爬某吉成绩、课程、评教小节

package guanyue;

import java.io.BufferedInputStream;

import java.io.IOException;

import java.security.MessageDigest;

import java.util.ArrayList;

import java.util.List;

import java.util.Scanner;

import org.apache.http.HttpResponse;

import org.apache.http.NameValuePair;

import org.apache.http.ParseException;

import org.apache.http.client.config.CookieSpecs;

import org.apache.http.client.config.RequestConfig;

import org.apache.http.client.entity.UrlEncodedFormEntity;

import org.apache.http.client.methods.HttpGet;

import org.apache.http.client.methods.HttpPost;

import org.apache.http.entity.StringEntity;

import org.apache.http.impl.client.CloseableHttpClient;

import org.apache.http.impl.client.HttpClients;

import org.apache.http.message.BasicNameValuePair;

import org.apache.http.util.EntityUtils;

import org.json.JSONArray;

import org.json.JSONException;

import org.json.JSONObject;

/\*\*

\* @version 1.0

\* @author Guan Yue

\* @time 2017年11月29日 下午12:31:25

\*

\*/

public class Test {

//

private static RequestConfig config = RequestConfig.custom().setConnectTimeout(1000)

.setCookieSpec(CookieSpecs.DEFAULT).build();

private static CloseableHttpClient client = HttpClients.custom().setDefaultRequestConfig(config).build();

// j\_spring\_security\_check

private static String loginUrl = "http://uims.jlu.edu.cn/ntms/j\_spring\_security\_check";

//

private static int stuID = 0, stuTERM = 0;

/\*\*

\* @param args

\* @throws IOException

\* @throws InterruptedException

\*/

public static void main(String[] args) throws IOException, InterruptedException {

// TODO Auto-generated method stub

Scanner scanner = null;

try {

String username = null, passwd = null, url = loginUrl;

int num = 0, term = 0;

scanner = new Scanner(System.in);

if (args.length != 2) {

System.out.print("输入教学号：");

username = scanner.nextLine().trim();

System.out.print("输入密码：");

passwd = scanner.nextLine().trim();

} else {

username = args[0];

passwd = args[1];

}

passwd = md5(username, passwd);

uimsLogin(url, username, passwd);

// start do something here .....

uimsTeachingEvaluation();

System.out.print("输入查询最近科目数：");

num = Integer.parseInt(scanner.nextLine().trim());

if (num <= 0)

num = 15;

uimsScore(num, false);

System.out.printf("输入待查询学期(当前学期：%1$3d)：", stuTERM);

term = Integer.parseInt(scanner.nextLine().trim());

if (term > stuTERM)

term = stuTERM;

uimsCourse(term);

//

uimsLogout();

} finally {

if (scanner != null)

scanner.close();

if (client != null)

client.close();

}

}

private static String md5(String username, String passwd) {

// TODO Auto-generated method stub

passwd = "UIMS" + username + passwd;

String md5str = "";

try {

// 1 创建一个提供信息摘要算法的对象，初始化为md5算法对象

MessageDigest md = MessageDigest.getInstance("MD5");

// 2 将消息变成byte数组

byte[] passwdbytes = passwd.getBytes();

// 3 计算后获得字节数组,这就是那128位了

byte[] buff = md.digest(passwdbytes);

// 4 把数组每一字节（一个字节占八位）换成16进制连成md5字符串

md5str = bytesToHex(buff);

} catch (Exception e) {

e.printStackTrace();

}

return md5str;

}

private static String bytesToHex(byte[] buff) {

// TODO Auto-generated method stub

StringBuffer md5str = new StringBuffer();

// 把数组每一字节换成16进制连成md5字符串

int digital;

for (int i = 0; i < buff.length; i++) {

digital = buff[i];

if (digital < 0) {

digital += 256;

}

if (digital < 16) {

md5str.append("0");

}

md5str.append(Integer.toHexString(digital));

}

return md5str.toString();

