本文主要介绍如何通过cookie处理进行快速登陆

cookie登陆于巡检优化

Puppeteer的Page提供了cookie的处理方法

方法	说明
page.setCookie()	设置指定cookie
page.cookies()	返回全部cookie信息
page.deleteCookie()	删除指定cookie

通过cookie访问页面时可以直接访问。

1-cookie登陆流程

》登录时，cookie校验

--如果有正确的cookie信息-直接登陆；

--如果无正确的cookie信息：

----》登陆后浏览器带有完整的cookie信息，设置为：global.cookies

----》写入cookie信息到文件

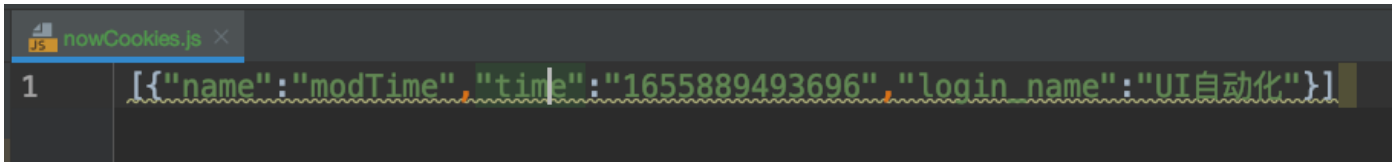
2-cookie文件

修改：src/config/config.js 新增cookies的文件目录设置

```
    'login_name':'UI自动化',
    'login_pwd':'520',
    'cookies': './src/cookie/nowCookies.js',
```

新建文件：src/cookie/nowCookies.js

```
[{"name":"modTime","time":"1655889493696","login_name":"UI自动化"}]
```

