FOCUS task evaluation: a user guide

This is an end-user guide useful to complete two tasks with two different Java libraries.

Setup installation

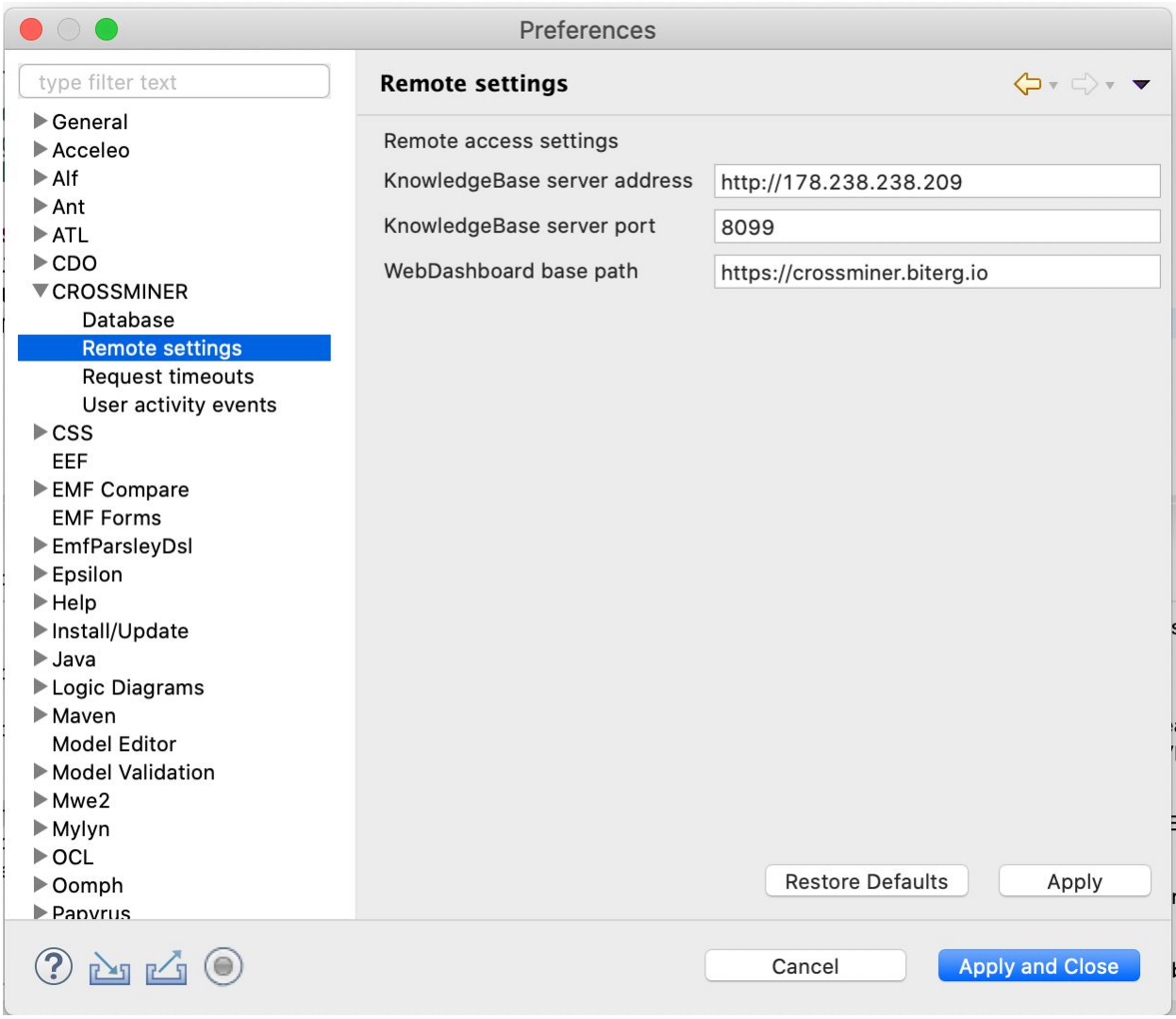
To install the Eclipse IDE, please follow these instructions:

1. Download and install Eclipse (https://www.eclipse.org/downloads/ and choose the **JEE distribution**)
2. Be sure to have JRE and JDK software on your machine
3. Open Eclipse IDE and choose **File -> Import**
4. Choose **Maven-> Existing Maven project** as import wizard
5. Select the folder in which you downloaded the Github project (the links are available for each task)

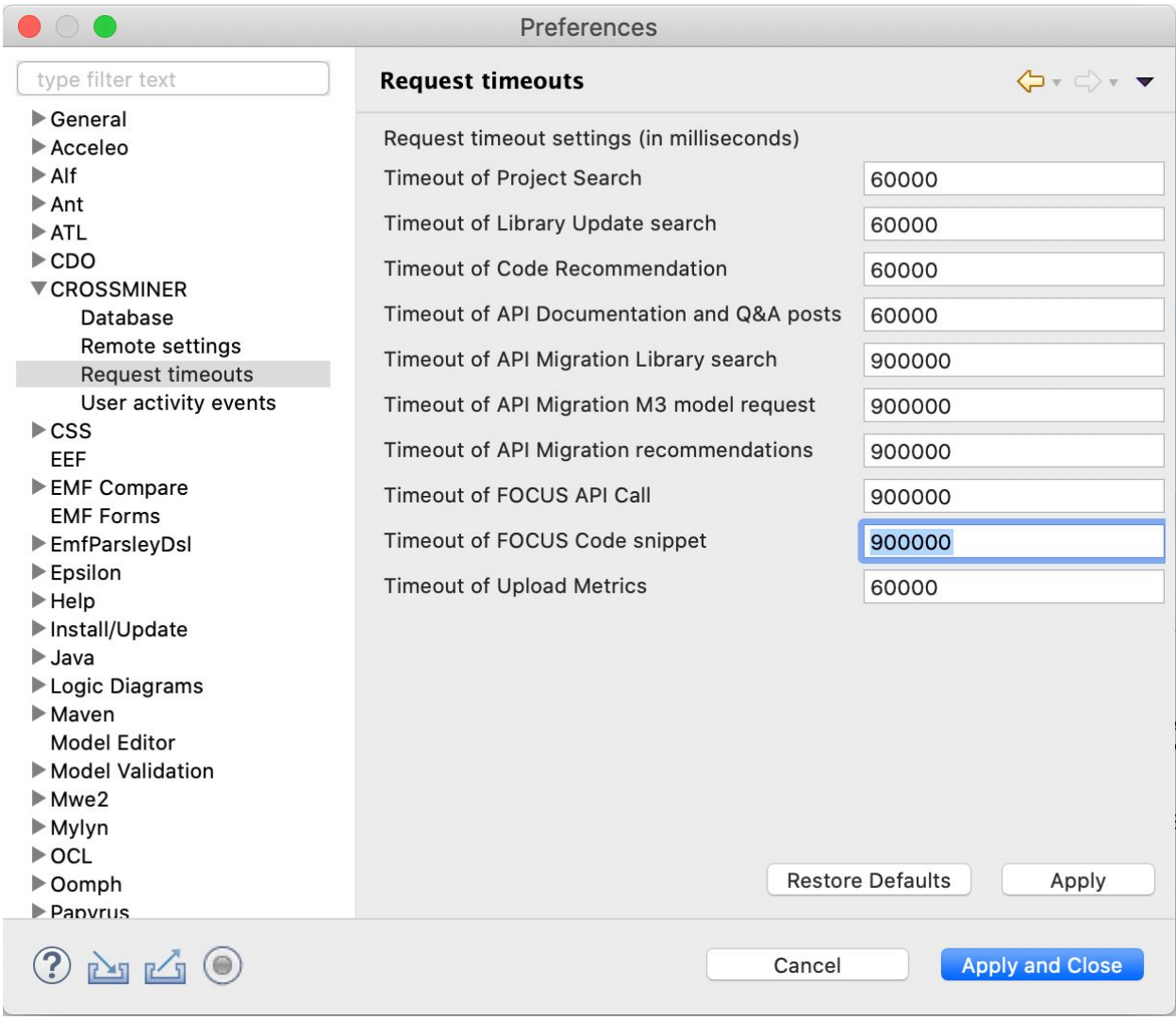
Focus plugin installation

To install the SOrec plugin, please follow these instructions:

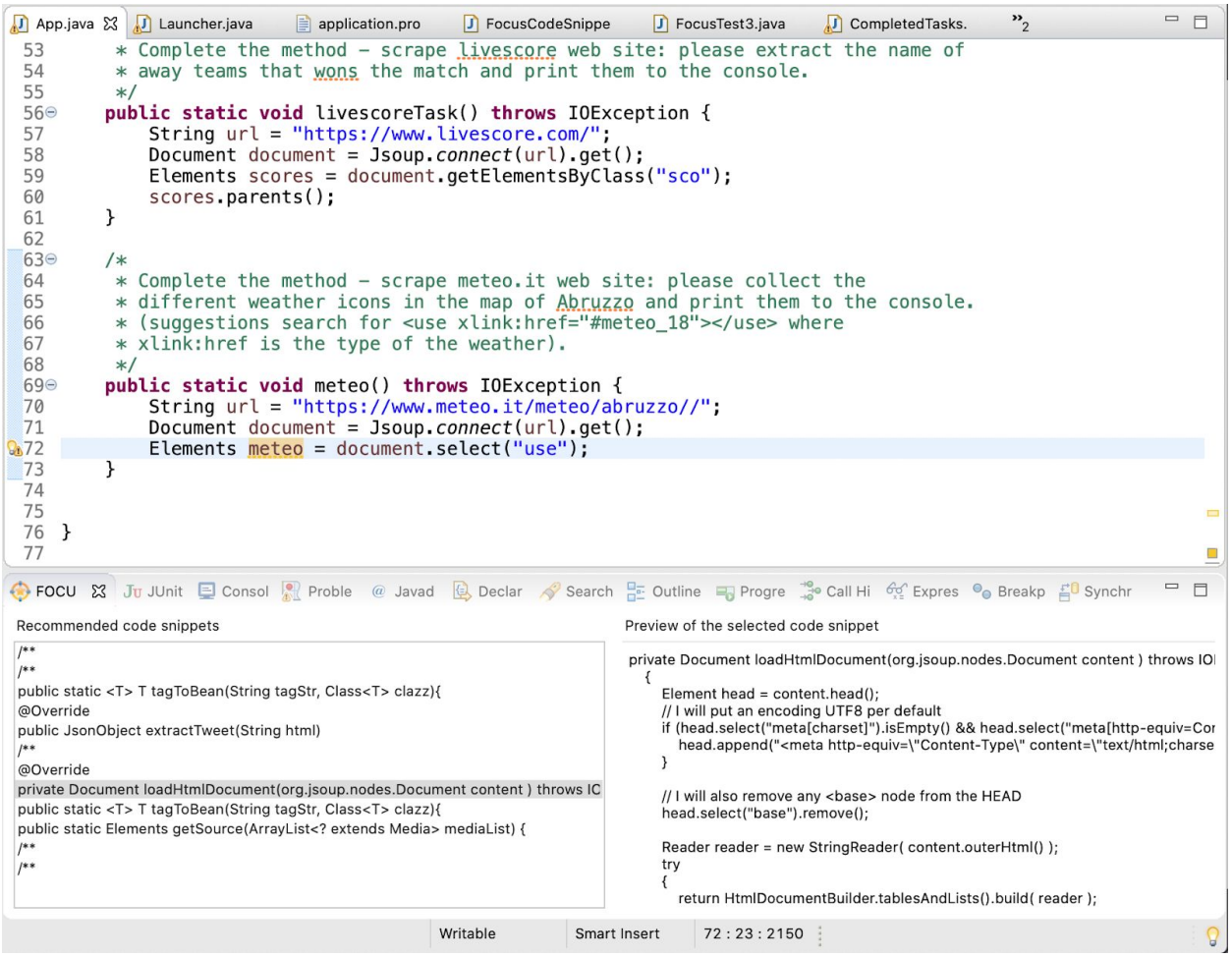
1. Go to Help->Install new software
2. Choose Add and put this site in Location: http://ci5.castalia.camp:8080/job/scava-ide/job/dev/lastSuccessfulBuild/artifact/eclipse-based-ide/org.eclipse.scava.root/releng/org.eclipse.scava.update/target/repository/
3. Important: Be sure to avoid the usage of University connection for all these operations
4. Check CROSSMINER Eclipse-based IDE and choose Next->Install
5. Restart Eclipse
6. Go to Window->Preferences->CROSSMINER->Remote settings and choose the following configuration:
    a. KnowledgeBase server address->http://178.238.238.209
    b. KnowledgeBase server port -> 8099
    c. WebDashboard base path -> https://crossminer.biterg.io