}

/\*\*

\* 登陆UIMS

\*

\* @param url:登陆地址

\* @param username：登陆名

\* @param passwd：登陆密码（MD5）

\*/

private static void uimsLogin(String url, String username, String passwd) {

// TODO Auto-generated method stub

try {

HttpPost post = new HttpPost(url);

post.addHeader("Accept",

"text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,\*/\*;q=0.8");

post.addHeader("Accept-Encoding", "gzip, deflate");

post.addHeader("Accept-Language", "zh-CN,zh;q=0.8");

post.addHeader("User-Agent",

"Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/61.0.3163.100 Safari/537.36");

List<NameValuePair> nameValuePairs = new ArrayList<NameValuePair>();

nameValuePairs.add(new BasicNameValuePair("j\_username", username));// TxtUserName

nameValuePairs.add(new BasicNameValuePair("j\_password", passwd));// TxtPassword

nameValuePairs.add(new BasicNameValuePair("mousePath", ""));

post.setEntity(new UrlEncodedFormEntity(nameValuePairs, "utf-8"));

HttpResponse response = client.execute(post);

System.out.println("开始登陆:\t" + response.getStatusLine());

String login\_suss = response.getFirstHeader("location").getValue().trim().split(";")[0];

System.out.println("中间跳转 ---> " + login\_suss);

post.abort();

HttpGet get = new HttpGet(login\_suss);

get.addHeader("User-Agent",

"Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/61.0.3163.100 Safari/537.36");

response = client.execute(get);

System.out.println("跳转登陆:\t" + response.getStatusLine());

get.abort();

HttpPost post2 = new HttpPost("http://uims.jlu.edu.cn/ntms/action/getCurrentUserInfo.do");

response = client.execute(post2);

System.out.println("获取用户信息：\t" + response.getStatusLine());

JSONObject raw = new JSONObject(EntityUtils.toString(response.getEntity()));

post2.abort();

String userId = raw.getString("userId");

stuID = Integer.parseInt(userId.trim());

String teachingTerm = raw.getJSONObject("defRes").getString("teachingTerm");

stuTERM = Integer.parseInt(teachingTerm.trim());

String nickName = raw.getString("nickName");

String date = raw.getString("sysTime");

String loginName = raw.getString("loginName");

String groupName = raw.getJSONArray("groupsInfo").getJSONObject(0).getString("groupName");

System.out.println("当前时间：" + date + "\t教学号：" + loginName + "\t当前学期（内部表示）：" + teachingTerm + "\t\t内部ID:"

+ userId + "\t姓名：" + nickName + "\t职位：" + groupName);

} catch (IOException | ParseException | JSONException e) {

// TODO Auto-generated catch block

e.printStackTrace();

try {

client.close();

} catch (IOException ie) {

// TODO Auto-generated catch block

ie.printStackTrace();

}

}

}

/\*\*

\* UIMS一键评教,查看已评记录

\*/

private static void uimsTeachingEvaluation() {

// TODO Auto-generated method stub

BufferedInputStream bufferedInputStream = null;

try {

// 尚未评教记录查询

String url = "http://uims.jlu.edu.cn/ntms/service/res.do";

HttpPost post = new HttpPost(url);

post.addHeader("Content-Type", "application/json");

post.addHeader("User-Agent",

"Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/61.0.3163.100 Safari/537.36");

String strs = "{\"tag\":\"student@evalItem\",\"branch\":\"self\",\"params\":{\"blank\":\"Y\"}}";

post.setEntity(new StringEntity(strs));

HttpResponse response = client.execute(post);

System.out.println("查询未评记录:\t" + response.getStatusLine());

bufferedInputStream = new BufferedInputStream(response.getEntity().getContent(), 102400);

StringBuilder builder = new StringBuilder();

int n = 0;

byte[] bs = new byte[102400];

while ((n = bufferedInputStream.read(bs)) != -1) {

builder.append(new String(bs, 0, n));

}

post.abort();

JSONObject raw = new JSONObject(builder.toString());

JSONArray value = raw.getJSONArray("value");

for (int i = 0; i < value.length(); i++) {

JSONObject techInfo = value.getJSONObject(i);

JSONObject target = techInfo.getJSONObject("target");

String teacherName = target.getString("name");

String teacherPersonID = target.getString("personId");

String teacherSchool = target.getJSONObject("school").getString("schoolName");

