



Sarawak Campus

## Assignment Cover Sheet for Undergraduate Programs

(for individual and group assignments)

This cover sheet is to be attached to all assignments, both hard copy and electronic format



### ASSIGNMENT DETAILS

Unit Code SWE20001 Unit Title Development Project 1 - Tools and Practices  
Tutorial/Lab Group  Lecturer/Tutor Name Dr Bee Theng Law  
Assignment Title Portfolio  
Due date 31/05/2019 Date Received

### DECLARATION

To be completed if this is an individual assignment

I declare that this assignment is my individual work. I have not worked collaboratively, nor have I copied from any other student's work or from any other source/s, except where due acknowledgment is made explicitly in the text, nor has any part been written for me by another person.

Student Details	Student ID Number	Student Name	Student Signature
Student 1	<u>101212783</u>	<u>Aldalton Choo Chien Khin</u>	

To be completed if this is a group assignment

We declare that this is a group assignment and that no part of this submission has been copied from any other student's work or from any other source except where due acknowledgment is made explicitly in the text, nor has any part been written for us by another person.

Student Details	Student ID Number(s)	Student Name(s)	Student Signature (s)
Student 1			
Student 2			
Student 3			
Student 4			
Student 5			

### MARKER'S COMMENTS

Total Mark

Marker's Signature

Date

### EXTENSION CERTIFICATE

This assignment has been given an extension by

Unit Convenor

Extended due date

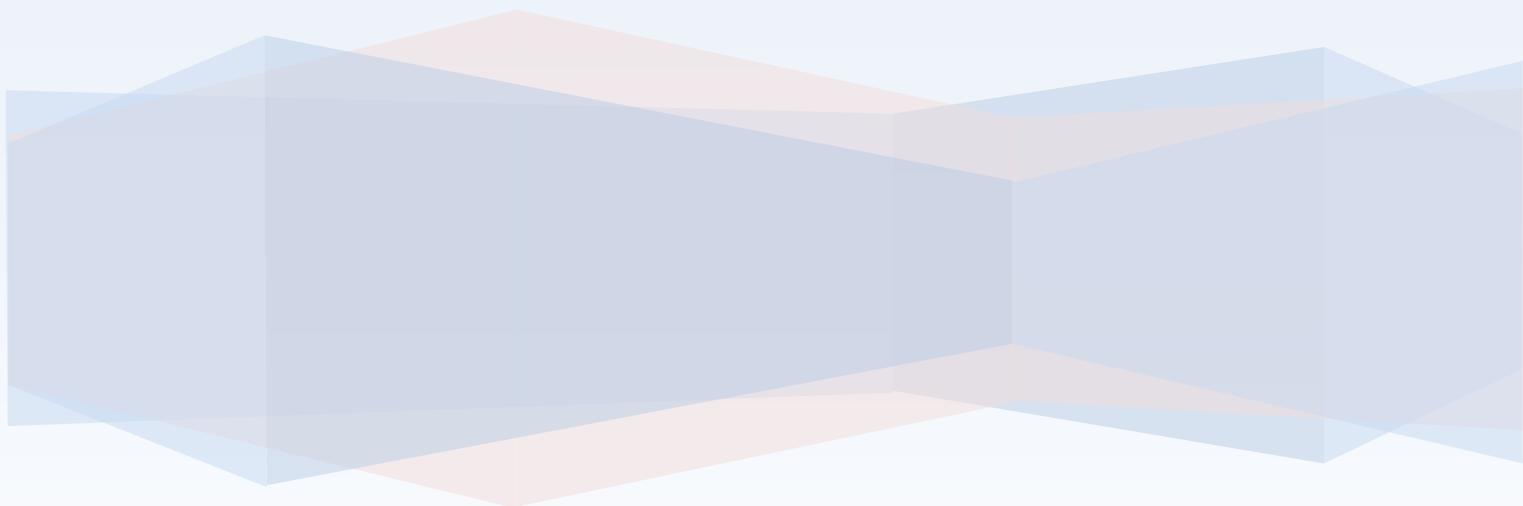
Date Received

# SWE20001 – Development Project 1: Tools and Practices

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*Learning Summary Report*

Aldalton Choo Chien Khin (101212783)



## Self-Assessment Details

The following checklists provide an overview of my self-assessment for this unit.

	Pass (D)	Credit (C)	Distinction (B)	High Distinction (A)
Self-Assessment (please tick)		✓		

### *Self-assessment Statement*

	Included (please tick)
Learning Summary Report	✓
All Pass Tasks signed off in Doubtfire	✓

### *Minimum Pass Checklist*

	Included (please tick)
Pass Tasks done, and Progress on Credit Tasks	✓
All Pass Tasks signed off in Doubtfire	✓

### *Minimum Credit Checklist, in addition to Pass Checklist*

	Included (please tick)
Credit and Pass Tasks done, and Progress on Distinction Tasks.	
One or both of the Final Project reports - meeting Distinction standards	
Final Project meets Distinction criteria	

### *Minimum Distinction Checklist, in addition to Credit Checklist*

	Included (please tick)
All Tasks (P/C/D/HD) signed off in Doubtfire	
Portfolio consisting of research report (if applicable), and associated pieces	
At least two of the three reports (the Final Project reports + Research report) - meeting High Distinction standards	
Final Project meets High Distinction requirements	

### *Minimum High Distinction Checklist, in addition to Distinction Checklist*

## Declaration

I declare that this portfolio is my individual work. I have not copied from any other student's work or from any other source except where due acknowledgment is made explicitly in the text, nor has any part of this submission been written for me by another person.

Signature: \_\_\_\_\_



## Introduction

This report summarises what I learnt in SWE20001 Development Project 1 – Tools and Practices. It includes a self-assessment against the criteria described in the unit outline, a justification of the pieces included, details of the coverage of the unit's intended learning outcomes, and a reflection on my learning.

## Overview of Pieces Included

This section outlines the pieces that I have included in my portfolio...

1. Pass task 1
  - Pass task 1.1: Team Formation and To Do Process
    - I was asked to find 2 other friends to make a group and complete the task given in the lab as a group
  - Pass task 1.2: Slack
    - I was asked to try slack for the first time with my group members
  - Pass task 1.3: Team Scenario Discussion
    - My group was given a few scenarios and we were asked to discuss together on how we would provide a solution to each scenario
2. Pass task 2
  - Pass task 2.1: Version Control with Git
    - We were asked to use GitHub to store the card game that was given to us to be fixed and enhanced.
3. Pass task 3
  - Pass task 3.1: Wikis and Design Documents
    - We were asked to create a wiki page on GitHub about the chess game that we were planning to make.
4. Pass task 4
  - Pass task 4.1: Battleship Project Meeting
    - We were asked to have our first meeting for the Battleship project where we had to find a way to convert the Battleship VB Code to C# code
5. Pass task 5
  - Pass task 5.1: Battleship Project Meeting
    - We were asked to have our second meeting for the Battleship project where we split the task to convert, document and test the battleship code if it is working as intended. We were asked to use Trello to manage the tasks and Toggl to track the amount of time we spend on the Battleship Project.
6. Pass task 6
  - Pass task 6.1: Battleship Sprint
    - We were asked to have our first sprint for the Battleship project. We were asked to conduct daily scrum meeting to check up on each other's progress for the Battleship project by using Slack.

**7. Credit task 6**

- Credit task 6.2: System Modelling
  - We were asked to design a domain model, explain what models in software development project are, explain what common and domain vocabulary is, design a UseCase, design a Class Diagram based on the scenario given and design an Activity Diagram based on the UseCase that we designed.
- Credit task 6.3: Version Control
  - In this task we were asked to research what is version control and discuss about the various version control available and how are they different amongst each other. We were then asked to explain how does version control work. Lastly, we were asked to compare 3 different version control software and state each of their advantages and disadvantages

**8. Pass task 7**

- Pass task 7.1: Sprint Retrospective
  - We were asked to have our first Sprint Retrospective as a group for the Battleship project where we looked back on our first battleship sprint and discussed what can be added to enhance the Battleship game and search for any problems or mistakes during the sprint and reflect on them.

**9. Pass task 8**

- Pass task 8.1: Battleship Sprint 2
  - We were asked to conduct our second sprint for the battleship project where we discussed about what can we improve more on the battleship project since most of the bugs are solved. We then split the tasks evenly and conducted daily scrum meetings on slacks to check on each other's progress.

**10. Pass task 9**

- Pass task 9.1: Sprint 2 Retrospective
  - We were asked to have our second Sprint Retrospective as a group for the Battleship project where we looked back on our second battleship sprint discussed what can be added to further enhance the Battleship game and search for any problems or mistakes during the sprint and reflect on them.

**11. Pass task 10**

- Pass task 10.1: Unit Testing
  - For part 1 of the task we were asked to conduct a unit testing based on the function given to us and fix the function accordingly to meet the expected outcome of the unit testing method. For part 2 of the task, we were asked to create a unit testing method for the Battleship project to make sure each function is working as intended and if any bug is found during the unit testing we were asked to fix it.

## Coverage of the Intended Learning Outcomes

This section outlines how the pieces I have included demonstrate the depth of my understanding in relation to each of the unit's intended learning outcomes.

### ILO 1:

*Explain the lifecycle of a software development project, and describe associated objectives of different activities.*

The following pieces demonstrate my ability in relation to this ILO:

- Pass Task 4.1: In this task we were asked to have our very first meeting for the battleship project where we had to plan and discuss ways to convert the Battleship from VB code to C# code. I believe this task helped me to achieve ILO 1 because planning is part of the early stages of a software development project lifecycle and I believe the aim for this activity is to provide a backbone for the project so that we can carry on our next software development stage as planned.
- Pass Task 7.1: In this task we were asked to have our very first sprint retrospective after our first sprint process for the battleship project. This task has help me to achieve ILO 1 because this activity basically marks that my groupmates and I are in the middle stages of a software development project lifecycle. I believe this the aim of this activity is to ensure that my groupmates and I reflect on the changes that we have made on the battleship project and make sure that everything done up till now is according to plan.
- Pass task 10.1: In part 2 of this task, I was asked to create a unit testing method for any function of the battleship project to make sure that it is working as intended. This task has help me to achieve ILO 1 because this activity indicates that the battleship project lifecycle is almost reaching its end. I believe the aim of this activity is to test out the battleship project to make sure that it meets the objectives of the battleship project and the battleship project can run with zero bugs.

