# **Milestone 2 Scrum Report**

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

**GROUP**: \_\_\_\_\_\_\_\_\_\_\_\_\_5\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Members Present**:

|  |  |
| --- | --- |
| 1. Phuong Bac Nguyen | 4. |
| 2.shuja lashkari | 5. |
| 3. | 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, updated in the project, and added to the repository) | 25% |
| Test plan (complete, well-written) | 25% |
| Git usage (used properly with good structure) | 10% |
| Jira usage (creates issues, tracks progress) | 20% |
| Scrum report & reflections | 20% |
| **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 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** |
| **Phuong Bac** | * Added macros to the milestone source code and pushed to GitHub * 3 reflection questions * New data structures * Finished test plan * Git and Jira usage | * Miscommunication Causing Delays in Project |
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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** | Communication gaps are causing misunderstandings and delays, impacting team efficiency |
| **Impact on Project** |  |
| **Solution or work-around** | I've sent messages to our group chat and am waiting for a response. Looking forward to their input so we can move forward efficiently. |
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| **Delayed or Blocked Task** | **Shuja lashkari: I tried messaging 2 of our group members that have been inactive / not contributing to their part. We tried messaging them in WhatsApp and emailing them but they have don’t anything till now** |
| **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 |
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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 cannot be completed, the student should indicate why this was not possible.

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| Member | Task Attempted | Time Spent | Complete? |
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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 |
| Phuong Bac | Functions, test cases, Jira usage, Git usage, scrum report |
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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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**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 were asked to design the data structure for the project. Print the data structure below then explain each item.

Phuong Bac:

Structure for a shipment.  
- weight: The weight of the shipment in kilograms.  
- boxSize: The volume of the box in cubic meters (allowed sizes: 0.5, 2, or 5).  
- destination: The delivery destination on the map, represented as a struct Point from mapping.h.   
  
struct Shipment {   
 int weight;   
 double boxSize;   
 struct Point destination;   
};

Structure for a truck.

- type: Indicates the truck's route using the defined macros (TRUCK\_BLUE, TRUCK\_GREEN, TRUCK\_YELLOW).

- currentWeight: The current total weight of shipments loaded on the truck.

- currentVolume: The current total volume of shipments loaded on the truck.

- shipments: An array that holds all shipments assigned to this truck.

- shipmentCount: The number of shipments currently loaded in the truck.

Maximum number of shipments a truck can hold

#define MAX\_SHIPMENTS 50

struct Truck {

int type;

int currentWeight;

double currentVolume;

struct Shipment shipments[MAX\_SHIPMENTS];

int shipmentCount;

};f

Shuja Lashkari: The data structures we designed are the backbone of the project. The Shipment structure is straightforward—it holds the weight, size, and destination of each package. This way, we can keep track of what’s being delivered and where it needs to go. The Truck structure is a bit more complex because it handles the logistics. It stores the truck’s route, how much weight and volume it’s currently carrying, and a list of all the shipments assigned to it. The MAX\_SHIPMENTS macro is there to make sure we don’t overload a truck with more packages than it can handle. These structures make it easier to manage the delivery process and ensure everything runs smoothly. Without them, we’d be stuck trying to keep track of everything manually, which would be a nightmare

1. How did analyzing the project requirements and design before starting the coding process help you identify potential challenges or define a clear development strategy?

Phuong Bac:  
Analyzing the project requirements and designing before coding really helped me see what needed to be done. By studying the problem early, I was able to break it down into smaller parts like mapping, truck routes, and handling shipments. This made it clear what data structures were needed, such as the Truck and Shipment structures, and how they should work together. I also discovered potential challenges like managing truck capacity and planning delivery routes around obstacles. With this plan in place, I knew exactly where to start and could work on each part step by step. Overall, this initial analysis helped me avoid surprises during coding and made it easier to develop a clear strategy to tackle the project.  
  
Shuja Lashkari: Taking the time to analyze the project requirements and design before jumping into coding was really helpful. It helped me see the big picture and break the problem into smaller, manageable pieces. For example, I realized early on that we’d need to handle things like truck capacity, shipment details, and route planning. This made it clear that we’d need data structures like Truck and Shipment to keep everything organized. I also spotted some potential challenges, like making sure trucks don’t get overloaded and finding the best delivery routes while avoiding buildings. By addressing these issues upfront, I was able to create a clear plan for how to approach the coding. It saved me a lot of time later because I knew exactly what needed to be done and in what order. Plus, it gave me confidence that I wasn’t missing anything important.

1. How did creating a test plan help you ensure comprehensive test coverage for the project? Reflect on how defining objectives, scope, and test cases in advance influenced the effectiveness and efficiency of your testing process.

Phuong Bac:  
Creating a test plan helped me cover all parts of the project. I defined clear test objectives, which meant I knew exactly what needed to be tested, like mapping, shipment handling, and truck capacity. By setting the scope early and listing test cases, I was able to catch potential issues before they became big problems. This planning made the testing process more effective because I didn’t miss any important parts, and it helped me work more efficiently by focusing on each area step by step. In short, having a test plan meant I was well-prepared, which saved time and made the final project much more reliable.  
  
Shuja Lashkari: Creating a test plan was one of the most helpful things we did for this project. It forced me to think about all the different parts of the system that needed testing, like the Truck and Shipment structures, the pathfinding algorithm, and edge cases like oversized packages or invalid destinations.