

Selenium

1. 使用步骤

Selenium IDE 安装及使用

可以不用写脚本，用来录制测试人员在网页的操作，然后保存操作，最后重新测试的时候可以重新执行测试。

加载已解压的扩展程序

打包扩展程序

更新



Selenium IDE 3.17.2

Selenium Record and Playback tool for ease of getting acquainted with Selenium WebDriver.

ID: mooikfkahbdckldjjndioackbalphokd

[查看视图](#) [背景页](#)

详情

移除



1. 录制

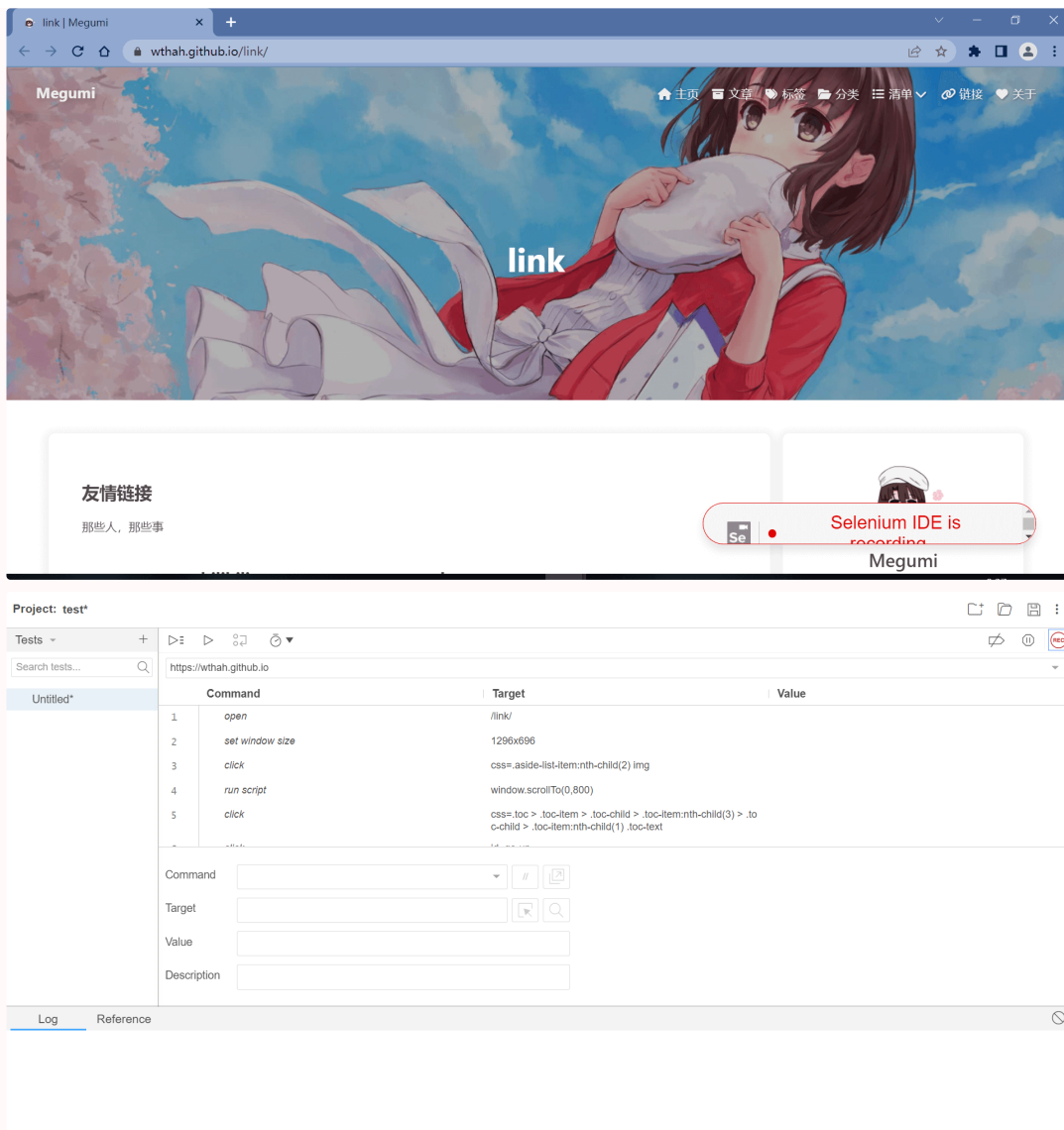
Set your project's base URL

Before you can start recording, you must specify a valid base URL for your project. Your tests will start by navigating to this URL.

