# **MILESTONE 2** -- 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**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Members Present**:

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| --- | --- |
| 1.Yatin Bawa | 4. Rehatpreet Kaur |
| 2. Muhammetyar Yarov | 5. Aayush Bhogal |
| 3. Nehmat Ladhar | 6. |

## Milestone 2 Tasks

Some of the software for the project has already been written for you and is available on Blackboard. You must use this in your project and every team should add it to the source code for their repository. Anything in the main function is simply for demonstration purposes and can be replaced. The software you are being given has not been tested and you will need to test it.

You need to study the problem and the code provided for you and then:

* Add any new data structures you will require This will require a thorough analysis of the problem and the existing software. This should be done by creating a new header file in the directory where the rest of the source code has been placed. You do not want to go back and modify it later if you can avoid it as it will slow the project.
* Create a test plan for the project by replacing the text in the supplied test plan template with your test plan.

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

* An analysis of the problem (no written artifacts produced).
* A series of data structures created as header files and stored in the repository.
* A test plan 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** | Data structures (complete, correct, and well-designed, & project updated) | 20% |
| Test plan (complete, well-written) | 20% |
| Git usage (used properly with good structure) | 10% |
| Jira usage (creates issues, tracks progress) | 15% |
| Scrum report & reflections | 25% |
| Meets deadlines | 10% |

**Scrum Report**

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

Here you can list all 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** |
| Yatin Bawa | * **Added tasks to Jira** * **Created data structures as header file and added to repository** * **Reviewed all the tasks and helped in making any necessary modifications/changes accordingly** | **-** |
| Muhammetyar Yarov | * **Completed Group contract** * **Participated in dicussion of scrum report and reflect questions** | **-** |
| Nehmat Ladhar | * **Completed Test plan** * **Worked on reflect question 1** * **Participated in discussion of scrum report** | **-** |
| Rehatpreet kaur | * **Completed scrum report** * **Participated in dicussion of scrum report and reflect questions** | **-** |
| Aayush Bhogal | * **Worked on reflect question 2 and 3** * **Participated in discussion of scrum report** | **-** |
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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 discussed in the meeting and the outcomes of the discussions.

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| Topic | Discussion Summary | Outcome |
| Getting started with the milestone | **Reviewed the milestone, assigned tasks to the team members and discussed the approach to solve the tasks.** | **Deadlines and tasks assigned to the team mates.** |
| Discussion about the test plan | **Discussed together as group all the potential approaches to solve the the given problem and finally prepared a test plan.** | **Finalization of the test plan** |
| Disussion about the best possible Data Structure and reflection questions. | **Discussed all the possible data structures that could solve our problem and concluded our meeting by selecting the most efficient data structure among them. Discussed the reflect questions.** | **Figured out possibly, the most efficient data structure to solve the given problem.** |
| Completing the Scrum | **Discussed and documented the Scrum report** |  |
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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 |
| Members to start working on the assigned tasks with clear instructions. | Success |
| Framework for the test plan ready to start working on | Success |
| Finalizing the data structure to be used, skeleton answers to the reflect questions. | Success |
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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 cannot be completed, the student should indicate why this was not possible.

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| Member | Task Attempted | Time Spent | Complete? |
| Yatin Bawa | **Made the header file, Participated in answering the reflect questions and completing the scrum report** | **1 hr** | Yes |
| Muhammetyar Yarov | **Completed the group contract, Participated in answering the reflect questions and completing the scrum report** | **1 hr** | **Yes** |
| Nehmat Ladhar | **Documented the test plan, Contributed in making the header file, Participated in answering the reflect questions and completing the scrum report** | **1.5 hr** | **Yes** |
| Rehatpreet kaur | **Contributed in preparing the test plan and data structure, Participated in answering the reflect questions and completing the scrum report** | **1hr** | **Yes** |
| Aayush Bhogal | **Contributed in preparing the test plan and data structure, Participated in answering the reflect questions and completing the scrum report** | **1 hr** | **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 |
| Yatin Bawa | Assigning tasks on Jira, analyzing milestone and contribution the disussion of testplan and reflect. |
| Muhammetyar Yarov | Analyzing milestone and contribution to the disussion of testplan and reflect. |
| Nehmat Ladhar | Analyzing milestone and contribution to the disussion of testplan and reflect. |
| Rehatpreet kaur | Analyzing milestone and contribution to the disussion of testplan and reflect. |
| Aayush Bhogal | Analyzing milestone and contribution to the disussion of testplan and reflect. |
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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 |
| Test Plan prepared | **Can start working on data structures** |
| Data structure finalized | **Can start working on reflect and scrum report** |
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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 |
| Framework for Test Plan prepared | **Team work** |
| Data structure finalized | **Team contribution** |
| Completion of reflect quesitons and Scrum Report | **Group Participation** |
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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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**Reflection Questions:**

