INSANE

INTERACTIVE STRUCTURAL ANALYSIS ENVIRONMENT

INSANE DEVELOPMENT KIT INSTALLATION GUIDE

Version: July 31, 2020

Contents

1 Introduction

In this guide, details regarding the installation, configuration and the use of the programs used by the **INSANE** development team will be illustrated, as well as the necessary procedures for the communication with the version control remote repository.

1.1 INSANE Standard Development Kit

The set of programs used by the **INSANE** development team is labelled as **INSANE Standard Development Kit** (SDK).

Its main components are:

- **Eclipse IDE for Java developers** - www.eclipse.org
- **Java OpenJDK - Version 11 or above** - https://openjdk.java.net/

Advanced users should also install the complete versions of **Maven** and **Git**, not only the versions embedded in **Eclipse IDE for Java developers**. However, this guide will not present the instructions for this.

2 Pre-installation

If you are reinstalling the programs and wishes to make a clean install,you must delete the .insane, .m2, .eclipse, .p2 and .tooling folders located in your `HOME` directory.

The location of `HOME` directory varies depending on the operating system, as follows, in which [username] is your username:

- **Windows** - `C:\Users\[username]`
- **macOS** - `/home/[username]`
- **Linux** - `/Users/[username]`

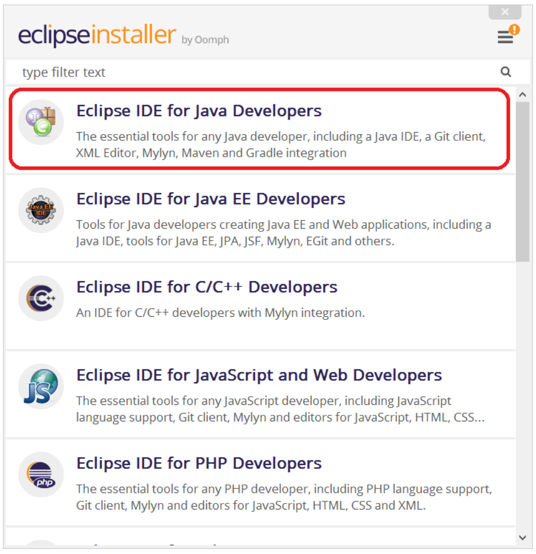
3 Installation

The first step consists in downloading the necessary files to the installation of the **INSANE SDK**. When downloading the files, verify their compatibility with your operating system, and make sure that they are the most up-to-date versions.

Make sure you download the Eclipse IDE for Java Developers package or the Eclipse Installer.

Windows In order to install the **Java** package, just extract the downloaded file to a folder of your choice. If you downloaded the **Eclipse Installer**, execute it and choose **Eclipse IDE for Java Developers** during install. Then, follow the instructions on screen. If you downloaded the **Eclipse** package, just extract the files to a folder of your choice.

It is recommended to extract Eclipse to a folder named Eclipse.



eclipseinstaller by Oomph

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Eclipse IDE for Java Developers
The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Mylyn, Maven and Gradle integration

Eclipse IDE for Java EE Developers
Tools for Java developers creating Java EE and Web applications, including a Java IDE, tools for Java EE, JPA, JSF, Mylyn, EGit and others.

Eclipse IDE for C/C++ Developers
An IDE for C/C++ developers with Mylyn integration.

Eclipse IDE for JavaScript and Web Developers
The essential tools for any JavaScript developer, including JavaScript language support, Git client, Mylyn and editors for JavaScript, HTML, CSS...

Eclipse IDE for PHP Developers
The essential tools for any PHP developer, including PHP language support, Git client, Mylyn and editors for JavaScript, HTML, CSS and XML.

Figure 1: **Eclipse Installer**

macOS In order to install the **Java** package, just extract the downloaded file to a folder of your choice. If you downloaded the **Eclipse Installer**, execute it and choose **Eclipse IDE for Java Developers** during install. Then, follow the instructions on screen. If you downloaded the **Eclipse** package, just extract the files to a folder of your choice.

It is advisable to create folders named Java and Eclipse in the directory Applications of your system, and extract the files in it. If the directory Applications is used, the environment variables of the system don't need to be configured.

Linux Most **Linux** distributions are already installed with the **Java**. To check if it is installed and which version, just type the following command on a terminal window: `java -version`

If it is not installed, you should refer to dedicated guides (for example, **Ubuntu**). In Debian based distributions, like Ubuntu, the following command install **Java 11**):

```
sudo apt install openjdk-11-jdk
```

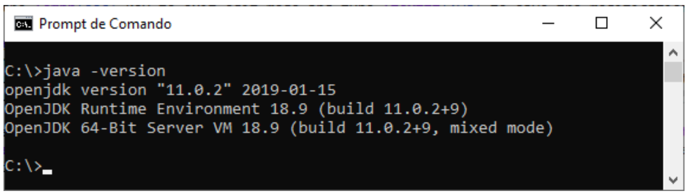
If you downloaded the **Eclipse Installer**, execute it and choose **Eclipse IDE for Java Developers** during install. Then, follow the instructions on screen. If you downloaded the **Eclipse** package, just extract the files to a folder of your choice.

3.1 Setting environment variables

In order to make the executable files of the programs globally accessible by the operating system, it is necessary to configure the environment variables. The different procedures for systems based on **Windows**, **macOs** and **Linux** are described.

Testing the Configuration You can check the configuration of the variables just by typing the command `java -version` in the *terminal*. If the configuration is correct, a message similar to the one of Figure 2 should appear.

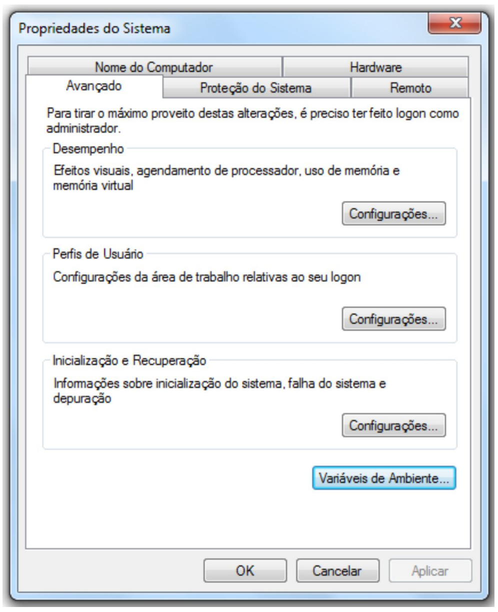
Windows To configure the environment variables in **Windows**, access Control Panel → System and security → System → Advanced system configurations and, in the section Advanced, access Environment Variables (Figure 3a). In **Windows 10**,



```
C:\>java -version
openjdk version "11.0.2" 2019-01-15
OpenJDK Runtime Environment 18.9 (build 11.0.2+9)
OpenJDK 64-Bit Server VM 18.9 (build 11.0.2+9, mixed mode)

C:\>_
```

Figure 2: Testing the environment variables configuration

just type `environment variables` in the search box and click the `Edit system environment variables` link which will be shown.



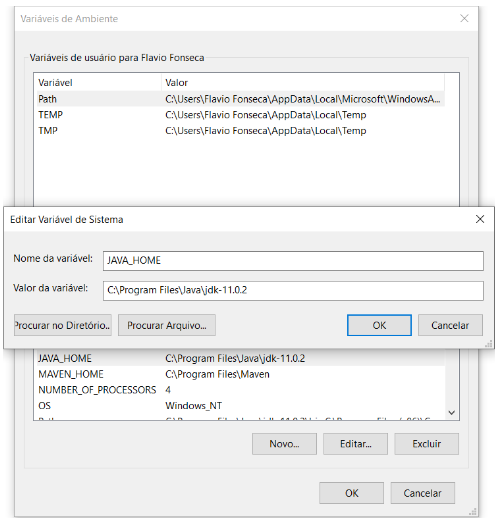
Para tirar o máximo proveito destas alterações, é preciso ter feito logon como administrador.

Efeitos visuais, agendamento de processador, uso de memória e memória virtual

Configurações da área de trabalho relativas ao seu logon

Informações sobre inicialização do sistema, falha do sistema e depuração

(a) System Properties



Variáveis de usuário para Flavio Fonseca

Variável	Valor
Path	C:\Users\Flavio Fonseca\AppData\Local\Microsoft\WindowsA...
TEMP	C:\Users\Flavio Fonseca\AppData\Local\Temp
TMP	C:\Users\Flavio Fonseca\AppData\Local\Temp

Nome da variável: JAVA_HOME

Valor da variável: C:\Program Files\Java\jdk-11.0.2

JAVA_HOME	C:\Program Files\Java\jdk-11.0.2
MAVEN_HOME	C:\Program Files\Maven
NUMBER_OF_PROCESSORS	4
OS	Windows_NT

(b) Setting user variable

Figure 3: Environment variables definition

In the section User Variables, create a new variable named `JAVA_HOME`, defining its value with the path of the installation directory of the **Java Development Kit** (for example: `C:\ProgramFiles\Java\jdk-11.0.2`), (Figure 3b).

In the section System Variables, edit the variable `Path`, by adding the installation path of **Java**, followed by `\bin` (for example: `C:\ProgramFiles\Java\jdk-11.0.2\bin`).

Modify this path according to your system.

In order to make the new configurations effective, restart your system.

macOS If the programs were installed according to the previous procedures, the environment variables should be already configured.

If needed, it can be done by editing the file `.bash_profile`. Open the terminal and execute the command `vi ~/.bash_profile` to open the file in the **Vi** text editor. Press the *i* key in order to insert a new text in the file, and add the following lines, modified according to the existing paths:

```
export JAVA_HOME="/System/Library/Java/JavaVirtualMachines/
                                    jdk-11.jdk/Contents/Home"
export PATH=\${PATH}:\$JAVA_HOME/bin
```

Press the *esc* key to exit edit mode and type `:wq` to save the modifications and close the file.

Linux The configuration of the environment variables in a **Linux** system requires the modification of the `/etc/profile` file, that must be accessed as a superuser. If the installation of **Java** was done with the automatic procedure described in the previous section, there should be no need to configure the `JAVA_HOME` variable.

In case you need to configure this variable, open the terminal and type the command `sudo gedit /etc/profile`, in order to open the `profile` file with the **gedit** text editor. Once you have opened the file, add the following lines, modified according to the existing paths:

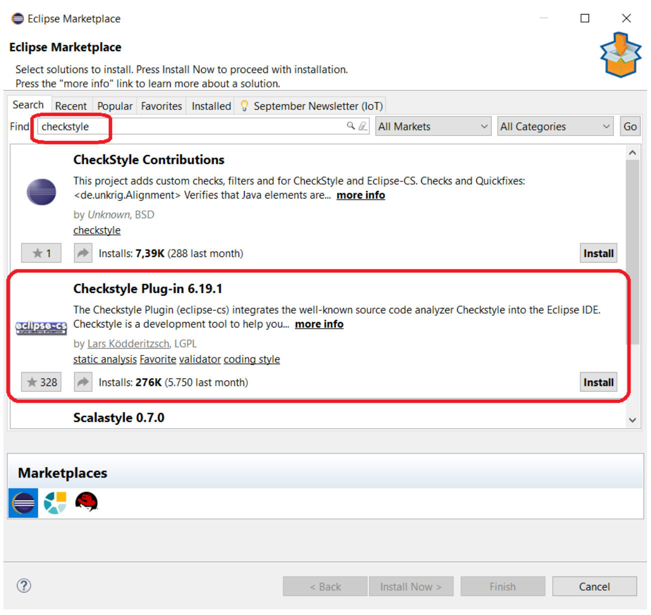
```
JAVA_HOME=/usr/lib/jvm/java-11-openjdk-amd64
ECLIPSE_HOME=/usr/local/eclipse
export JAVA_HOME ECLIPSE_HOME
PATH=\$PATH:\$JAVA_HOME/bin:\$ECLIPSE_HOME
export PATH
```

There is no need to restart the system.

3.2 Installing **Checkstyle** plug-in

To install the **Checkstyle** plug-in, a feature called Eclipse Marketplace will be used.

Start **Eclipse** and set the working directory (usually a folder named workspace in your `HOME` directory). Open the Help menu and select Eclipse Marketplace. In the dialog which will open, make a search for Checkstyle. Select the Checkstyle plug-in and click Install (Figure 4). Accept the license agreement and continue until **Eclipse** requests to be restarted.



Eclipse Marketplace

Eclipse Marketplace

Select solutions to install. Press Install Now to proceed with installation.
Press the "more info" link to learn more about a solution.

Search | Recent | Popular | Favorites | Installed | September Newsletter (IoT)

Find: checkstyle | All Markets | All Categories | Go

CheckStyle Contributions
This project adds custom checks, filters and for CheckStyle and Eclipse-CS. Checks and Quickfixes: <de.unkrig.Alignment> Verifies that Java elements are... **more info**
by *Unknown*, BSD
checkstyle
★ 1 | Installs: **7,39K** (288 last month) | Install

Checkstyle Plug-in 6.19.1
The Checkstyle Plugin (eclipse-cs) integrates the well-known source code analyzer Checkstyle into the Eclipse IDE. Checkstyle is a development tool to help you... **more info**
by Lars Ködderitzsch, LGPL
static analysis Favorite validator coding style
★ 328 | Installs: **276K** (5.750 last month) | Install

Scalastyle 0.7.0

Marketplaces

< Back | Install Now > | Finish | Cancel

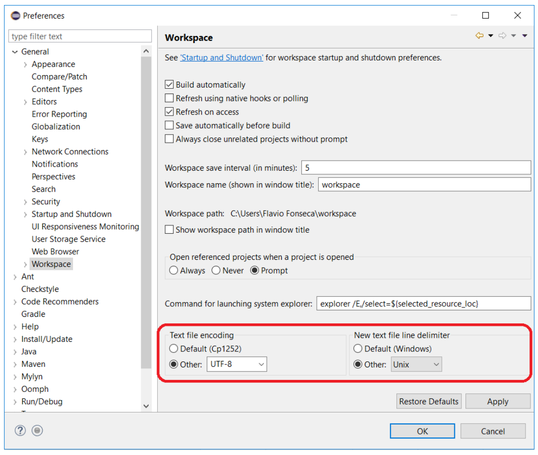
Figure 4: Installing **Checkstyle** plug-in via Eclipse Marketplace

4 Configuration

4.1 Setting text encoding to `UTF-8`

All text files in **INSANE** must be encoded in `UTF-8`. To set **Eclipse** to automatically do this, go to Window → Preferences → General → Workspace and set Text file encoding to `UTF-8` and New text file delimiter to `Unix` (Figure 5a).