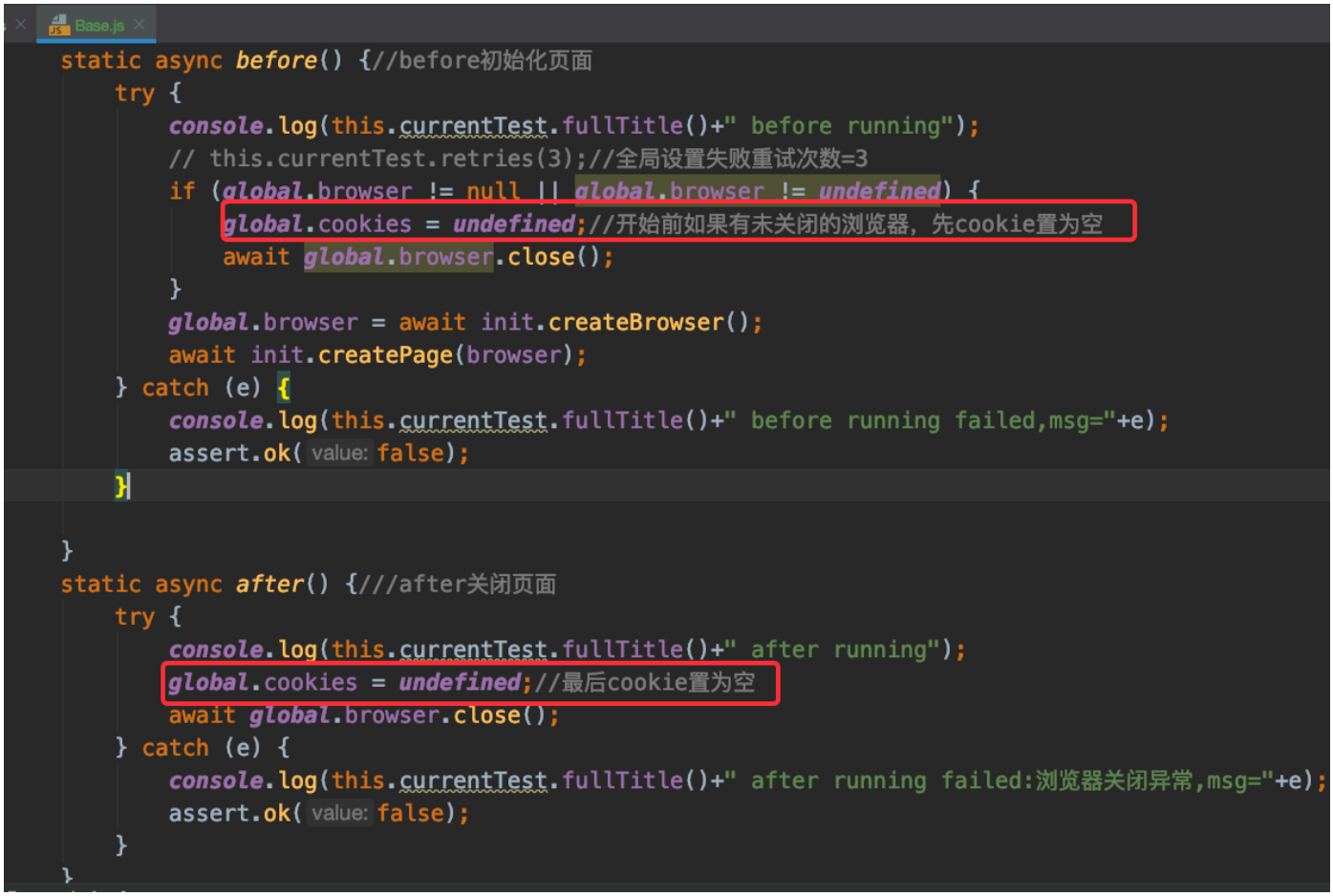


3-Base cookie处理

修改：test/Base.js

before方法：每个用例开始前，如果有未关闭的浏览器，先将cookie设置为undefined，再关闭

after方法：每个用例结束后，先将cookie设置为undefined，再关闭



```
Base.js
static async before() {//before初始化页面
    try {
        console.log(this.currentTest.fullTitle()+" before running");
        // this.currentTest.retries(3);//全局设置失败重试次数=3
        if (global.browser != null || global.browser != undefined) {
            global.cookies = undefined;//开始前如果有未关闭的浏览器，先cookie置为空
            await global.browser.close();
        }
        global.browser = await init.createBrowser();
        await init.createPage(browser);
    } catch (e) {
        console.log(this.currentTest.fullTitle()+" before running failed,msg="+e);
        assert.ok( value: false);
    }

}
static async after() {///after关闭页面
    try {
        console.log(this.currentTest.fullTitle()+" after running");
        global.cookies = undefined;//最后cookie置为空
        await global.browser.close();
    } catch (e) {
        console.log(this.currentTest.fullTitle()+" after running failed:浏览器关闭异常,msg="+e);
        assert.ok( value: false);
    }
}
```

完整代码：

```
const assert = require('assert');
const init = require('../src/system/init');

class Base{
    static async before() {//before初始化页面
        try {
            console.log(this.currentTest.fullTitle()+" before running");
            // this.currentTest.retries(3);//全局设置失败重试次数=3
            if (global.browser != null || global.browser != undefined) {
                global.cookies = undefined;//开始前如果有未关闭的浏览器，先cookie置为空
                await global.browser.close();
            }
            global.browser = await init.createBrowser();
            await init.createPage(browser);
        } catch (e) {
            console.log(this.currentTest.fullTitle()+" before running failed,msg="+e);
            assert.ok(false);
        }

    }
    static async after() {///after关闭页面
        try {
```

```
            console.log(this.currentTest.fullTitle()+" after running");
            global.cookies = undefined;//最后cookie置为空
            await global.browser.close();
        } catch (e) {
            console.log(this.currentTest.fullTitle()+" after running failed:浏览器关闭异
常,msg="+e);
            assert.ok(false);
        }
    }

    static async afterEach() {//失败截图
        try {
            console.log(this.currentTest.fullTitle()+" afterEach running");
            if (this.currentTest.state == 'failed') {
                console.log("开始截图")
                let currentTime = new Date().getTime();
                await page.screenshot({
                    path:
'./test/screenShot/'+this.currentTest.title+currentTime+'.png',
                    type: 'png',
                    fullPage: true
                });
            }
        } catch (e) {
            console.log("截图失败,msg="+e);
        }
    }
}

module.exports=Base;
```