## ILO 2:

*Apply techniques to analyse, document, extend, and test an existing software solution.*

- Pass task 3.1: In this task I was asked to create a wiki page on GitHub with my groupmates about the chess game that we were planning to make. This task helped me to achieve ILO 2 because it has taught me to analyse how the chess game should work and then document the result on the GitHub wiki page like the purpose of the chess game, the function of the chess game and so on. My groupmates and I also included a list of extension that we can add to the chess game on the wiki page.
- Pass task 4.1: In this task my groupmates and I are asked to analyse the battleship project given to us and find ways to convert the battleship project from VB to C# code. This task helped me to achieve ILO 2 because it has taught me how to analyse the battleship project to find if it has any bugs, any functionality missing and so on. This task also taught me how to document the result of our findings as we created a wiki page and stored the list of bugs and functionality missing on the wiki page.
- Pass task 10.1: In this task I was asked to create a unit testing method to test any function in the battleship game to see if the specified function is working as intended. In this task I was given two different choices to test for the battleship project either use the Xamarin IDE or the Visual studio IDE and I decided to go with Visual Studio because it is the only IDE I have on my personal computer. I had no idea how to do unit testing on this version of Visual Studio because it is the 2019 version as to compared to the one in the university's open lab which is 2010. So, I had to do my own research on how to conduct unit testing on the Visual Studio 2019 version and because of this I learned a new technique on how to conduct testing on the battleship project as I managed finish the pass task 10. This is the reason why I think this task has helped me achieved ILO 2.

## ILO 3:

*Utilise contemporary software development tools for version control, issue tracking, documenting software designs, and unit testing; and explain their role in a software development project.*

- Credit task 6.3: In this task I was asked to write a report on the various version control systems available in the market. I believe this task has help me achieved ILO 3 because I had to conduct various research on the web about what version control is for example there are 2 types of version control which is centralized version control system and distributed version control system. Other than that, while conducting my research for the report about version control, I learned that version control plays an important role in a software development project as it helps to keep track of issue tracking because every time someone commits a certain changes to the repository there is a time stamp stating when is it committed and this is really beneficial to a software development team. Another reason why version control plays an important role in software development is because it helps to prevent merge conflicts to happen and this in return will help save the software development team a lot of time and money trying to fix the merge conflict.
- Pass task 6: In this task my groupmates and I were asked to conduct a sprint process on the battleship project. This task has helped me achieve ILO 2 because we were asked to use Slack to conduct our daily scrum meeting. Slack plays an important role in our battleship project as it is our main communication method. During our scrum meetings, each member of our group would share with the team about what they have achieved for the day and if they have any issues with any part of the battleship project they can share it with the group and we will try to solve it together as group. Slack has made issue tracking a non-issue during the battleship project for my group as it keeps a timestamp of when a message is sent and every time an error appears we can just refer back to Slack to see who is responsible for the task that caused the error, and this helped save time to fix the error.

**ILO 4:**

*Apply and use tools and techniques to work effectively as a member of a software development team and reflect upon group work experience.*

- Pass task 8: In this task we were asked to do the second sprint process for the battleship project. This task helped me achieve ILO 4 because we were asked to use Trello to create a list of tasks that is needed to be done before this week's second sprint process is over. If the task has not started yet, then the card containing the task is put on the To-Do section and if someone is currently doing a task, then the card that contains that task will be put into the Doing section. Once someone is done with a task, the card that contains the task will be moved to Done section. This has helped working as a team in the battleship project much more effective as everyone in the group won't mix up the task given to them. Trello also helped me to work effectively as a member of the battleship project by helping me not waste time doing a task that is currently being done by someone. The reason for this is because when I see a task on the Doing section, I won't bother with it instead I will take a different task from the To-Do section where clearly all the task on that section has not been started yet.
- Pass task 9: in this task we were asked to do the second sprint retrospective for the second sprint process conducted in week 8. This task helped me achieve ILO 4 because we were asked to discuss as a group and mention our experience working with each other during the second sprint process. Through sprint retrospective 2, we were also able to reflect about what task that we have done and contributed individually to the battleship project and try to improve the on the mistakes that each of us has discovered about ourselves during the second sprint. Other than that, through the second spring retrospective we were able to reflect upon the extensions that we have added to the battleship project and come up with new ideas about what type enhancements or improvements can be further added to battleship project and this helped us to work with each other more effectively as brainstorming together is much better than doing the brainstorming for new ideas alone.

## Reflection

### The most important things I learnt:

The most important things that I have learned from this unit is about how to work together as a team. This unit has taught me about how important it is to communicate with your teammate and rely on them as they can help you in the areas that you are weaker in. Other than that, this unit has taught me the importance of writing a proper documentation for your code. This is important because it helps other people to have a much easier time to understand the code you are writing and help them understand it better. This unit also taught me about the importance of version control and why we need it as a software development team. Version control is important because it helps a software development team to avoid merge conflicts. Version control also allows two or more developers to work on the same project at the same time which helps save time and cost when working on a project. Overall, I am satisfied with what I have learnt from this unit and all the expectations that I have for this unit has been met.

### The things that helped me most were:

One of the things that helped me the most were online resources. Websites like google, Stack Overflow and Reddit has helped me out a lot when I have trouble understanding a concept or when I have trouble fixing the errors in my code. The community on Reddit and Stack Overflow has been friendly and supportive and would always answer the questions that I posted up on the websites. Other than that, my lecturer for this unit which is Dr Lau has helped me out a lot when I have trouble with this unit. She would always answer the questions that I present to her about the unit in a manner that I can understand easily and for this I am grateful for all the help that Dr Lau has provided to me. Other than that, my friends are also one of the things that helped me when I have trouble with this unit. They would always answer my questions regarding this unit and help me to improve the areas that I am weaker in for this unit.

### I found the following topics particularly challenging:

One of the topics that I found particularly challenging is the topic about version control system. I find it challenging because there is a lot to read and understand about version control as there are different types of version control systems and each has their own advantages and disadvantages. Other than that, merge conflict is also a topic that I find difficult because I am not familiar with the ways to fix merge conflicts as this is my first-time using Git Hub to store a group project.

### I found the following topics particularly interesting:

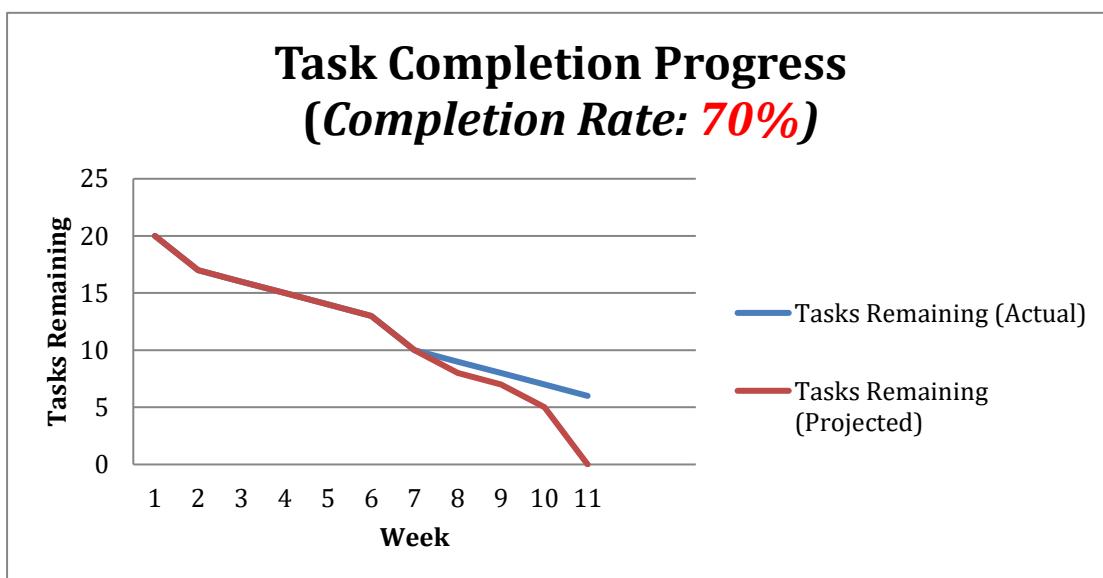
One of the topics that I found particularly interesting is unit testing. I found this topic interesting because I think it's a more convenient way to test the code that you are writing for any bugs or errors before releasing it to the public. Other than that, through unit testing I felt that I can understand better how a function in a code should work and discover new ways to manipulate the code so that it will function in the way I want. Another topic I found interesting is the sprint retrospective topic. This is because through sprint retrospective, I can recognize the mistakes that I have made during the sprint processes and able to receive feedbacks from my teammate on what they think I should improve on and so on. I believe through the sprint retrospective process it can help me to improve as a software developer and as a person overall.

**I feel I learnt these topics, concepts, and/or tools really well:**

I feel like I learnt the topic version control well because I have been using Git Hub since week 2 to store projects that me and my teammates have been doing work on like the Battleship project that was given to us on week 4. We were asked to convert the VB version of the battleship code to C#, fixed the bugs found after conversion and improve the Battleship game. All progress or changes made to the Battleship project individually is pushed to Git Hub with comments stating who did what changes so that we can keep track on each other's work. Through this process, I have learnt about network graphs which basically shows who is doing work on which repository branch and also shows when did the branch got merged with the main branch, contributor graphs which shows how many commits that each of us has made individually to the project and also how to use Git Hub's wiki page to store the documentation that we have made on the project like each meeting's meeting minutes, meeting agenda and the tasks given to each of us by the team leader is also stored on the wiki page. Through repeating this process from week 2 until week 10, I feel like I have a firm grasp on this topic.

**I still need to work on the following areas:**

I still need work on the unit testing area. This is because my knowledge in C# syntax is not extensive and there are a lot of different ways to conduct unit tests that I still have not discovered yet. Other than that, I will also try to improve on the documentation area. My skills in documentation is not really good because it is my first time doing documentation for a project so I would like to practice writing documentation more outside of this unit as I believe it will be very beneficial for me in the future.

**My progress in this unit was ...:**

Based on the progress graph above I did and submitted most of my work on time. The reason why the graph started to fall off starting from week 7 because I did not attempt the Distinction tasks and High Distinction tasks.

**This unit will help me in the future:**

This unit will definitely help me in the future as I believe it will make my learning experience much better and easier as I have a grasp on what to expect to units similar to this. Other than that, this unit has taught me how to work better as a team and I believe this is really important when it comes to the working life where I would have to work with a larger number of people when compared to the number of people I worked with in this unit for the Battleship project. This unit has also taught me about the importance of documentation and I believe this aspect of the unit will bring a lot of benefits to me when it comes to my studies and also my career. This is because documentation makes understanding a person's work much easier and also backtracking to fix an error in a code is much easier due to the practice of documentation.

