Dear Professor Diab,

We are Group 3 from NAA, and we would like to provide some explanations regarding our Milestone 6.

Due to the tremendous efforts of all members in our group, we had already completed all the debugging and testing by the time we finished Milestone 5. We understand that testing alone does not prove that our software is entirely correct and flawless. However, we have done our utmost to identify and fix all the bugs within our capabilities, ensuring that our testing results are correct. It is for this reason that we were able to complete some of the tasks required for Milestone 6 during Milestone 5. When we asked you in class whether finishing the Milestone 5 tasks ahead of schedule would result in the loss of corresponding points for Milestone 6, you mentioned that it wouldn't, and you encouraged us to explain this in the Scrum report.

Below is a list indicating which tasks were completed during Milestone 5 and which ones were left for Milestone 6:

|  |  |
| --- | --- |
| Updated test matrix | MS5 |
| Final test report | MS6 |
| Test Execution (performed, results recorded, issues created) | MS5 |
| Debugging (Bugs fixed, documented, Jira updated) | MS5 |
| Git Usage (used properly with good structure) | MS5 & MS6 |
| Jira Usage (creates issues, tracks progress) | MS5 & MS6 |
| Meets Deadlines | MS5 & MS6 |
| SCRUM Report & reflections | MS6 |

If you have any questions about the above content, please feel free to reach out to any member of our group.

Finally, we want to wholeheartedly express our profound gratitude for the invaluable knowledge you have shared with us throughout this semester. This course has been an incredible source of growth and learning for us, and we genuinely appreciate the impact it has had on our academic development and professional career.

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All members of NAA Group 3

# –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.

**GROUP**: \_\_\_\_\_3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Members Present**:

|  |  |
| --- | --- |
| 1. Chang Cui | 4. Xiaofei Xu |
| 2. Lok Yin Tai | 5. Xinyang Wu |
| 3. Siu Man Cheng | 6. Ye Tian |

## Milestone 6 Tasks

This is the final milestone where you will run the acceptance tests and fix any remaining bugs found. In addition, you will produce a testing report which lists all the tests conducted, the results and whether the bugs were fixed, and the final test passed. You will also review the test matrix to ensure every test has been performed and passed. You can change the colour of the test in the matrix to show it was run and passed. At the end, all tests in the matrix should have been passed.

The final test report can be tabular like this:

|  |  |  |  |
| --- | --- | --- | --- |
| Function/acceptance/requirement | Test Run | Bugs Fixed | Passed |
| Input validation | I1003 | Did not handle edge values | 🗹 |
| Find Possible Truck | I2006 | Did not handle normal shipment on yellow line | 🗹 |
| Find Route for Truck | I3001 | Did not find available truck | 🗹 |
| Find Best Route | I4001 | Did not handle edge case | 🗹 |

**Deliverables Due at end of Lab:**

* SCRUM Report and reflections

**Deliverables Due at 23:59 4 Days after Lab:**

* Execute acceptance tests(results in Jira), and debug.
* Updated function-test matrix stored to the repository.
* Final Testing report listing tests conducted, bugs fixed and the final test passed.

**Rubric**

|  |  |  |
| --- | --- | --- |
| Individual | Group Participation | 75% |
|  | Teamwork | 10% |
|  | SCRUM Report & reflections | 15% |
| Group | Updated test matrix | 20% |
|  | Final test report | 20% |
|  | Test Execution (performed, results recorded, issues created) | 10% |
|  | 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 & reflections | 30% |

**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.

|  |  |  |
| --- | --- | --- |
| **Member** | **Tasks Completed** | **Tasks Delayed/Blocked** |
| **Chang Cui** | Reflection question 3  Jira Board Management  GitHub Repository Management | N/A |
| **Lok Yin Tai** | Test Report  Jira Board Management  GitHub Repository Management | N/A |
| **Siu Man Cheng** | Reflection question 1  Jira Board Management  GitHub Repository Management | N/A |
| **Xiaofei Xu** | Scrum Report and Reflection question 2  Jira Board Management  GitHub Repository Management | N/A |
| **Xinyang Wu** | Test Report  Jira Board Management  GitHub Repository Management | N/A |
| **Ye Tian** | Reflection question 4  Test Report  Jira Board Management  GitHub Repository Management | N/A |