String subject = techInfo.getJSONObject("targetClar").getString("notes");

JSONObject evalActTime = techInfo.getJSONObject("evalActTime").getJSONObject("evalTime");

String start = evalActTime.getString("dateStart");

String stop = evalActTime.getString("dateStop");

String evalItemId = techInfo.getString("evalItemId");

System.out

.println("学院：" + teacherSchool + "\t教师：" + teacherName + "\t教师ID：" + teacherPersonID + "\t所教科目："

+ subject + "\t项目ID:" + evalItemId + "\t(评教开始时间：" + start + " 评教结束时间" + stop + " )");

// HttpPost post2 = new HttpPost("http://uims.jlu.edu.cn/ntms/service/res.do");

// strs = "{\"tag\":\"get@EvalItem\",\"params\":{\"evalItemId\":\"" + evalItemId

// + "\"}}";

// post2.addHeader("Content-Type", "application/json");

// post2.setEntity(new StringEntity(strs));

// response = client.execute(post2);

// System.out.println("选定该待评教师：\t"+response.getStatusLine());

// System.out.println(EntityUtils.toString(response.getEntity()));

// post2.abort();

//

// HttpPost post3 = new

// HttpPost("http://uims.jlu.edu.cn/ntms/action/get-message-count.do");

// response = client.execute(post3);

// System.out.println("选定该待评教师：\t"+response.getStatusLine());

// System.out.println(EntityUtils.toString(response.getEntity()));

// post3.abort();

HttpPost post4 = new HttpPost("http://uims.jlu.edu.cn/ntms/page/eval/action/eval/eval-with-answer.do");

strs = "{\"evalItemId\":\"" + evalItemId

+ "\",\"answers\":{\"prob11\":\"A\",\"prob12\":\"A\",\"prob13\":\"D\",\"prob14\":\"A\",\"prob15\":\"D\",\"prob21\":\"A\",\"prob22\":\"A\",\"prob23\":\"A\",\"prob31\":\"A\",\"prob32\":\"A\",\"prob41\":\"A\",\"prob42\":\"A\",\"prob43\":\"C\",\"prob51\":\"A\",\"prob52\":\"A\",\"sat6\":\"A\",\"mulsel71\":\"L\",\"advice8\":\"\"}}";

post4.addHeader("Content-Type", "application/json");

post4.setEntity(new StringEntity(strs));

response = client.execute(post4);

System.out.println("评教结果：\t" + response.getStatusLine());

System.out.println(EntityUtils.toString(response.getEntity()));

post4.abort();

}

// 查询已评教记录

HttpPost haveEvaluated = new HttpPost("http://uims.jlu.edu.cn/ntms/service/res.do");

strs = "{\"tag\":\"student@evalItem\",\"branch\":\"self\",\"params\":{\"done\":\"Y\"}}";

haveEvaluated.addHeader("Content-Type", "application/json");

haveEvaluated.addHeader("User-Agent",

"Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/61.0.3163.100 Safari/537.36");

haveEvaluated.setEntity(new StringEntity(strs));

response = client.execute(haveEvaluated);

System.out.println("查询已评教记录:\t" + response.getStatusLine());

String result = EntityUtils.toString(response.getEntity());

haveEvaluated.abort();

JSONObject resRaw = new JSONObject(result);

JSONArray resValue = resRaw.getJSONArray("value");

for (int i = 0; i < resValue.length(); i++) {

JSONObject techInfo = resValue.getJSONObject(i);

JSONObject target = techInfo.getJSONObject("target");

String teacherName = target.getString("name");

String teacherPersonID = target.getString("personId");

String teacherSchool = target.getJSONObject("school").getString("schoolName");

String subject = techInfo.getJSONObject("targetClar").getString("notes");

JSONObject evalActTime = techInfo.getJSONObject("evalActTime").getJSONObject("evalTime");

String start = evalActTime.getString("dateStart");

String stop = evalActTime.getString("dateStop");

String evalItemId = techInfo.getString("evalItemId");

System.out

.println("学院：" + teacherSchool + "\t教师：" + teacherName + "\t教师ID：" + teacherPersonID + "\t所教科目："

