

15-5 Report

Date: 2012.06.10
Reference: FDZ_2012.06.10._001
Subject: 15-5 Report for the Week 1
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Configuring the remote machines (installing VNC on the Linux platform, Cygwin on the Windows platform).
2. Installing chrome and IE drivers on the Windows platforms for possibility for executing tests.
3. Creating shell scripts for configuring/starting remote nodes, coping and starting the Pulse server.
4. Testing configured system.

1.2 Problems/Deviations

Problems:

1. Before starting the Pulse server, on the startup script, all colons should be replaced by semicolons on CLASSPATH.
2. For running the shell commands on the background mode, was used & symbol on the Linux platform and -d on the Windows platform.
3. There is not any plugin for maven 2 that provides easy copy and run shell script on the remote machine. The problem was resolved by updating to maven 3.
4. Windows does not provide any possibility to send execution script to any display session so user cannot see the test run evaluation. This problem was fixed for Linux platform.
5. The Internet Explorer is the strange browser, it should have disabled the protected mode.
6. Before run each test, the cache and cookies of the Internet Explorer should be cleared. The browser doesn't make it automatically when closing the session.
7. When the test case is fail, the browser isn't closed. This problem will be fixed on the next week.

2. Activities Planned for Next Week

1. Add timeout for nodes in situations when the test case is fail.
2. Integrate the test environment on the continuous building system.

3. Open Issues Needing Discussion

None.

15-5 Report

Date: 2012.13.10
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 2
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Fixing the test cases that the browser did not close when the test case fails
2. Integrating the test environment on the continuous building system.
3. Testing configured system.

1.2 Problems/Deviations

Problems:

1. The problem when the browser did not close was fixed by refactoring of test cases. The code was refactored to ensure that the command `driver.quit()` will always be executed when the test is terminated.
2. After running the Jenkins job at the first time, it didn't find many files that were defined on the project object model. The problem happened due to the value of '`${project.basedir}`' was changed from Selenium project to Pulse project because the last one is executed firstly.
3. After configuring the nodes, the tests start to be executed immediately. It causes that the first test case fails on the last configured node because the Pulse server still was not booted. The problem was solved by adding timeout after executing last command on the configuration scripts.

2. Activities Planned for Next Week

1. Participation on quality process of pre-release.
2. Create more test cases for testing system reality.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. O'BRIEN, T., MOSER, M., CASEY, J., FOX, B., ZYL, J., REDMOND, E., SHATZER, L. Maven: The Complete Reference. <http://www.sonatype.com/books/mvnref-book/reference/public-book.html>.

Accessed on October 10, 2012.

2. O'BRIEN, T., MOSER, M., CASEY, J., FOX, B., ZYL, J., XU, J., LONCHER, T., FABBULICH, D., REDMOND, E., SNYDER, B. Maven by Example. <http://www.sonatype.com/books/mvnex-book/reference/public-book.html>.

Accessed on October 10, 2012.

3. KAWAQUCHI, K. Using Jenkins. <https://wiki.jenkins-ci.org/display/JENKINS/Use+Jenkins>.

Accessed on October 11, 2012.

4. KAWAQUCHI, K. How to install plugins. <https://wiki.jenkins-ci.org/display/JENKINS/Plugins>.

Accessed on October 11, 2012.

15-5 Report

Date: 2012.20.10
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 3
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Participation on quality process of pre-release.
2. Create more test cases for testing system reality.

1.2 Problems/Deviations

Problems:

1. Fixed several test cases because the select fields were replaced by select2.
2. After creating all graphs of the plot widget was concluded that one application cannot contain all dashboards with graphs, the browser turns very slow and consumes much memory and CPU. This problem will be resolved on the next week by dividing test cases in several applications.

2. Activities Planned for Next Week

1. Create fixed data set for verification values that appear on the generated graphs.
2. Create more test cases for testing system reality.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Accessed on October 20, 2012.

15-5 Report

Date: 2012.20.10
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 4
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Participation on quality process of pre-release.
2. Verification of resolved bugs.
3. Execution of the selenium test cases in order to verify the graph rendering.

1.2 Problems/Deviations

Deviations:

1. Due to approaching of the pre-release it was not possible to perform the planned tasks, so these tasks will be performed later.