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

1. In this milestone you have been asked to analyze a problem and design software (functions) to complete the solution without writing the software.
   1. Is this process more difficult than just writing the software to complete the project? If so, why is it more difficult? If not, why is it easier than just writing the software?

According to us, the process of analysing a problem and designing software functions is more challenging because of the following reasons :

1. **Conceptual Thinking:** Developers need to tackle the problem conceptually in the design phase. They need to consider potential issues, dependencies, and interactions between various system components. This can be challenging since it makes it necessary to form a mental picture of the solution without the real code in place.
2. **Time Consuming :** Before actually developing any code, it is necessary to fully comprehend the requirements and the problem. Developing this expertise of analyzing a problem may be time-consuming and challenging.

3**. Important architectural choices** that will affect the project as a whole must be made by developers at the design stage. The correct technologies must be selected, the system's structure must be established, scalability and maintainability must be planned for. This stage of the project is crucial to its success since poor architectural decisions can many consequences in the long run.

* 1. Describe two advantages of developing software in this manner rather than just moving on to writing the functions without writing specifications first.

Advantages of developing software through careful analysis and design, instead of immediately writing functions without proper specifications are as follows :

1. **Reduced Errors** : When software development begins with careful planning and analysis, the probability of misunderstandings and making mistakes is greatly decreased by these clear instructions.

2. **Maximised Resource allocation:** Project managers may more efficiently manage human resources, time, and money if they have a clear plan in place from the start of the design process. This effective resource management guarantees that the project stays within budgetary restrictions, meets timetables, and stays on course.

3**. Simplified Development:** The design stage provides a planned, organised approach to development. This reduces delays brought on by uncertainty, scope changes, or unforeseen difficulties while actually writing the code. It results in increased productivity and teamwork.

1. Why is it a good idea to create a test plan? Describe at least 3 advantages of test plans.

Creating a test plan is a critical component of the software development lifecycle, and it is critical for ensuring that the final product meets the necessary quality requirements. The following are three advantages of having a well planned test plan:

1. **Improved Quality:** A test plan serves as a blueprint, describing the testing scope, objectives, and procedures to ensure thorough coverage of all parts of the product. This rigorous approach is critical in evaluating the product's functionality, usability, and dependability, resulting in increased customer satisfaction.
2. **Risk Anticipation:** A test strategy allows teams to address vulnerabilities before they worsen by indicating possible issue areas. This not only speeds the development process, but also protects end-users from important faults that may otherwise ruin the product's reputation and incur additional expenditures.
3. **Optimized Resource Utilization:** A structured test plan allows for the strategic allocation of resources, be it time, manpower, or tools. It establishes a clear timetable and assigns duties to ensure that the testing phase proceeds smoothly and without needless delays or resource waste. This structure is essential for keeping project timetables and finances on track, allowing for a more efficient development cycle.
4. Describe the process you used to analyze and understand the existing software.

The process we used to analyze were as follows:

**Code Review**: Thoroughly studying the source code and crucial information about the programming logic, design patterns, and codebase. This examination was critical for understanding the working and processes of the program.

**Dependency Analysis:** I examined external libraries and header files to understand their integration and functioning inside the software, which is a critical step in ensuring that all components operate together.

**Data Structure Analysis:** Understanding the role and manipulation of data structures inside the code was critical, since they are the building blocks that perform the main functionality of the software.

**Variable Walkthrough:** Following the variables line by line and their transformations throughout the code allowed for a more in-depth knowledge of the software's logic and operational flow.