4-cookie写入

⚠️写入cookie到文件时，我们多写一段自定义内容用于后续校验

⚠️fs库提供了文件操作的方法

```
/**
     * 写入cookie：浏览器cookies+自定义的cookie信息一起存在文件里持久化
     * 自定义cookie信息主要是记录了时间
     */
    writeCookie: async function (login_name,cookieFile) {
        if (cookieFile == null) {
            return console.error(cookieFile);
        }
        //读取浏览器cookies信息
        let cookie = await page.cookies();
        //自定义cookie检查内容
        let check = {name: "modTime"};
```

```
        check.time = new Date().getTime().toString();
        check.login_name = login_name;
        check.cookie_str =cookie.map(item=>`${item.name}=${item.value}`).join(';');//写入格式化后的cookie
        //将自定义的cookie信息加入到浏览器读取的内容中
        cookie.push(check);
        const cookieJson = JSON.stringify(cookie);
        //浏览器+自定义的cookieJson写入到cookieFile（文件）中
        fs.writeFile(cookieFile, cookieJson, function (err) {
            if (err) {
                return;
            }
            console.log("异步cookies文件写入成功");
            fs.readFile(cookieFile, function (err) {
                if (err) {
                    return console.error(err);
                }
                console.log("异步读取cookies文件成功 ");
            });
        });

    }
```

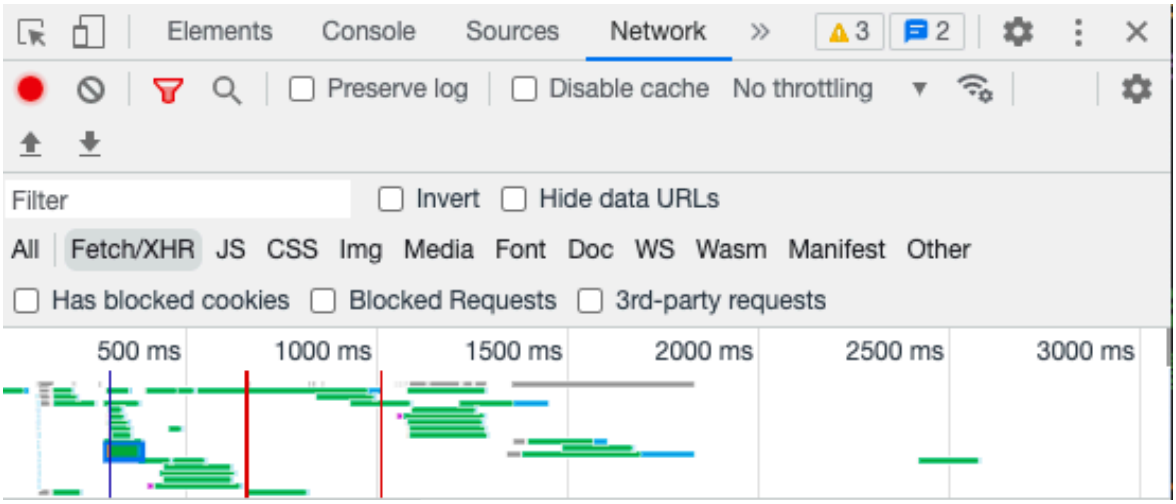
⚠️： check.cookie_str =cookie.map(item=>`${item.name}=${item.value}`).join(';');//写入格式化后的cookie