2. Activities Planned for Next Week

1. Participation on quality process of pre-release.
2. Verification of resolved bugs.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice. Wiley.

15-5 Report

Date: 2012.27.10
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 4
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Participation on quality process of pre-release.
2. Verification of resolved bugs.
3. Test on multiple browsers.

1.2 Problems/Deviations

None.

2. Activities Planned for Next Week

1. Create fixed data set for verification values that appear on the generated graphs.
2. Make screenshots of graphs and compare them in the future if the values are still displayed correctly.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice. Wiley.
2. WHITTAKER, J., ARBON, J., CAROLLO, J. (2012). How Google Tests Software. Help me test like Google. Addison-Wesley.

15-5 Report

Date: 2012.10.11
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 6
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Create fixed data set for verification values that appear on the generated graphs.
2. Make screenshots of graphs and compare them in the future if the values are still displayed correctly.

1.2 Problems/Deviations

Problems:

1. Found several bugs that prevent generation of screenshots.
2. Database was changed due to graph that include grid.

2. Activities Planned for Next Week

1. Continue to check the generated graphs.
2. Make screenshots of graphs and compare them in the future if the values are still displayed correctly.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice. Wiley.
2. WHITTAKER, J., ARBON, J., CAROLLO, J. (2012). How Google Tests Software. Help me test like Google. Addison-Wesley.



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15-5 Report

Date: 2012.10.17
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 7
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Continue to check the generated graphs.
2. Create algorithm for making screenshot after creating a graph.

1.2 Problems/Deviations

Problems:

1. Sometimes the javascript that resize the dashboard is not executed properly. This provoke that the screenshot has not the same size and cannot be compared.
2. Sometimes the selenium fails when generating the graphs. This problem will be investigated on the next week.

2. Activities Planned for Next Week

1. Create algorithm that will compare two screenshots.
2. Make screenshots of generated graphs.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice.

Wiley.

15-5 Report

Date: 2012.10.24
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 8
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Create algorithm that will compare two screenshots.
2. Make screenshots of generated graphs.

1.2 Problems/Deviations

Problems:

1. With removing to access to jquery some code should be refactored. JQuery should be injected before starting any test or after refreshing the page.
2. Resolved the problem when the selenium crashes during executions of tests. The problem was related with execution of jquery on elements that have fade out/on effects or elements that were not yet visible.
3. The screenshots have not been made yet due to exist several bugs on the graphs.

2. Activities Planned for Next Week

1. Configure the selenium tests to run on the Jenkins every night.
2. Taking screenshot of the graphs generated if the bugs will be resolved.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice. Wiley.

15-5 Report

Date: 2012.12.02
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 9
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Configure the selenium tests to run on the Jenkins every night.
2. Taking screenshot of the graphs generated if the bugs will be resolved.
3. Made list with categories of tests to be used on the integration tests.

1.2 Problems/Deviations

Problems:

1. Sometimes the tests fail on the Jenkins on assertions methods, this question should be investigated on this week. Possible solution for this problem is paralysis of tests by classes and not by methods.

2. Activities Planned for Next Week

1. Resolve problem on the Jenkins, why sometimes the tests fail.
2. Refactor the Selenium tests for using categories.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice.

Wiley.

15-5 Report

Date: 2012.12.09
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 10
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Resolve the tests failure on the Jenkins.
2. Refactor the Selenium tests for using categories.

1.2 Problems/Deviations

Problems:

1. The Selenium tests failures were resolved on the current week by checking of blocking of JQuery by any request.

2. Activities Planned for Next Week

1. Make the Selenium test run on the continuous integration system every night.
2. Write documentation.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice. Wiley.
2. KITCHENHAM, B., PFLEEGER, S. (1996). Software Quality: The elusive target. IEEE Software.

15-5 Report

Date: 2012.12.16
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 11
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Make the Selenium test run on the continuous integration system every night.
2. Write documentation.

1.2 Problems/Deviations

None

2. Activities Planned for Next Week

1. Verification of corrected issues opened in previous weeks.
2. Provide requirement list for implementation of maven plugin to configure remote machines for executing functional tests.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice. Wiley.
2. KITCHENHAM, B., PFLEEGER, S. (1996). Software Quality: The elusive target. IEEE Software.
3. PRESSMAN, R. Engenharia de Software. Trad. Jose Carlos Barbosa dos Santos. Sao Paulo: Makron Books, 1995.