+ subject + "\t项目ID:" + evalItemId + "\t(评教开始时间：" + start + " 评教结束时间" + stop + " )");

}

} catch (IOException | JSONException e) {

// TODO Auto-generated catch block

e.printStackTrace();

try {

client.close();

} catch (IOException ie) {

// TODO Auto-generated catch block

ie.printStackTrace();

}

} finally {

if (bufferedInputStream != null) {

try {

bufferedInputStream.close();

} catch (IOException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

}

}

/\*\*

\* 查询成绩及比例

\*

\* @param flag是否查询比例

\* @param num查询最新的num数目科

\*/

private static void uimsScore(int num, boolean flag) {

// TODO Auto-generated method stub

try {

HttpPost scorePost = new HttpPost("http://uims.jlu.edu.cn/ntms/service/res.do");

String params = "{\"tag\":\"archiveScore@queryCourseScore\",\"branch\":\"latest\",\"params\":{},\"rowLimit\":"

+ num + "}";

scorePost.addHeader("Content-Type", "application/json");

scorePost.addHeader("User-Agent",

"Mozilla/5.0 (Windows NT 6.3; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/62.0.3202.89 Safari/537.36");

scorePost.setEntity(new StringEntity(params));

HttpResponse response = client.execute(scorePost);

System.out.println("成绩查询\t:" + response.getStatusLine());

String scoreResult = EntityUtils.toString(response.getEntity());

scorePost.abort();

JSONObject scoreRaw = new JSONObject(scoreResult);

JSONArray scoreValue = scoreRaw.getJSONArray("value");

for (int i = 0; i < scoreValue.length(); i++) {

JSONObject rawScore = scoreValue.getJSONObject(i);

String asId = rawScore.getString("asId");// 双击显示比例

String score = rawScore.getString("score");

String scoreNum = rawScore.getString("scoreNum");

String credit = rawScore.getString("credit");

credit = String.format("%-3s", credit);

String gpoint = rawScore.getString("gpoint");

String dateScore = rawScore.getString("dateScore");

String classHour = rawScore.getString("classHour");

String termName = rawScore.getJSONObject("teachingTerm").getString("termName");

String courName = rawScore.getJSONObject("course").getString("courName");

courName = String.format("%-20s", courName);

System.out.println("学期：" + termName + "\t成绩发布时间：" + dateScore + "\t学时：" + classHour + "\t学分：" + credit

+ "\t成绩：" + score + "(" + scoreNum + ")" + "\t通过绩点：" + gpoint + "\t内部ID：" + asId + "\t课程："

+ courName);

// 比例查询

if (flag) {

HttpPost scoreRate = new HttpPost("http://uims.jlu.edu.cn/ntms/score/course-score-stat.do");

params = "{\"asId\":\"" + asId + "\"}";

scoreRate.addHeader("Content-Type", "application/json");

scoreRate.addHeader("User-Agent",

"Mozilla/5.0 (Windows NT 6.3; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/62.0.3202.89 Safari/537.36");

scoreRate.setEntity(new StringEntity(params));

response = client.execute(scoreRate);

if (response.getStatusLine().getStatusCode() == 200) {

String resultRate = EntityUtils.toString(response.getEntity());

JSONObject rate = new JSONObject(resultRate);

JSONArray items = rate.getJSONArray("items");

System.out.println();

for (int j = 0; j < items.length(); j++) {

JSONObject item = items.getJSONObject(j);

String label = item.getString("label");

label = String.format("%-15s", label);

String percent = item.getString("percent");

System.out.println("\t\t等级：" + label + "占比：" + percent);

}

System.out.println("\n");

}

scoreRate.abort();

}

}

} catch (IOException | JSONException e) {

// TODO Auto-generated catch block

e.printStackTrace();

try {

client.close();

} catch (IOException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

}

} finally {

}

}

/\*\*

\* 课程表查询

\*

\* @param term

\*/

private static void uimsCourse(int term) {

// TODO Auto-generated method stub

try {

HttpPost post = new HttpPost("http://uims.jlu.edu.cn/ntms/service/res.do");

String params = "{\"tag\":\"teachClassStud@schedule\",\"branch\":\"default\",\"params\":{\"termId\":" + term

