# **MILESTONE 4** -- SFT221 SCRUM Report and Reflection

All students are expected to attend the SCRUM meetings and to participate. Failure to do so will result in greatly reduced grades.

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

**Members Present**:

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| 1. Shwe Yee Lin Aung | 4. Nevan Sargeant |
| 2. Cynthia Fotso | 5. Tsz Wa Wong (Locus) |
| 3. Jackey Zhou | 6. |

## Milestone 4 Tasks

**Deliverables due 4 days after your lab day:**

* Finish implementing/coding the functions.
* Finish implementing/coding blackbox tests. Store in repo, executed, results in Jira (and on corresponding test documents, and debugged.
* A set of whitebox tests as test documents (in an Excel file) with test data for the functions you created. At least 4 sets of test data are required for each function. You must have test cases for at least 6 functions (including all your custom function). Stored in the repository.
* Whitebox tests implemented (in the C++ testing project), stored in repository, executed, results in Jira and on corresponding test documents, and debugged (at least 1 SET is required).
* Updated requirements traceability matrix stored in the repository.
* Completed hook file (for EACH team member) for test automation stored in the repository.
* Completed scrum report including reflection questions answered.

**Rubric:**

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| **Individual** | Group participation (includes GitHub commits and Jira usage) | 80% |
| Teamwork | 20% |
| **Group** | Implemented functions and main (well-designed, and documented) | 10% |
| Finish coding blackbox code (well-designed, written, and documented) | 5% |
| Whitebox test case document (well written, complete, good test data) | 10% |
| Whitebox test code (well designed and documented) | 20% |
| Updated requirements traceability matrix | 5% |
| Test execution (performed, results recorded, issues created) | 10% |
| Debugging (bugs fixed, documented, Jira updated) | 5% |
| Hook files | 10% |
| Git usage (used properly with good structure) | 5% |
| Jira usage (creates issues, tracks progress) | 10% |
| Scrum report & reflections | 10% |
| **Deadline** | 20% deduction for each day you are late |  |

**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** |
| **Jackey** | **Reflection Q4, Q3, Function implementation** | **None** |
| **Nevan** | **Reflection Q2, Function implementation** | **None** |
| **Locus** | **White box test cases, Function testing, Traceability matrix** | **None** |
| **Cynthia** | **Reflection Q1, Scrum report** | **None** |
| **Shwe** | **White box test cases** | **None** |
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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** | **Function implementation** |
| **Reason for delay or block** | **The source code was not compiling** |
| **Impact on Project** | **There was a delay on proceeding with the project** |
| **Solution or work-around** | **Nevan helped fix the code** |
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| **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 |
| Task Allocation and time control | Tasks required to be completed are identified and allocated to each member according to availability. The tasks were allocated based on urgency and importance. Time control was also a great factor here because we had a lot do in this milestone as we first had to fix our previous errors before proceeding with milestone 4 requirements. | A general allocation of tasks for each member was completed by collaboration and discussion among the group about which person was allocated to which task. On some tasks, we collaborated. |
| Documentation of tasks | To keep a thorough documentation of task assignments, progress updates and any decisions made during the task allocation process. | It serves as a reference point and help maintain accountability. |
| Feedback Mechanisms | Establish mechanisms for providing feedback on task progress and addressing any challenges or obstacles that arise. | Regular check-ins or status updates helps keep tasks on track and identify issues early. It was mostly done on teams call and in Jira. |
| Task Completion | Discussion is done to have a general summary and confirmation of completed tasks by each group member. | Acknowledge the contributions of each team member to the project or initiative. |
| Collaboration | Parties involved: The collaboration involved team members working together on the milestone and communicating through teams and Jira | As a result of the discussion, the team agreed on clear project milestones, assigned responsibilities to each team member, established regular progress review meetings, and designated communication channels. Additionally, potential risks and mitigation strategies were identified to ensure smoother project execution. |
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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 |
| Locus did function testing white box test cases, and traceability Matrix | Reflective practices encourage him to articulate their thoughts and experiences effectively. This improved communication skill can facilitate better collaboration, conflict resolution, and relationship-building in future collaboration. |
| Nevan did a reflection and function implementation | He did so to encourage himself to think critically which helped with analysis, synthesis, and evaluation. Black box testing allows testers to work independently of developers. Testers do not need access to the source code, which means they can start testing as soon as the software is available, without waiting for the code to be completed or stable. |
| Shwe did the white box cases | She wanted to share her insights on the project and what she had done in reflection. By not considering the internal workings, it ensures that testing is done from the user's perspective, which helps identify issues that users might encounter in real-world scenarios. |
| Cynthia did the scrum report and a reflection | I did this to promote transparency by documenting the group’s progress and the type of communication and decision making that is occurring during group meetings and tasks. |
| Jackey did function implementation and 2 reflections | By identifying what worked well and what could be improved, he can apply these learnings to future situations, leading to continuous improvement and growth. |
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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? |
| Locus | **White box test cases, function implementation, traceability matrix** | **115 mins** |  |
| Shwe | **White box test cases** | **60 mins** |  |
| Jackey | **Function implementation and 2 reflections** | **90 mins** |  |
| Cynthia | **Scrum report and reflection Q1** | **80 mins** |  |
| Nevan | **Function implementation and reflection Q2** | **100 mins** |  |
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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 |
|  | This will be discussed during our next scheduled meeting on teams |
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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 |
| The code was fixed according to the instructions given | The overall process to finish the milestone using the fixed code in the upcoming week’s tasks are going smoothly |
| Jira updates | There is a documentation of who does what for each week tracked which makes it easier for the professor to see who made each contribution |
| Github | The files completed by each group members are uploaded for easier access by the professors and easier collaboration of the team going forward |
| Scrum Report | Help establish accountability within the team by documenting commitments and progress towards those commitments. Team members are accountable for completing their assigned tasks within the agreed-upon time frame |
| Reflections | Reflection encourages the group members to enhance their self-awareness, communication and collaboration which leads to overall improved performance and productivity within a team |
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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 |
| Allocation of tasks | Group members identified what they were comfortable with doing and set off to do what was required for each task. |
| Completion of tasks | Since group members did what they were comfortable with and asked for clarifications during the group call, the progress went smoothly for each deliverable. |
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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 |
| Communication | **We had some issues to understand certain requirements in this milestone, and we didn’t really communicate as a team which slowed us down.** |
| Time Constraints | **Some of the deliverables in the project took longer time than expected** |
| Fixing bugs | **The code was not running as expected due to some bugs and it was fixed, additionally, code implementation is improved upon by more than one member and hence, it became more suitable as an end deliverable. The code was tested as well by different team members.** |
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**Reflections**:

Answer the following questions using your own words. Make sure that each answer comprises a minimum of 100 words.

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 record the result in both the original test document and in Jira for appropriate documentation and traceability. It will enable the author have the original updated file on his computer as well as the group/team members as they will be able to access it through Jira. The original test document has detailed information about test cases, scenarios, and the expected results. The actual test results will provide a record of what was tested and if it passed or failed. Having all of these in Jira will enable each member remain updated on the tests and also, it will notify team members who were interested in this issue that its status has changed.   
   It also facilitates reporting, which will improve communication and collaboration among team members.
2. Why did we wait until the fourth milestone to write the whitebox tests?  
     
   Writing whitebox tests was waited until the fourth milestone because during the third milestone, it was at the beginning phase only and just starting to write out the code for the project. When you compare milestone 3 and milestone 4, milestone 4 is more about finishing off the code to being near complete so it can be run and tested to see how the code structure and the overall functionality of the code. In milestone 3, it was just creating the code and assuming how the code might work. This is why doing the white-box test cases during milestone 4 was the best idea as it is the perfect time to test out the code to see if it lives up to what it needs to be done and finding out about the bugs early on.
3. Pick one of the functions you created and list its name. For this function did you produce more blackbox or whitebox tests? Explain why your answer (more blackbox or more whitebox) happens for most functions.

The function I chose is the LoadShipmentOntoTruck function.

For this function we produced more whitebox test cases than black box test cases. The reason why there is more whitebox test cases than black box test cases is because whitebox testing allows us to examine the internal and logic and paths of the function. This allows us to create and design test cases that are able to target different branches and conditions within the code, which will ensure comprehensive coverage and better handling of edge cases and potential issues. The reason why whitebox test cases may appear more are when dealing with complex logic, error handling, coverage metrics, and performance optimization.

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

The purpose of the automation hook for GIT is that it ensures that certain standards, tests, or even procedures are to be followed consistently by all developers that are working on the project. The pre-push hook suggested in milestone 4 is able to validate files against specific criteria before they are added to an online repository. The automation hook for GIT can improve the quality of the software in the project by enforcing standard, for example if any code does not meet the defined standards, the push will be rejected, which will force the developers to review and make changes to their code. The automation hook for GIT is able to prevent errors. It will act as a net that is able to catch potential mistakes or issues which will help avoid situations where wrong or incomplete code gets into the shared repository.