**If I did this unit again I would do the following things differently:**

If I had to do this unit again I would prepare myself earlier on before doing the tasks given to me. For example, when converting the VB code to C# code, my groupmate and I had many difficulties trying to fix the bugs after the conversion, we even had to ask the lecturer to give us a guideline on how to fix the code. This experience has left a bitter taste in my mouth and to avoid making the same mistake again in the future I would make a thorough research on how to properly conduct a particular task before actually trying to do it. Other than that, if I did this unit again, I would like to attempt to do the Distinction tasks. The reason why I pulled out last minute from the distinction task is due to the fact that I believed if I went through with this I would not have enough time for the other units but turns out I was wrong. Unable to handle pressure and a tight due date is another particular area I would like to improve on if I were to do this unit again.

# Week 1 Pass Task 1

## Pass Task Team Formation and To do Process

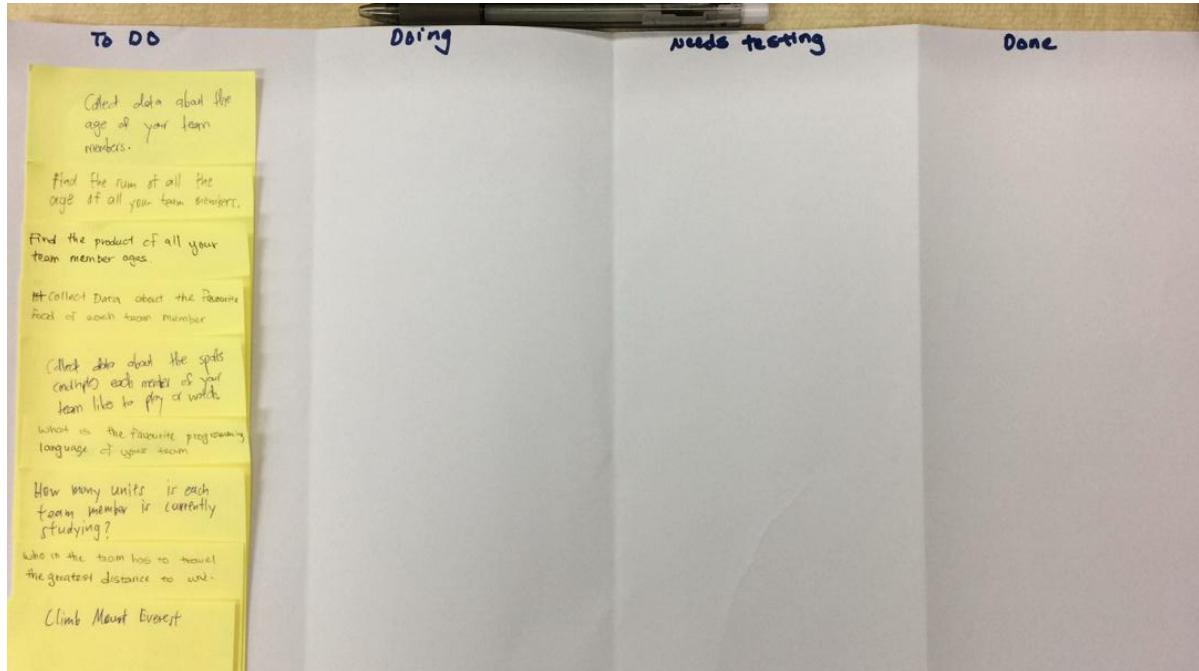
**Name:** Aldalton Choo Chien Khin

**Student ID:** 101212631

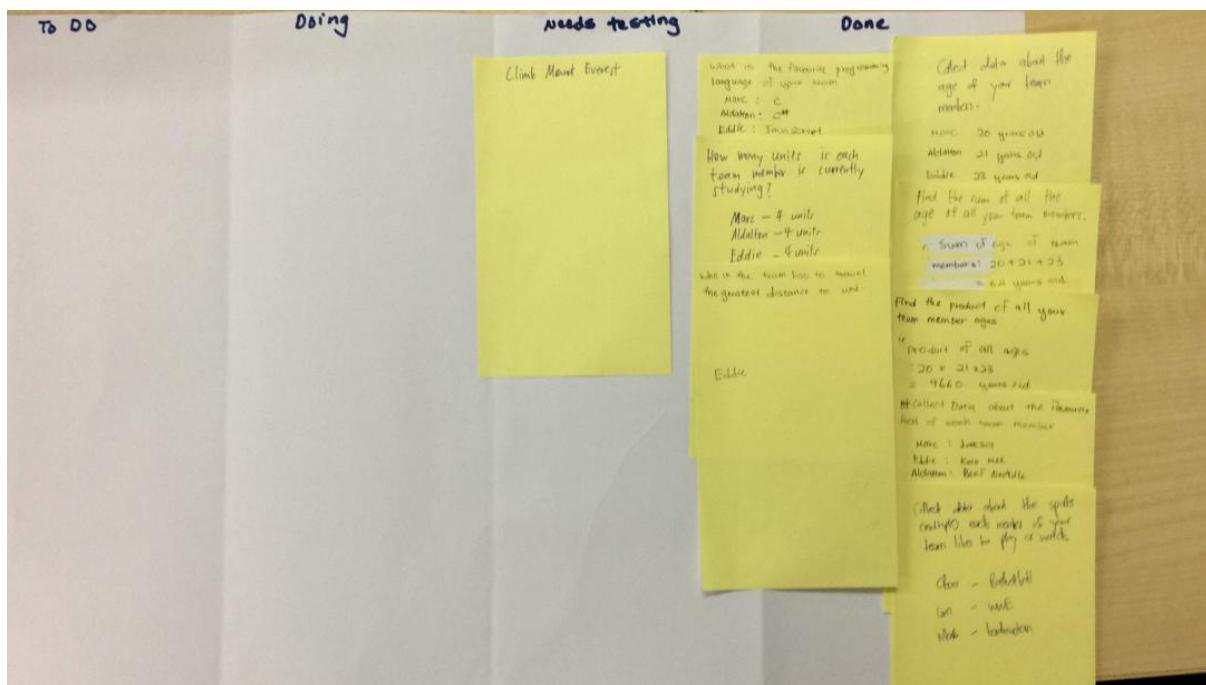
**Team Number:** 3

**Lab 1:** Thursday, 3.30pm

Team Member	
Name	Student ID
Lim Jia Lok	101212631
Marc Gabriel Chai	100087980



**Figure 1.1.1: To do list**



**Figure 1.1.2 : Mount Everest question needs testing while the other questions are done and answered.**

## Pass task 1.2 Slack

The screenshot shows a Slack interface with the following details:

- Channel:** #pass-task-1
- Members:** Marc Chai, Choo (you), Eddie Lim
- Message History:**
  - Marc Chai (4:19 PM): joined #pass-task-1 along with Choo.
  - Choo (4:20 PM): hello friends  
ready to work! 😊
  - Marc Chai (4:20 PM): hi
  - Eddie Lim (4:20 PM): joined #pass-task-1.
  - Choo (4:21 PM): dont toxic pls
    - haha>
    - haha
  - Marc Chai (4:24 PM): we are going to finish our pass task !  
get ready to screenshot for pass task 1.2  
working intensifies
    - get tow ork
    - @Choo hi
    - #pass-task-1
    - #random
- Bottom Bar:** Message #pass-task-1

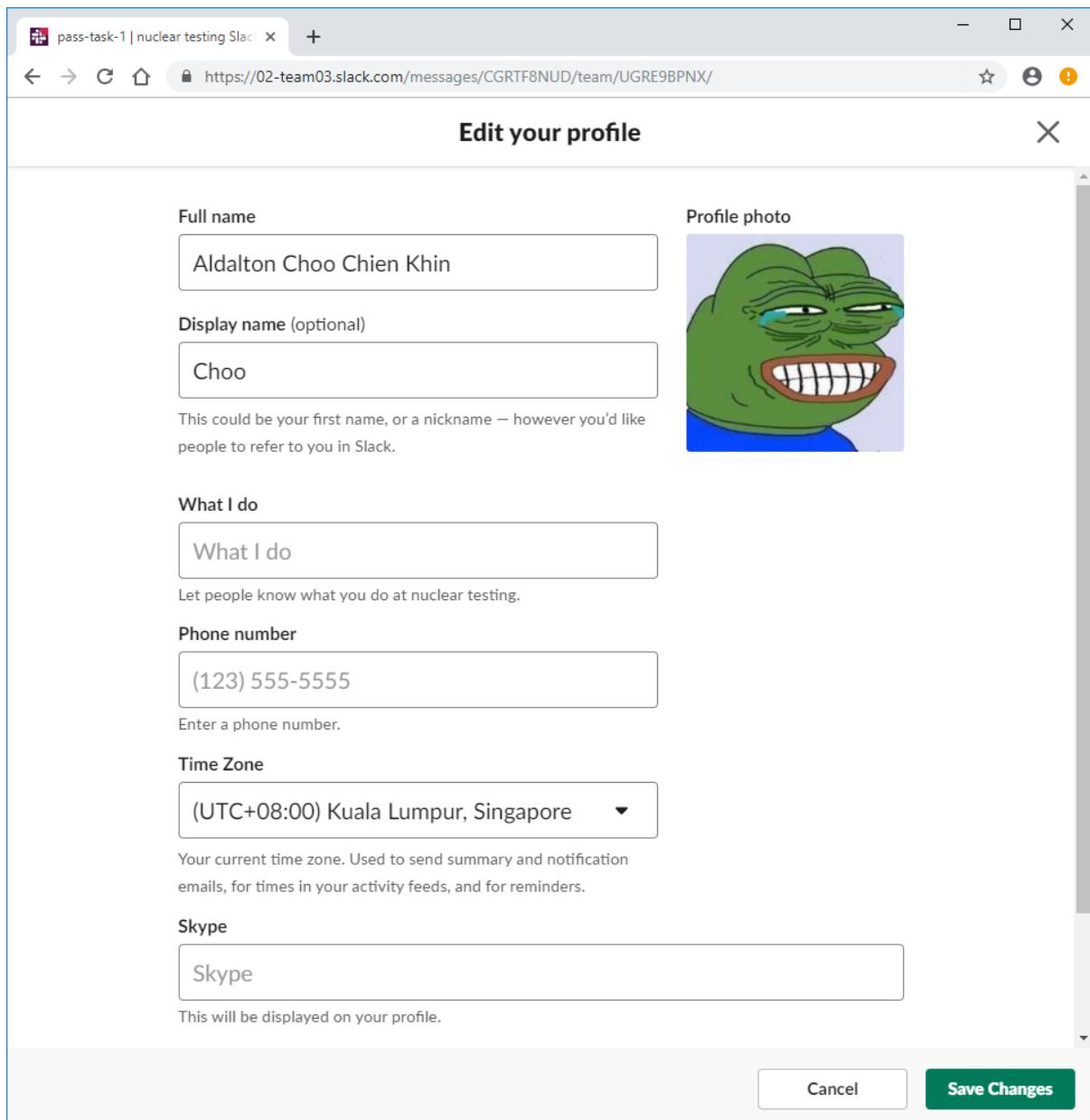
Figure 1.2.1: Shows I am able to emphasize words, creating an indented block, star an item