Also, go to Window → Preferences → General → Content types, select Text and write `UTF-8` at the Default encoding field (Figure 5b). Click Update, then OK.



Workspace

See 'Startup and Shutdown' for workspace startup and shutdown preferences.

- [✓] Build automatically
- [ ] Refresh using native hooks or polling
- [✓] Refresh on access
- [ ] Save automatically before build
- [ ] Always close unrelated projects without prompt

Workspace save interval (in minutes): 5

Workspace name (shown in window title): workspace

Workspace path: C:\Users\Flavio Fonseca\workspace

- [ ] Show workspace path in window title

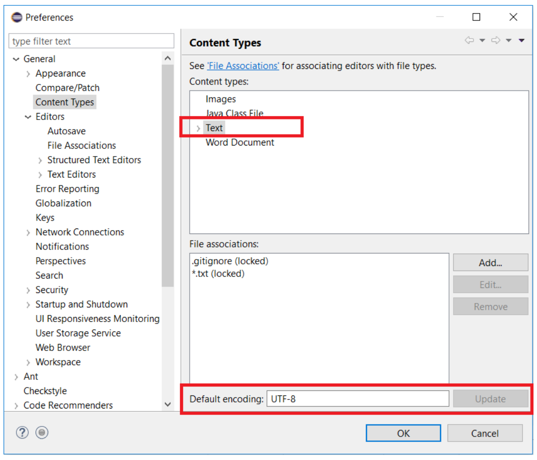
Open referenced projects when a project is opened: Always Never [✓ Prompt]

Command for launching system explorer: explorer /E,/select=${selected_resource_loc}

Text file encoding: Default (Cp1252) [✓ Other: UTF-8]

New text file line delimiter: Default (Windows) [✓ Other: Unix]

(a)



Content Types

See 'File Associations' for associating editors with file types.

Content types:

Images
Java Class File
Text
Word Document

File associations:

.gitignore (locked)
*.txt (locked)

Default encoding: UTF-8

(b)

Figure 5: Setting text encoding to `UTF-8`

4.2 Setting **Git** user attributes

To set the **Git** user name and e-mail, go to Window → Preferences → Team → Git → Configuration.

Create these two entries, by clicking Add entry button and filling the dialog with your name and e-mail (Figure 6a):

- Key = `user.name` / Value = [your name]
- Key = `user.email` / Value = [your e-mail]

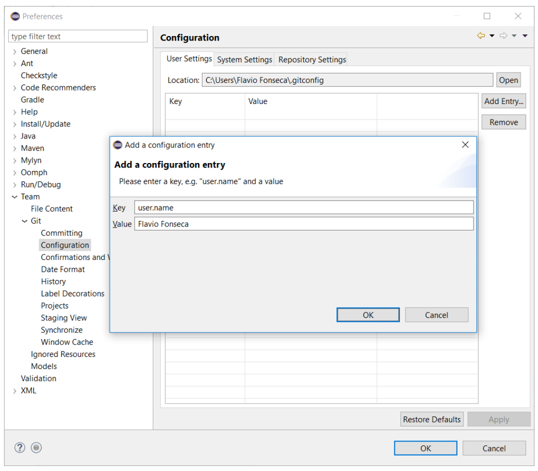
The e-mail must be the same as set in your user account at InsaneLab.

Check if the entries were successfully saved (Figure 6b).

4.3 Setting the **JRE**

By default, **Eclipse** is set to use a **JRE** (`Java Runtime Environment`) which is not part of a **JDK** (`Java Development Environment`). However, some of the features used by the **INSANE SDK** require the use of a **JRE** from a **JDK**.

To configure an adequate **JRE**, go to Window → Preferences → Java → Installed JREs, select the JRE which is set and click Edit (Figure 7a). In the following dialog,



Configuration

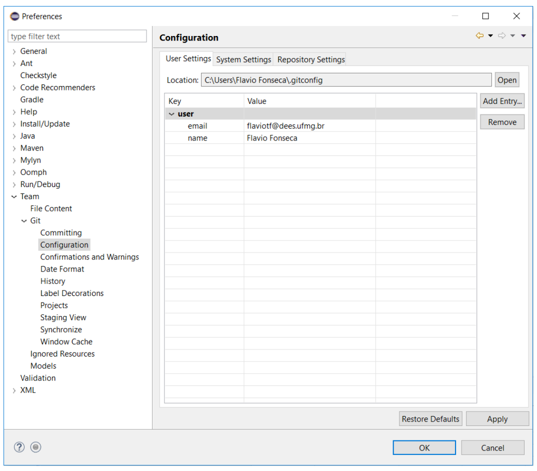
Location: C:\Users\Flavio Fonseca\.gitconfig

Add a configuration entry

Please enter a key, e.g. "user.name" and a value

Key	user.name
Value	Flavio Fonseca

(a)



Configuration

Location: C:\Users\Flavio Fonseca\.gitconfig

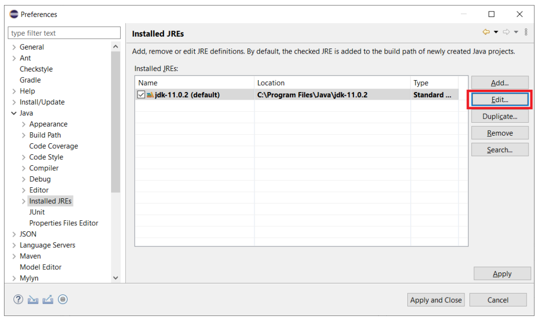
Key	Value
user	
email	flaviotf@dees.ufmg.br
name	Flavio Fonseca

(b)

Figure 6: Setting **Git** user attributes

change the path of the JRE home to a JRE inside a JDK (for example, in **Windows**, `C:\ProgramFiles\Java\jdk-11.0.2`) (Figure 7b). Click Finish, then OK.

It is recommended that you have only one JRE set. If you have more than one, you may have to change some configurations for Maven plug-in.



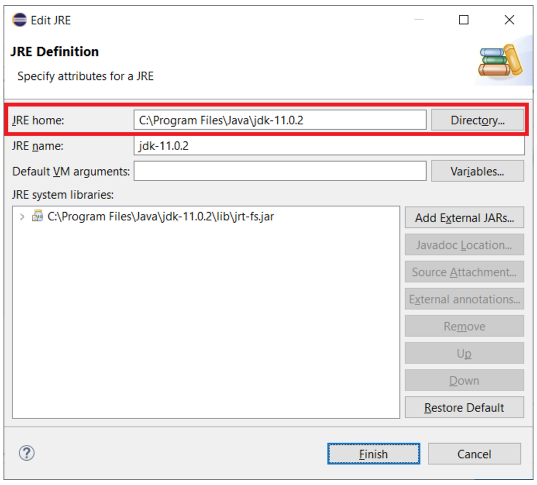
Installed JREs

Add, remove or edit JRE definitions. By default, the checked JRE is added to the build path of newly created Java projects.

Installed JREs:

Name	Location	Type
☑ jdk-11.0.2 (default)	C:\Program Files\Java\jdk-11.0.2	Standard ...

(a)



JRE Definition

Specify attributes for a JRE

JRE home:	C:\Program Files\Java\jdk-11.0.2
JRE name:	jdk-11.0.2
Default VM arguments:	

JRE system libraries:

C:\Program Files\Java\jdk-11.0.2\lib\jrt-fs.jar

(b)

Figure 7: Setting the **JRE**

5 Setting up the workspace

5.1 Cloning the remote repository

Start **Eclipse** and open the Git perspective by going to Window → Perspective → Open perspective → Other and selecting Git. Then, select Clone a Git repository.

Fill the `URI` field with `https://git.insane.dees.ufmg.br/insane/insane.git`. Leave all other fields with their default values (Figure 8a). Click Next. In the next window, select all the branches you want to clone (branch `master` is the main branch and must be cloned) (Figure 8b). Click Next again. Do not change any value in the next window and click Finish (Figure 8c). The remote repository will be cloned to your local machine. It can take some time. When finished, the local repository file structure will be displayed (Figure 8d).

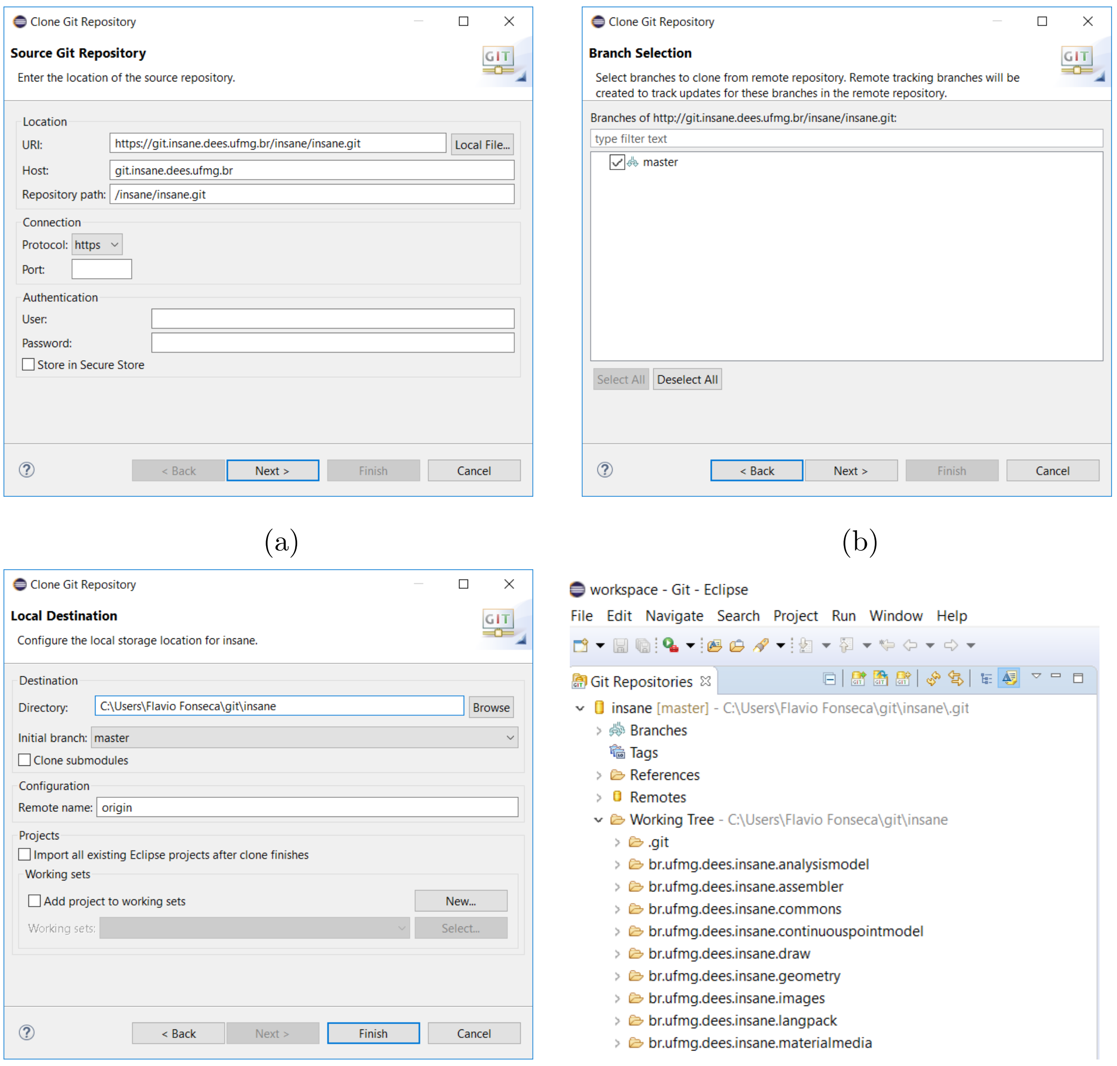
5.2 Configuring **Maven** plug-in

At least three tasks must be created: `eclipse:eclipse` (creates **Eclipse** projects, based on the repository files), `install` (builds the projects and installs the snapshots) and `clean` (removes the compiled classes and the snapshots).

To create them, open the Java perspective by going to Window → Perspective → Open perspective → Other and selecting Java (default). Then, go to Run → Run configurations. Select Maven build and click the New launch configuration button (Figure 9a). Complete the following fields as below, where `[HOME]` is the path to your home directory (Figure 9b):

```
Name: eclipse_eclipse
Base directory: [HOME]\git\insane
Goals: eclipse:eclipse
User settings: [HOME]\git\insane\pom.xml
```

This will set the `eclipse:eclipse` task. To set the others, select the `eclipse:eclipse` task, click the Duplicate button, and change the Name and Goals fields to `install`



Clone Git Repository

Source Git Repository

Enter the location of the source repository.

Location

URI: https://git.insane.dees.ufmg.br/insane/insane.git

Host: git.insane.dees.ufmg.br

Repository path: /insane/insane.git

Connection

Protocol: https

Port:

Authentication

User:

Password:

☐ Store in Secure Store

(a)

Clone Git Repository

Branch Selection

Select branches to clone from remote repository. Remote tracking branches will be created to track updates for these branches in the remote repository.

Branches of http://git.insane.dees.ufmg.br/insane/insane.git:

type filter text

☑ master

(b)

Clone Git Repository

Local Destination

Configure the local storage location for insane.

Destination

Directory: C:\Users\Flavio Fonseca\git\insane

Initial branch: master

☐ Clone submodules

Configuration

Remote name: origin

Projects

☐ Import all existing Eclipse projects after clone finishes

Working sets

☐ Add project to working sets

Working sets:

(c)

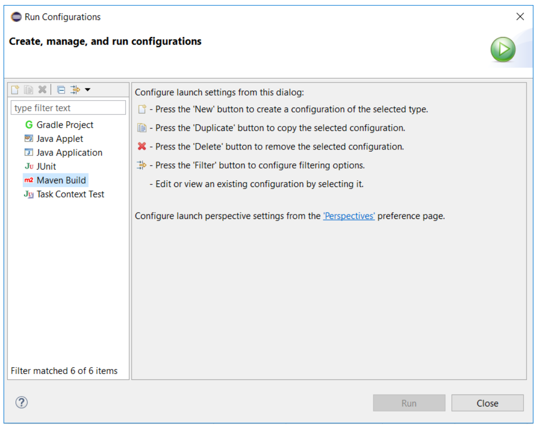
workspace - Git - Eclipse

```
insane [master] - C:\Users\Flavio Fonseca\git\insane\.git
  Branches
  Tags
  References
  Remotes
  Working Tree - C:\Users\Flavio Fonseca\git\insane
    .git
    br.ufmg.dees.insane.analysismodel
    br.ufmg.dees.insane.assembler
    br.ufmg.dees.insane.commons
    br.ufmg.dees.insane.continuouspointmodel
    br.ufmg.dees.insane.draw
    br.ufmg.dees.insane.geometry
    br.ufmg.dees.insane.images
    br.ufmg.dees.insane.langpack
    br.ufmg.dees.insane.materialmedia
```

(d)

Figure 8: Cloning **Git** repository

to create the `install` task and `clean` to create the `clean` task (both fields with the same value).



