## Case Analysis Roadmap

After downloading the file "degradation-experiment-v0.1.1-OPT.zip", extract it into a folder with permission to write and read files.

Enter the "bin" folder and run the "degradation-experiment.bat" file on Windows, or "degradation-experiment" on Unix-based systems. The software is configured to ignore the "src/test" folder, which usually contains automated tests. The reason is that the tests can lead to the detection of smells that are false positives. If your project has automated tests that are in a folder other than "src/test", before running the software, you can put the name of the test folders in the "folders-filter.config" file that is located in the "bin" folder.



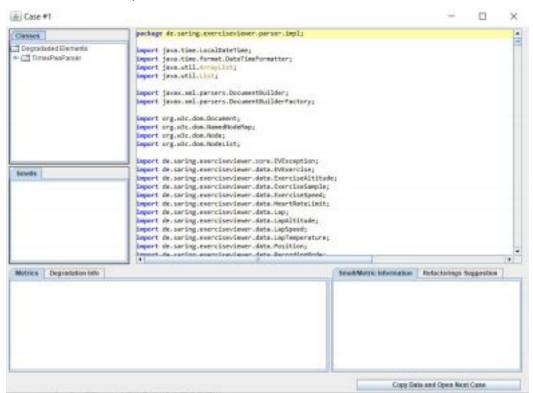
A command prompt will open, asking for the path to the folder where the software project that will be analyzed in the experiment is located.

```
OPUS Research Group
Source Code Degradation Experiment
Please provide the path to the project:
```

Provide the path to the folder where the project's source code is and press "enter". A static code analysis process will begin.

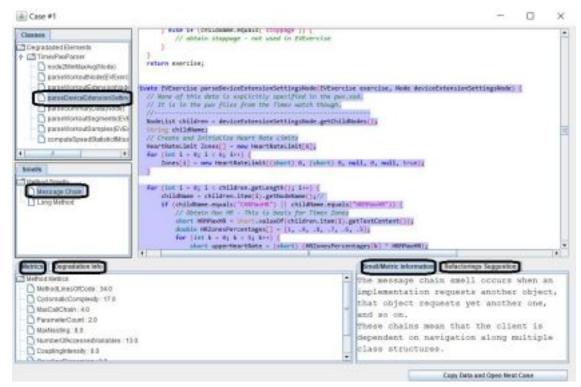
```
C\Windows\system32\cmd.exe
OPUS Research Group
Source Code Degradation Experiment
Please provide the path to the source code folder (without test folder):
:\Users\willi\Documents\repositories\sportstracker\st-exerciseviewer\src\main\java
Starting: . Items to process: 1000
18.0% complete
20.0% complete
30.000002% complete
40.0% complete
50.0% complete
68.000084% complete
78.6% complete
80.0% complete
90.0% complete
188.6% complete
Starting: Building smelly graph edges. Items to process: 312
9.32051283% complete
10.256411% complete
20.192307% complete
38.128284% complete
48.054182% complete
50.0% complete
60.25641% complete
70.19231% complete
88.128284% complete
90.0541% complete
Started Analyzing Case #1
```

Once the static analysis is complete, you should begin to analyze the cases. Each case will be presented on a desktop screen.



Before analyzing each case, open the <u>case analysis form</u> and fill in the initial data: email and start time.

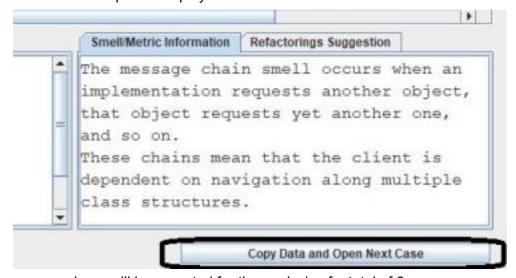
Browse through the information provided on the screen (metrics, smells, degradation info, etc.), evaluating the structural quality of the presented code. Inspect the class and its methods during such an analysis.



If deemed necessary, you can use your IDE to inspect other classes that are related to the case analyzed.

Answer the questions on the form, considering all the provided information.

In the last question on the form, you will be asked for a "case description". Such description is provided by the analysis screen through the button "Copy Data and Open Next Case". Just paste the text that will be in your clipboard. By clicking on this button the case will be closed and a new window will open to display the next case.



The above procedures will be repeated for the analysis of a total of 6 cases.

At the end of the analysis of the 6 cases, please complete the post-study interview form.