15-5 Report

Date: 2012.12.22
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 12
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Verification of corrected issues opened in previous weeks.
2. Define requirements of a maven plugin for setting up remote environments for testing (targetted to run selenium tests).

1.2 Problems/Deviations

None

2. Activities Planned for Next Week

1. Write thesis report.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice. Wiley.
2. KITCHENHAM, B., PFLEEGER, S. (1996). Software Quality: The elusive target. IEEE Software.
3. PRESSMAN, R. Engenharia de Software. Trad. Jose Carlos Barbosa dos Santos. Sao Paulo: Makron Books, 1995.

15-5 Report

Date: 2012.12.31
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 13
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Write thesis report.

1.2 Problems/Deviations

None

2. Activities Planned for Next Week

1. Write thesis report.
2. Implementation of Maven plugin based on requirements defined two week ago.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice. Wiley.
2. PRESSMAN, R. Engenharia de Software. Trad. Jose Carlos Barbosa dos Santos. Sao Paulo: Makron Books, 1995.

15-5 Report

Date: 2012.01.07
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 14
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Write thesis report.
2. Implementation of Maven plugin based on requirements defined two week ago.

1.2 Problems/Deviations

None

2. Activities Planned for Next Week

1. Implementation of Maven plugin based on requirements defined two week ago.
2. Write documentation.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice. Wiley.
2. PRESSMAN, R. Engenharia de Software. Trad. Jose Carlos Barbosa dos Santos. Sao Paulo: Makron Books, 1995.

15-5 Report

Date: 2012.01.13
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 15
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Implementation of Maven plugin based on requirements defined two week ago.
2. Write documentation of implemented Maven plugin.

1.2 Problems/Deviations

None

2. Activities Planned for Next Week

1. Resolve configuration problem of the findbugs tool used for static code analysis.
2. Implement test cases for new features of PulseViews.

3. Open Issues Needing Discussion

None.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice. Wiley.

15-5 Report

Date: 2013.01.20
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 16
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Resolve configuration problem of the findbugs tool used for static code analysis.
2. Implement test cases for new features of PulseViews.
3. Elaboration of second version of the thesis report.

1.2 Problems/Deviations

1. It was detected problem with limitation of Pulse server. It sometimes returns blue screen on PulseViews. During the next week will be implemented mechanism to provide more information of occurred error by capturing screenshot of last instance, copy server logs to remote repository.

2. Activities Planned for Next Week

1. Implementation of the mechanism to provide maximum information of occurred erros during functional and regression tests.
2. Analyze existing tools for mutation testing.
3. Implement test cases for new features of PulseViews.

3. Open Issues Needing Discussion

1. It will be discussed several tools with Diogo to decide which of them will be for mutation testing.

4. Bibliography

1. NAIK, K., TRIPATHY, P. (2008). Software Testing and Quality Assurance. Theory and Practice. Wiley.

15-5 Report

Date: 2013.01.28
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 17
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Implementation of the mechanism to provide maximum information of occurred erros during functional and regression tests.
2. Analyze existing tools for mutation testing.
3. Implement test cases for new features of PulseViews.
4. Some improvements on thesis report.

1.2 Problems/Deviations

None.

2. Activities Planned for Next Week

1. Analyse the Sonar tool to identify current problems and provide possible solutions.

3. Open Issues Needing Discussion

None.

4. Bibliography

None.

15-5 Report

Date: 2013.02.03
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 18
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Analyze the Sonar tool to identify current problems and provide possible solutions.

1.2 Problems/Deviations

None.

2. Activities Planned for Next Week

1. Trying to solve the product coverage problem. Actually, the Sonar cannot calculate the test coverage of total product due to the product being multi-module and each module contains own unit tests. Sonar cannot calculate the coverage of the existing system tests because they do don't belong to any module but execute several classes of each module.

3. Open Issues Needing Discussion

None.

4. Bibliography

None.

15-5 Report

Date: 2013.02.10
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 19
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Prepare presentation.
2. Solve the product coverage problem.