Run Configurations

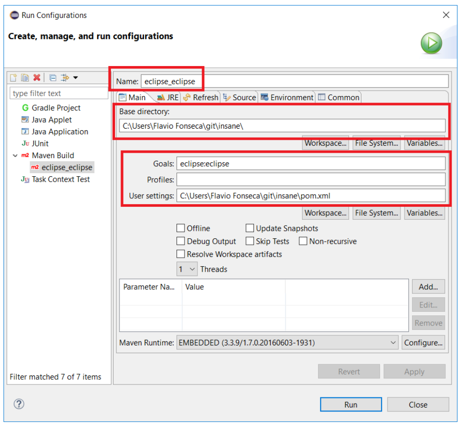
Create, manage, and run configurations

Configure launch settings from this dialog:
- Press the 'New' button to create a configuration of the selected type.
- Press the 'Duplicate' button to copy the selected configuration.
- Press the 'Delete' button to remove the selected configuration.
- Press the 'Filter' button to configure filtering options.
- Edit or view an existing configuration by selecting it.

Configure launch perspective settings from the 'Perspectives' preference page.

Filter matched 6 of 6 items

(a)



Run Configurations

Create, manage, and run configurations

Name: eclipse_eclipse

Base directory: C:\Users\Flavio Fonseca\git\insane\

Goals: eclipse:eclipse

Profiles:

User settings: C:\Users\Flavio Fonseca\git\insane\pom.xml

☐ Offline ☐ Update Snapshots
☐ Debug Output ☐ Skip Tests ☐ Non-recursive
☐ Resolve Workspace artifacts

1 Threads

Maven Runtime: EMBEDDED (3.3.9/1.7.0.20160603-1931)

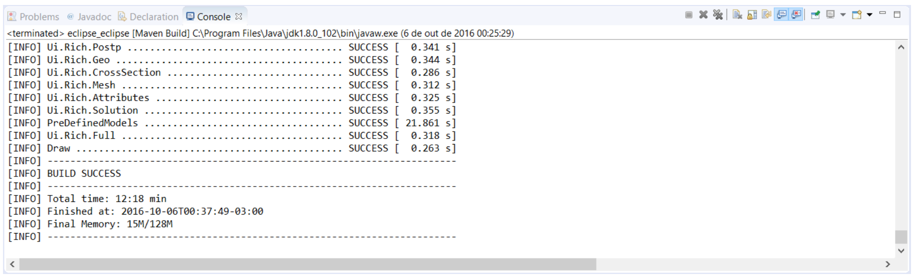
Filter matched 7 of 7 items

(b)

Figure 9: Configuring **Maven** plug-in

5.3 Creating and importing projects to **Eclipse**

To create the projects, go back to Run → Run configurations, select the `eclipse_eclipse` task and click the Run button. **Maven** will run and the output will be shown in **Eclipse** console. When finished, if no problems occurred, the message `Build success` will be displayed (Figure 10). The first time this task is run, it will download many required packages from the Internet.



```
<terminated> eclipse_eclipse [Maven Build] C:\Program Files\Java\jdk1.8.0_102\bin\javaw.exe (6 de out de 2016 00:25:29)
[INFO] Ui.Rich.Postp ...................................... SUCCESS [  0.341 s]
[INFO] Ui.Rich.Geo ........................................ SUCCESS [  0.344 s]
[INFO] Ui.Rich.CrossSection ............................... SUCCESS [  0.286 s]
[INFO] Ui.Rich.Mesh ....................................... SUCCESS [  0.312 s]
[INFO] Ui.Rich.Attributes ................................. SUCCESS [  0.325 s]
[INFO] Ui.Rich.Solution ................................... SUCCESS [  0.355 s]
[INFO] PreDefinedModels ................................... SUCCESS [ 21.861 s]
[INFO] Ui.Rich.Full ....................................... SUCCESS [  0.318 s]
[INFO] Draw ............................................... SUCCESS [  0.263 s]
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 12:18 min
[INFO] Finished at: 2016-10-06T00:37:49-03:00
[INFO] Final Memory: 15M/128M
[INFO] ------------------------------------------------------------------------
```

Figure 10: Creating projects with **Maven** plugin

Now, go to File → Import → General → Existing projects into workspace click Next (Figure 11). In the following dialog, set the Select root directory to the **INSANE** directory root and click Finish. The projects will appear in the Package explorer view of **Eclipse**(Figure 12).

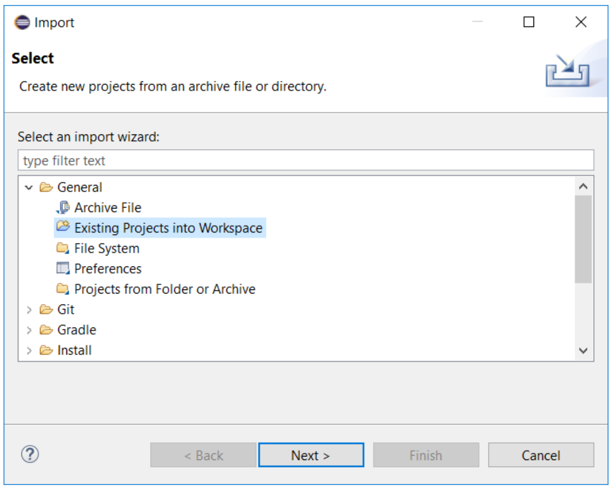


Figure 11: Installing projects (1)

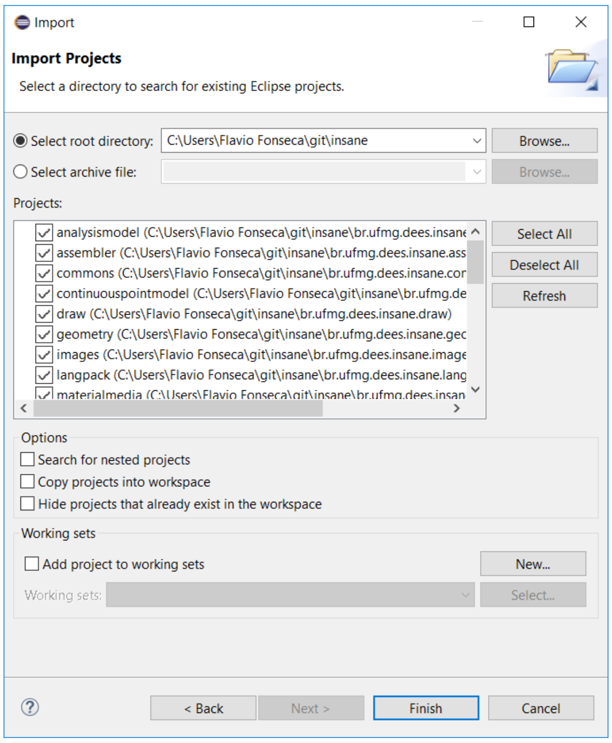
5.4 Building the projects

To build the projects, just run the `install` task created, by going to Run → Run configurations, selecting the `install` task and clicking the Run button. **Maven** will run and the output will be shown in **Eclipse** console. When finished, if no problems occurred, the message `Build success` will be displayed. The first time this task is run, it will download many required packages from the Internet.

In case a problem occurs, clean the building by running the `clean` task and re-run the `install` task till the procedure results in the message `Build success`.

5.5 Activating Checkstyle

The **Checkstyle** configuration used in **INSANE** is the Google Java Style with some modifications. These rules are saved in a file named InsaneChecks.xml located at the top directory of the repository.



Import

Import Projects

Select a directory to search for existing Eclipse projects.

(●) Select root directory: C:\Users\Flavio Fonseca\git\insane

( ) Select archive file:

Projects:

- ✓ analysismodel (C:\Users\Flavio Fonseca\git\insane\br.ufmg.dees.insane
- ✓ assembler (C:\Users\Flavio Fonseca\git\insane\br.ufmg.dees.insane.ass
- ✓ commons (C:\Users\Flavio Fonseca\git\insane\br.ufmg.dees.insane.cor
- ✓ continuouspointmodel (C:\Users\Flavio Fonseca\git\insane\br.ufmg.de
- ✓ draw (C:\Users\Flavio Fonseca\git\insane\br.ufmg.dees.insane.draw)
- ✓ geometry (C:\Users\Flavio Fonseca\git\insane\br.ufmg.dees.insane.gec
- ✓ images (C:\Users\Flavio Fonseca\git\insane\br.ufmg.dees.insane.image
- ✓ langpack (C:\Users\Flavio Fonseca\git\insane\br.ufmg.dees.insane.lang
- ✓ materialmedia (C:\Users\Flavio Fonseca\git\insane\br.ufmg.dees.insan

Options

- ☐ Search for nested projects
- ☐ Copy projects into workspace
- ☐ Hide projects that already exist in the workspace

Working sets

- ☐ Add project to working sets

Working sets:

Figure 12: Installing projects (2)

To define this style, go to Window → Preferences → Checkstyle, and click the New button. (Figure 13a).

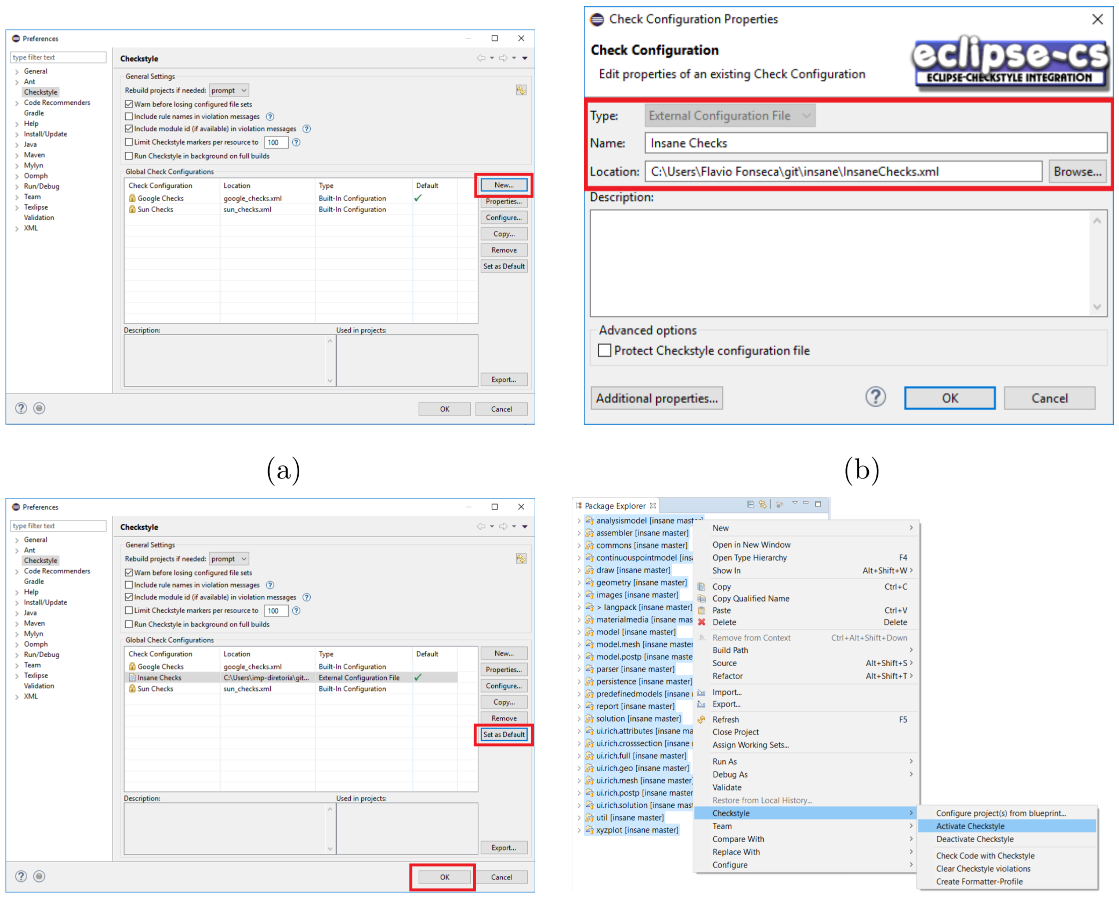
In the dialog, select the following, and then press OK:

```
Type: External Configuration File
Name: Insane Checks
Location: [HOME]\git\insane\InsaneChecks.xml
```

Next, select the Insane Checks configuration, click Set as Default and then press OK.

To finalize the activation of **Checkstyle**, select all projects (*Ctrl* + *A*), right-click them and select Checkstyle → Activate Checkstyle (Figure 13d). Repeat the process, but selecting Check code with Checkstyle at the end.

All files will be rebuilt, and the **Checkstyle** warnings, if any, will be show at Problems view in **Eclipse**.