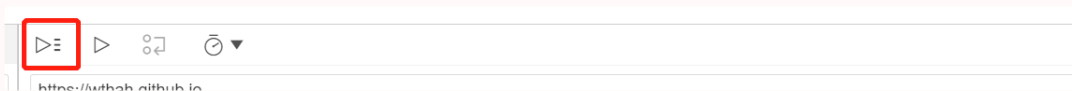
BASE URL

START RECORDING

CANCEL



2. 执行



3. 保存

Selenium WebServer安装及使用

maven

```
<dependency>
  <groupId>org.seleniumhq.selenium</groupId>
  <artifactId>selenium-java</artifactId>
  <version>3.141.59</version>
</dependency>
```

元素操作

1. clear ()
2. click ()
3. sendKeys ()

```

// 连接火狐
public static void openFirefox(){
    // 设置火狐浏览器exe位置
    System.setProperty("webdriver.firefox.bin", "D:\\soft\\FireFox\\firefox.exe");
    // 下载火狐浏览器驱动geckodriver保证火狐能够看得懂我们的代码
    System.setProperty("webdriver.gecko.driver", "src/main/resources/geckodriver.exe");
    FirefoxDriver firefoxDriver = new FirefoxDriver();
    firefoxDriver.get("https://wthah.github.io/link/");
}
// 连接谷歌
public static void openChrome(){
    // 下载谷歌驱动

    System.setProperty("webdriver.chrome.driver", "src/main/resources/chromedriver.exe");
    // 1. 打开浏览器
    ChromeDriver chromeDriver = new ChromeDriver();
    // 2. 访问网站
    chromeDriver.get("https://wthah.github.io/link/");
}

public static void main(String[] args) throws InterruptedException {
    openChrome();
    // 填写输入框
    chromeDriver.findElement(By.id("kw")).sendKeys("1234");
    // 强制睡眠3s
    Thread.sleep(3000);
    // 清空输入框
    chromeDriver.findElement(By.id("kw")).clear();
    // 定位kw输入框
    WebElement webElement = chromeDriver.findElement(By.id("kw"));
    // getTagName
    System.out.println(webElement.getTagName());
    // getAttribute
    System.out.println(webElement.getAttribute("maxlength"));
    // getText
    System.out.println(webElement.getText());
    // isDisplayed
    System.out.println(webElement.isDisplayed());
}