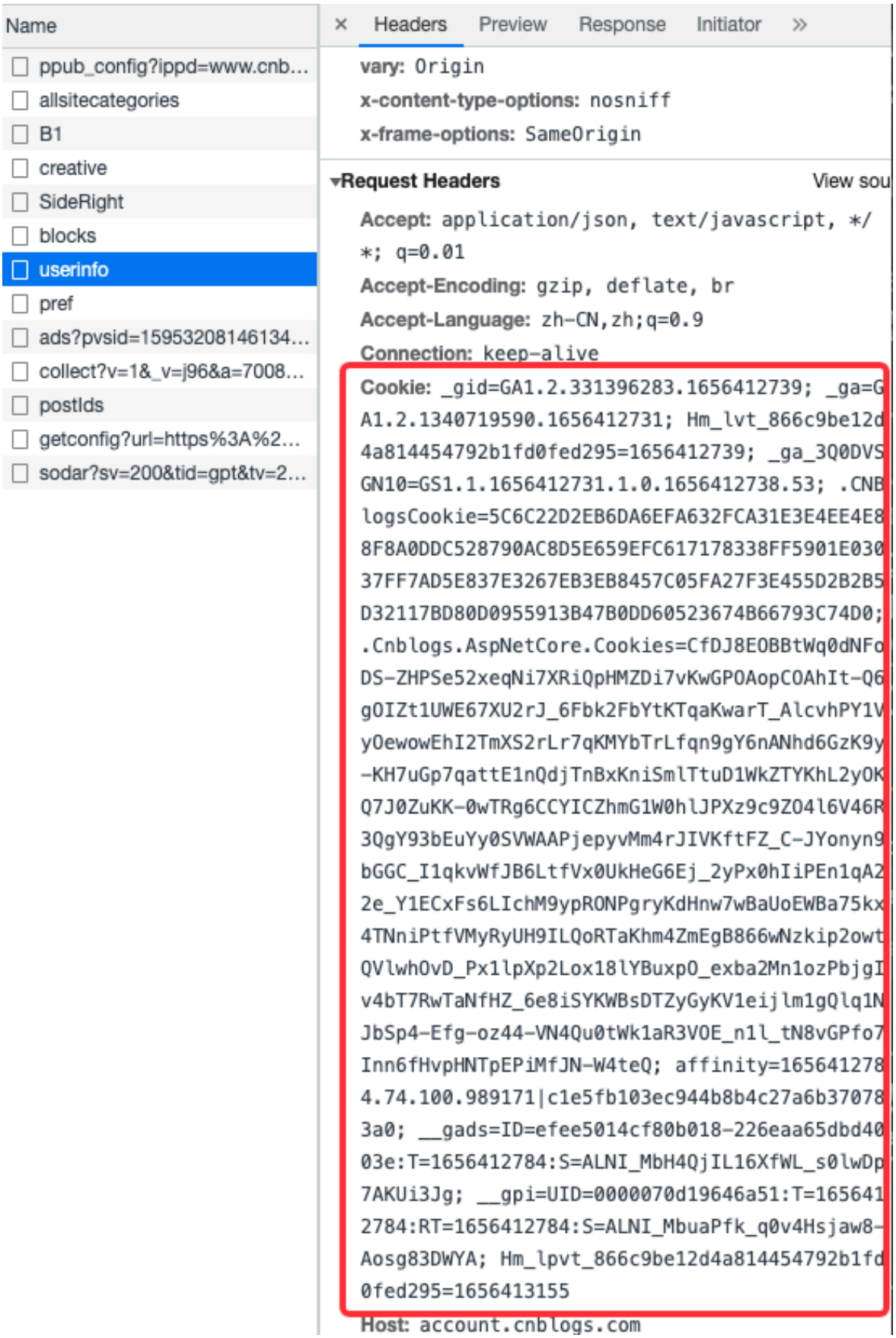
这一步的操作是page.cookies()获取的cookie数组，转化为浏览器形式的cookie字符串

page.cookies() 例子：


```
[{"name":"_gat_gtag_UA_476124_1","value":"1","domain":".cnblogs.com","path":"/","expires":1656406444,"size":22,"httpOnly":false,"secure":false,"session":false,"sameParty":false,"sourceScheme":"Secure","sourcePort":443},
{"name":"_gid","value":"GA1.2.1776849710.1656406384","domain":".cnblogs.com","path":"/","expires":1656492784,"size":31,"httpOnly":false,"secure":false,"session":false,"sameParty":false,"sourceScheme":"Secure","sourcePort":443}]
```


浏览器cookie例子：





5-cookie读取

cookie读取是从文件读取cookie内容并且设置为page的cookie，并且设置全局cookies信息

```
/**
 * @param cookieFile 需要输入的cookies存储路径，config文件中有默认
 * @returns {Promise.<void>}
 */
readCookie: async function (cookieFile) {
    var data = fs.readFileSync(cookieFile);
    console.log("同步读取cookies文件成功");
    var cookies = JSON.parse(data);
    const check = cookies.pop();//读取cookie文;件，POP自定义的信息进行校验
    global.cookieStr=check.cookie_str;//设置全局的参数
    await page.setCookie(...cookies);
    global.cookies = await page.cookies();
}
```