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**.**

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

**Summary of Meeting:**

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

|  |  |  |
| --- | --- | --- |
| Topic | Discussion Summary | Outcome |
| Review on last week work | The team reviewed the work and difficulties from the previous week. The team provided comments to help each other. | Identified areas for improvement and appreciate each other. |
| Improvement base on professor comment and grading | Read the comments and feedback from the last milestone and discussed how to get better outcome in the coming works | Agreed to spend much time on reflection and ask professor to get some suggestions. |
| Discussion on MS6 task distribution | The team discussed the tasks required for Milestone 6 and divided the tasks evenly. | The tasks are assigned to each team member by random drawing. |
| Knowledge sharing on milestone 6 tasks | The team discussed the requirements and expectations for each task. | All agreed with the same direction to continue the works |
| Deadline discussion | The team discussed the dependencies between each task and determined the due dates for each member. | All team members agreed with the due dates and ensured the high-quality completeness of MS6. |

**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.

|  |  |
| --- | --- |
| Decision | Rationale |
| Tasks are divided into 6 parts based on workload | Fair distribution of work among team members. Ensured the tasks are finished with high efficiency and productivity. |
| Task distributed using random dice game | Fair and unbiased method in work division |
| Clarified the milestone deliverables and document to be submitted | Understanding of MS6 requirements and the whole project requirements are again emphasized, preventing misunderstandings. |
| Set up a due date for team documents review and feedback | Reserved a buffer period for reviewing and providing feedback on team documents, promoting timely progress and improvements. |
| Established a clear goal to achieving high grading and submit quality deliverables in this milestone | Ensured everyone is focusing on delivering high-quality work, aligning with project objectives and expectations. |

**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.

|  |  |  |  |
| --- | --- | --- | --- |
| Member | Task Attempted | Time Spent | Complete? |
| Chang Cui | Reflection question 3  Jira Board Management  GitHub Repository Management | 3 hours  10 mins  10 mins | Yes |
| Lok Yin Tai | Test Report  Jira Board Management  GitHub Repository Management | 3 hours  10 mins  10 mins | Yes |
| Siu Man Cheng | Reflection question 1  Jira Board Management  GitHub Repository Management | 3 hours  10 mins  10 mins | Yes |
| Xiaofei Xu | Scrum Report and Reflection question 2  Jira Board Management  GitHub Repository Management | 3 hours  10 mins  10 mins | Yes |
| Xinyang Wu | Test Report  Jira Board Management  GitHub Repository Management | 3 hours  10 mins  10 mins | Yes |
| Ye Tian | Reflection question 4  Test Report  Jira Board Management  GitHub Repository Management | 3 hours  3 hours  10 mins  10 mins | Yes |

**Major Outcomes of Meeting:**

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

|  |  |
| --- | --- |
| Outcome | Impact on Project |
| Understand the correlation between tasks and due date for each part | Better planning and coordination, ensure everyone has enough time to work on their own tasks and clearly know what time the task should be finished. |
| Tasks for MS6 divided into six parts based on workload and difficulty | Fair work division, optimize productivity, individual contributions, and efficiency. |
| Agreed on making improvement based on MS5 professor comments | Improve upcoming works, aimed for better outcome. |
| Ensured individual parts concerns are addressed | Ensured the each group member is clear with the requirements and instructions, without worries or concerns. |
| Strive for quality work | Ensured the team are clear with goals of the project, strive for 100/100 for each work. |

**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.

|  |  |
| --- | --- |
| Topic/Work Item | Reason for Success |
| Understanding of individual parts and the dependencies of each part | Ensured every member fully understood the correlation between tasks and agreed with the assigned tasks and individual due dates. |
| Fair workload and tasks rotation for MS6 | Every member agreed with the fairness on task division, and the work rotated between members. |
| Establish the same goal and objective on high quality submission | Ensured every member agreed with the objective in finishing the project and aimed at a high-quality submission, so everyone can be responsible for the individual’s part. |
| Active problem solving and knowledge sharing | Encouraged teamwork and problem-solving, maintain good team collaboration by using tools, like Jira and GitHub. |
| Efficient communication | Each group member actively participated in group meeting and freely share opinions. |

**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*.

|  |  |
| --- | --- |
| Topic/Work Item | Reason for Problem and How to do Better |
| N/A | The meeting went smooth, all tasks were well discussed. Each team members participated actively during the meeting. |

**Reflections**:

1. Although we wrote a report on the testing that shows which tests were run and passed or failed, we also updated the function test matrix. What are the advantages of updating the function test matrix in addition to writing the test report?  
     
   Test matrix provides an overview of all tests that have been executed and acts as a visual representation on test coverage by summarizing relationship with business requirements. There are several advantages to update the function test matrix when we are working on our project.  
     
   **Ensure test coverage** - Test matrix demonstrates the relationship between list of requirements and test cases, it is beneficial for our quality assurance team members to ensure comprehensive testing are conducted to cover all business or functional requirements. It helps our team to review and identify possible gaps in testing coverage at an early stage. In our test matrix, all requirements are associated with one or more test cases, so we are confident that every aspect of the functionality is thoroughly tested and verified.  
     