```

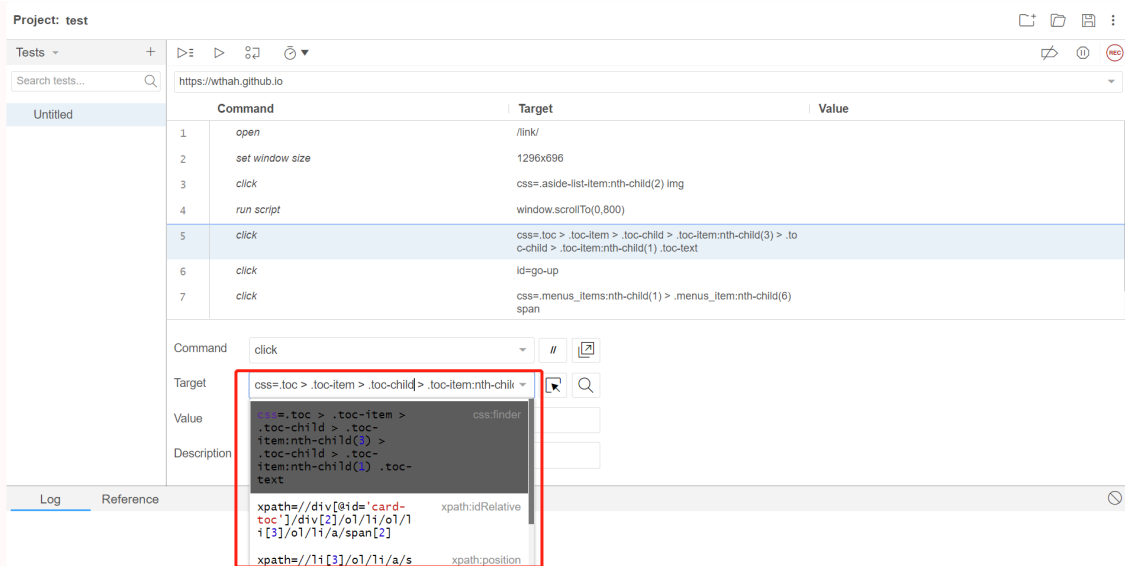
元素定位

```

public static void main(String[] args) {
    openChrome();
    chromeDriver.findElement(By.id("kw")).sendKeys("Megumi");
    chromeDriver.findElement(By.id("su")).click();
    // 定位name
    // 定位tagname
    // 定位classname
    // 定位LinkText
    chromeDriver.findElement(By.linkText("新闻")).click();
    // 定位partialLinkText
    chromeDriver.findElement(By.partialLinkText("新")).click();
    // css元素定位 (略写)
    // xpath元素定位
}

```

快速获取xpath和css方法:



xpath手写: https://blog.csdn.net/weixin_49981930/article/details/123093827?ops_request_misc=%257B%2522request%255Fid%2522%253A%2522165326893816780357228898%2522%252C%2522scm%2522%253A%25220140713.130102334..%2522%257D&request_id=165326893816780357228898&biz_id=0&utm_medium=distribute.pc_search_result.none-task-blog-2~all~sobaiduend~default-2-123093827-null-null.142^v10^pc_search_result_control_group,157^v4^control&utm_term=selenium+xpath%E5%AE%9A%E4%BD%8D&spm=1018.2226.3001.4187

driver操作

```
public static void main(String[] args) throws InterruptedException {
    openChrome();

    // url, title, 退出页面
    System.out.println(chromeDriver.getCurrentUrl());
    System.out.println(chromeDriver.getTitle());
    System.out.println(chromeDriver.getPageSource());
    chromeDriver.quit();
    chromeDriver.close();

    // 句柄获得
    chromeDriver.findElement(By.id("kw")).sendKeys("腾讯课堂");
}
```

```

chromeDriver.findElement(By.id("su")).click();
System.out.println("打开前的句柄"+chromeDriver.getWindowHandle());
Thread.sleep(1000);
chromeDriver.findElement(By.linkText("官方")).click();
System.out.println("打开后的句柄"+chromeDriver.getWindowHandle());

// options菜单操作对象 (屏幕大小控制)
WebDriver.Options options = chromeDriver.manage();
options.window().fullscreen();
Dimension dimension = options.window().getSize();
System.out.println(dimension.getHeight());
System.out.println(dimension.getWidth());
System.out.println(options.window().getPosition().getX());
System.out.println(options.window().getPosition().getY());

// navigate (前进后退)
WebDriver.Navigation navigation = chromeDriver.navigate();
Thread.sleep(1000);
navigation.to("https://wthah.github.io");
Thread.sleep(1000);
navigation.refresh();
Thread.sleep(1000);
navigation.back();
Thread.sleep(1000);
navigation.forward();
}

```

三种等待方式

```

public static void main(String[] args) throws InterruptedException {
    openChrome();
    // 隐式等待 (所有操作都要等待固定时间)
    chromeDriver.manage().timeouts().implicitlyWait(5, TimeUnit.SECONDS);
    chromeDriver.get("https://baidu.com");
    chromeDriver.findElement(By.id("kw")).sendKeys("腾讯课堂");
    chromeDriver.findElement(By.id("su")).click();

    // 硬性等待 (单个操作强制等待)
    Thread.sleep(30000);
    chromeDriver.findElement(By.xpath("//a[text() = '-综合性在线终身学习平台']")).click();

    // 显示等待 (等条件出现了再继续执行后续代码)
    WebDriverWait webDriverWait = new WebDriverWait(chromeDriver, 5);

    webDriverWait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("//a[text() = '-综合性在线终身学习平台']")));
}