6-cookie校验

⚠️cookie校验的流程是读取cookie文件的内容，校验我们自定义的cookie内容查看是否过期

⚠️cookie校验通过后直接跳转到指定URL

```
/**
     * 检查cookie信息是否符合要求
     * 如果存在正确的cookie信息，直接登陆到指定URL
     */
    checkCookie: async function (login_name,cookieFile, gotoUrl) {
        const TodayTimeStamp = (new Date(new Date().setHours(0, 0, 0, 0)) / 1000 *
1000).toString();//当天0点的时间戳
        try {
            var data = fs.readFileSync(cookieFile);
        } catch (error) {
            console.log(error);
            return false;
        }
        const cookies = JSON.parse(data);
        const check = cookies.pop();//读取cookie文件，POP自定义的信息进行校验
        if (check.time > TodayTimeStamp) {
            if (check.login_name == login_name) {
                await this.readCookie(cookieFile);
                console.log('cookie校验通过，直接登陆并跳转到指定URL='+gotoUrl)
                await page.goto(gotoUrl);
                return true;
            }
        }
    }
```

7-cookie登陆

⚠️cookie登陆完整流程

```
/**
     * 登陆流程，有cookie直接跳转；无cookie，登陆后写入cookie信息后跳转
     */
    loginBlogCheck: async function (url,loginName,loginPwd,cookie_File) {
        let login_name = (loginName == undefined ? global.config.login_name :
loginName);
        let login_pwd = (loginPwd == undefined ? global.config.login_pwd : loginPwd);
        let cookieFile = (cookie_File === undefined ? global.config.cookies :
cookie_File);
        //1-有正确cookie，直接跳转targetURL
        const goodCookies = await this.checkCookie(login_name, cookieFile, url);
        //2-无正确cookie，先登陆，写入cookie信息，后跳转targetURL
        if (!goodCookies) {
            console.log("cookies校验错误，开始登陆并写入cookie");
            if (global.cookies === undefined) {
                //1. 登陆：博客园
                await page.goto("https://account.cnblogs.com/signin");
                //2. 点击：密码登陆
                await page.waitForSelector('#mat-tab-label-0-0 > div',
{timeout:2*1000}).then(ele=>{ele.click()}).catch(e=>{console.log(e)})
                //3. 输入：用户名
                await page.focus('#mat-input-0');
                await page.type('#mat-input-0',login_name);
                //4. 输入：密码
                await page.focus('#mat-input-1');
                await page.type('#mat-input-1',login_pwd);
                //5. 勾选：记住我（可选）
                // await page.click('#mat-checkbox-1 > label > span.mat-checkbox-inner-
container');
                //6. 点击：登陆
                await page.waitForSelector('body > app-root > app-sign-in-layout > div
> div > app-sign-in > app-content-container > div > div > div > form > div > button',
{timeout:2*1000}).then(ele=>{ele.click()}).catch(e=>{console.log(e)})
                //等待响应返回200
                await page.waitForResponse(response => response.status() === 200);
                await page.waitForTimeout(2000);

                //登陆后获取浏览器cookie
                global.cookies = await page.cookies();
                //写入cookie
                await this.writeCookie(login_name,cookieFile);
            }
            // 如果第一次进来的时候有cookie
            let newPageCookies = await page.cookies();
           // 设置global.cookieStr参数

global.cookieStr=newPageCookies.map(item=>`${item.name}=${item.value}`).join(';')
            if (newPageCookies.length === 0) {
                // 这里需要加上"..."，是因为cookies是一个多值的数组
```

```
                console.log("没有cookie，加进来")
                await page.setCookie(...global.cookies);
            }
            // 选择店铺并跳转到目标页面
            console.log('指定URL', url);
            await page.goto(url,{timeout:20000})
        }
    }
```

