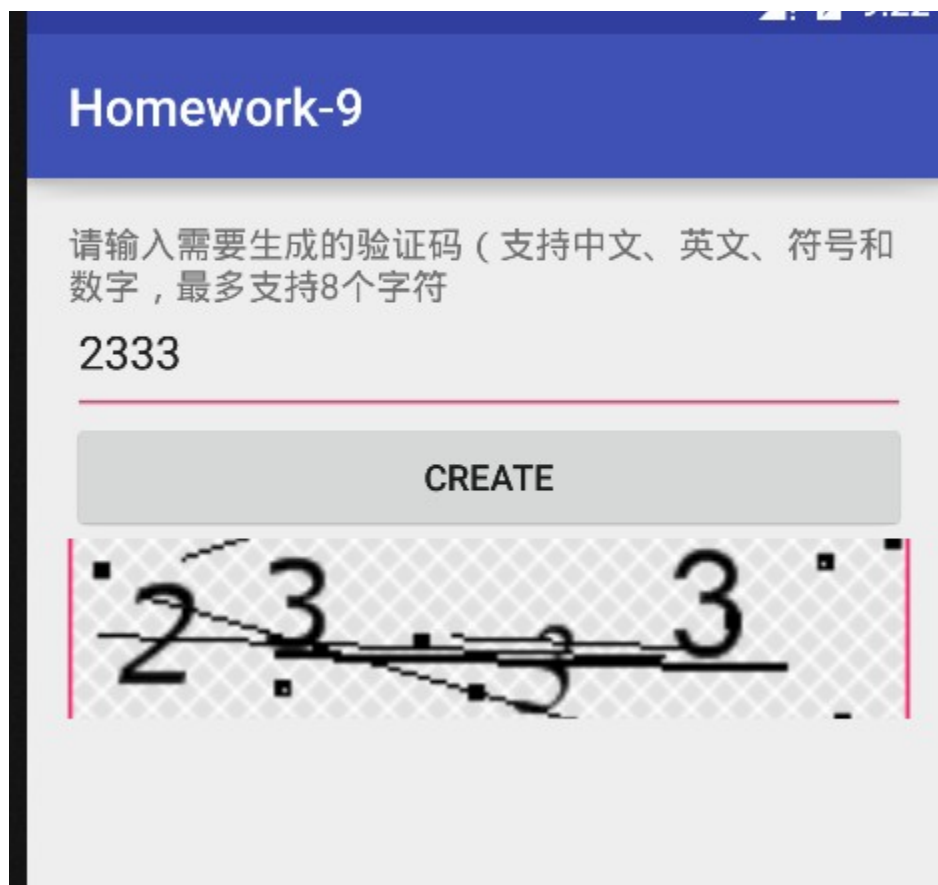
四.实验结果

1)初始界面:

2)请求中:

3)结果:

五.实验总结

    这次的实验本身不难,麻烦的是请求的服务器经常无法响应......弄得我以为哪里写错了.......看了 webService 网站本身上说明的 soap 格式和一些博文,对 soap 请求有了一定的了解,或许可以利用 webService 来完成自己编写的应用的一些功能.

参考资料:
1.http://blog.csdn.net/sjf0115/article/details/7255280
2.http://webservice.webxml.com.cn/WebServices/ValidateCodeWebService.asmx?op=enValidateByte

联系方式: 18819473218