d. set the FOCUS timeouts to 900000



7. After you select the code, you can do Right click->**CROSSMINER->Request FOCUS Code Snippet recommendation** and you got something like that:



Task 1: Parsing command line parameters by apache-cli library - Maintenance Task (with FOCUS)

The Apache Commons CLI library provides an API for parsing command-line options passed to programs. It's also able to print help messages detailing the options available for a command-line tool.

SQLDump is a simple java project that exports SQL data to CSV files. In particular, it is a command-line utility to execute SQL queries and export results to a CSV file. Apache-cli is used for taking parameters from the command line.

Adapt the method of Launcher class to complete the following tasks with the support of apache-cli library:

1. SQLDump shall require the:
    a. DB protocol,
    b. address,
    c. user,
    d. username,

    e. password, and
    f. Query

    as mandatory parameters;
2. SQLDump shall use a CSV file path as an optional parameter;
3. SQLDump shall parse all required parameter values;
4. SLQDump shall parse the optional parameter value if exists, a default value should be return otherwise;
5. SQLDump shall print the API usage if the provided parameters are incomplete or incorrect.

The java program has to be run as the following shell command:

```
java -jar SQLDump-0.4.jar -url [jdbc:oracle:thin:@hostname:port:sid] -user [username] -pass [password] -sql [query]
```

Task 2: Scraping HTML pages by Gsoup - Development Task (without FOCUS)

jsoup is a Java library for working with real-world HTML. It provides a very convenient API for extracting and manipulating data, using the best of DOM, CSS, and jquery-like methods.
The jsoup-example project has been generated from the example methods provided in the https://jsoup.org/ web site.
Please finalize the methods in App class to complete the following tasks:

1. scrape tuttojuve mobile website (https://m.tuttojuve.com/) and select all thumbnails from "CALIOMERCATO" news. Print the results on the console;
2. scrape and modify vocegiallorossa (https://m.vocegiallorossa.it/) mobile website: add a 2 fake news: one on top of the list and one to the bottom and store the new document as a file;
3. scrape livescore web site (https://www.livescore.com/): please extract the name of away teams that wons the match and print them to the console;
4. scrape meteo.it (https://www.meteo.it/meteo/abruzzo/) web site: collect the different weather icons in the map of Abruzzo and print them to the console.

The link for the corresponding questions is available here:
https://docs.google.com/forms/d/e/1FAIpQLSdiMGDdq4RWP4aW1ftga_vlOyqC02HUCfD00NhtaJTgSpxpHA/viewform?usp=sf_link