Preferences
type filter text
General
Ant
Checkstyle
Code Recommenders
Gradle
Help
Install/Update
Java
Maven
Mylyn
Oomph
Run/Debug
Team
Texlipse
Validation
XML
Checkstyle
General Settings
Rebuild projects if needed: prompt
Warn before losing configured file sets
Include rule names in violation messages
Include module id (if available) in violation messages
Limit Checkstyle markers per resource to 100
Run Checkstyle in background on full builds
Global Check Configurations
Check Configuration
Location
Type
Default
Google Checks
google_checks.xml
Built-In Configuration
Insane Checks
C:\Users\imp-diretoria\git...
External Configuration File
Sun Checks
sun_checks.xml
Built-In Configuration
New...
Properties...
Configure...
Copy...
Remove
Set as Default
Description:
Used in projects:
Export...
OK
Cancel
Check Configuration Properties
Check Configuration
Edit properties of an existing Check Configuration
eclipse-cs
ECLIPSE-CHECKSTYLE INTEGRATION
Type: External Configuration File
Name: Insane Checks
Location: C:\Users\Flavio Fonseca\git\insane\InsaneChecks.xml
Browse...
Description:
Advanced options
Protect Checkstyle configuration file
Additional properties...
OK
Cancel
Package Explorer
analysismodel [insane master]
assembler [insane master]
commons [insane master]
continuouspointmodel [insane master]
draw [insane master]
geometry [insane master]
images [insane master]
> langpack [insane master]
materialmedia [insane master]
model [insane master]
model.mesh [insane master]
model.postp [insane master]
parser [insane master]
persistence [insane master]
predefinedmodels [insane master]
report [insane master]
solution [insane master]
ui.rich.attributes [insane master]
ui.rich.crosssection [insane master]
ui.rich.full [insane master]
ui.rich.geo [insane master]
ui.rich.mesh [insane master]
ui.rich.postp [insane master]
ui.rich.solution [insane master]
util [insane master]
xyzplot [insane master]
New
Open in New Window
Open Type Hierarchy F4
Show In Alt+Shift+W
Copy Ctrl+C
Copy Qualified Name
Paste Ctrl+V
Delete Delete
Remove from Context Ctrl+Alt+Shift+Down
Build Path
Source Alt+Shift+S
Refactor Alt+Shift+T
Import...
Export...
Refresh F5
Close Project
Assign Working Sets...
Run As
Debug As
Validate
Restore from Local History...
Checkstyle
Team
Compare With
Replace With
Configure
Configure project(s) from blueprint...
Activate Checkstyle
Deactivate Checkstyle
Check Code with Checkstyle
Clear Checkstyle violations
Create Formatter-Profile

(a) (b)

(c) (d)

Figure 13: Activating **Checkstyle**

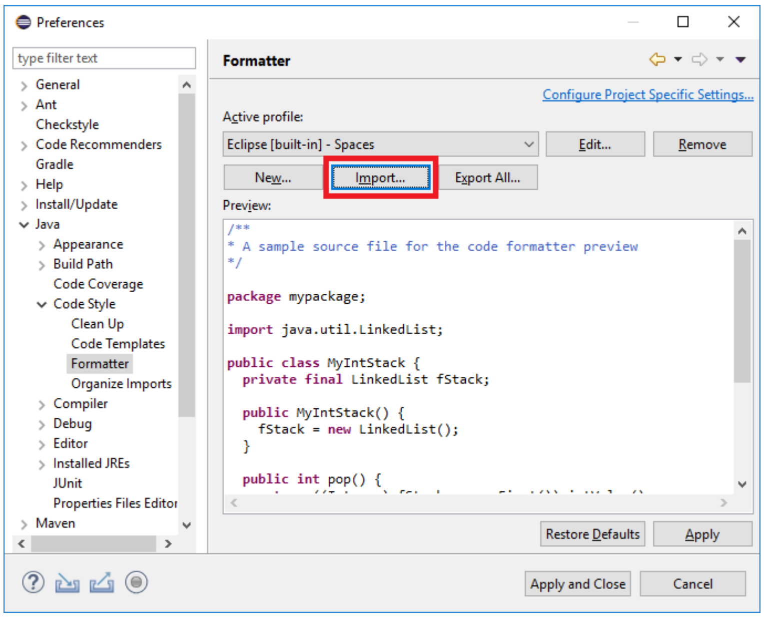
5.6 Configuring indentation, tabbing and other formatting settings

In **INSANE**, indentation must be done using spaces, not tabs. and the indentation size must be 2.

To configure this and all other formatting settings, go to Window → Preferences → Java → Code style → Formatter and click Import (Figure 14).

Select the the file `[HOME]\git\insane\InsaneFormatter.xml` and press Apply and Close button.

When editing a file in Eclipse, just press ctrl + shift + F (or the adequate shortcut for the OS in use) to format the file according to the project rules.



Active profile:
Eclipse [built-in] - Spaces

```
/**
 * A sample source file for the code formatter preview
 */

package mypackage;

import java.util.LinkedList;

public class MyIntStack {
  private final LinkedList fStack;

  public MyIntStack() {
    fStack = new LinkedList();
  }

  public int pop() {
```

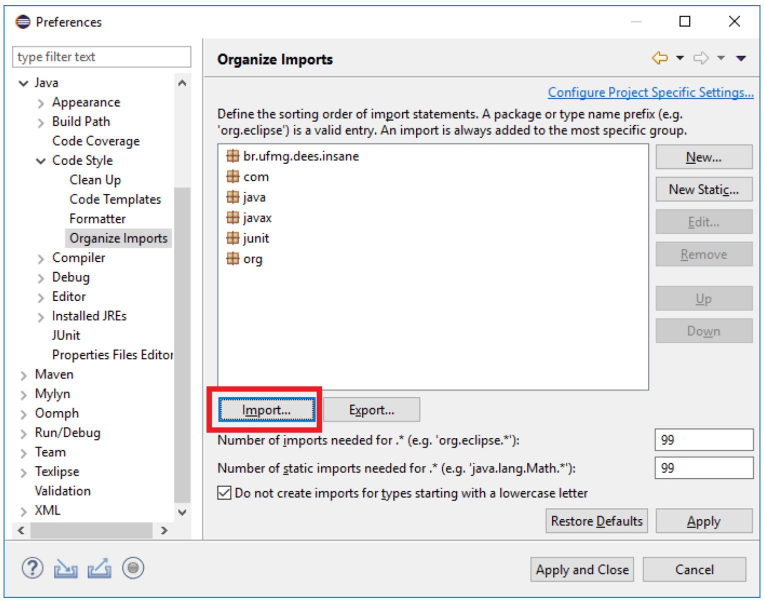
Figure 14: Configuring formatter.

5.7 Configuring "Organize Import"

To configure the "organize import" order, go to Window → Preferences → Java → Code style → Organize Imports and click Import (Figure 15).

Select the the file `[HOME]\git\insane\Insane.importorder` and press Apply and Close button.

When editing a file in Eclipse, just press ctrl + shift + O (or the adequate shortcut for the OS in use) to organize the imports section according to the project rules.



Define the sorting order of import statements. A package or type name prefix (e.g. 'org.eclipse') is a valid entry. An import is always added to the most specific group.

- br.ufmg.dees.insane
- com
- java
- javax
- junit
- org

Number of imports needed for .* (e.g. 'org.eclipse.*'): 99

Number of static imports needed for .* (e.g. 'java.lang.Math.*'): 99

☑ Do not create imports for types starting with a lowercase letter

Figure 15: Configuring “organize imports”.

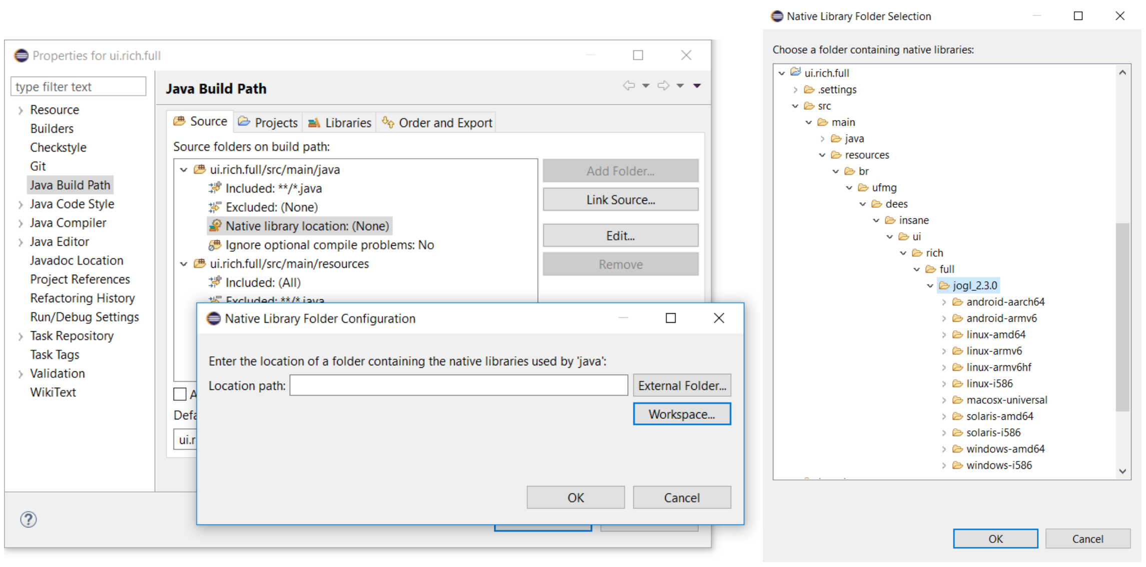
5.8 Configuring the native library **OpenGL**

Since commit *08a94925*, from 28/08/2018, this step is no longer necessary. However, out of date branches may need this.

The **OpenGL** (*Open Graphics Library*) is a library of functions and data structures for accessing the graphic hardware. This interface basically consists of a set of functions that can be used to specify objects and operations necessary to the production of 3D interactive applications. Below, the steps for its configuration are described.

Right-click the project `ui.rich.full`, select Properties. In the next window, select Java Build Path → Source. In this section, select Native library location, inside the package `ui.rich.full/src/main/java` and click edit (Figure 16a).

In the next window, click Workspace and follow the path `ui.rich.full/src/main/resources/br/ufmg/dees/insane/ui/rich/full/jogl_2.3.2-patched`. Choose the `JOGL` version compatible with your operating system and click OK (Figure 16b).



Source folders on build path:

ui.rich.full/src/main/java
Included: **/*.java
Excluded: (None)
Native library location: (None)
Ignore optional compile problems: No
ui.rich.full/src/main/resources
Included: (All)
Excluded: **/*.java

Enter the location of a folder containing the native libraries used by 'java':
Location path:

Choose a folder containing native libraries:

ui.rich.full
.settings
src
main
java
resources
br
ufmg
dees
insane
ui
rich
full
jogl_2.3.0
android-aarch64
android-armv6
linux-amd64
linux-armv6
linux-armv6hf
linux-i586
macosx-universal
solaris-amd64
solaris-i586
windows-amd64
windows-i586

(a) (b)

Figure 16: Configuring **OpenGL**

6 Running INSANE

To run **INSANE**, select the Insane.java class from br.ufmg.dees.insane.ui.rich.full package in ui.rich.full project, right-click it and select Run as → Java application (Figure 17).

The **INSANE** graphical user interface will be displayed and the system can already be used in its most up-to-date version.

7 Using Git

More sections must be added!

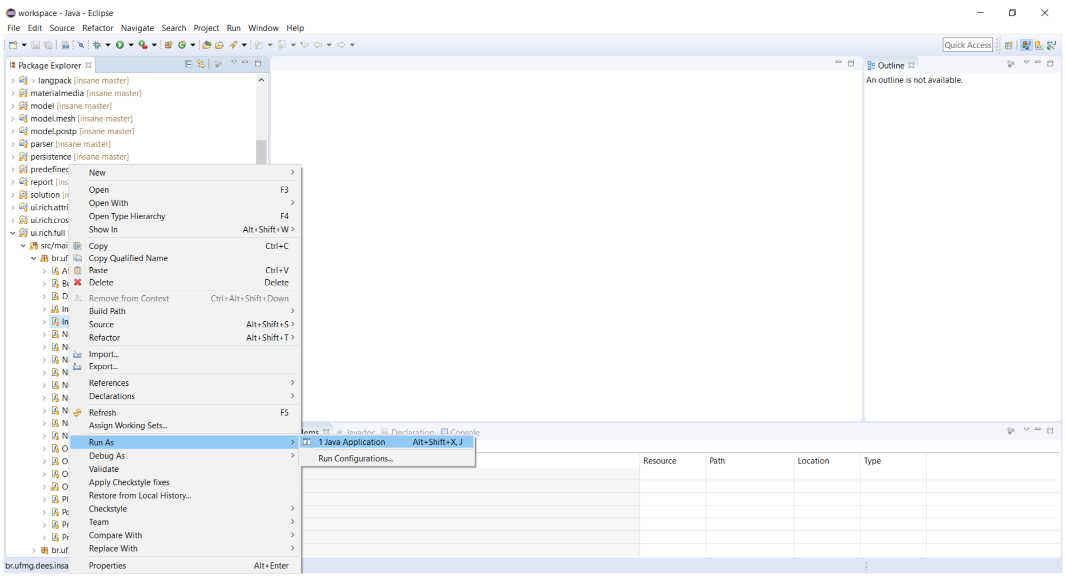


Figure 17: Running **INSANE**

7.1 How to update a branch from master

It is usual that after creating a branch (*newBranch*, in this example) from another one (*master*, in this example) the original branch continues to be developed (Figure 18). It is important to integrate these modifications to the new branch, in order to keep it up to date with the new improvements. The merge command is the best way to do this.

The following steps show how to merge master into newBranch.

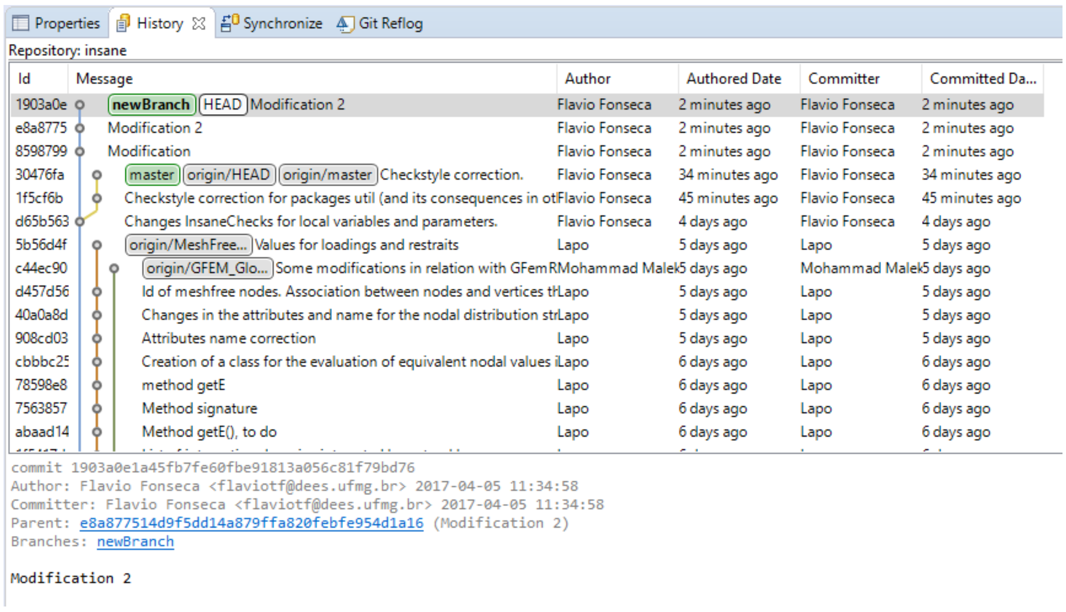
1 – Be sure to be working in the branch that will receive the modifications (checkout this branch – the ☑ sign must be on the desired branch). The *newBranch* must be clean (all changes already committed) and the *master* branch must be up to date.

