**软件测试上机报告**

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第二次上机作业

**学 院\_\_智能与计算学部\_\_**

**专 业\_\_软件工程 \_\_**

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# 一、实验要求

Tasks:

1. Install Selenium with Eclipse.

2. Install Firefox and SeleniumIDE plugin.

3. Try to record and export scripts using SeleniumIDE.

4. Please complete the following task using Selenium Webdriver:

“Selenium Lab2020.xlsx” contains information about the students, and https://103.120.226.190/selenium-demo/git-repo can view someone’s information after logging in (student id as username, git address as password). Please check each record in the excel to make sure that each student’s information is consistent with the information on the website.

Requirements for the experiment:

1. Finish the tasks above individually.

2. Check in your java code to Github or gitee

3. Please send your experiment report to 智慧树, the following information should be included in your report:

a) The brief description that you install Selenium, Firefox, and SeleniumIDE.

b) Steps for recording and exporting scripts.

c) Steps for testing the website using Selenium.

# 二、源代码

ReadExcel.java:

package ex2;

import jxl.\*;

import jxl.read.biff.BiffException;

import java.io.\*;

public class ReadExcel {

private String src;

public ReadExcel(String src) {

this.src = src;

}

public String[][] getData(int sh) throws BiffException, IOException {

String[][] result;

Workbook exl = Workbook.getWorkbook(new File(this.src));

Sheet sheet = exl.getSheet(sh);

int rows = sheet.getRows();

int cols = sheet.getColumns();

System.out.println("一共" + rows + "条数据");

result = new String[rows][cols];

for(int i = 0; i<rows;i++) {

for(int j = 0; j < cols; j++) {

result[i][j] = new String(sheet.getCell(j, i).getContents());

}

}

return result;

}

}

Web.java:

package ex2;

import java.io.IOException;

import java.util.concurrent.TimeUnit;

import org.openqa.selenium.\*;

import org.openqa.selenium.firefox.FirefoxDriver;

import jxl.read.biff.BiffException;

public class Web {

private static String url = "http://103.120.226.190/selenium-demo/git-repo";

private static WebDriver driver;

public Web() {

System.setProperty("webdriver.gecko.driver", "firefox\\geckodriver.exe");

System.setProperty("webdriver.firefox.bin","E:\\firefox.exe");

driver = new FirefoxDriver();

driver.manage().timeouts().implicitlyWait(500, TimeUnit.MILLISECONDS);

driver.get(url);

}

public boolean test(String sid, String gitAddress) {

WebElement username = driver.findElement(By.xpath("/html/body/div/div/div/div/div/div/div[2]/div/form/div[1]/input"));

WebElement password = driver.findElement(By.xpath("/html/body/div/div/div/div/div/div/div[2]/div/form/div[2]/input"));

WebElement submit = driver.findElement(By.xpath("/html/body/div/div/div/div/div/div/div[2]/div/form/div[3]/input"));

username.clear();

password.clear();

username.sendKeys(sid);

password.sendKeys(gitAddress);

submit.click();

WebElement info = driver.findElement(By.xpath("/html/body/div/div/div/div/div/div/div[2]/div/form/div[5]/code"));

String userinfo = info.getText();

if (userinfo.equals(gitAddress)) {

System.out.println("用户" + sid + "信息正确！");

return true;

} else {

System.out.println("错误：用户" + sid + "的信息应为" + gitAddress + ", 输出为" + userinfo);

return false;

}

}

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

Web webTest = new Web();

ReadExcel excel = new ReadExcel("Selenium Lab2020.xls");

String [][] data = excel.getData(0);

boolean isAllPass = true;

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

System.out.print((i + 1) + " : ");

isAllPass &= webTest.test(data[i][1], data[i][2]);

}

if (isAllPass) {

System.out.println("恭喜！所有的用户信息都正确！");