The screenshot shows a Slack interface with the following details:

- Channel:** #pass-task-1
- Participants:** Marc Chai, Choo, Eddie Lim, Slackbot.
- Messages:**
  - Marc Chai (4:24 PM): we are going to finish our pass task !  
get ready to screenshot for pass task 1.2  
working intensities  
get tow ork
  - @Choo hi
  - #pass-task-1
  - #random
  - Choo (4:29 PM):
    - Code snippet
    - 1 using System;
    - 2 namespace accessspecifier
    - 3 {
    - 4 class Program
    - 5 {
  - Marc Chai (4:29 PM): well done !
  - Choo (4:30 PM): this is an example of my work!
  - Word Document attachment: Week 1 Pass task 1.docx (12 kB Word Document)
    - Week 1 Pass task 1
    - Pass Task 1.1 Team Formation and To Do Process
    - Name: Aldaton Choo Chien Khin
    - Student ID: 101212783
    - Lab: Thursday
    - Time: 3:30 p.m.
    - Team Number: 3
    - Team member details:

Name	Student ID	Age
Lim Jia Lok	101212631	23
Marc Gabriel Chai	100087980	20
  - Eddie Lim (4:32 PM): bye
- Bottom Bar:** A message input field containing '+ Message #pass-task-1' and a send button.

Figure 1.2.2: Shows I am able to send a snippet of a code that I wrote, upload a file



**Figure 1.2.3:** shows that I am able to change my profile picture.

pass-task-1 | nuclear testing Slack

<https://02-team03.slack.com/messages/CGRTF8NUD/>

nuclear testing

Choo

All Threads

Channels

# general

# pass-task-1

# random

+ Add a channel

Direct Messages

Slackbot

Choo (you)

Eddie Lim

Marc Chai

+ Invite people

Apps

#pass-task-1

Team Number 3

Team member details:

Name	Student ID	Age
Lim Jia Lok	101212631	23
Marc Gabriel Chai	100087980	20

Eddie Lim 4:32 PM

bye

I'm almost done with the work

I'm almost done with the work

Marc Chai 4:37 PM

snippet to check if a number is even or odd

Untitled

```

1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5

```

my work

Pasted image at 2019-03-07, 4:38 PM

About me

Name: Marc Gabriel Chai Wai Chai

Student ID: 100087980

Team number: 3

Last 2: Thursday, 5:39pm

Team members

Name	Student ID
Lim Jia Lok	101212631
Aishwarya Choo	101212789

Choo 4:39 PM

@Marc Chai @Eddie Lim Good job guys!

#general come join me in this channel!

+ Message #pass-task-1

Figure 1.2.4: Shows that I am able to tag my friends using the @ symbol and link a different channel in the group.

### **Pass task 1.3 Team Scenario Discussion**

1. Through our discussion, we decided that we should review both design options and see which option is better. For example, which one is more suitable for the project we are working on, which options uses less time to do but also produces a high quality product and so on
2. Through our discussion, the team should approach the said member in a friendly way and ask him nicely if he has problem committing himself to the project. The team will then discuss ways for the said member to still be able to commit himself to the project without coming to team meetings often. For example, the team will inform the said member of any updates regarding the project through a group message and give him certain work that can be done from home so that the workload can be distributed evenly to all team members.
3. The student should state his worries and anxiety in a group discussion as the topic of the day is if there is anything to note or any problems that should be brought forth beforehand. The other members should take note of these in order to formulate a plan around his weakness by encouraging him and eased his worries. Probable solutions include having que cards or practicing the presentation beforehand to ease him into the presentation.
4. The team leader should remind the team members at interval times in order for them to remember their responsibilities and to ask them if there is anything that they are unsure about to assuage their worries. What would be suggested is to keep being in communication with each other using channels like Slack, Discord, or WhatsApp in order to keep track on all the going on and not only reporting back in meetings. This is to ensure all members are kept up to date to all the progress in the group.
5. Yes, this is possible. We can simply give the other members parts of the project that requires less time but more brain work, while that one member can do the work that requires more time. The one person should also be the leader, as he is the one person who is willing to spend more time on the project. Even if things do not work out, that one person can just put in more effort than the rest of his teammates and get all the contribution.
6. The one team member has to be reminded that he is part of a team and that even though his ideas are better than that of the other team members, it is still essential to have other ideas. One of the best things the team can do to deal with it is to work together to come up with even better ideas. They must talk to that team member and ensure that he understands how the team feels and what they are doing.

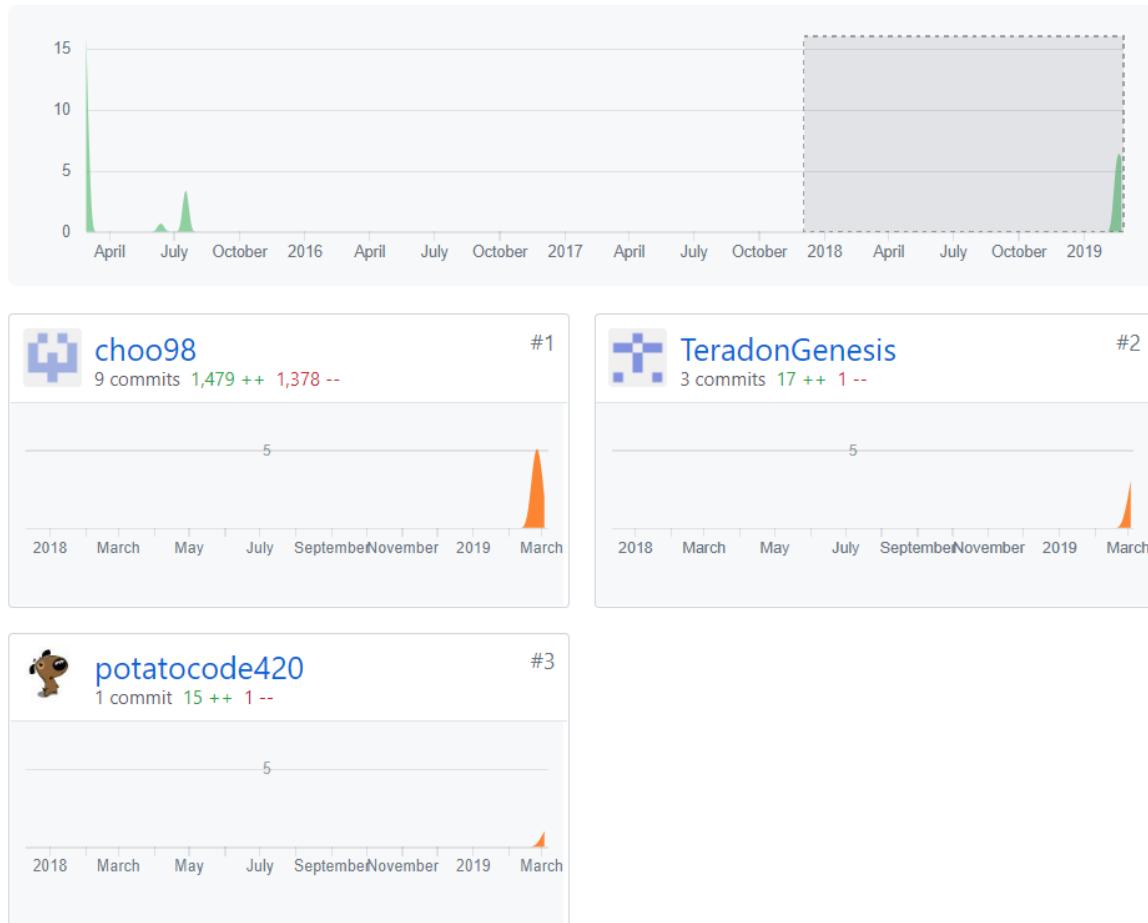
## Pass task 2.1: Version control with Git

### Contributors screenshot

Dec 25, 2017 – Mar 20, 2019

Contributions: Commits ▾

Contributions to master, excluding merge commits



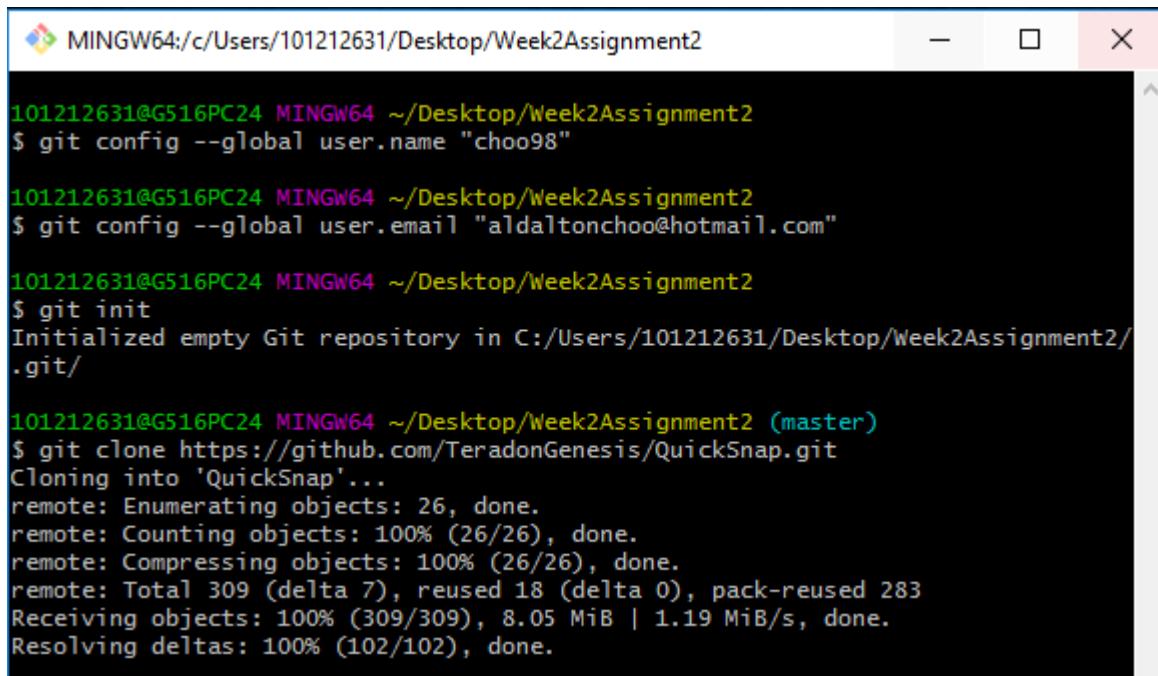
Figure(1): Choo98 is (me), TeradonGenesis is (Lim jia lok) and potatocode420 is (Marc)