8-cookie处理

创建：src/cookie/HandleCookie.js

```
const fs = require('fs');

const HandleCookie = {
    /**
     * 登陆流程，有cookie直接跳转；无cookie，登陆后写入cookie信息后跳转
     */
    loginBlogCheck: async function (url,loginName,loginPwd,cookie_File) {
        let login_name = (loginName == undefined ? global.config.login_name :
loginName);
        let login_pwd = (loginPwd == undefined ? global.config.login_pwd : loginPwd);
        let cookieFile = (cookie_File === undefined ? global.config.cookies :
cookie_File);
        //1-有正确cookie，直接跳转targetURL
        const goodCookies = await this.checkCookie(login_name, cookieFile, url);
        //2-无正确cookie，先登陆，写入cookie信息，后跳转targetURL
        if (!goodCookies) {
            console.log("cookies校验错误，开始登陆并写入cookie");
            if (global.cookies === undefined) {
                //1. 登陆：博客园
                await page.goto("https://account.cnblogs.com/signin");
                //2. 点击：密码登陆
                await page.waitForSelector('#mat-tab-label-0-0 > div',
{timeout:2*1000}).then(ele=>{ele.click()}).catch(e=>{console.log(e)})
                //3. 输入：用户名
                await page.focus('#mat-input-0');
                await page.type('#mat-input-0',login_name);
                //4. 输入：密码
                await page.focus('#mat-input-1');
                await page.type('#mat-input-1',login_pwd);
                //5. 勾选：记住我（可选）
                // await page.click('#mat-checkbox-1 > label > span.mat-checkbox-inner-
container');
                //6. 点击：登陆
                await page.waitForSelector('body > app-root > app-sign-in-layout > div
> div > app-sign-in > app-content-container > div > div > div > form > div > button',
{timeout:2*1000}).then(ele=>{ele.click()}).catch(e=>{console.log(e)})
```

```
                //等待响应返回200
                await page.waitForResponse(response => response.status() === 200);
                await page.waitForTimeout(2000);

                //登陆后获取浏览器cookie
                global.cookies = await page.cookies();
                //写入cookie
                await this.writeCookie(login_name,cookieFile);
            }
            // 如果第一次进来的时候有cookie
            let newPageCookies = await page.cookies();
            // 设置global.cookieStr参数

global.cookieStr=newPageCookies.map(item=>`${item.name}=${item.value}`).join(';')
            if (newPageCookies.length === 0) {
                // 这里需要加上"...", 是因为cookies是一个多值的数组
                console.log("没有cookie, 加进来")
                await page.setCookie(...global.cookies);
            }
            // 选择店铺并跳转到目标页面
            console.log('指定URL', url);
            await page.goto(url,{timeout:20000})
        }
    },
    /**
     * 检查cookie信息是否符合要求
     * 如果存在正确的cookie信息, 直接登陆到指定URL
     */
    checkCookie: async function (login_name,cookieFile, gotoUrl) {
        const TodayTimeStamp = (new Date(new Date().setHours(0, 0, 0, 0)) / 1000 *
1000).toString();//当天0点的时间戳
        try {
            var data = fs.readFileSync(cookieFile);
        } catch (error) {
            console.log(error);
            return false;
        }
        const cookies = JSON.parse(data);
        const check = cookies.pop();//读取cookie文件, POP自定义的信息进行校验
        if (check.time > TodayTimeStamp) {
            if (check.login_name == login_name) {
                await this.readCookie(cookieFile);
                console.log('cookie校验通过, 直接登陆并跳转到指定URL='+gotoUrl)
                await page.goto(gotoUrl);
                return true;
            }
        }
    },
    /**
```

```
     * 读取符合要从文件中读取cookies塞到浏览器中
     * @param cookieFile 需要输入的cookies存储路径，config文件中有默认
     * @returns {Promise.<void>}
     */
    readCookie: async function (cookieFile) {
        var data = fs.readFileSync(cookieFile);
        console.log("同步读取cookies文件成功");
        var cookies = JSON.parse(data);
        const check = cookies.pop();//读取cookie文;件，POP自定义的信息进行校验
        global.cookieStr=check.cookie_str;//设置全局的参数
        await page.setCookie(...cookies);
        global.cookies = await page.cookies();
    },

    /**
     * 写入cookie：浏览器cookies+自定义的cookie信息一起存在文件里持久化
     * 自定义cookie信息主要是记录了时间
     */
    writeCookie: async function (login_name,cookieFile) {
        if (cookieFile == null) {
            return console.error(cookieFile);
        }
        //读取浏览器cookies信息
        let cookie = await page.cookies();
        //自定义cookie检查内容
        let check = {name: "modTime"};
        check.time = new Date().getTime().toString();
        check.login_name = login_name;
        check.cookie_str =cookie.map(item=>`${item.name}=${item.value}`).join(';');//写
入格式化后的cookie
        //将自定义的cookie信息加入到浏览器读取的内容中
        cookie.push(check);
        const cookieJson = JSON.stringify(cookie);
        //浏览器+自定义的cookieJson写入cookieFile（文件）中
        fs.writeFile(cookieFile, cookieJson, function (err) {
            if (err) {
                return;
            }
            console.log("异步cookies文件写入成功");
            fs.readFile(cookieFile, function (err) {
                if (err) {
                    return console.error(err);
                }
                console.log("异步读取cookies文件成功 ");
            });
        });

    },
```

```
};

module.exports=HandleCookie;
```