```

特殊组件 (并不完整)

```

public static void main(String[] args) throws InterruptedException {
    openChrome();
    // alert
    // 找到alert
    Alert alert = chromeDriver.switchTo().alert();
    alert.accept();
    alert.dismiss();
    System.out.println(alert.getText());
}

```

```

// confirm
// 找到confirm
chromeDriver.switchTo().alert();
alert.accept();
alert.dismiss();
alert.getText();
// iframe
// 在默认页面输入数据
chromeDriver.findElement(By.id("aa")).sendKeys("aa");;
chromeDriver.switchTo().frame("bframe");
chromeDriver.findElement(By.id("bb")).sendKeys("bb");
chromeDriver.switchTo().defaultContent();
//window切换
chromeDriver.findElement(By.id("aa")).sendKeys("a");

chromeDriver.findElement(By.id("b")).click();;
// 句柄切换
// 切换到b之后获取所有窗口的句柄
Set<String> handles = chromeDriver.getWindowHandles();
for(String handle: handles){
    chromeDriver.switchTo().window(handle);
    if(chromeDriver.getTitle().equals("***")){
        break;
    }
}

// select
chromeDriver.findElement(By.className("setting-text")).click();
chromeDriver.findElement(By.xpath("//a[text()='高级搜索']")).click();
Thread.sleep(2000);
WebElement webElement = chromeDriver.findElement(By.name("qpc"));
Select select = new Select(webElement);
}

```

Testng生成log

导入maven

```

<dependency>
    <groupId>org.testng</groupId>
    <artifactId>testng</artifactId>
    <version>6.14.3</version>
</dependency>

<dependency>
    <groupId>org.uncommons</groupId>
    <artifactId>reportng</artifactId>
    <version>1.1.4</version>
    <scope>test</scope>
</dependency>
<dependency>
    <groupId>com.google.inject</groupId>
    <artifactId>guice</artifactId>
    <version>4.0</version>
    <scope>test</scope>
</dependency>

```

导入插件

```
<plugins>
  <plugin>
    <groupId>org.apache.maven.plugins</groupId>
    <artifactId>maven-surefire-plugin</artifactId>
    <version>2.17</version>
    <configuration>
      <suiteXmlFiles>
        <suiteXmlFile>xmlfile/testng.xml</suiteXmlFile>
      </suiteXmlFiles>
    </configuration>
  </plugin>
  <plugin>
    <groupId>org.apache.maven.plugins</groupId>
    <artifactId>maven-surefire-plugin</artifactId>
    <version>2.19.1</version>
    <configuration>
      <properties>
        <property>
          <name>usedefaultlisteners</name>
          <value>>false</value>
        </property>
        <property>
          <name>listener</name>
          <value>org.uncommons.reportng.HTMLReporter,
org.uncommons.reportng.JUnitXMLReporter</value>
        </property>
      </properties>
      <workingDirectory>target</workingDirectory>
    </configuration>
  </plugin>
</plugins>
```

编写test.xml

```
<?xml version="1.0" encoding="UTF-8"?><!DOCTYPE suite SYSTEM "http://testng.org/testng-1.0.dtd" >
<suite name="MySuite-1">
  <test name="TestCaseClass">
    <classes>
      <class name="Order.MyRequire.Add" />
    </classes>
  </test>
  <listeners>
    <listener class-name="org.uncommons.reportng.HTMLReporter"/>
    <listener class-name="org.uncommons.reportng.JUnitXMLReporter"/>
  </listeners>
</suite>
```

