# Introduction

The documentscontains manual how to debug automation tests in eclipse and general errors, which may occur.

## Exceptions

While running tests you may faced NoSuchElelementException in log, e.g.:

Caused by: org.openqa.selenium.NoSuchElementException: Unable to locate element: {"method":"xpath","selector":"//span[.='LearningTools button']/ancestor::div[1]/following-sibling::div/tr/input"}

By this exception, we can see that element with xpath “//span[.='LearningTools button']/ancestor::div[1]/following-sibling::div/tr/input” was not found.

Le’t loook at the stack trace of the exception in log:

FAILED CONFIGURATION: @BeforeClass testSuiteSetup

com.mcgraw.test.automation.framework.core.timing.TimeoutException: Timed out after 10 seconds waiting for com.mcgraw.test.automation.framework.selenium2.ui.WebDriverFunctions$3@da8e53c

at com.mcgraw.test.automation.framework.selenium2.ui.Browser$6.timeoutException(Browser.java:483)

at com.mcgraw.test.automation.framework.core.timing.SmartWait.until(SmartWait.java:231)

at com.mcgraw.test.automation.framework.selenium2.ui.Browser.waitForElement(Browser.java:488)

at com.mcgraw.test.automation.framework.selenium2.ui.Browser.waitForElement(Browser.java:500)

at com.mcgraw.test.automation.ui.mhcampus.TegrityCreateMhCampusCustomerScreen.setExtendedPropertiesForSetting(TegrityCreateMhCampusCustomerScreen.java:189)

at com.mcgraw.test.automation.ui.mhcampus.TegrityCreateMhCampusCustomerScreen.fillInDetailsForAccountAndSave(TegrityCreateMhCampusCustomerScreen.java:262)

at com.mcgraw.test.automation.ui.applications.TegrityAdministrationApplication.createNewMhCampusInstance(TegrityAdministrationApplication.java:105)

at com.mcgraw.test.automation.ui.applications.TegrityAdministrationApplication.createNewMhCampusInstance(TegrityAdministrationApplication.java:84)

at com.mcgraw.test.automation.ui.applications.TegrityAdministrationApplication.createNewMhCampusInstance(TegrityAdministrationApplication.java:149)

at com.mcgraw.test.automation.tests.sakai.Gradebook.testSuiteSetup(Gradebook.java:95)

At this point we are interesting in classes which ends with ‘Screen’ as this classes contains references to webelements. Elements in screen defined in screen class like this:

@DefinedLocators(@DefinedLocator(how = How.ID, using = “TextBoxDomain2id"))

Element userDomain;

If you got NoSuchElementException you may fix its locator, updating ‘using’ to correct value,

Also you may face several other general exceptions:

* ScreenIsNotOpenedException, e.g. ScreenIsNotOpenedException: TegrityAccountsScreen was not opened!

In this case you should check @PageIdentificator for the TegrityAccountsScreen classs:

@PageIdentificator(locators = @DefinedLocators(@DefinedLocator(using = "//\* [@id='ctl00\_ContentPlaceHolder1\_ClientServicesMain1\_ClientServicesDashboard1\_BreadCrumb1\_LabelCurrent'][contains(text(),'MH Campus Accounts')]")))

It also contains ‘using’ field with current locator, which can be updated with new changes in UI. The identifcator is used when we call browser.waitForPage(TegrityAccountsScreen.class).

* ScreenFrameNotFoundException. Several Screen classes should be identified by fields which located in frames. Webdriver to find such identificators we should switch in frames and the locate it. So if locator for the frame is incorrect we will have such exception, e.g.

@PageFrameIdentificator(locators = @DefinedLocators(@DefinedLocator(how = How.CLASS\_NAME, using = "portletMainIframe")))

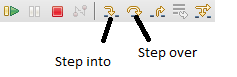
@PageIdentificator(locators = @DefinedLocators(@DefinedLocator(using = "//h2[contains(.,'Gradebook Items')]")))

public class SakaiGradesScreen

when we call browser.waitForPage(SakaiGradesScreen.class) and the locator inside @PageFrameIdentificator annotation is incorrect @DefinedLocator(how = How.CLASS\_NAME, using = "portletMainIframe") (in this case locator is found by @class atrribute in html), then we will get this exception

# Debugging process

When your test failed and you got one of the exceptions:

1. locate the string in code from the stacktrace (when you click on the class name in blue in stacktraceit will move you to target place),
2. Then you may place the breakpoint by double-clicking on the left border of the string
3. Then right-click on your test class and click Debug as
4. After you test run reach the breakpoint you will be switched to Debug perspective and have the debug panel available at the top 

You may use these buttons to step into the method or step over the method.