# **MILESTONE 5** -- 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**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Members Present**:

|  |  |
| --- | --- |
| 1.Duc Phu Nguyen | 4. |
| 2. Jashandeep Singh | 5. |
| 3. | 6. |

## Milestone 5 Tasks

In this milestone, you should write, implement, and execute integration tests. Integration tests test how multiple functions work together to complete a task. Depending on what is being tested, you might be able to write unit tests to do the testing and automatically compare the results. In other cases, you might need to manually check the output to check it. This will all be stated in the tests where it discusses how they should be run.

As you update the function-test matrix, you will need to add a very brief description for each integration test so the matrix will clearly show what the tests are testing. Acceptance tests will be tested against actual user requirements and will list all the tests for each requirement.

Acceptance tests are the final tests and are largely aimed at showing the customer that the correct output is produced for different inputs. This will largely require manual testing.

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

* Integration tests document stored in repository with at least 4 sets of distinct test cases (each case must have at least 4 distinct test data).
* Integration tests coded (store in repo), executed (results in Jira and in test documents) and debugged.
* Finish implementing/coding whitebox tests. Store in repo, executed, results in Jira (and on corresponding test documents, and debugged.
* Acceptance tests written and stored in repository.
* Updated requirements traceability matrix stored to 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** | Integration test case document (well written, complete, good test data) | 10% |
| Integration test code (well designed and documented) | 10% |
| Finish coding all functions and main (well-designed, written, and documented) | 10% |
| Finish coding blackbox and whitebox cases (well-designed, written, and documented) | 10% |
| Acceptance tests (well-designed, written and documented) | 5% |
| Requirements traceability matrix updated | 5% |
| Test execution (performed, results recorded, issues created) | 10% |
| Debugging (bugs fixed, documented, Jira updated) | 10% |
| Git usage (used properly with good structure) | 5% |
| Jira usage (creates issues, tracks progress) | 10% |
| Scrum report & reflections | 15% |
| **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** |
| **Duc Phu Nguyen** | **Completed unit test white box** |  |
| **Duc Phu Nguyen** | **Update traceability matrix** |  |
| **Jashandeep Sungh** | **Reflection , updated Unit test** |  |
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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** |  |
| **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 |
| Duc Phu Nguyen | **How we create integration in UnitTest** |  |
| Duc Phu Nguyen | **How to arrange** |  |
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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 |
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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? |
| Duc Phu Nguyen | **Create another function to get edge point** | **2 hrs** |  |
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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 |
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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 |
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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 |
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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 |
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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. At this point, you are using the GIT hook to automate testing. Have you found that any of the tests failed and prevented you from pushing your code to the repository? If so, how did you handle the situation?

In some cases, test failures have stopped code from being pushed to the repository because of the automated testing of the Git hook software. This happened as a result of codebase modifications that created problems and caused test cases to fail.We took a methodical approach to fixing this issue so that the code would continue to be stable and functioning. To find the source of the problem, we first thoroughly examined the test cases that failed. After determining the issue, we changed the code as needed to fix the problems and guarantee that the test cases succeeded. We made the necessary adjustments, executed the test cases, and verified that each one was successful before pushing the new code to the repository.

1. Explain why we are automating the testing process and what the advantages of this automation are.  
     
     
   Firstly , automating the testing process enhances efficiency by speeding up testing and ensuring consistency, thereby avoiding repetitive test executions and making it more cost-effective to meet project deadlines. In additionally, It helps increase test coverage, enabling the early detection of bugs and improving software quality. Furthermore, automation supports agile practices, aligning with development and continuous integration. Last but not least, automated tests are more accurate than manual testing, eliminating user input errors, and can scale effectively to handle complex scenarios. In general, automated testing enables the fast delivery of high-quality software with greater reliability and confidence.
2. Did you find the integration and acceptance tests more difficult to write than the black box and white box tests? If so, why were they harder to write? Did you write more white box and black box tests or more integration and acceptance tests?

Integration and acceptance tests can be more challenging to write than black box and white box tests mainly because they require testing the interaction between multiple components or systems. This can make it more difficult to isolate and debug issues. Integration tests require testing the interactions between different components, while acceptance tests are used to confirm that a system meets the requirements and specifications. The difficulty of writing integration and acceptance tests can also depend on the level of documentation and communication between teams. If the requirements and specifications are not clearly defined, it can be more difficult to write effective tests. We wrote more white box and black box tests than the integration and acceptance tests.

1. Explain why it is necessary to write integration and acceptance tests given that all of the code has already passed black box and white box tests.

While black box and white box tests are important for ensuring that individual components of the code function correctly, integration and acceptance tests are necessary to verify that all of these components work together as expected and meet the requirements of the system as a whole. Integration tests check for interactions between different modules or systems, while acceptance tests ensure that the system meets the expectations and needs of the end-users. By conducting these tests, we can identify any issues or bugs that may arise from the integration of components and address them before the final product is released. In short, integration and acceptance tests are crucial to ensuring the overall functionality and usability of the system, even if the individual components have already passed black box and white box tests.