+ ",\"studId\":" + stuID + "}}";

post.addHeader("Content-Type", "application/json");

post.addHeader("User-Agent",

"Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/61.0.3163.100 Safari/537.36");

post.setEntity(new StringEntity(params));

HttpResponse response = client.execute(post);

System.out.println("课表查询：" + response.getStatusLine());

String result = EntityUtils.toString(response.getEntity());

post.abort();

JSONObject jsonObject = new JSONObject(result);

JSONArray values = jsonObject.getJSONArray("value");

for (int i = 0; i < values.length(); i++) {

JSONObject value = values.getJSONObject(i);

JSONObject teachClassMaster = value.getJSONObject("teachClassMaster");

String tcsId = value.getString("tcsId");

String maxStudCnt = teachClassMaster.getString("maxStudCnt");

String studCnt = teachClassMaster.getString("studCnt");

String courName = teachClassMaster.getJSONObject("lessonSegment").getString("fullName");

JSONArray lessonSchedules = teachClassMaster.getJSONArray("lessonSchedules");

LessonSchedule[] schedules = new LessonSchedule[lessonSchedules.length()];

for (int j = 0; j < lessonSchedules.length(); j++) {// lessonSchedules

JSONObject lessonSchedule = lessonSchedules.getJSONObject(j);

schedules[j] = new LessonSchedule();

if (lessonSchedule.has("classroom") && lessonSchedule.getJSONObject("classroom").has("fullName"))

schedules[j].setClassroom(lessonSchedule.getJSONObject("classroom").getString("fullName"));

else

schedules[j].setClassroom("null");

if (lessonSchedule.has("timeBlock") && lessonSchedule.getJSONObject("timeBlock").has("name"))

schedules[j].setTime(lessonSchedule.getJSONObject("timeBlock").getString("name"));

else

schedules[j].setTime("null");

}

JSONArray lessonTeachers = teachClassMaster.getJSONArray("lessonTeachers");

Teacher[] teachers = new Teacher[lessonTeachers.length()];

for (int j = 0; j < lessonTeachers.length(); j++) {

teachers[j] = new Teacher();

teachers[j].setName(lessonTeachers.getJSONObject(j).getJSONObject("teacher").getString("name"));

}

System.out.println("科目:" + courName + "\t科目ID" + tcsId + "\t可容纳人数:" + maxStudCnt + "\t实际人数:" + studCnt);

for (int j = 0; j < teachers.length; j++) {

System.out.println("\t\t授课教师:" + teachers[j].getName());

}

for (int j = 0; j < schedules.length; j++) {

System.out.println("\t\t教室:" + schedules[j].getClassroom() + "\t\t时间:" + schedules[j].getTime());

}

System.out.println();

}

} catch (IOException | JSONException e) {

// TODO Auto-generated catch block

e.printStackTrace();

try {

client.close();

} catch (IOException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

}

} finally {

}

}

/\*\*

\* 退出登录

\*/

private static void uimsLogout() {

// TODO Auto-generated method stub

try {

HttpGet get = new HttpGet("http://uims.jlu.edu.cn/ntms/logout.do");

get.addHeader("User-Agent",

"Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/61.0.3163.100 Safari/537.36");

HttpResponse response = client.execute(get);

System.out.println("退出UIMS(步骤一)\t" + response.getStatusLine());

get.abort();

HttpGet get1 = new HttpGet("http://uims.jlu.edu.cn/ntms/j\_spring\_security\_logout");

get1.addHeader("User-Agent",

"Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/61.0.3163.100 Safari/537.36");

response = client.execute(get1);

System.out.println("退出UIMS(步骤二)\t" + response.getStatusLine());

get1.abort();

} catch (IOException e) {

// TODO Auto-generated catch block

e.printStackTrace();

try {

client.close();

} catch (IOException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

}

}

}

}

class LessonSchedule {

private String classroom = null;

private String time = null;

public String getClassroom() {

return classroom;

}

public void setClassroom(String classroom) {

this.classroom = classroom;

}

public String getTime() {

return time;

}

public void setTime(String time) {

this.time = time;

}

}

class Teacher {

private String name = null;

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

}