2 – Right-click the branch and choose Merge...

3 – In the dialog, select the branch to merge into *newBranch*: in this example, select *master*. Keep the other options as shown in Figure 21. Click Merge button.

4 – If there is no conflicts, the following dialog, with the Result: Merged text, will be displayed.

4a – Checking the branches history, it is possible to see that the braches were

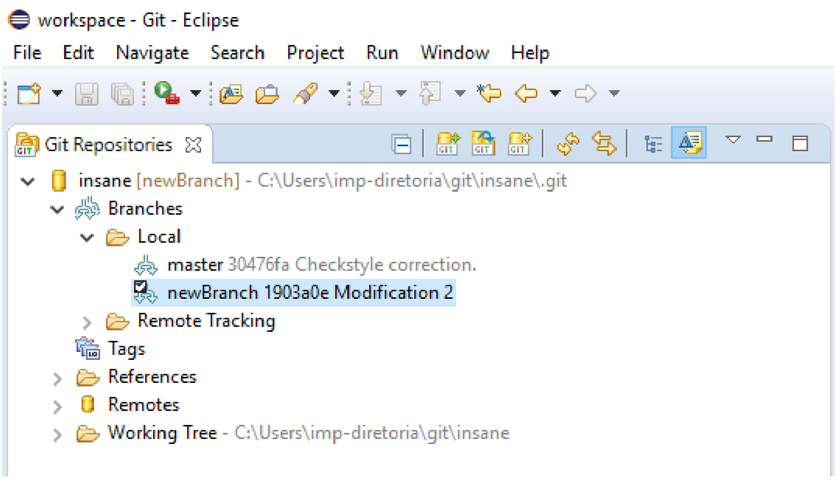


Repository: insane

Id	Message	Author	Authored Date	Committer	Committed Da...
1903a0e	newBranch HEAD Modification 2	Flavio Fonseca	2 minutes ago	Flavio Fonseca	2 minutes ago
e8a8775	Modification 2	Flavio Fonseca	2 minutes ago	Flavio Fonseca	2 minutes ago
8598799	Modification	Flavio Fonseca	2 minutes ago	Flavio Fonseca	2 minutes ago
30476fa	master origin/HEAD origin/master Checkstyle correction.	Flavio Fonseca	34 minutes ago	Flavio Fonseca	34 minutes ago
1f5cf6b	Checkstyle correction for packages util (and its consequences in ot	Flavio Fonseca	45 minutes ago	Flavio Fonseca	45 minutes ago
d65b563	Changes InsaneChecks for local variables and parameters.	Flavio Fonseca	4 days ago	Flavio Fonseca	4 days ago
5b56d4f	origin/MeshFree... Values for loadings and restraits	Lapo	5 days ago	Lapo	5 days ago
c44ec90	origin/GFEM_Glo... Some modifications in relation with GFemR	Mohammad Malek	5 days ago	Mohammad Malek	5 days ago
d457d56	Id of meshfree nodes. Association between nodes and vertices tl	Lapo	5 days ago	Lapo	5 days ago
40a0a8d	Changes in the attributes and name for the nodal distribution str	Lapo	5 days ago	Lapo	5 days ago
908cd03	Attributes name correction	Lapo	5 days ago	Lapo	5 days ago
cbbbc25	Creation of a class for the evaluation of equivalent nodal values i	Lapo	6 days ago	Lapo	6 days ago
78598e8	method getE	Lapo	6 days ago	Lapo	6 days ago
7563857	Method signature	Lapo	6 days ago	Lapo	6 days ago
abaad14	Method getE(), to do	Lapo	6 days ago	Lapo	6 days ago

```
commit 1903a0e1a45fb7fe60fbe91813a056c81f79bd76
Author: Flavio Fonseca <flaviotf@dees.ufmg.br> 2017-04-05 11:34:58
Committer: Flavio Fonseca <flaviotf@dees.ufmg.br> 2017-04-05 11:34:58
Parent: e8a877514d9f5dd14a879ffa820febfe954d1a16 (Modification 2)
Branches: newBranch

Modification 2
```

Figure 18: Branches history – note the new commits (1f5cf6b and 30476fa) in *master*, after the creation of *newBranch*.



insane [newBranch] - C:\Users\imp-diretoria\git\insane\.git
Branches
Local
master 30476fa Checkstyle correction.
newBranch 1903a0e Modification 2
Remote Tracking
Tags
References
Remotes
Working Tree - C:\Users\imp-diretoria\git\insane

Figure 19: *newBranch* checked out.

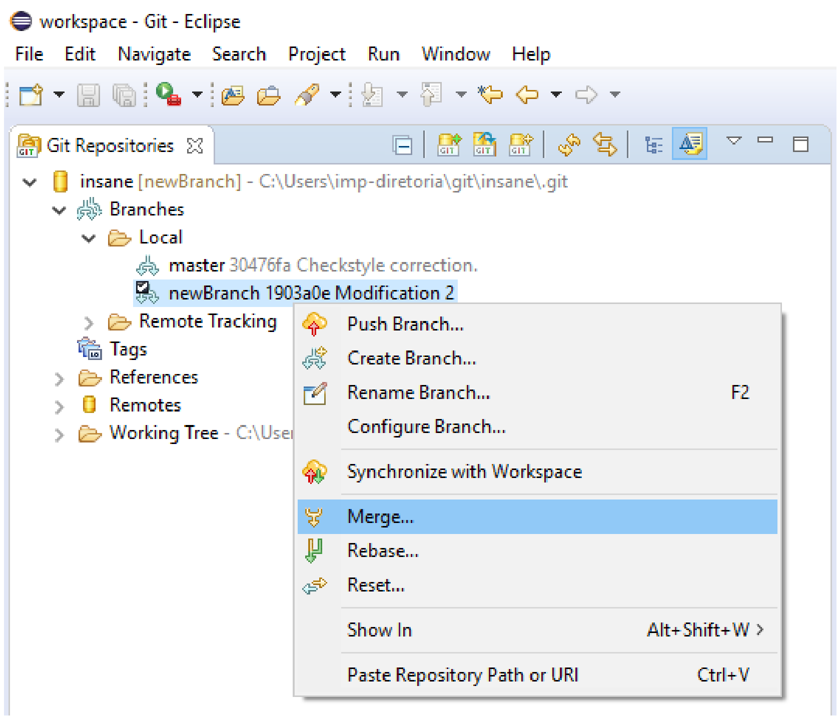

workspace - Git - Eclipse
File Edit Navigate Search Project Run Window Help
Git Repositories
insane [newBranch] - C:\Users\imp-diretoria\git\insane\.git
Branches
Local
master 30476fa Checkstyle correction.
newBranch 1903a0e Modification 2
Remote Tracking
Tags
References
Remotes
Working Tree - C:\User
Push Branch...
Create Branch...
Rename Branch... F2
Configure Branch...
Synchronize with Workspace
Merge...
Rebase...
Reset...
Show In Alt+Shift+W >
Paste Repository Path or URI Ctrl+V

Figure 20: Merge command.

successfully merged and a new commit (`4fa98f8`) was created.

5 – If the same line of a file was modified in both branches, **Eclipse** will indicate that there is a conflict (Result: Conflicting). These conflicts must be manually solved.

5a - In Git perspective, the existence of conflicts is also displayed.

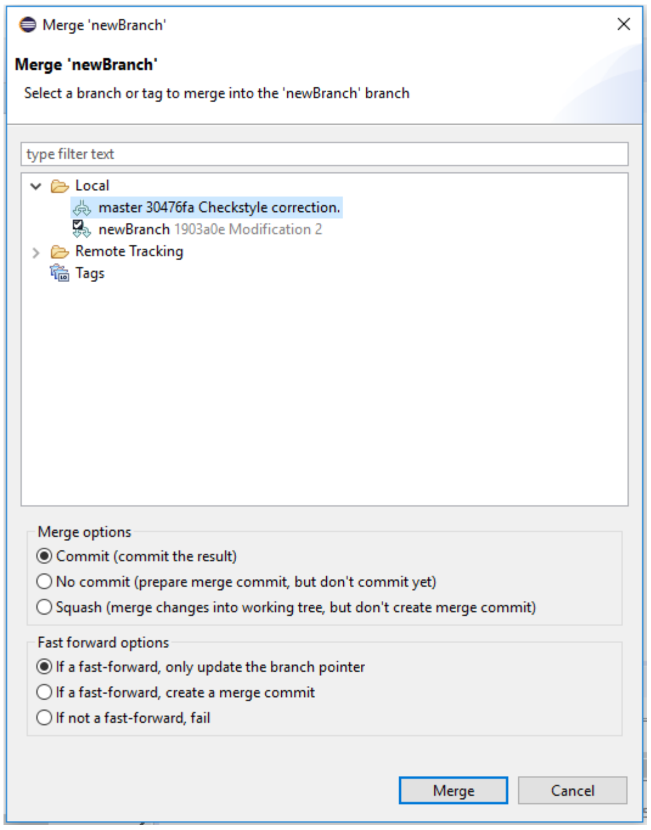
5b – In Java perspective, the files with conflicts are marked with the sign.

5c – In the file, the conflicting lines are marked with the `<<<<<<<`, `=======` and `>>>>>>>` tags.

The lines between `<<<<<<<` and `=======` are the ones from *HEAD* revision (from master). The lines between `=======` and `>>>>>>>` are the ones from *newBranch*.

The user must choose manually which lines shall remain and delete the others. IMPORTANT: the lines with the tags (`<<<<<<<`, `=======` and `>>>>>>>`) must be also deleted!

5d – After resolving all conflicts from all files, the user must go back to Git Staging tab. Note that the file with conflict is unstaged (Figure 28). Add this file


Merge 'newBranch'

Merge 'newBranch'

Select a branch or tag to merge into the 'newBranch' branch

type filter text

- Local
  - master 30476fa Checkstyle correction.
  - newBranch 1903a0e Modification 2
- Remote Tracking
- Tags

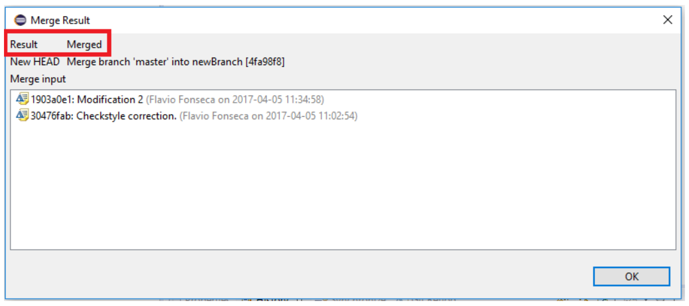
Merge options

- [✓ Commit (commit the result)]
- No commit (prepare merge commit, but don't commit yet)
- Squash (merge changes into working tree, but don't create merge commit)

Fast forward options

- [✓ If a fast-forward, only update the branch pointer]
- If a fast-forward, create a merge commit
- If not a fast-forward, fail

Figure 21: Merge command dialog.

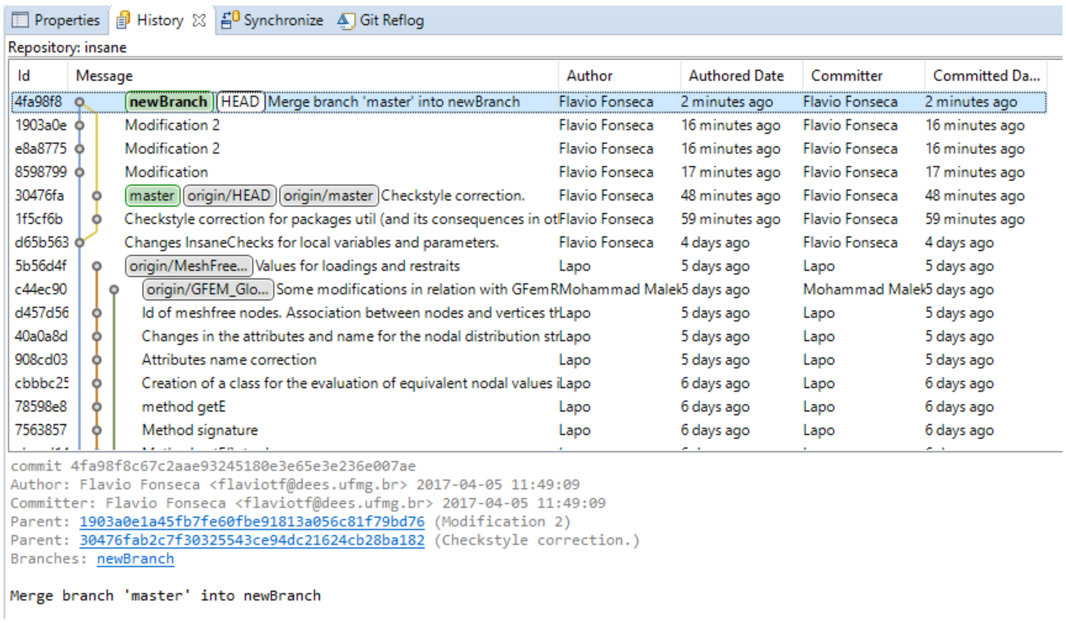

Merge Result

Result	Merged
New HEAD	Merge branch 'master' into newBranch [4fa98f8]

Merge input

1903a0e1: Modification 2 (Flavio Fonseca on 2017-04-05 11:34:58)
30476fab: Checkstyle correction. (Flavio Fonseca on 2017-04-05 11:02:54)

Figure 22: Merge result, no conflicts.