自己定义的suite-name

自己定义的测试名

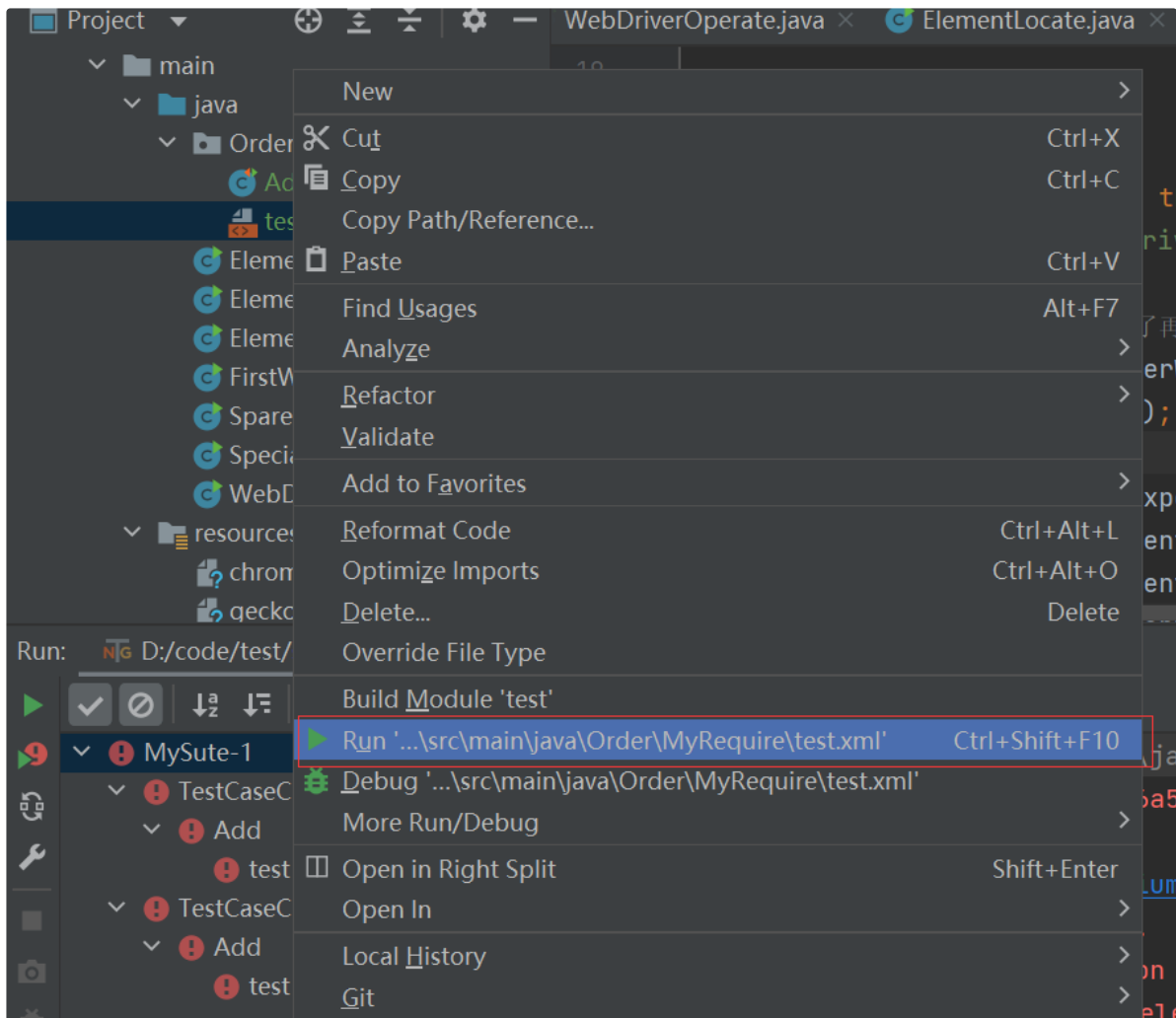
运行类

监听器

添加日志

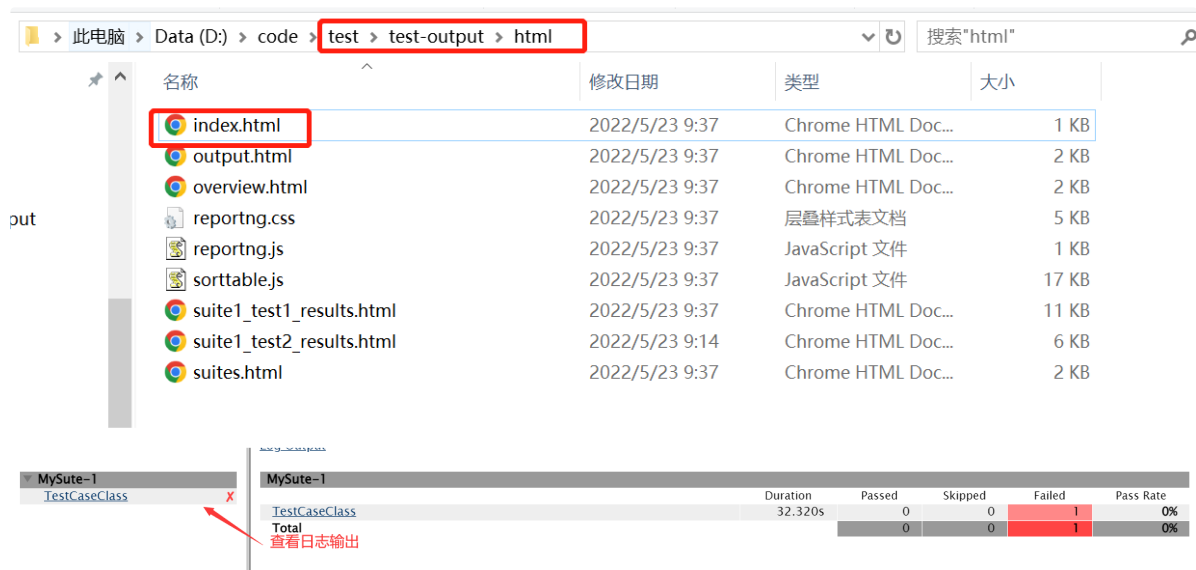
```
@Test
public static void test() throws InterruptedException {
  Reporter.log("设置driver, 打开网页");
  openChrome();
  // 显示等待 (等下拉框出现了再执行)
  WebDriverWait webDriverWait = new WebDriverWait(chromeDriver, timeOutInSeconds: 10);
  Reporter.log("登录");
  // 登录
  webDriverWait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("//input[@placeholder='请输入用户名']")));
  chromeDriver.findElement(By.xpath("//input[@placeholder='请输入用户名']")).sendKeys("charSequence");
}
```

运行xml1, 查看输出



输出一般在项目根目录下的test-output中的html文件里边

index.html



Test duration: 32.320s	
MySute-1	
TestCaseClass	X
Failed Tests	
Order.MyRequire.Add	
test	32.320s
设置driver, 打开网页 登录 点击工单管理 点我的申请 点击新增 点击工单类型 点击设备类型 点击设备维修 点击设备提交 点击紧急程度 选择紧急程度为一般 点击提交 点击添加车辆 点击搜索 点击重置 输入设备编号 选择设备类型 选择主生产设备 点击重置 选择页数 选择三十页 点击前一页 点击分页 点击选择设备 点击开始时间 选择具体日期 org.openqa.selenium.TimeoutException: Expected condition failed: waiting for visibility of element	

输出和失败原因

testng的使用

这篇包含 [testng注释](#) 和使用 [全部测试和部分测试的xml](#) 如何编写

https://blog.csdn.net/weixin_39909877/article/details/108696188?ops_request_misc=%257B%2522request%255Fid%2522%253A%2522165327012316781483779829%2522%252C%2522scm%2522%253A%25220140713.130102334..%2522%257D&request_id=165327012316781483779829&biz_id=0&utm_medium=distribute.pc_search_result.none-task-blog-2~all~top_click~default-2-108696188-null-null.142^v10^pc_search_result_control_group,157^v4^control&utm_term=testng&spm=1018.2226.3001.4187