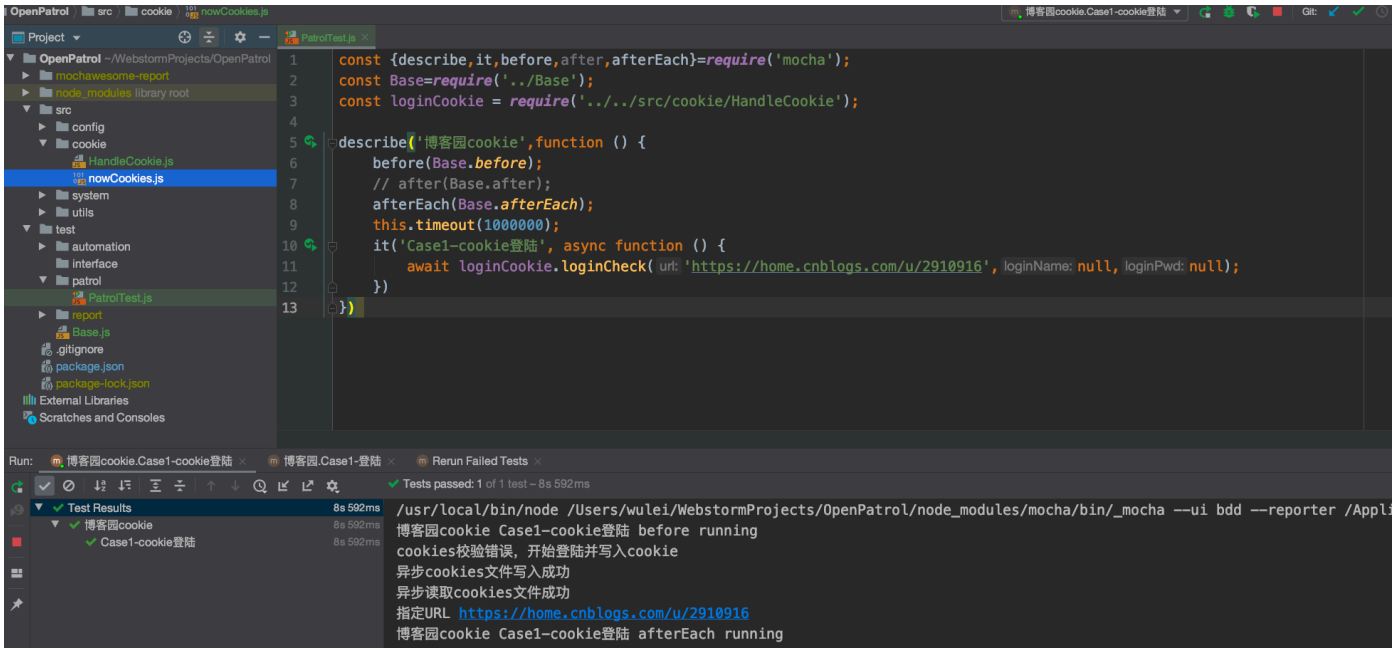
9-cookie登陆测试

新建：test/patrol/PatrolTest.js

```
const {describe,it,before,after,afterEach}=require('mocha');
const Base=require('../Base');
const loginCookie = require('../../src/cookie/HandleCookie');

describe('博客园cookie',function () {
    before(Base.before);
    // after(Base.after);
    afterEach(Base.afterEach);
    this.timeout(1000000);
    it('Case1-cookie登陆', async function () {
        await
loginCookie.loginBlogCheck('https://home.cnblogs.com/u/2910916',null,null);
    })
})
```