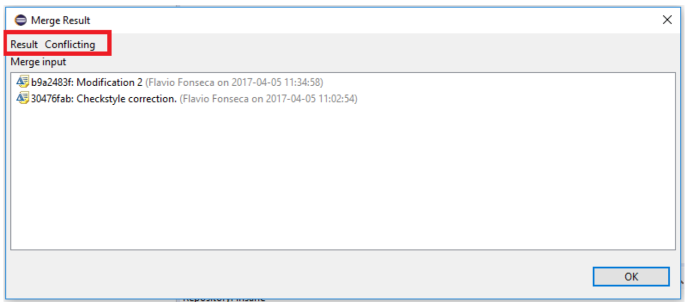
Properties | History | Synchronize | Git Reflog

Repository: insane

Id	Message	Author	Authored Date	Committer	Committed Da...
4fa98f8	newBranch HEAD Merge branch 'master' into newBranch	Flavio Fonseca	2 minutes ago	Flavio Fonseca	2 minutes ago
1903a0e	Modification 2	Flavio Fonseca	16 minutes ago	Flavio Fonseca	16 minutes ago
e8a8775	Modification 2	Flavio Fonseca	16 minutes ago	Flavio Fonseca	16 minutes ago
8598799	Modification	Flavio Fonseca	17 minutes ago	Flavio Fonseca	17 minutes ago
30476fa	master origin/HEAD origin/master Checkstyle correction.	Flavio Fonseca	48 minutes ago	Flavio Fonseca	48 minutes ago
1f5cf6b	Checkstyle correction for packages util (and its consequences in ot	Flavio Fonseca	59 minutes ago	Flavio Fonseca	59 minutes ago
d65b563	Changes InsaneChecks for local variables and parameters.	Flavio Fonseca	4 days ago	Flavio Fonseca	4 days ago
5b56d4f	origin/MeshFree... Values for loadings and restraits	Lapo	5 days ago	Lapo	5 days ago
c44ec90	origin/GFEM_Glo... Some modifications in relation with GFemR	Mohammad Malek	5 days ago	Mohammad Malek	5 days ago
d457d56	Id of meshfree nodes. Association between nodes and vertices th	Lapo	5 days ago	Lapo	5 days ago
40a0a8d	Changes in the attributes and name for the nodal distribution str	Lapo	5 days ago	Lapo	5 days ago
908cd03	Attributes name correction	Lapo	5 days ago	Lapo	5 days ago
cbbbc25	Creation of a class for the evaluation of equivalent nodal values i	Lapo	6 days ago	Lapo	6 days ago
78598e8	method getE	Lapo	6 days ago	Lapo	6 days ago
7563857	Method signature	Lapo	6 days ago	Lapo	6 days ago

```
commit 4fa98f8c67c2aae93245180e3e65e3e236e007ae
Author: Flavio Fonseca <flaviotf@dees.ufmg.br> 2017-04-05 11:49:09
Committer: Flavio Fonseca <flaviotf@dees.ufmg.br> 2017-04-05 11:49:09
Parent: 1903a0e1a45fb7fe60fbe91813a056c81f79bd76 (Modification 2)
Parent: 30476fab2c7f30325543ce94dc21624cb28ba182 (Checkstyle correction.)
Branches: newBranch

Merge branch 'master' into newBranch
```

Figure 23: Merged branches.



Merge Result

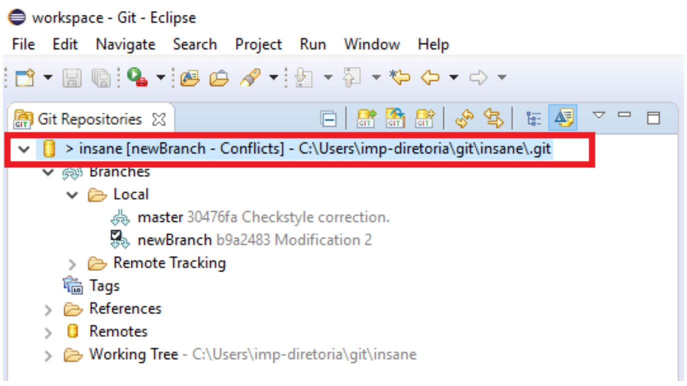
Result Conflicting

Merge input

b9a2483f: Modification 2 (Flavio Fonseca on 2017-04-05 11:34:58)

30476fab: Checkstyle correction. (Flavio Fonseca on 2017-04-05 11:02:54)

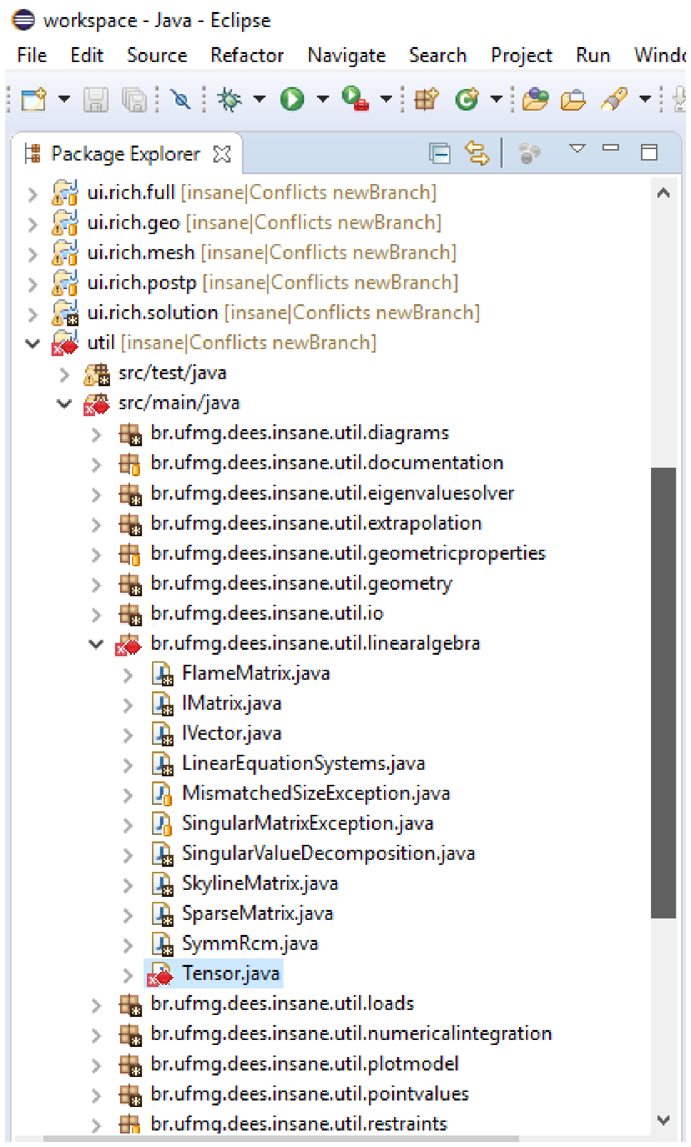
Figure 24: Merge result, conflicting.



workspace - Git - Eclipse

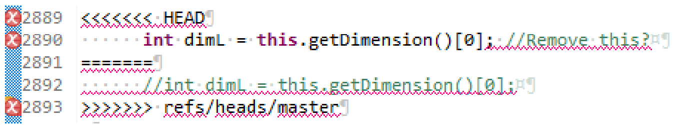
> insane [newBranch - Conflicts] - C:\Users\imp-diretoria\git\insane\.git
- Branches
  - Local
    - master 30476fa Checkstyle correction.
    - newBranch b9a2483 Modification 2
  - Remote Tracking
- Tags
- References
- Remotes
- Working Tree - C:\Users\imp-diretoria\git\insane

Figure 25: Git perspective, conflicting.


workspace - Java - Eclipse
File Edit Source Refactor Navigate Search Project Run Windo
Package Explorer

```
> ui.rich.full [insane|Conflicts newBranch]
> ui.rich.geo [insane|Conflicts newBranch]
> ui.rich.mesh [insane|Conflicts newBranch]
> ui.rich.postp [insane|Conflicts newBranch]
> ui.rich.solution [insane|Conflicts newBranch]
v util [insane|Conflicts newBranch]
    > src/test/java
    v src/main/java
        > br.ufmg.dees.insane.util.diagrams
        > br.ufmg.dees.insane.util.documentation
        > br.ufmg.dees.insane.util.eigenvaluesolver
        > br.ufmg.dees.insane.util.extrapolation
        > br.ufmg.dees.insane.util.geometricproperties
        > br.ufmg.dees.insane.util.geometry
        > br.ufmg.dees.insane.util.io
        v br.ufmg.dees.insane.util.linearalgebra
            > FlameMatrix.java
            > IMatrix.java
            > IVector.java
            > LinearEquationSystems.java
            > MismatchedSizeException.java
            > SingularMatrixException.java
            > SingularValueDecomposition.java
            > SkylineMatrix.java
            > SparseMatrix.java
            > SymmRcm.java
            > Tensor.java
        > br.ufmg.dees.insane.util.loads
        > br.ufmg.dees.insane.util.numericalintegration
        > br.ufmg.dees.insane.util.plotmodel
        > br.ufmg.dees.insane.util.pointvalues
        > br.ufmg.dees.insane.util.restraints
```

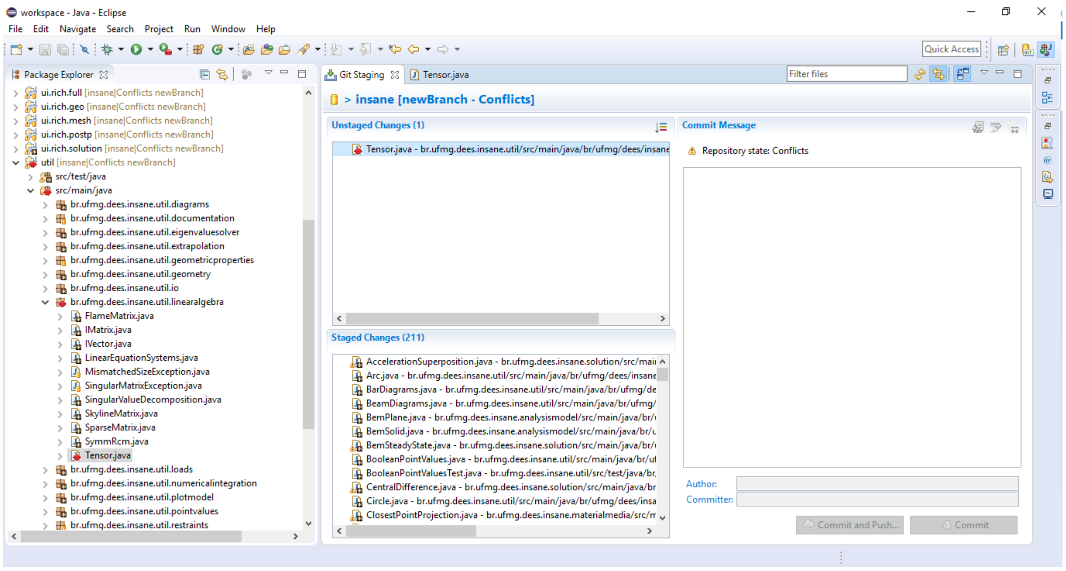
Figure 26: Java perspective, conflicting.



```
<<<<<<< HEAD
      int dimL = this.getDimension()[0]; //Remove this?
=======
      //int dimL = this.getDimension()[0];
>>>>>>> refs/heads/master
```

Figure 27: Conflict marks in file.

to the index (move it to the Staged Changes area). A standard commit message will be created (Figure 29). It is recommended to not change this message. Then, press Commit.



```
ui.rich.full [insane|Conflicts newBranch]
ui.rich.geo [insane|Conflicts newBranch]
ui.rich.mesh [insane|Conflicts newBranch]
ui.rich.postp [insane|Conflicts newBranch]
ui.rich.solution [insane|Conflicts newBranch]
util [insane|Conflicts newBranch]
  src/test/java
  src/main/java
    br.ufmg.dees.insane.util.diagrams
    br.ufmg.dees.insane.util.documentation
    br.ufmg.dees.insane.util.eigenvaluesolver
    br.ufmg.dees.insane.util.extrapolation
    br.ufmg.dees.insane.util.geometricproperties
    br.ufmg.dees.insane.util.geometry
    br.ufmg.dees.insane.util.io
    br.ufmg.dees.insane.util.linearalgebra
      FlameMatrix.java
      IMatrix.java
      IVector.java
      LinearEquationSystems.java
      MismatchedSizeException.java
      SingularMatrixException.java
      SingularValueDecomposition.java
      SkylineMatrix.java
      SparseMatrix.java
      SymmRcm.java
      Tensor.java
    br.ufmg.dees.insane.util.loads
    br.ufmg.dees.insane.util.numericalintegration
    br.ufmg.dees.insane.util.plotmodel
    br.ufmg.dees.insane.util.pointvalues
    br.ufmg.dees.insane.util.restraints
```

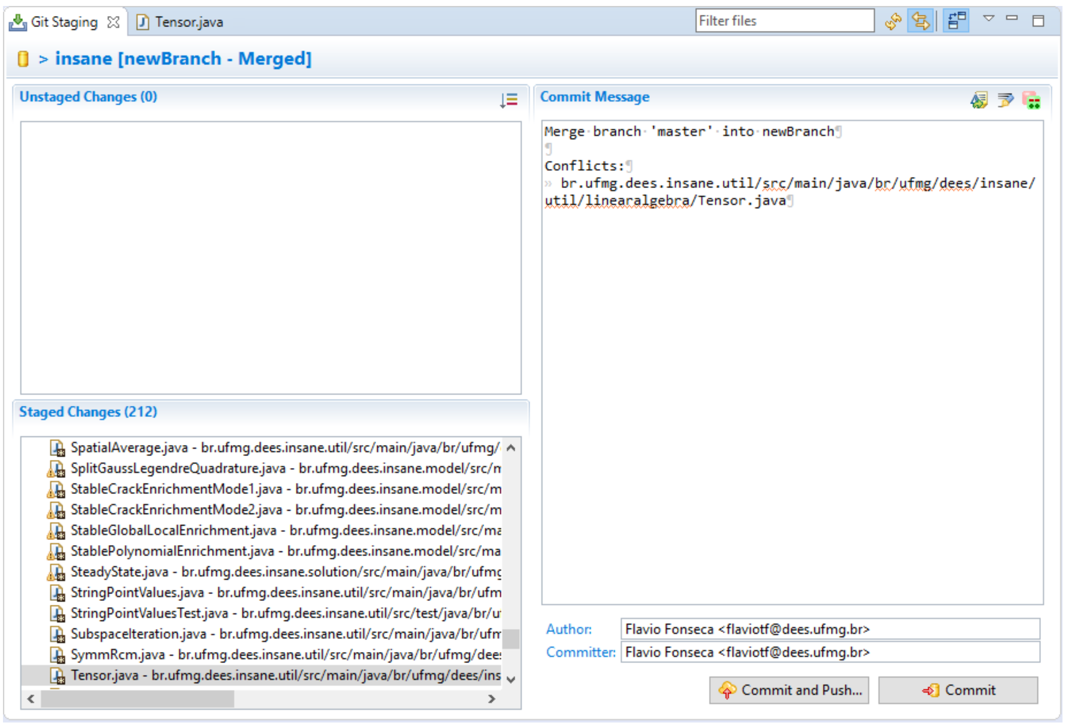
```
> insane [newBranch - Conflicts]

Unstaged Changes (1)
Tensor.java - br.ufmg.dees.insane.util/src/main/java/br/ufmg/dees/insane

Staged Changes (211)
AccelerationSuperposition.java - br.ufmg.dees.insane.solution/src/mai
Arc.java - br.ufmg.dees.insane.util/src/main/java/br/ufmg/dees/insane
BarDiagrams.java - br.ufmg.dees.insane.util/src/main/java/br/ufmg/de
BeamDiagrams.java - br.ufmg.dees.insane.util/src/main/java/br/ufmg/
BemPlane.java - br.ufmg.dees.insane.analysismodel/src/main/java/br/
BemSolid.java - br.ufmg.dees.insane.analysismodel/src/main/java/br/u
BemSteadyState.java - br.ufmg.dees.insane.solution/src/main/java/br/
BooleanPointValues.java - br.ufmg.dees.insane.util/src/main/java/br/ut
BooleanPointValuesTest.java - br.ufmg.dees.insane.util/src/test/java/br,
CentralDifference.java - br.ufmg.dees.insane.solution/src/main/java/br
Circle.java - br.ufmg.dees.insane.util/src/main/java/br/ufmg/dees/insa
ClosestPointProjection.java - br.ufmg.dees.insane.materialmedia/src/m

Commit Message
Repository state: Conflicts
```

Figure 28: Conflicting file in unstaged area.