1.2 Problems/Deviations

None.

2. Activities Planned for Next Week

1. Fix the Selenium tests. Several tests will be fixed after merging the quality branch into develop due to the new introduced features and the changes on the design.

3. Open Issues Needing Discussion

1. The solution for the product coverage was found. It will be used the Jacoco to calculate total product coverage. To calculate the coverage of all modules, it will be executed unit tests of each module and saved results on one jacoco.exec file. After make it, all classes of each module should be copied into system test folder, should be executed system tests and saved results on separate file jacoco-it.exec file. After executing all tests, it will be published results on Sonar. The Sonar can merge two coverage files and calculate overall coverage.
2. It will be decided which of tools for calculation coverage of each module will be used (Cobertura used until now or Jacoco). To use Jacoco, it will be necessary to change the actual testing Maven profiles for including jacoco agent in maven surefire plugin for separate the coverage result of each module.

4. Bibliography

None.



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15-5 Report

Date: 2013.02.17
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 20
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Ad-hoc testing of new features.

1.2 Problems/Deviations

None.

2. Activities Planned for Next Week

1. More ad-hoc tests of new features.
2. Fix the Selenium tests and implement new tests cases for new features.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

15-5 Report

Date: 2013.02.24
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 21
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. More ad-hoc tests of new Pulse Views features.
2. Fix the Selenium tests and implement new tests cases for new features.

1.2 Problems/Deviations

None.

2. Activities Planned for Next Week

1. Fix Selenium render tests of plot widget on the Pulse Views for automatic verification of graph values.
2. Integrate found solution for code coverage calculating of integration tests with unit tests. This solution could suffer several changes and will be described on the next report.
3. Verify resolved issues opened on the last weeks.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

15-5 Report

Date: 2013.03.04
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 22
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Fix Selenium render tests of plot widget on the Pulse Views for automatic verification of graph values.
2. Integrate found solution for code coverage calculating of integration tests with unit tests. This solution could suffer several changes and will be described on the next report.
3. Verify resolved issues opened on the last weeks.

1.2 Problems/Deviations

None.

2. Activities Planned for Next Week

1. Continue of working on the product coverage problem. Several tests need to be fixed. The Jacoco plugin is passed by parameter and broke several tests.
2. Verify resolved issue opened on the last weeks.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

15-5 Report

Date: 2013.03.10
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 23
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Continued working on the product coverage issue. There are tests that still need to be fixed. Since the execution the Jacoco is made by passing parameter it broke several tests.
2. Verify resolved issues, opened on the last weeks.

1.2 Problems/Deviations.

1. After changing the design of the Pulse Views (frontend), Selenium tests were to be verified and fixed.
2. It was impossible to test the integrated solution for product coverage due to the existence of the failing tests. The solution will be tested after the developers fix all system tests.

2. Activities Planned for Next Week

1. Add support for testing all Pulse Views features with the purpose of finding the highest number of bugs in order to guarantee the quality of product.
2. On the last week it was found a bug in the PKernel engine, basically, PKernel was producing incorrect values when calculating the average. This bug was detected by render tests, where the screenshot of previous version was compared with the screenshot of actual version. Now, the values that appear on the charts must be verified again. Internal uses fixed dataset (it is text file with several entries) that is injected into Pulse. Previously (on previous release), the values that appear on the chart were compared with the values produced by Pulse (on Pulse database). Now, created application calculates the values bases on the injected dataset and the values that appear on the generated charts will compare with the results produced by the application and not by Pulse. This form ensures that the values appear on the chart are correct.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

15-5 Report

Date: 2013.03.18
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 24
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Add support for testing all Pulse Views features with the purpose of finding the highest number of bugs in order to guarantee the quality of product.
2. On the last week it was found a bug in the PKernel engine, basically, PKernel was producing incorrect values when calculating the average. This bug was detected by render tests, where the screenshot of previous version was compared with the screenshot of actual version. Now, the values that appear on the charts must be verified again. Internal uses fixed dataset (it is text file with several entries) that is injected into Pulse. Previously (on previous release), the values that appear on the chart were compared with the values produced by Pulse (on Pulse database). Now, created application calculates the values based on the injected dataset and the values that appear on the generated charts will compare with the results produced by the application and not by Pulse. This form ensures that the values appear on the chart are correct.