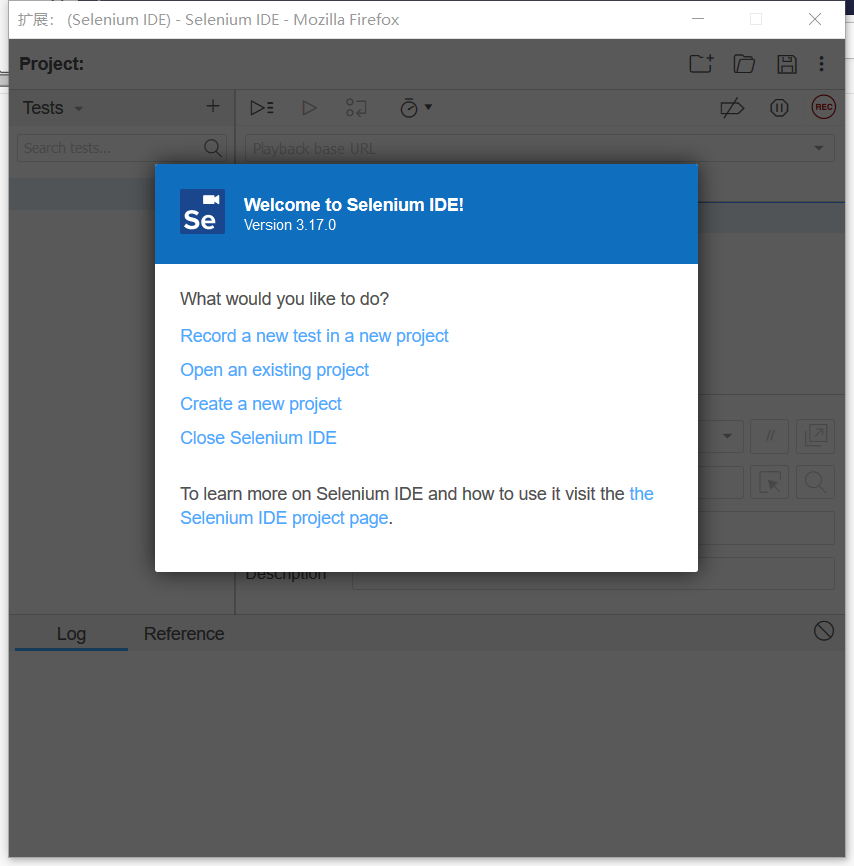
}

}

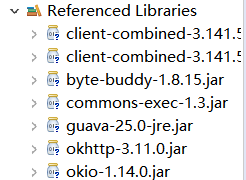
}

# 三、运行结果

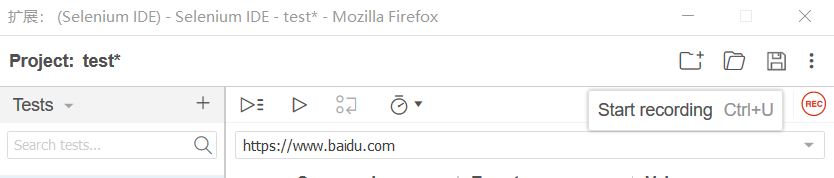
1. Install Firefox, and install Selenium IDE from Firefox.



Install selenium-java-3.141.59.zip and unzip, add .jar file to Build Path.



2. Open Selenium IDE, add the base URL used to test and click ‘Start Record’ button.



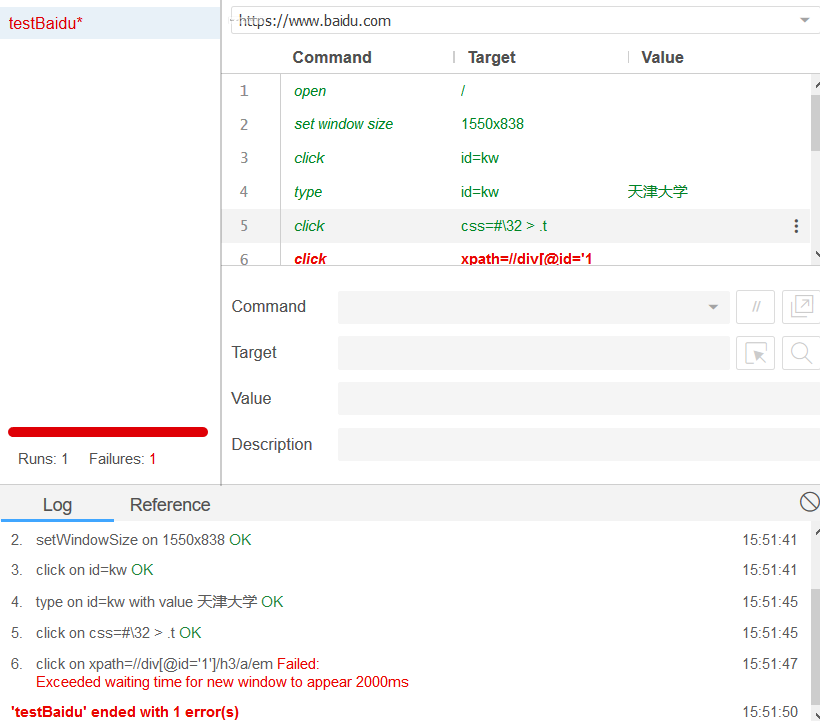
When the web page open, begin the test you want. After the test, return to the IDE and click stop, then you will get the record of your tests.



IDE can run the record auto when you click ‘Run all tests’.