   **Easy to trace testing process** **and improve team collaboration** - Test matrix is effective to keep track of the test status and outcomes. With transparent test matrix data, collaboration between team members is improved while everyone can see which requirements are being tested and the associated test outcomes. This facilitates streamlined communication and coordination between team members. It also allows our quality assurance team members to do forward traceability to find the related tests or reverse traceability to figure out the associated requirements. For example, when a member logs an issue on Jira with test case identifier, we can look up the corresponding linkage and streamlines the tracking of testing progress.  
     
   In conclude, the test matrix helps ensuring test coverage, enhancing traceability, as well as improving quality by providing comprehensive overview to all project team members.
2. Teamwork on a project like this is vital to success. How well did your team work? If it worked well, what contributed to its success? If it did not work well, what contributed to the problems?  
     
   Our team worked on the project well since we have had a productive and collaborative

environment. Regular communication played an important role in our teamwork. We had group meetings once to twice a week, and our team members shared their insights freely and helped each other when needed. Everyone actively participates in function implementation, code reviewing and testing, providing feedback and identifying the potential issues.

In addition, we established clear roles and responsibilities, ensuring each group members knew what task should be done and the deadlines. Every week, after we finished our group meeting, we divided the weekly assignment into small tasks and assigned these tasks to each group member, so everyone could be responsible to her task.

GitHub and Jira also contributed a lot to our group work. Through using these two tools, we could check the project progresses, modification of history, and get the updated information from our group members. We could use Jira to add comment to each other, which also contributed on team communication and collaboration. In addition, when we were working on each milestone, every group member was hardworking and concentrated much on our teamwork. In this case, our group can work together well.

1. In every milestone you were asked what worked and did not work along the way. Were you able to incorporate what you learned to improving your team’s performance on the next milestone? Did your team learn from its mistakes and improve? If so, why? If not, why?

Throughout all six milestones, our team has consistently performed exceptionally well and achieved impressive results. However, we also firmly believe that nothing in this world is perfect, and so, honestly speaking, we must acknowledge that our team encountered some challenges along the way. In the early milestones, our task allocation was not very well-balanced. While we attempted to ensure fairness and equal distribution by randomly assigning tasks using dice rolls, it resulted in a lack of continuity in the tasks. For instance, one person might be responsible for writing function prototypes in one milestone, and in the next, they might be assigned to write test cases, and so on. We recognized the flaws in this approach.

Another issue was that, during the initial milestones, we relied solely on online communication tools for collaboration. Although each team member was actively participating, we found that the efficiency and effectiveness of our communication were not ideal. As the project's difficulty increased, we swiftly realized that online communication and meetings alone were insufficient. Consequently, we promptly agreed to make adjustments and decided to hold numerous weekly face-to-face meetings.

During these meetings, we collectively discussed code modifications, test case strategies, and test code implementation. The outcome was a significant improvement in our team's efficiency. What used to take a considerable amount of time to discuss during online meetings was now resolved swiftly through face-to-face interactions. After several face-to-face meetings, we witnessed remarkable progress.

Our team demonstrated the ability to recognize the limitations of our existing communication methods and promptly adjusted our approach, leading us to achieve satisfying results. We are incredibly proud of our outstanding team that not only identifies issues but also quickly learns from mistakes and strives to improve. This adaptability and commitment to growth have been essential in our journey to success.

In conclusion, reflecting on our team's performance, we acknowledge that we faced challenges and made mistakes initially. However, we transformed these setbacks into opportunities for improvement. By learning from our experiences and adjusting our strategies, we evolved into a more cohesive and efficient team. We are excited about the progress we've made and look forward to continuing our journey as a team that embraces challenges and thrives on continuous improvement.

1. Did you end up testing the code to the point where you were convinced it worked correctly? Were there any tests that had not passed at the end? If so, what was the impact of this on the project?

Yes, but only limited to the portions tested so far, the code was thoroughly tested to ensure its correct functionality. Throughout the testing process, all 123 test cases were executed, and ultimately, all tests passed successfully. This comprehensive testing approach provided a high level of confidence that the code was functioning as intended. But there is no bug free code.

During earlier stages of development and testing, there were instances where some tests had not passed, indicating the presence of bugs or issues. However, these situations were addressed diligently, and the necessary fixes were implemented. The impact of these initial test failures was that they highlighted areas requiring improvement and refinement within the codebase. By identifying and rectifying these issues, the project was able to progress towards a stable and reliable state.

The process of identifying and resolving test failures not only contributed to the code's quality and reliability but also demonstrated the commitment to delivering a robust solution. Through continuous testing, debugging, and refinement, the team was able to ensure that the final product met the required standards and delivered the expected outcomes.

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