运行：



cookie文件写入成功：

再次运行：发现直接登陆到指定页面

巡检优化

修改：test/patrol/PatrolTest.js

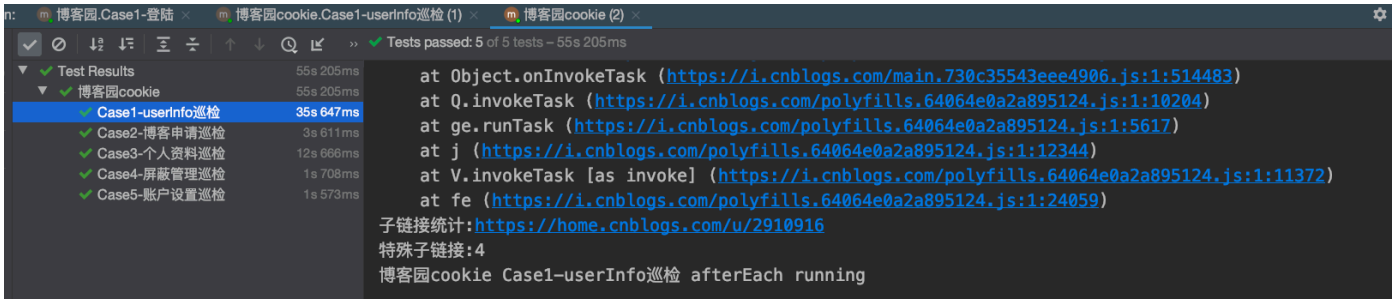
巡检代码优化

```
const {describe,it,before,after,afterEach}=require('mocha');
const Base=require('../Base');
const loginCookie = require('../../src/cookie/HandleCookie');
const patrol = require('../../src/utils/Patrol');

describe('博客园cookie',function () {
    before(Base.before);
    // after(Base.after);
    afterEach(Base.afterEach);
    this.timeout(1000000);
    it('Case1-userInfo巡检', async function () {
        const userInfo="https://home.cnblogs.com/u/2910916";
        await loginCookie.loginBlogCheck(userInfo,null,null);
        //巡检
        await patrol.patrolNormalHref(page,userInfo);
        await patrol.patrolSpecialHref(page,userInfo);
    })
    it('Case2-博客申请巡检', async function () {
        const myBlog="https://account.cnblogs.com/blog-apply";
        await loginCookie.loginBlogCheck(myBlog,null,null);
        //巡检
        await patrol.patrolNormalHref(page,myBlog);
        await patrol.patrolSpecialHref(page,myBlog);
    })
    it('Case3-个人资料巡检', async function () {
        const profile="https://home.cnblogs.com/set/profile/";
```

```
        await loginCookie.loginBlogCheck(profile,null,null);
        //巡检
        await patrol.patrolNormalHref(page,profile);
        await patrol.patrolSpecialHref(page,profile);
    })
    it('Case4-屏蔽管理巡检', async function () {
        const blocks="https://account.cnblogs.com/settings/blocks";
        await loginCookie.loginBlogCheck(blocks,null,null);
        //巡检
        await patrol.patrolNormalHref(page,blocks);
        await patrol.patrolSpecialHref(page,blocks);
    })
    it('Case5-账户设置巡检', async function () {
        const account="https://account.cnblogs.com/settings/account";
        await loginCookie.loginBlogCheck(account,null,null);
        //巡检
        await patrol.patrolNormalHref(page,account);
        await patrol.patrolSpecialHref(page,account);
    })
})
```

运行后：



链接巡检合并

代码：src/utils/Patrol.js

为了减少代码的重复性，可以在patrolNormalHref方法后面，调用patrolSpecialHref方法，这样可以巡检全部链接

```
patrolNormalHref:async function(page,url) {
    //指定访问页面
    await page.goto(url);
    //页面-普通超链接
    const urls = await page.evaluate(
        () => Array.from(document.body.querySelectorAll('a[href*=\'//\']'), ({ href }) => href)
    );
    //排重
    const distinct_urls =this.distinct(urls);
    console.log('子链接统计:'+url);
```

```
    console.log('普通子链接:'+distinct_urls.length);
    // 巡检页面超链接
    for (const url in distinct_urls){
        await page.goto(distinct_urls[url],{timeout:10000,waitUntil:
'domcontentloaded'}).catch(async error => {
            console.log('巡检异常URL='+distinct_urls[url]);
            console.log('异常信息='+error);
        });
        page.on('pageerror', pageerror=> {
            console.log('page_error='+pageerror);
        });
    }
    //巡检特殊子链接
    await  patrolSpecialHref(page,url);
}
```