1.2 Problems/Deviations.

1. None.

2. Activities Planned for Next Week

1. Add support for testing all Pulse Views features.
2. Integrate tool for creating mutation tests with the purpose to evaluate the quality of existing unit tests.
3. Execute all Selenium tests on the all supported operating systems and browsers by Feedzai.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

15-5 Report

Date: 2013.03.25
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 24
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Add support for testing all Pulse Views features.
2. Integrate tool for creating mutation tests with the purpose to evaluate the quality of existing unit tests.
3. Execute all Selenium tests on the all supported operating systems and browsers by Feedzai.

1.2 Problems/Deviations.

1. All tests were executed on all operating systems and browsers except on the Internet Explorer 10. Currently, it is exist only one remote environment with this browser. Today, I configured rather two environments with this browser and the tests will run this night.

2. Activities Planned for Next Week

1. The last task of my internship will be creation of support for extracting the quality metrics to generate report and send it by mail in order to show the quality status of product, comparing with the last week. During this week, the requirement document will be created and validated by Diogo.
2. Tonight, I will start the Selenium tests on the missing browser.
3. During this week, I will read several papers, send by Paulo. The topic of the article is “How to improve the stability of your Selenium tests”.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

15-5 Report

Date: 2013.03.31
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 25
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. The last task of my internship will be creation of support for extracting the quality metrics to generate report and send it by mail in order to show the quality status of product, comparing with the last week. During this week, the requirement document will be created and validated by Diogo.
2. Tonight, I will start the Selenium tests on the missing browser.
3. During this week, I will read several papers, send by Paulo. The topic of the article is “How to improve the stability of your Selenium tests”.

1.2 Problems/Deviations.

1. The execution of the Selenium tests was aborted due to performance tests. Performance tests need a lot of memory and the Selenium grid as well as its machines were turned off.

2. Activities Planned for Next Week

1. During this week, I and Diogo will evaluate the requirements document of quality reports written on the last week. After completing the evaluation task, I will start implementation part. The principal objective of these reports is to aggregate information of several resources and present it on quality report that will be sent periodically. There are two main groups of reports:
 - Short quality status – the report with highlighted information about quality status of product that will be sent to pulse-int mailing list.
 - Full quality status – the report with detail information about quality status of product that will be sent to FeedZai direction.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

15-5 Report

Date: 2013.03.31
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 26
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. The requirement document was approved by Diogo.

1.2 Problems/Deviations.

None.

2. Activities Planned for Next Week

1. Before starting the implementation, I will define the system architecture of the quality reports. The architecture will be provided on the next 15 5 report. The architecture will be discussed with Diogo.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

15-5 Report

Date: 2013.04.15
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 27
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Support for extracting information from Sonar, Jira, Jenkins was implemented.

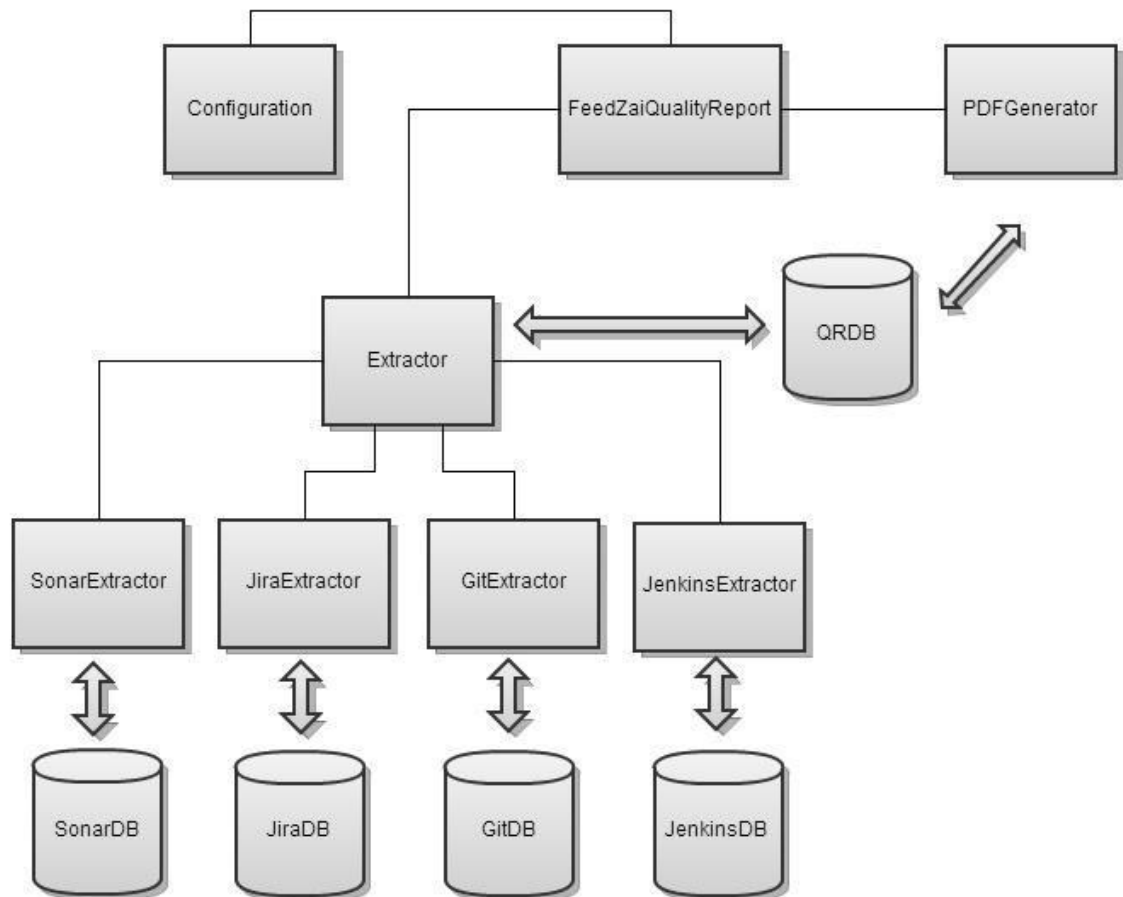
1.2 Problems/Deviations.

None.

2. Activities Planned for Next Week

Refactor existing database to support violations.

The architecture of the system was discussed with Diogo and can be seen on the image bellow:



The application will work with two threads. The first, will extract the information from sources (Git, Jenkins, Jira and Sonar) periodically (the periodicity can be configured on class 'Configuration'). The second thread will generate short and full reports based on retrieved information.

The generated report should show the evaluation progress and the information should be compared with the previous results.

The report will be composed by four sections: Sonar, Jenkins, Jira and Git. The information on this report will be shown by modules. For example, the Sonar sections will contain 8 subsections:

- **Size** section will contain information about source code (for example, number of physical lines, total lines of code and others).

- **Documentation** section will contain information about the documentation part (for example, number of comment lines, the percentage of public documentation API and others).
- **Complexity** section will contain information about cyclomatic complexity of source code.
- **Unit tests** section will contain information about unit tests execution (for example, number of unit failures or errors, execution duration, percentage of line coverage and branch coverage).
- **Integration tests** section will contain information about integration tests execution (for example, line coverage, branch coverage and others).
- **Overall** section will combine the results from unit section and integration section.
- **Duplication** section will contain information about duplicated lines, blocks and files on source code.
- **Rules** section will contain information about all violations on the project.

Next week, support for extracting information from Git will be implemented. After implementing support, I am going to implement algorithms to generate reports. I think that I will be able to show the first example report at the end of next week.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

15-5 Report

Date: 2013.04.22
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 28
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Refactor existing database to support violations.
2. New maven was implemented. The plugin is named *jacoco-scala-manen-plugin*. The main objective of this plugin is to calculate the code coverage of unit tests of PKernel. The PKernel module is composed by several sub-modules that are written in different programming languages. The main difficulty was to aggregate the coverage of this different programming languages.

1.2 Problems/Deviations.

None.

2. Activities Planned for Next Week

1. Implement support for extracting information from Git. It was not implemented yet.
2. Created first example report.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

15-5 Report

Date: 2013.04.28
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 30
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Implementing support to extract information from Git. It was not implemented yet.
2. Two the errors were found on the calculation form of the PKernel coverage. The first error has to do with the fact that not all classes appeared on the generated report (only executed classes appeared on the report). The second error is that all test classes were included on the generated report, which increases the coverage value because the coverage of test classes is nearly 100%.

1.2 Problems/Deviations.

1. The problem with merging results of Scala and Java projects has appeared after implementing the jacoco-scala-coverage-plugin. Implemented plugin inserts retrieved data in a temporary table. The plugin calculates the coverage for each PKernel source file. I will implement an algorithm that will update the PKernel coverage of Sonar projects. The algorithm should get the coverage calculated by the plugin and update the coverage retrieved from Sonar. The steps to update the coverage are as follows:
 - Update the data of each source file for each programming language.
 - Update the coverage data of each package for each programming language.
 - Update the coverage data of each sub-module for each programming language.
 - Update the coverage of PKernel project for each programming language.
2. Another detected problem is related to timestamp of files of each sum-modules (for example, the modules/sub-modules/packages/files come with different timestamps because they are analyzing sequentially and not at the same time). The code should be refactored to use the same timestamp for all project components.

2. Activities Planned for Next Week

1. Resolving found problems.
2. Still working on the implementation of quality reports.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

***15-5 Report

Date: 2013.05.06
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 31
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Working on the implementation of quality reports.
2. Adding support to configure Selenium HUB before starting the test suite.

1.2 Problems/Deviations.

None

2. Activities Planned for Next Week

1. Still working on the implementation of quality reports.
2. The database of the quality reports should be refactored. Currently the table 'rule_value' contains the source code and the live for each occurred violation. It is not scalable because some source files contain more than 1 violation and this structure increases the database size. The table 'rule_value' will be refactored so that the source files will be moved to a new table, source, and the table 'rule_value' will contain the reference id of the source file and line where the violation occurred.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

***15-5 Report

Date: 2013.05.20
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 32
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Adding support to show the performance metrics.
2. The quality server has been installed on the remote server.
3. Changing the design of the short quality report. The algorithm must be tested with purpose of verifying the correctness of the values that appear on the short report. This process will take a few days.

1.2 Problems/Deviations.

1. A solution to calculate coverage of the Selenium tests has been found. The follow steps should be executed to calculate the coverage:
 - 1.1. Compiling the Pulse.
 - 1.2. Adding Jacoco java agent to the start-up script on the setup phase(setup of the remote environments).
 - 1.3. Executing all Selenium tests.
 - 1.4. Copying all source files and compiled classes from all Pulse modules(including sub-modules) to the Selenium folder.
 - 1.5. Executing Sonar task with the objective of calculating coverage of the Selenium tests.

2. Activities Planned for Next Week

1. Starting to write thesis report.
2. During this week, the design of the full quality reports will be discussed with Diogo.
3. Providing support for testing new Pulse features.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.

***15-5 Report

Date: 2013.06.03
Reference: FDZ_2012.08.01_001
Subject: 15-5 Report for the Week 34
Author: Andrey Klimachev (andrey.klimachev@feedzai.com)

1. Activities Completed During the Week

1.1 Current Work

This week the main tasks were:

1. Testing Pulse Views features.
2. Changing design of full quality report.

1.2 Problems/Deviations.

1. This week the critical problem was found on the calculation algorithm of Git metrics. Previously, the Gir metrics were calculated by comparing the current value to the value of the previous report. This procedure proved to be wrong. This algorithm would work only for one of the reports but FeedZai, currently, has two different report types full and short. The comparison should be made for the two report types. In case FeedZai want to have another report? The collecting algorithm should be generic. It only needs to extract values and other algorithms that will generate a report should work with these values each in their own way. This problem is already fixed.
2. Another moment is related with the way in which the performance metrics were calculated. For the short report the objective was to calculate the average of each metric by grouping all resources files. For the full report, the evaluation should be shown for each resource fils. This was implemented this week.

2. Activities Planned for Next Week

1. Starting to write final thesis report.
2. Testing Pulse Views features.
3. Solving open tweak issues for the full report.
4. Analyzing the result format of the full repot with Diogo.

3. Open Issues Needing Discussion

N/A

4. Bibliography

None.