## **Network screenshot**



Figure(2): a screenshot of our network

## Overview process of using Git for revision control



The screenshot shows a terminal window titled "MINGW64:/c/Users/101212631/Desktop/Week2Assignment2". The terminal output is as follows:

```
101212631@G516PC24 MINGW64 ~/Desktop/Week2Assignment2
$ git config --global user.name "choo98"

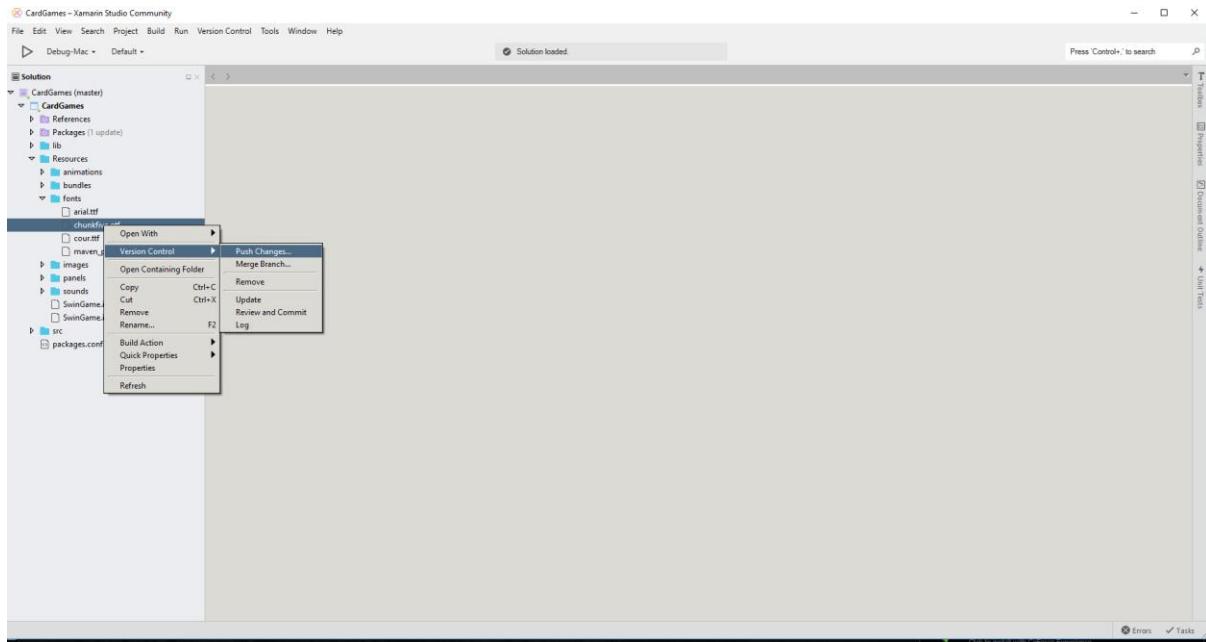
101212631@G516PC24 MINGW64 ~/Desktop/Week2Assignment2
$ git config --global user.email "aldalonchoo@hotmail.com"

101212631@G516PC24 MINGW64 ~/Desktop/Week2Assignment2
$ git init
Initialized empty Git repository in C:/Users/101212631/Desktop/Week2Assignment2/
.git/

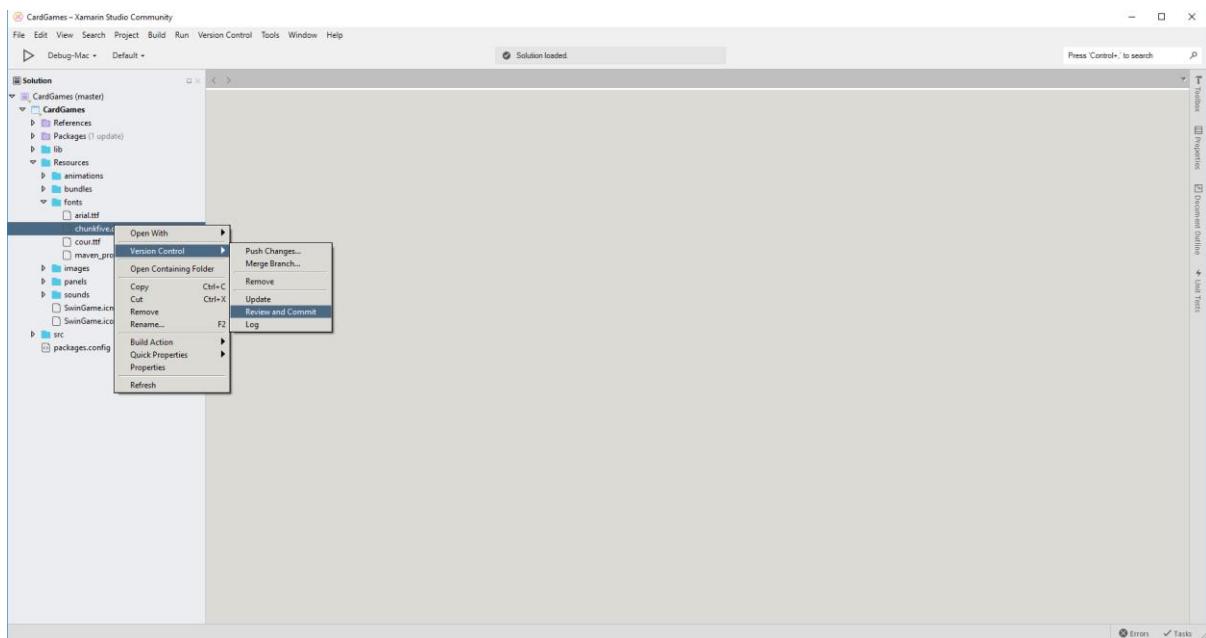
101212631@G516PC24 MINGW64 ~/Desktop/Week2Assignment2 (master)
$ git clone https://github.com/TeradonGenesis/QuickSnap.git
Cloning into 'QuickSnap'...
remote: Enumerating objects: 26, done.
remote: Counting objects: 100% (26/26), done.
remote: Compressing objects: 100% (26/26), done.
remote: Total 309 (delta 7), reused 18 (delta 0), pack-reused 283
Receiving objects: 100% (309/309), 8.05 MiB | 1.19 MiB/s, done.
Resolving deltas: 100% (102/102), done.
```

Figure(3) Setting up the git repository

First we set the username and email by using the “git config –global user.name and user.email” command. Then we use the “git init” command to initialize the git in the specific folder that we want to create the project in. If we have an existing project in the Git Hub repository, we can use the “git clone [URL]” command to clone the project in the Git Hub repository into the specific folder as shown as the picture above.



Figure(4) Pushing a single file Git Hub



Figure(5): Reviewing the file and committing to Git Hub

If we want to push only a single file to the Git Hub repository, we right click on the specific file and click push changes as shown in figure 4. Next, we click review and commit so that the file will be uploaded to the Git Hub repository. The same process is repeated if we want to save our changes that we have done on the current project, but the only difference is clicking on the version control at the top. The process is shown in figure 6 and 7.