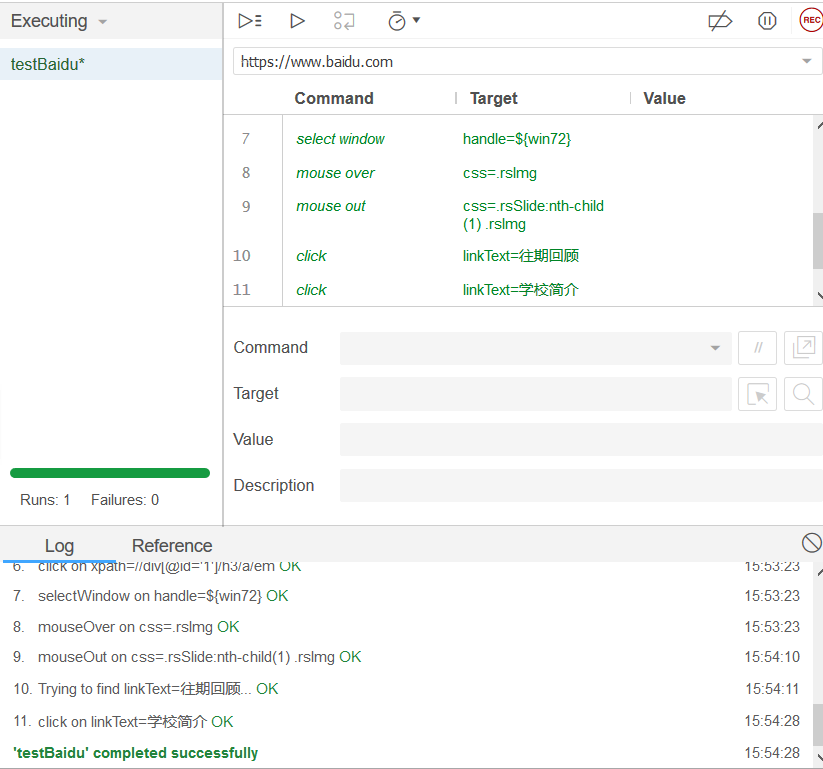
When your tests contain a operation that open a new web page, you should all the base web page to open new window in Firefox setting, or you will get a failure.



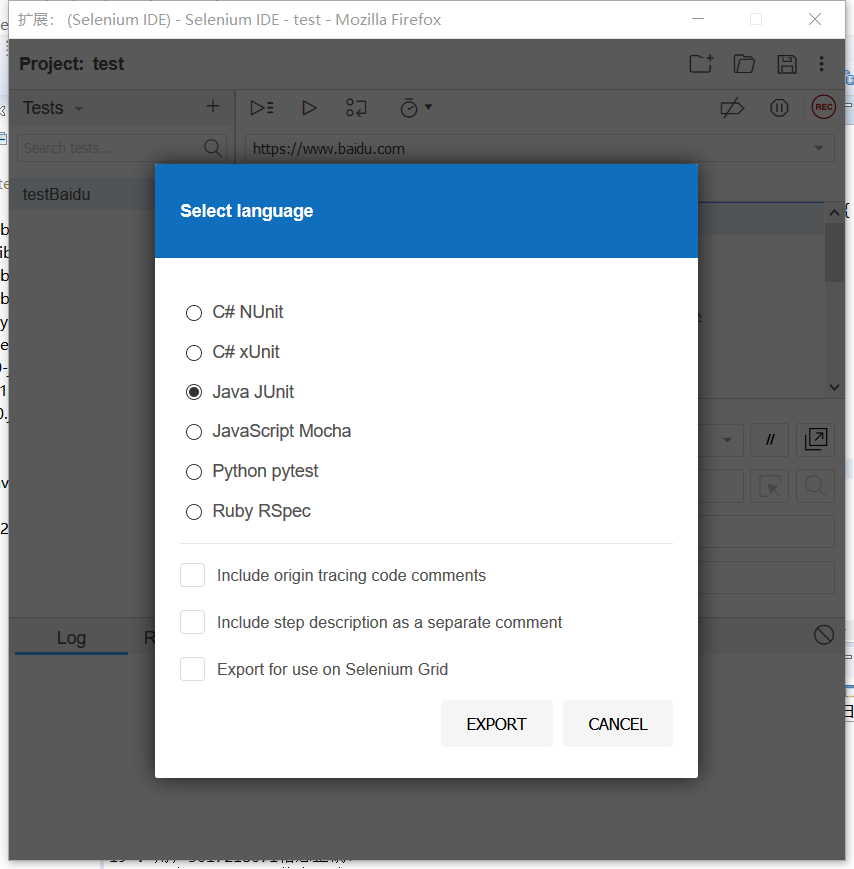
Now all the base URL to start window:



Test again, and all tests pass.

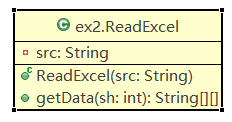


Right click the project recorded and click export, then you can choose a type of the test script exported.

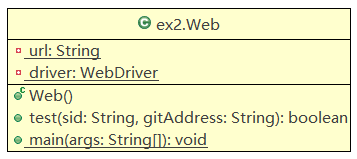


3.Steps for testing the website using Selenium:

1. To read the excel file, download the jxl.jar and add it to build path. Write a class names ReadExcel used to read excel file by using the method from jxl.jar. The class has a private property src which means the path of the file to read, and will be initialed by the constructor. The class also has a method to read data from the file and return a dyadic array storing the data.



2. To test the website, I wrote a class named Web which has two static properties and one method. One property names url, which record the url of the website to be tested, the other names driver, which is a WebDriver to operate the browser. The constructor will initial the driver and set a implicitly waiting time to avoid operating before the web page loaded. The method, named test, is used to log in ,select the information required from the web page and verify the truth of the information.



3. Ran the main method and got the results:

