# SFT221 SCRUM Report and Reflections

This report should be completed in the class and submitted at the end of class. Late submissions cannot be accepted without prior approval of the instructor. All students are expected to attend the in-class SCRUM meetings and to participate. Failure to do so will result in greatly reduced grades.

**GROUP**: \_\_4\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Members Present**:

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| --- | --- |
| 1. Anna Francesca Dela Cruz (Cesca) | 4. Irish Banga |
| 2. Gulpreet Kaur | 5. |
| 3. In Tae Chung | 6. |

## Milestone 4 Tasks

**Deliverables Due at end of Lab:**

* Completed SCRUM report and reflections

**Deliverables Due at 23:59 6 Days after Lab:**

* Implemented Functions
* Implemented blackbox tests (store in repo), executed (results in Jira and on corresponding test documents) and debugged,
* whitebox tests written and stored in repository.
* whitebox tests implemented (store in repo), executed (results in Jira and on corresponding test documents) and debugged.
* Updated function-test matrix stored in the repository.
* Completed hook for test automation

**Rubric**

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| --- | --- | --- |
| Individual | Group Participation | 75% |
| Teamwork | 5% |
| SCRUM Report | 10% |
| Automation Hook | 10% |
| Group | Implemented Functions (well-designed, written and documented) | 20% |
| Whitebox tests (well-designed, written and documented) | 20% |
| Test Execution (performed, results recorded, issues created) | 20% |
| Debugging (Bugs fixed, documented, Jira updated) | 5% |
| Git Usage (used properly with good structure) | 5% |
| Jira Usage (creates issues, tracks progress) | 5% |
| Meets Deadlines | 5% |
| SCRUM Report and Reflections | 20% |

**SCRUM Report**

**Summary of Tasks Completed or Delayed in the last week:**

Here you can list all of the tasks completed in the last week along with any tasks which could not be completed with a reason why they could not be completed.

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| **Member** | **Tasks Completed** | **Tasks Delayed/Blocked** |
| 1 | * Completed white box test documentation for getTruckByReference() and getTruckDistances2() * Combined black box and white box test documentation into xlsx file * Wrote partial code for white box tests of getTruckByReference() and getTruckDistances2() * Reflection Q-4 * Revised the Function-Requirements-Traceability Matrix * Fill in SCRUM report (Meeting details; individual tasks) | N/A |
| 2 | * Completed white box test documentation for validate() * Combined black box and white box test documentation into xlsx file * Wrote white box test code for validate() * Reflection Q-2 and 3 |  |
| 3 | * Completed white box test documentation for getSpaceRemaining() and sortByLimitingFactor() functions * Combined black box and white box test documentation into excel files * Coded white box test cases for getSpaceRemaining() and sortByLimitingFactor() functions * Reflection Q-1 |  |
| 4 | * Code and complete implementation of functions: getSpaceRemaining(), getTruckByReference(), getTruckDistances2(), sortByLimitingFactor(), findTruckAndDiversion() * Complete test documentation for findTruckAndDiversion() function * Write test code for validate(), findTruckAndDiversion() functions * Contributed to test code developed by Member 1 for getTruckDistances2() and getTruckByReference() functions * Fill in SCRUM report details |  |

For every task delayed or blocked, describe the reason for the delay or block, how it impacts the project and the proposed solution or workaround**.**

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| --- | --- |
| **Delayed or Blocked Task** | **N/A** |
| **Reason for delay or block** |  |
| **Impact on Project** |  |
| **Solution or work-around** |  |
|  |  |
| **Delayed or Blocked Task** |  |
| **Reason for delay or block** |  |
| **Impact on Project** |  |
| **Solution or work-around** |  |

**Summary of Meeting:**

A summary of the main points discusses in the meeting and the outcomes of the discussions.

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| Topic | Discussion Summary | Outcome |
| Documentation | Reviewed required documentation for white box tests and discussed how to include white box tests into the test description templates.  Reviewed the requirements of the matrix. | Assigned white box documentation to each member; Moved test documentation to xlsx file instead of docx.  Assigned the task of revising the matrix to suit the requirements. |
| Tests | Reviewed the results of black box tests and next steps regarding results.  Reviewed which functions needed white box tests. | Assigned each member white box test(s) to write |
| Automation Hook | Discussed the purpose of automation hooks | Each member is to set up the automation hook for pre-push purposes |
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**Summary of Decisions Made:**

This will include major architecture and design decisions, testing decisions, prioritization of tasks, dealing with problems encountered and other major outcomes from the meeting.

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| Decision | Rationale |
| Test Documentation | Move documentation of all tests to Microsoft Excel for better clarity and organization |
| Function-Requirements-Traceability Matrix | Revise matrix to meet project requirements: track each test for each function |
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**Tasks Attempted During Meeting:**

Each member is assumed to participate in the SCRUM meeting and contribute to the completion of the SCRUM report and reflections. Since the SCRUM meeting will not take more than 20-30 minutes, there is lots of time left to undertake some of the actual work tasks. In the table below, each member should list what they did to complete the SCRUM report, the reflections, and 1-4 other tasks they completed during the class period. If a task could not be completed, the student should indicate why this was not possible.

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| Member | Task Attempted | Time Spent | Complete? |
| 1, 2, 3, 4 | Reviewed the outcomes (pass/fail) of black box tests and the next steps in result of the outcomes | 20min | YES |
| 1, 2, 3, 4 | Reviewed the purpose of white box tests and assigned each member white box test(s) to write | 20min | YES |
| 1, 2, 3, 4 | Reviewed matrix requirements again and discuss what needs to be revised | 10min | YES |
| 1, 2, 3, 4 | Understand what bugs in functions need to be addressed | 20min | YES |
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**SCRUM Tasks Selected for Next Week**:

The tasks each member has selected to pursue for this class or the next week.

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| Group Member | Task Description |
| 1,2,3,4 | Members will develop ideas to integrate individual functions to meet the requirements for MS5.  A sample function by the name of run() was already implemented for testing and development purposes in MS4. |
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**Major Outcomes of Meeting:**

This is where you should highlight the major accomplishments of the class.

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| Outcome | Impact on Project |
| Awareness of bugs in program | Having a shared understanding of what bugs are present in the program will help us determine the appropriate steps to address them and aid in prioritization of our resources in the future |
| Division of white box test tasks | Dividing the white box tests that need to be written, documented and implemented ensures that our team will deliver all of the requirements for this week’s milestone and maintain our project deadlines |
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**Things That Went Well in This Meeting:**

Here you can highlight things which worked well. This indicates that the way you worked on these items is working and should be continued.

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| Topic/Work Item | Reason for Success |
| Communication of bugs and software quality | After discussing the black box test results, all members understood what bugs needed to be addressed in the future. |
| Development and Documentation contribution | Members were assigned responsibility for completing white box test development and documentation. |
| Function-Requirements-Traceability Matrix | A member discussed the matrix with the instructor. After sharing his findings in the meeting, the team had a better understanding of the requirements and purpose of the matrix. |
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**Things That Did NOT go Well in This Meeting:**

This is where you can list things which did not go well in the class. You should analyze why this happened and suggest how you can improve it next time. This will lead to the goal of *continuous process improvement*.

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| Topic/Work Item | Reason for Problem and How to do Better |
| N/A | **N/A** |
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**Reflections**:

1. After you run your blackbox and whitebox tests you are asked to record the results in both the original test document as well as in Jira. Explain why it is a good idea to record the results in both places.

It is a good idea to have the results of the tests in both the original test document as well as in Jira as the two documents’ purposes differ.   
 The original test document is used to describe how the tests were conducted, including details such as the environment of the tests, a description of the test data, the expected results, as well as the result of the test which include if any bugs were found. By providing this information, anyone working on the project is able to gather if there were any issues with a specific scope of the project, and under what conditions the issue is occurring. By accurately identifying the problem, the bug or issue can be fixed more efficiently.   
 Jira on the other hand, helps to give context to an overview of the progress of the entire project. By recording the results of the tests on Jira, it is easier to track who oversees the test cases and the status of the task (to-do, in progress, or completed) can be seen right away. Also, any further issues, such as bugs, can be documented as a Child Issue so that the progression of successful tests can be seen more easily.

1. Why did we wait until the fourth milestone to write the whitebox tests?  
     
   The team have had insufficient whitebox testing resources or initially prioritised blackbox testing to guarantee key operation. The decision to delay whitebox testing until the fourth milestone may be influenced by time limitations, iterative development, and code completion.

The decision to postpone writing the whitebox tests until the fourth milestone may have been driven by prioritisation, resource limitations, time constraints, the iterative development process, and the reliance on code completion. Different strategies for choosing when to concentrate on various forms of testing may be used depending on the particulars of each project and its development objectives.

1. For a given function did you produce more blackbox or whitebox tests? Explain why your answer (more blackbox or more whitebox) happens for most functions.  
     
   For a given function, I believe there should be more blackbox tests than whitebox tests since blackbox testing concentrates on user needs, is simpler to implement, and offers excellent test coverage. Whitebox testing can be time-consuming, needs in-depth knowledge, and may require additional maintenance due to coding changes. Depending on the complexity and project objectives, blackbox and whitebox testing must be balanced.

In most cases, we give blackbox testing priority to make sure the feature operates appropriately from the perspective of the user and serves the intended goal. The use of whitebox testing may not be as common as blackbox testing for the full function, but it is frequently used to solve specific complexity issues, key functions, or speed optimisation. Depending on project needs, team expertise, and the makeup of the functions being tested, the ratio of blackbox to whitebox tests may change.

1. Explain the purpose of the automation hook for GIT and explain how it can improve the quality of the software in the project.

Automation hooks are scripts that run automatically when certain events occur in a repository.

One function of automation hooks is to automate testing, ensuring the code passes all tests before it’s pushed to the repository. For instance, once the script is set up, every time a team member pushes code to the repository, it triggers tests. If the code fails these tests, the push is aborted. This prevents bugs from entering the repository and stops other developers from building on top of buggy code, thereby avoiding more significant issues in the future.

In summary, automation hooks, particularly pre-push hooks, improves the quality of the software by preventing faulty code from entering the primary codebase through its rigorous testing. This guarantees developers only have access to “good” code and eliminates the creation of more severe bugs and conflicts in the software.