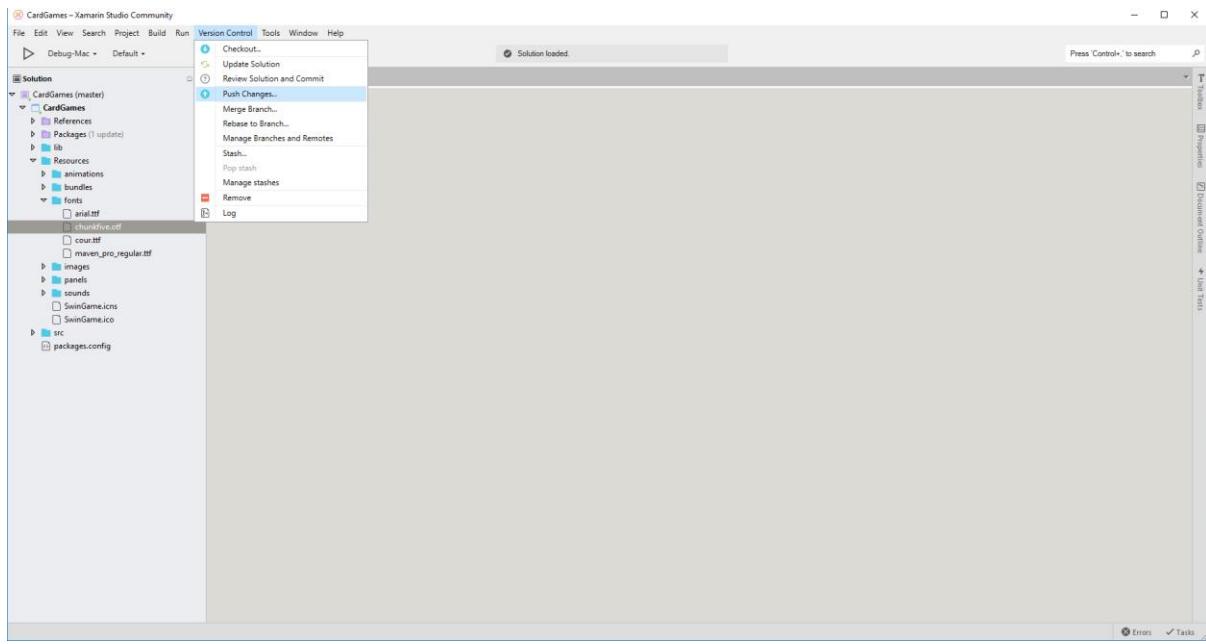


Figure (6) pushing changes for whole file

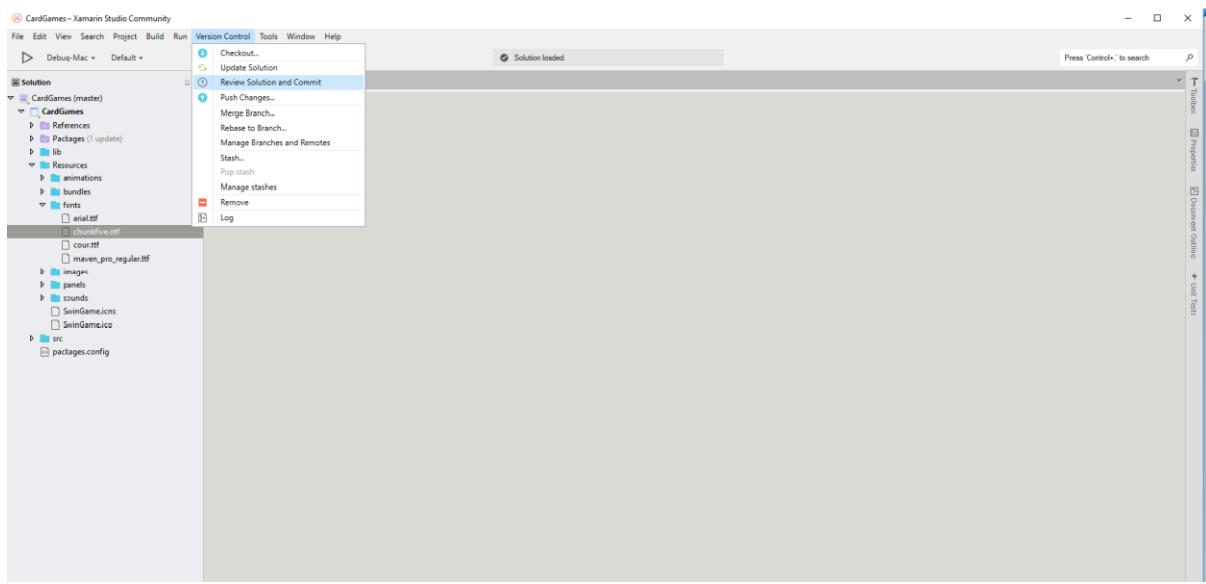


Figure (7) Reviewing file before committing changes to Git Hub Repository

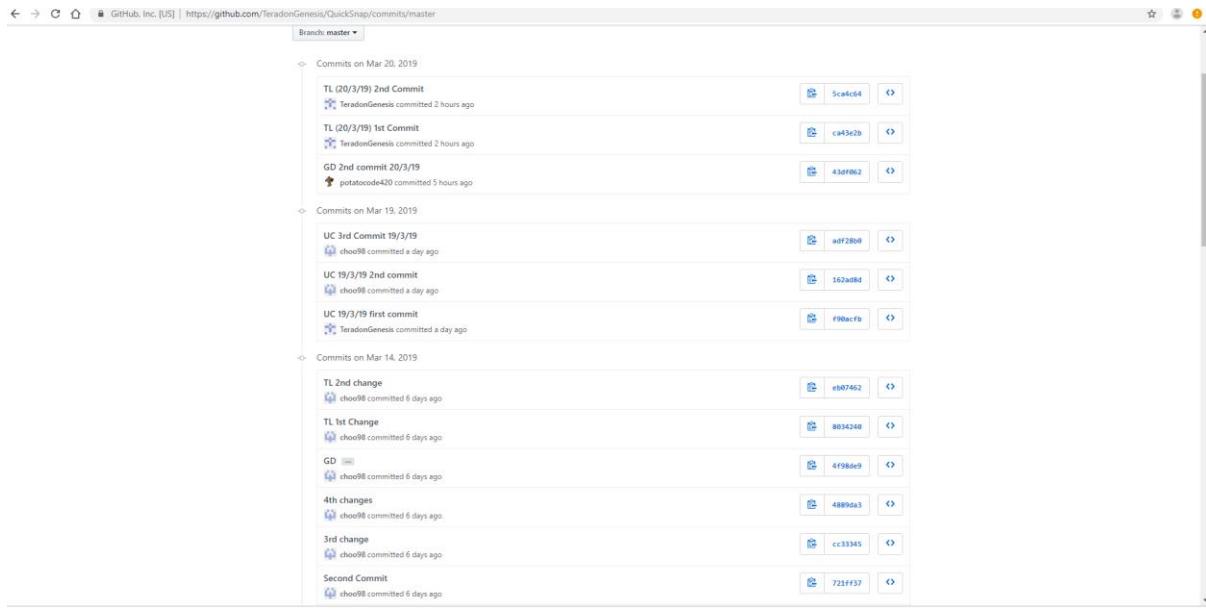


Figure (8) reviewing commits history on Git Hub

We can also review the history of commits that have been submitted through the Git Hub website. This makes back tracing much easier if there is anything wrong with the project.

# **Git Hub Reference Sheet**

## **Setup**

- 1) Git init: initialize an existing directory as a Git repository
- 2) Git clone [url]: retrieve a repository based on URL given.

## **Staging**

- 1) Git status: shows status of modified files that is currently working on
- 2) Git add[file]: adds a file for the next commit.
- 3) Git commit -m “[Description]”: commits your current project.

## **Branch and merging**

- 1) Git branch: list out all your branches
- 2) Git branch [branch-name]: creates a new branch
- 3) Git merge [branch]: merges a specific branch into the current branch
- 4) Git log: shows all the commits in a branch’s history.

## **Sharing and updating**

- 1) Git remote add [alias] [url]: add a git url as an alias
- 2) Git fetch [alias]: fetches all branches based on the alias given
- 3) Git push [alias] [branch]: pushes local branch commits to the remote respiratory branch
- 4) Git pull: fetch all commits from remote repository branch.

## Pass Task 3.1 Wikis and design documents

Contributions to wiki page:

### **Brief introduction on chess**

---

Chess is a classic game but still a popular board game among people of different ages. It was first introduced around 1500 years ago and how this game is played is that there are two different kingdoms which is, the white kingdom and black kingdom. The main goal of the game is for each side to eliminate the opposite side's king which is protected by 8 pawns, 2 knights, 2 rook, 2 bishop and 1 queen. This game is played by two players either casually or competitively.

The target platform for this game is every platform which is the PC platform, Mobile platform and console platform. Visual style that we are aiming for is a simple 2D style that is easy on the eyes but at the same time appealing.

I oversaw doing the brief introduction to our game's wiki page like what is it about, the history, and what platform are we aiming to release this game on.

## List of asset needed

- 1) Sounds for each chess pieces moving.
- 2) Images of chess pieces according to their roles.
- 3) In game timer for competitive plays.
- 4) Sound for in game timer.
- 5) Sound for winning the game.



I also oversaw listing down the assets needed for the game and the footer of the wiki page.

## **Pass task 4.1 : Battleship Project Meeting**

# **Meeting Agenda**

---

Date/Location: 28/3/19 at 15:30 at Swinburne University of Technology in A302

## **Information Updates/Reminders**

---

- The next two weeks are going to be about understanding the legacy Battleship code base so that we can plan for the work to fix and improve it.
- Everyone should be able to use git, github wiki's and Trello. Ask for help if that's a problem.
- We'll be using toggl.com to keep track of time.
- The Programming Help Desk (Room E620) is available to help us with programming for this unit.

## **General Items**

---

- Each of the members have to download the code and make sure it can run on their machine
- Each member require a github account
- Required to create wiki page to record the details

## Decisions Needed

---

- None (only general items requiring Actions this week)
- Everyone needs to download the old code and make sure they can run it.
- Need a Trello board created for this project and team. Actions and other details will be posted there. Columns used need to be decided. Someone needs to create and invite other team members.
- Need a Toggl team project to track the time the team uses. Someone needs to create and invite team members (using email addresses). We need to decide what activities to track.
- Need a github account for this project. (Project from last task can be used if suitable.) Existing code base can be added.
- Need github wiki pages to document project details.
- Need to find and list functional issues. What works the way it should and what does not? Put on wiki.
- Need a list of all the files, and what each file is for (description). Decide where this is stored. Put in wiki
- Are some files (code or resources) not being used or not needed? Create a list and share on wiki.
- What tools we can use to convert VB code to C# code? Someone (or several) people should investigate and report back next meeting so we can decide and then do the work of converting.
- What coding standards should we used for the project? Need someone (or several) people to investigate and report back at the next meeting so that we can decide.
- Are there any obvious TODO, BUG or FIXME comments in the code base that we should know about? Someone should check and report.
- How much of the code has been documented, and once converted what needs to be done. Someone should investigate and report.
- A list should be created to keep track of extensions ideas and new features that could be added (not bugs to fix). The work should not be done at this stage.

# Meeting Minutes

---

Date/Location: 28/3/19 at Swinburne University of Technology in A302

Attendees: Marc Chai, Lim Jia Lok, Aldalton Choo

Start Time: [2:30 p.m.]

End Time: [3:30 p.m.]

## Decisions

---

- None (only general items requiring Actions this week)
- AC, MC and LL needs to download the old code and make sure they can run it.
- LL will create a Trello board created for this project and team. Actions and other details will be posted there. Columns used is decided by LL.
- AC will create a Toggl team project to track the time the team uses. AC will invite team members (using email addresses). Activities tracked will be decided by each individual group members based on the task assigned to them.
- AC, LL and MC will create a github account for this project. (Project from last task can be used if suitable.) Existing code base can be added.
- MC will create the github wiki pages to document project details.
- LL will find and list functional issues. What works the way it should and what does not and put it on wiki.
- AC will list all the files, and what each file is for (description). Decide where this is stored. Put in wiki
- AC will decide if some files (code or resources) not being used or not needed? Create a list and share on wiki.
- What tools we can use to convert VB code to C# code? AC and LL will investigate and report back next meeting so we can decide and then do the work of converting.
- What coding standards should we use for the project? MC will investigate and report back at the next meeting so that we can decide.
- How much of the code has been documented, and once converted what needs to be done. LL will investigate and report.
- LL will create a list to keep track of extensions ideas and new features that could be added (not bugs to fix). The work should not be done at this stage.

## **Actions**

---

- 28-3 Marc will create a new GitHub page and invite the other members
- 28-3 Lim Jia Lok will create a trello board and invite the other members
- 28-3 Aldalton will create a Toggl page and invite the other members
- 01-3 Marc will be researching the coding standards
- 02-4 Marc will create a wiki page to record any findings
- 02-4 Aldaton will remove any unneeded files
- 02-4 Lim Jia Lok will be testing to run the game
- 02-4 Lim Jia Lok will be checking the functionality of the game and list missing functionality
- 02-4 Lim Jia Lok will be checking for bugs of the game and list the bugs
- 03-4 Aldalton will be researching tools needed to convert VB code to C# and Lim Jia Lok will be converting the VB code to C# code
- 03-4 All members have to report on their findings in the wiki.

Contribution on git hub :

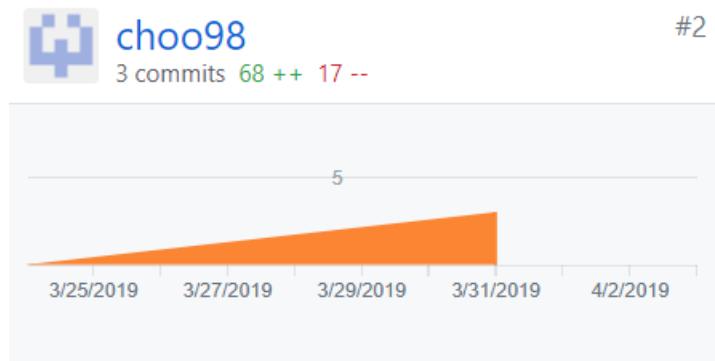


Figure (1) My contribution graph for week 4's assignment

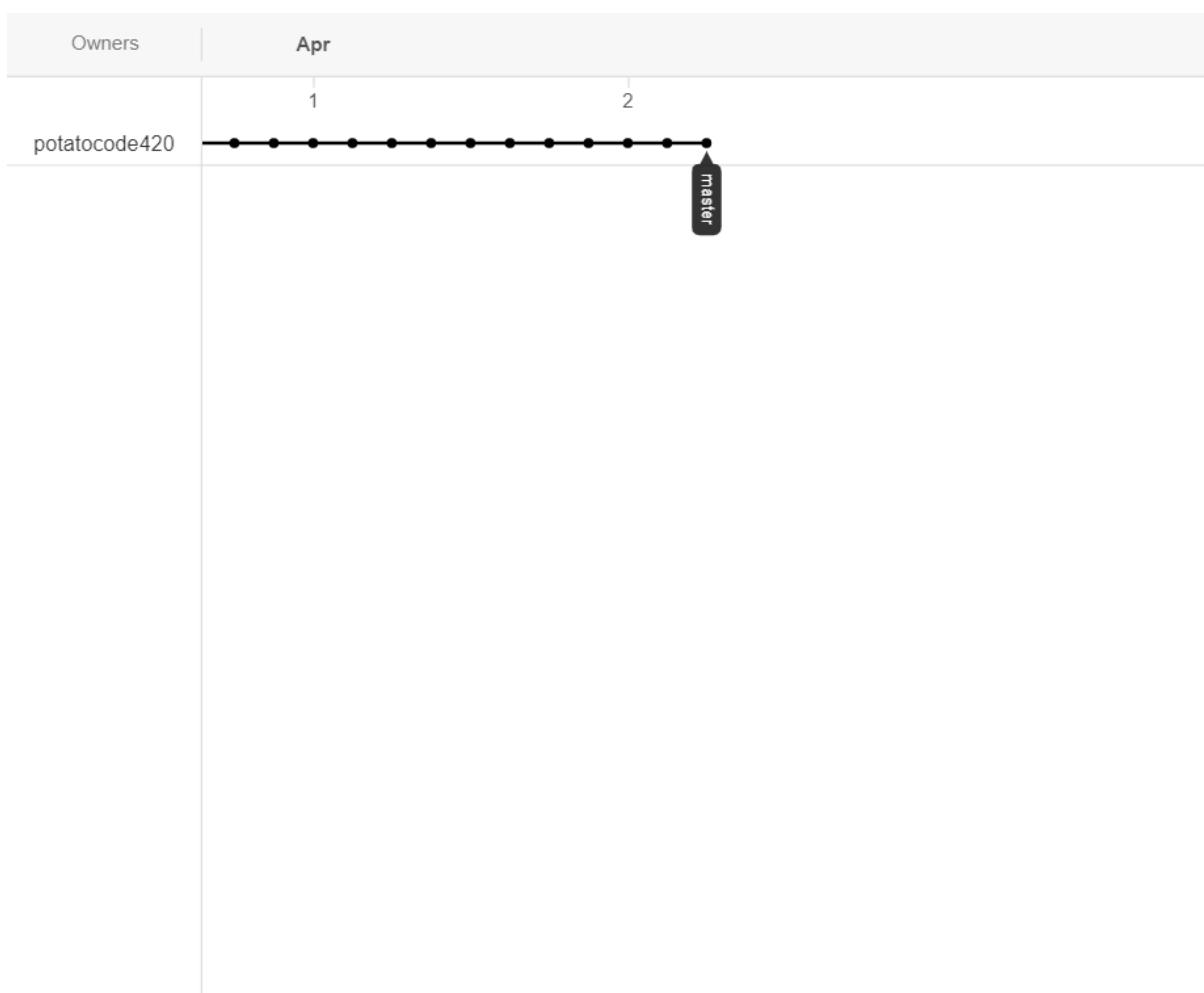


Figure (2) My network graph for week 4's assignment

My task in week 4's assignment was to list the files in the battleship folder and write a description for them. I was also in charged to find non-related files and deleting them. The last tasks that was assigned to me is searching for tools that can be used to convert VB code to C# code and I did this with Eddie. I searched the web for the converter which is <http://converter.telerik.com/> While Eddie did the converting process.

```

1 All these files can be found in the battleships file downloaded from blackboard:
2
3 bin file contains:
4     nothing
5
6 lib file contains:
7     1. godly file
8     2. mac file
9     3. sdl13 file
10    4. win file
11    5. cygpath file
12    6. Swingame.dll (application extension)
13    7. Swingame.dll (Microsoft access database)
14
15 Resources file contains:
16     1. animations file (contains the animation required for the battleship game)
17     2. bundles file (contains the bundles file needed to load the game like splash animation for startup and images)
18     3. fonts file (contains the fonts used by the battleship game)
19     4. images file (contains the images used by battleship game)
20     5. panels file (contains the panels used by battleship game)
21     6. sounds file (contains the sounds used by battleship game)
22     7. highscores file (text document, contains all the highscores made by players playing the game)
23     8. SwinGame.icns (ICNS File)
24     9. Swingame (Icon file)
25
26 Src file contains:
27     1. Model file (contains VB files created in visual basic language to create models used by battleship game)
28     2. DeploymentController.vb (VB file - project item file created in Visual Basic language)
29     3. DiscoveryController.vb (VB file - project item file created in Visual Basic language)
30     4. EndingGameController.vb (VB file - project item file created in Visual Basic language)
31     5. GameController.vb (VB file - project item file created in Visual Basic language)
32     6. GameLogic.vb (VB file - project item file created in Visual Basic language)
33     7. GameResources.vb (VB file - project item file created in Visual Basic language)
34     8. GameState.vb (VB file - project item file created in Visual Basic language)
35     9. HighscoreController.vb (VB file - project item file created in Visual Basic language)
36     10. MenuController.vb (VB file - project item file created in Visual Basic language)
37     11. UtilityFunctions (VB file - project item file created in Visual Basic language)
38
39 tmp file contains:
40     nothing
41
42 .gitignore file (it is used to tell git to ignore which files to avoid committing transient files)
43 build.sh (used to trigger build process)
44 clean.sh (used to trigger clean process)
45 contributors (text document- contains the names of contributors who created the battleship game)
46 out (text document- shows the IDE used and version used and also where the save file is)
47 README ( Contains the instruction needed to run the battleship game)
48 run.sh (used to trigger run process)

```

Figure (3) List of files found in battleship folder and their descriptions

## Finding non-related files to battleship and deleting them

- Bin file found in battleship file is not related because it is empty and is deleted
- tmp file found in battleship file is not related because it is empty and is deleted

Figure (4) Listed down the non-related files and deleted them.