5e - Checking the branches history, it is possible to see that the braches were successfully merged and a new commit (`daef43a`) was created.

Note 1: The commits SHA1 hashes shown in this example are for these commits only. Each different commit will have a unique SHA1 hash.

Note 2: Even if the user chooses to keep the branch version during conflict solving, master is not modified. If the master branch must be corrected, as it is protected in the remote repository, the user must create a Merge Request in **Insane GitLab**, as explained in section 7.2

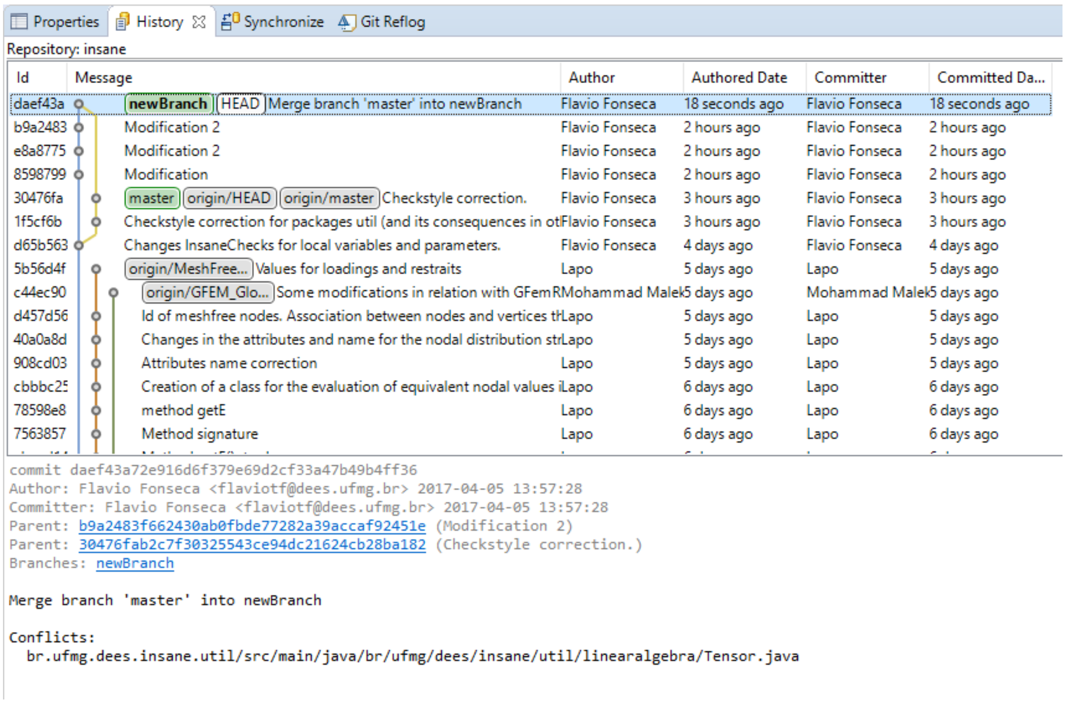


```
Merge branch 'master' into newBranch

Conflicts:
	br.ufmg.dees.insane.util/src/main/java/br/ufmg/dees/insane/
util/linearalgebra/Tensor.java
```

SpatialAverage.java - br.ufmg.dees.insane.util/src/main/java/br/ufmg/
SplitGaussLegendreQuadrature.java - br.ufmg.dees.insane.model/src/m
StableCrackEnrichmentMode1.java - br.ufmg.dees.insane.model/src/m
StableCrackEnrichmentMode2.java - br.ufmg.dees.insane.model/src/m
StableGlobalLocalEnrichment.java - br.ufmg.dees.insane.model/src/ma
StablePolynomialEnrichment.java - br.ufmg.dees.insane.model/src/ma
SteadyState.java - br.ufmg.dees.insane.solution/src/main/java/br/ufmg
StringPointValues.java - br.ufmg.dees.insane.util/src/main/java/br/ufm
StringPointValuesTest.java - br.ufmg.dees.insane.util/src/test/java/br/u
SubspaceIteration.java - br.ufmg.dees.insane.util/src/main/java/br/ufm
SymmRcm.java - br.ufmg.dees.insane.util/src/main/java/br/ufmg/dee
Tensor.java - br.ufmg.dees.insane.util/src/main/java/br/ufmg/dees/ins

Author: Flavio Fonseca <flaviotf@dees.ufmg.br>
Committer: Flavio Fonseca <flaviotf@dees.ufmg.br>

Figure 29: Conflicting file staged, standard commit message created.



Repository: insane

Id	Message	Author	Authored Date	Committer	Committed Da...
daef43a	newBranch HEAD Merge branch 'master' into newBranch	Flavio Fonseca	18 seconds ago	Flavio Fonseca	18 seconds ago
b9a2483	Modification 2	Flavio Fonseca	2 hours ago	Flavio Fonseca	2 hours ago
e8a8775	Modification 2	Flavio Fonseca	2 hours ago	Flavio Fonseca	2 hours ago
8598799	Modification	Flavio Fonseca	2 hours ago	Flavio Fonseca	2 hours ago
30476fa	master origin/HEAD origin/master Checkstyle correction.	Flavio Fonseca	3 hours ago	Flavio Fonseca	3 hours ago
1f5cf6b	Checkstyle correction for packages util (and its consequences in ot	Flavio Fonseca	3 hours ago	Flavio Fonseca	3 hours ago
d65b563	Changes InsaneChecks for local variables and parameters.	Flavio Fonseca	4 days ago	Flavio Fonseca	4 days ago
5b56d4f	origin/MeshFree... Values for loadings and restraits	Lapo	5 days ago	Lapo	5 days ago
c44ec90	origin/GFEM_Glo... Some modifications in relation with GFemR	Mohammad Malek	5 days ago	Mohammad Malek	5 days ago
d457d56	Id of meshfree nodes. Association between nodes and vertices tl	Lapo	5 days ago	Lapo	5 days ago
40a0a8d	Changes in the attributes and name for the nodal distribution str	Lapo	5 days ago	Lapo	5 days ago
908cd03	Attributes name correction	Lapo	5 days ago	Lapo	5 days ago
cbbbc25	Creation of a class for the evaluation of equivalent nodal values i	Lapo	6 days ago	Lapo	6 days ago
78598e8	method getE	Lapo	6 days ago	Lapo	6 days ago
7563857	Method signature	Lapo	6 days ago	Lapo	6 days ago

```
commit daef43a72e916d6f379e69d2cf33a47b49b4ff36
Author: Flavio Fonseca <flaviotf@dees.ufmg.br> 2017-04-05 13:57:28
Committer: Flavio Fonseca <flaviotf@dees.ufmg.br> 2017-04-05 13:57:28
Parent: b9a2483f662430ab0fbde77282a39accaf92451e (Modification 2)
Parent: 30476fab2c7f30325543ce94dc21624cb28ba182 (Checkstyle correction.)
Branches: newBranch

Merge branch 'master' into newBranch

Conflicts:
  br.ufmg.dees.insane.util/src/main/java/br/ufmg/dees/insane/util/linearalgebra/Tensor.java
```

Figure 30: Merged branches after conflicts solving.

7.2 How to create a merge request

The *master* branch is protected in the **INSANE** remote git repository, that is, only authorized users can write in it (actually, the supervisors professors). So, if a user makes some modifications to her local *master* branch, she will not be able to push them to the remote.

Then, how can a user make her work available to others (send them to master)? The user must create a merge request using **Gitlab**, which will be reviewed by her supervisor and, if approved, the modifications will be merged into master.

The following steps show how to create a merge request.

1 – Merge *master* into your branch (see section 7.1). This is important to solve all conflicts between branches locally.

2 – Log in to **Gitlab**: access `http://git.insane.dees.ufmg.br` and use your **InsaneLab** credentials Figure 31.

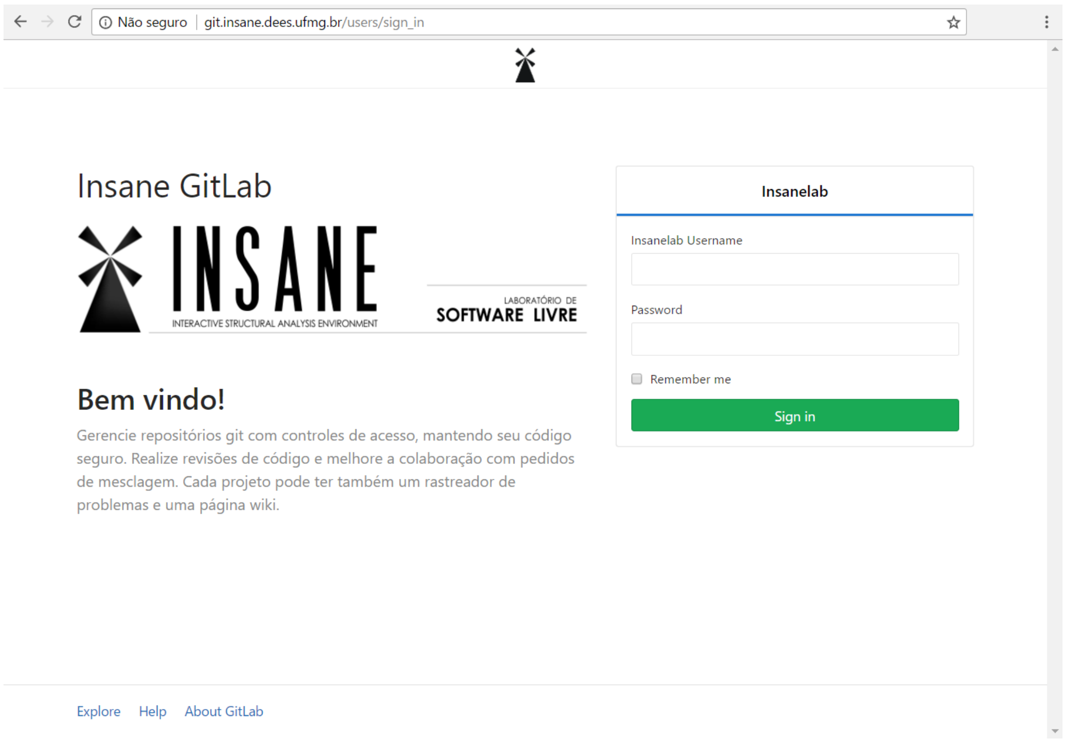
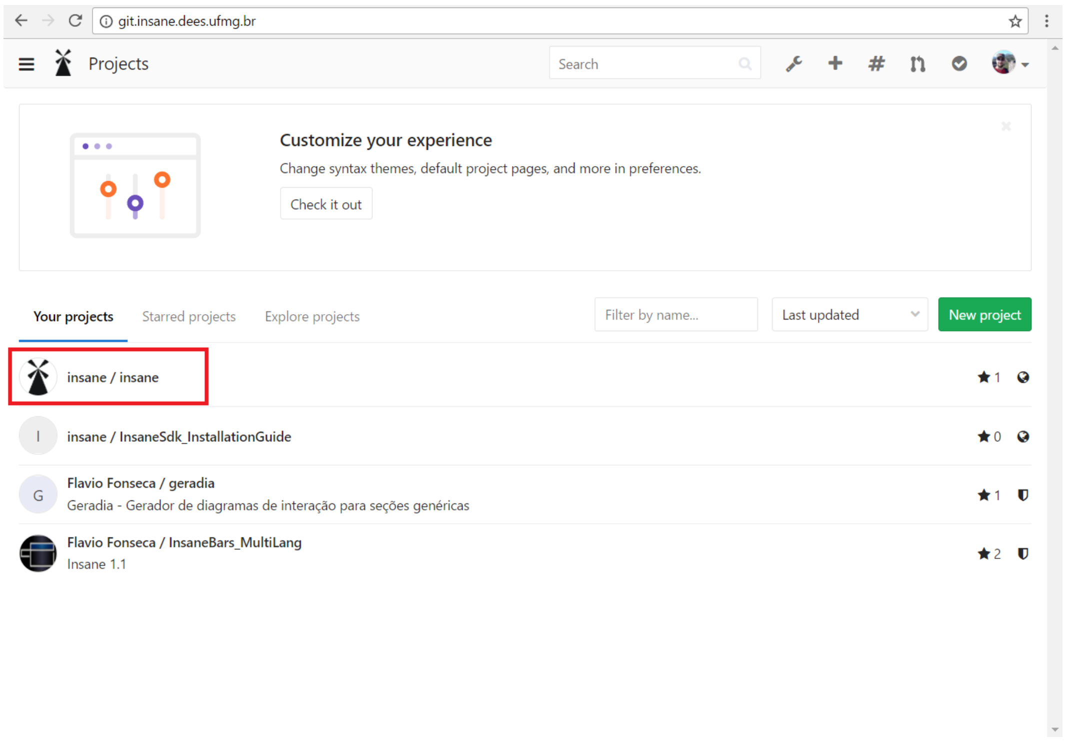

Não seguro | git.insane.dees.ufmg.br/users/sign_in
Insane GitLab
INSANE
INTERACTIVE STRUCTURAL ANALYSIS ENVIRONMENT
LABORATÓRIO DE SOFTWARE LIVRE
Bem vindo!
Gerencie repositórios git com controles de acesso, mantendo seu código seguro. Realize revisões de código e melhore a colaboração com pedidos de mesclagem. Cada projeto pode ter também um rastreador de problemas e uma página wiki.
Insanelab
Insanelab Username
Password
Remember me
Sign in
Explore
Help
About GitLab

Figure 31

3 – After login, enter the **INSANE** project by clicking on its name Figure 32.


git.insane.dees.ufmg.br

Projects

Customize your experience

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insane / insane ★1

insane / InsaneSdk_InstallationGuide ★0

Flavio Fonseca / geradia ★1
Geradia - Gerador de diagramas de interação para seções genéricas

Flavio Fonseca / InsaneBars_MultiLang ★2
Insane 1.1

Figure 32

4 – On top of page, click Merge Requests Figure 33.

5 – Then, click New merge request button Figure 34.

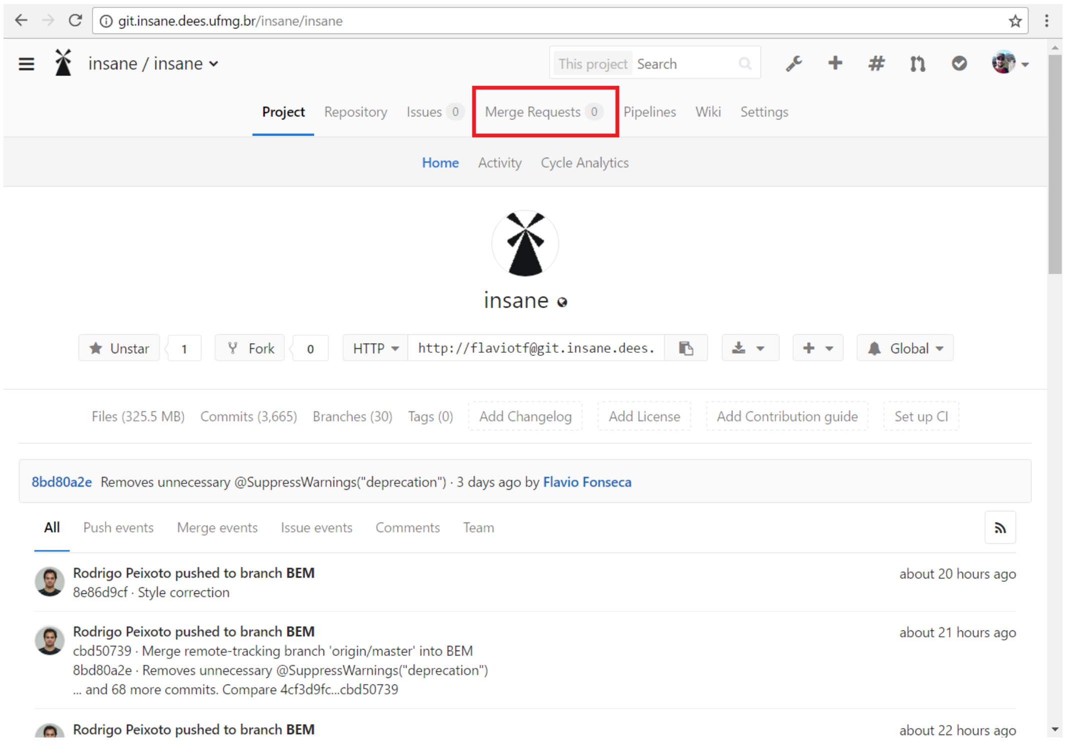
6 – Choose the source and target branches. Click compare branches and continue button Figure 35.

– Source branch: the branch with modifications

– Target branch: the *master* branch

7 – Fill the title and description fields with suitable content. In Assignee field, choose the person responsible for reviewing your merge request. It should be your supervisor or someone assigned by him. Then, click Submit merge request button Figure 36.

8 – The assigned person will receive an e-mail about the creation of this merge request. This person must review the modifications (logic, style, tests, etc.) and approve it or not.



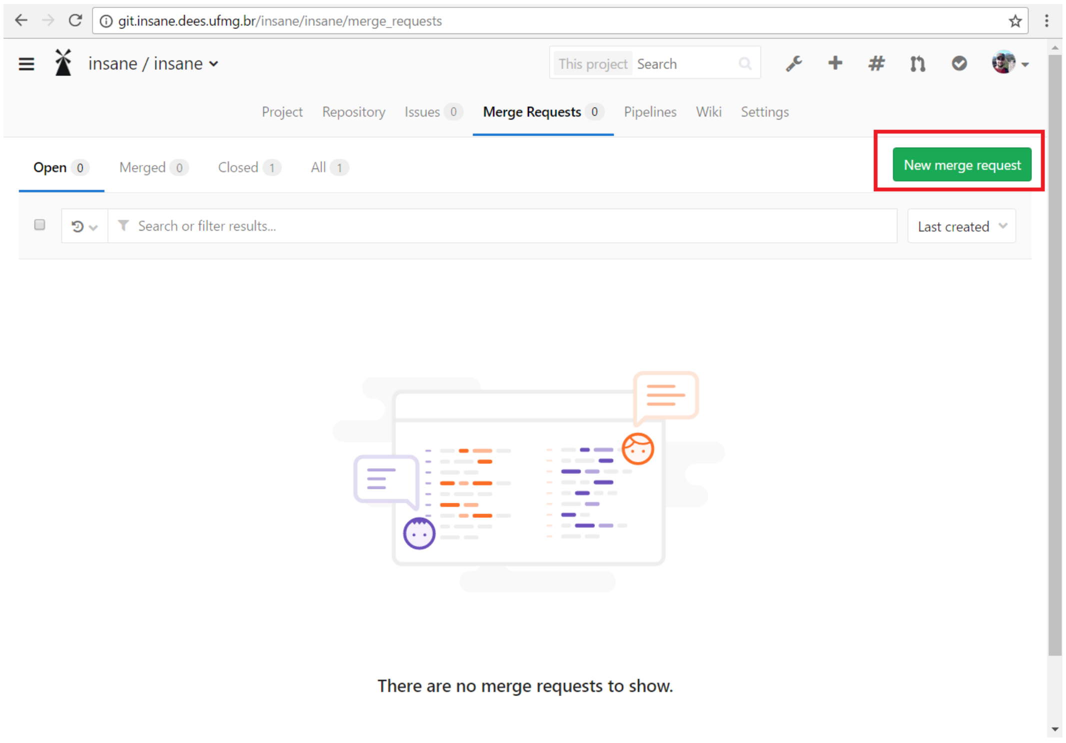
8bd80a2e Removes unnecessary @SuppressWarnings("deprecation") · 3 days ago by Flavio Fonseca

Rodrigo Peixoto pushed to branch BEM — about 20 hours ago
8e86d9cf · Style correction

Rodrigo Peixoto pushed to branch BEM — about 21 hours ago
cbd50739 · Merge remote-tracking branch 'origin/master' into BEM
8bd80a2e · Removes unnecessary @SuppressWarnings("deprecation")
... and 68 more commits. Compare 4cf3d9fc...cbd50739

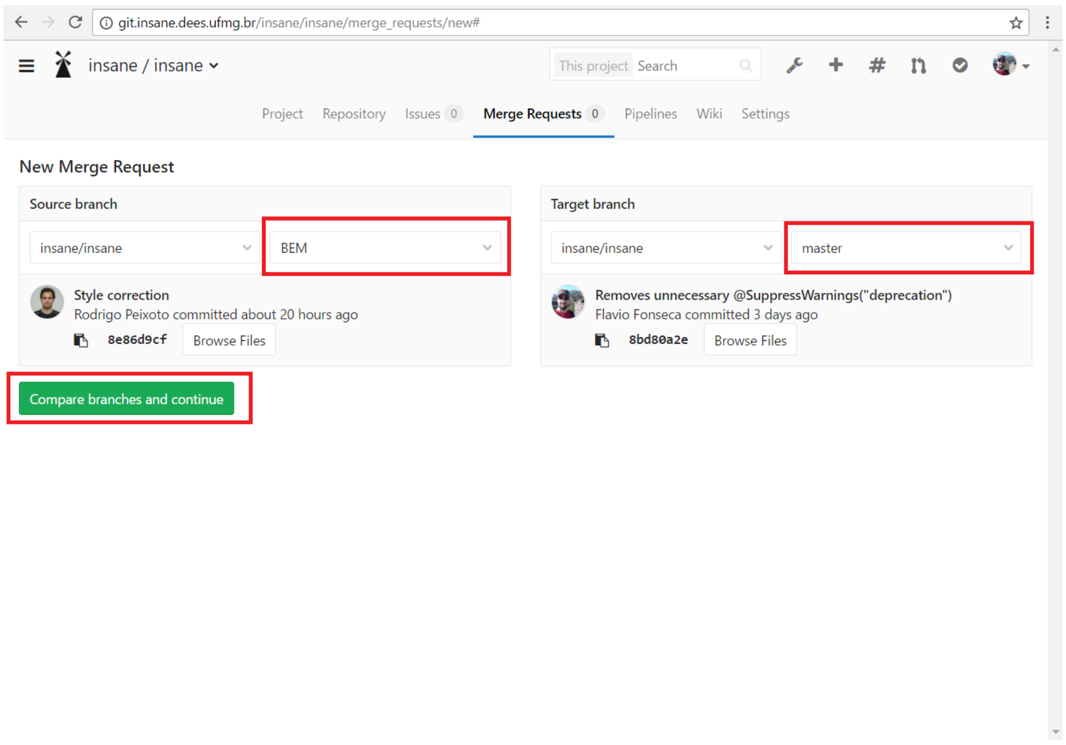
Rodrigo Peixoto pushed to branch BEM — about 22 hours ago

Figure 33



There are no merge requests to show.

Figure 34



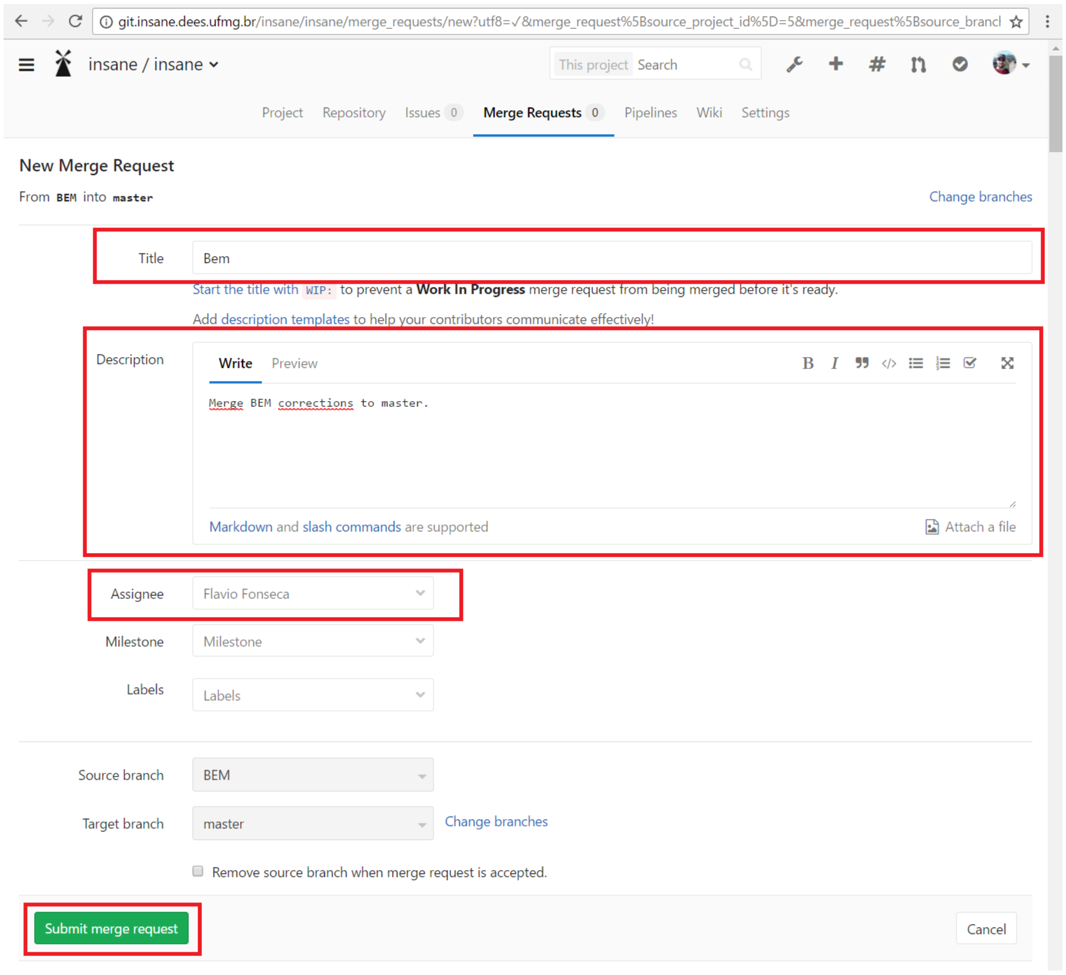
Style correction
Rodrigo Peixoto committed about 20 hours ago
8e86d9cf

Removes unnecessary @SuppressWarnings("deprecation")
Flavio Fonseca committed 3 days ago
8bd80a2e

Figure 35

In case the request is not approved, the reviewer can write back the reasons for this and suggest improvements. As long as the request in not set closed, the communication can be done via **Gitlab** and a new merge request should not be created.

Note: It is also possible to merge any two branches using this feature. It is advisable when the developer wants her modification to be reviewed by someone before merging.


git.insane.dees.ufmg.br/insane/insane/merge_requests/new?utf8=✓&merge_request%5Bsource_project_id%5D=5&merge_request%5Bsource_branc

insane / insane

Project Repository Issues 0 **Merge Requests 0** Pipelines Wiki Settings

New Merge Request

From `BEM` into `master` Change branches

Title: Bem

Start the title with `WIP:` to prevent a **Work In Progress** merge request from being merged before it's ready.

Add description templates to help your contributors communicate effectively!

Description:

```
Merge BEM corrections to master.
```

Markdown and slash commands are supported

Assignee: Flavio Fonseca

Milestone: Milestone

Labels: Labels

Source branch: BEM

Target branch: master

☐ Remove source branch when merge request is accepted.

Figure 36

8 Rules for developers

- Keep you local repository up-to-date, even if you are working in a separate branch.
- Properly comment your code. Remember that others will use it and you will not be always available to explain what you have done.
- Use English language for commenting.
- Before pushing to the remote repository, make sure your code is building.
- Don't forget to follow the code style.

Have fun!
INSANE development team