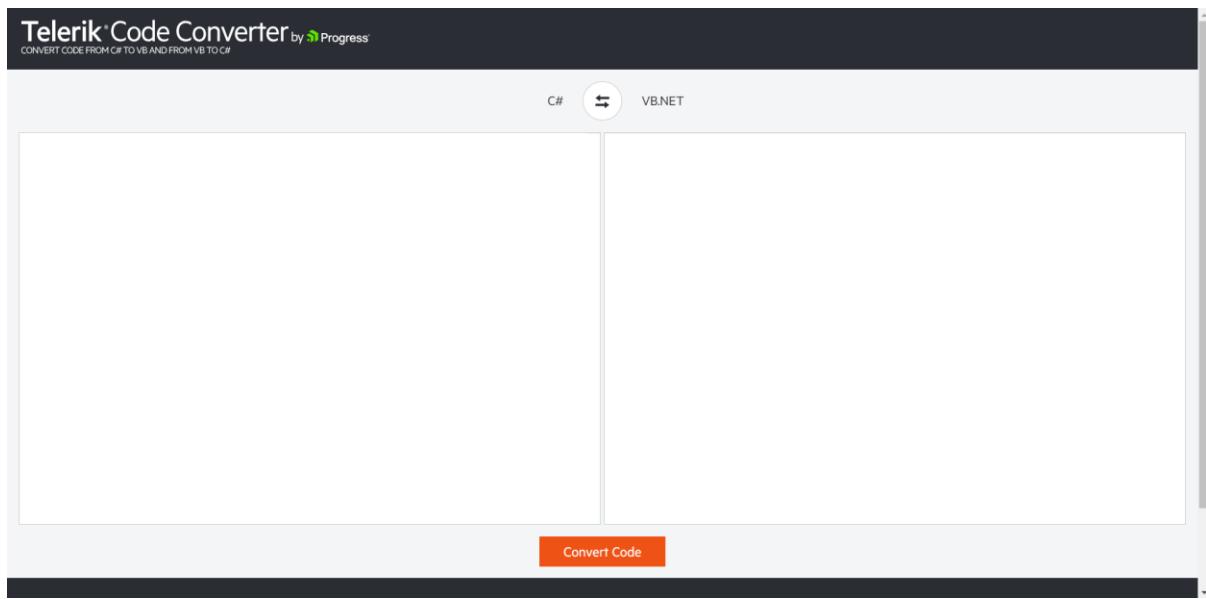


Figure (5) Example of converter used to convert VB code to C# code

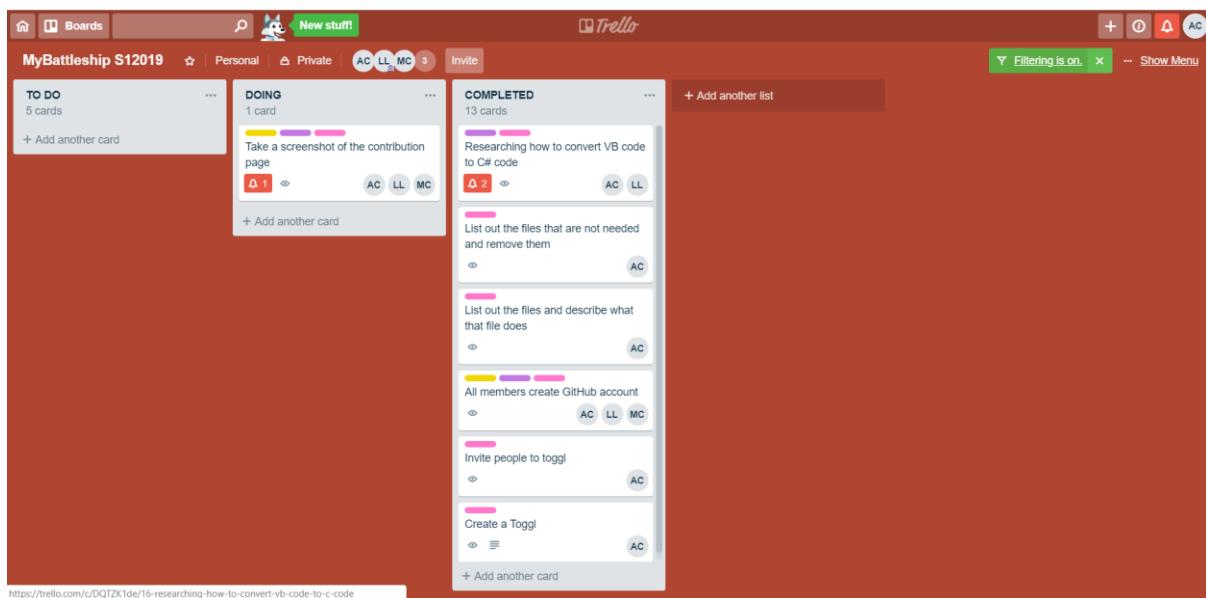


Figure (6) A picture of our Trello which shows which tasked I have done.

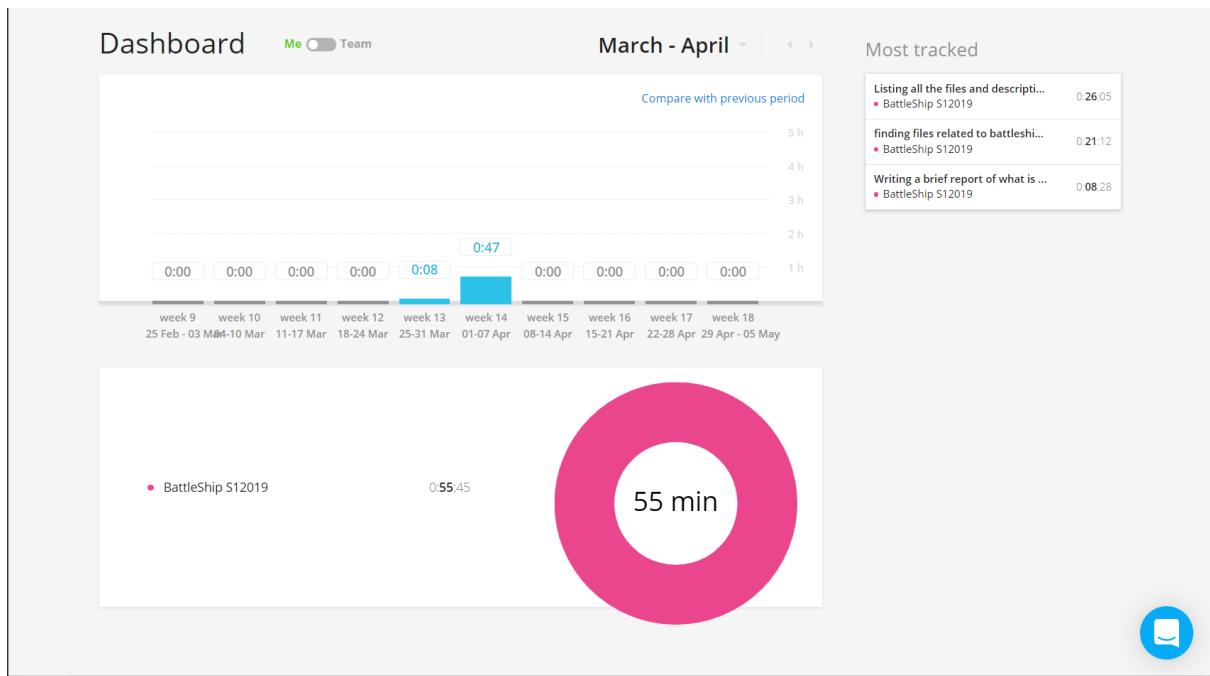


Figure (7) Toggl dashboard of my activities (AC)

## **Pass Task 5.1 Battleship Project Meeting**

# **Meeting Agenda**

---

Date/Location: 4-Apr-2019 at 1:45 in A302

## **Information Updates/Reminders**

---

- Last week was about analysing the legacy code.
- This week is about converting and documenting the code
- Next week we will use a sprint process over two weeks to fix bugs and extend the project. (No bug fixing or extensions yet!)
- Everyone should be able to use the team git repo, github wiki's and Trello. Ask for help (tutor or team) if that's a problem.
- Everyone should have used toggl.com to track their time last week. Also track time on tasks this week with Toggl.
- Tutor must be added to github, trello and toggl.
- The Programming Help Desk ATC620 is *still* available to help us with programming for this unit.

## **Decisions Needed**

---

- Action(s) created to fix missing code documentation (Should not be one person – break into smaller tasks the team can share)
- Action(s) created to confirm converted code works the same as the pre-conversion code (simple functional side-by-side equivalence testing).
- Action(s) to improve the documented list of identified feature issues (Missing, bugs or possible extensions categories)
- Adding in pictures of the bugs to better illustrate the bugs
- Adding in pictures of the functionality issues to illustrate the problem
- Solving the known bugs
- Fix the functionality issues
- Add in extension ideas

## **General Items**

---

- Add tutor account to team tools (github, wiki, toggle)
- Code needs to be converted, and the converted code committed to the repository. (Note – repository must start with VB code.)
- Converted code will need the appropriate SwinGame files to build and run the C# code.
- Missing code documentation (identified by report) needs to be fixed in the converted code. Can be shared by several people
- Converted and running code functionality needs to be checked to make sure it is the same as before (Validation). Suggest a checklist (list of functions?) to document the before and after result.
- There may be missing features, bugs or extension ideas that have not been identified and documented. This will be needed for the up-coming two-week sprint, so we should continue to look for these and note what they are.

# **Meeting Minutes**

---

Date/Location: 28/3/19 at Swinburne University of Technology in A302

Attendees: Marc Chai, Lim Jia Lok, Aldalton Choo

Start Time: [2:30 p.m.]

End Time: [3:30 p.m.]

## Decisions

---

- AC, MC and LL will report any other missing code documentation when they find more bugs when trying to fix known bugs.
- AC, MC and LL will run the converted code to confirm converted code works the same as the pre-conversion code (simple functional side-by-side equivalence testing).
- AC, LL and MC will add more known bugs to the documented list of identified feature issues (Missing, bugs or possible extensions categories)
- LL will be adding in pictures of the bugs to better illustrate the bugs
- LL will be adding in pictures of the functionality issues to illustrate the problem
- AC will be fixing the buttons disappearing and making the arrow button point in the correct direction
- LL will be fixing the board being out of bounds and coordinates not labelled correctly.
- MC will do the fixing of score boards not showing and board not functioning properly when clicking on a specific grid.
- AC will be assigning colors to different AIs.
- LL will do the highlighting difficulties chosen by the player and adding the no surrender or quit button in playing interface.
- MC will be assigning different sound effect for AI and players.
- AC, MC and LL will brainstorm to come up with new extensions to be added into the game
- AC should add back in bin and tmp files deleted
- AC will create a new trello board and invite everyone into it for this week's assignment.

## Actions

---

- 5-4-19 AC should be done creating the trello board and invited everyone into the project.
- 9-4-19 AC, MC and LL should be able to report any other missing code documentation when they find more bugs when trying to fix known bugs.
- 9-4-19 AC, MC and LL should have run the converted code to confirm converted code works the same as the pre-conversion code (simple functional side-by-side equivalence testing).
- 9-4-19 AC, LL and MC will add more known bugs to the documented list of identified feature issues (Missing, bugs or possible extensions categories)
- 9-4-19 LL should be done adding in pictures of the bugs to better illustrate the bugs
- 9-4-19 LL should be done adding in pictures of the functionality issues to illustrate the problem
- 9-4-19 AC should be done with fixing the buttons disappearing and making the arrow button point in the correct direction
- 9-4-19 LL should be done with fixing the board being out of bounds and coordinates not labelled correctly.
- 9-4-19 MC should be done with fixing the the score boards not showing and board not functioning properly when clicking on a specific grid.
- 9-4-19 AC should be done assigning colors to different AIs.
- 9-4-19 LL should be done highlighting difficulties chosen by the player and adding the no surrender or quit button in playing interface.
- 9-4-19 MC should be done assigning different sound effect for AI and players.
- 9-4-19 AC, MC and LL will brainstorm to come up with new extensions to be added into the game
- 9-4-19 AC should add back in bin and tmp files deleted

## Things I have done

I have tried to fixed files assigned to me by my group leader and while most of the bugs are fixed some of it is still unfixed because I couldn't find a solution to fix with it without causing another error in a different file. Most of the bugs that I have occurred in the files above is simple like missing words, capitalization of words that should not be capitalize, missing local variables, methods not called properly, class is not called properly and so on. I have also done adding the bin and tmp files that I have previously deleted because I thought they were of no use, but I was wrong.

## Bugs that I have fixed

```
@@ -2,6 +2,14 @@
2     2     using System.Collections.Generic;
3     3     using System.IO;
4     4     using SwinGamesDK;
5 +using static HighScoreController;
6 +using static MenuController;
7 +using static DeploymentController;
8 +using static DiscoveryController;
9 +using static UtilityFunctions;
10 +using static EndingGameController;
11 +using static GameController;
12 +using static GameResources;
13
14 /// <summary>
15
@@ -134,7 +142,7 @@ static class HighScoreController
134    142    {
135    143      Score s;
136    144
137    -      s = _Scores.Item[i];
138    145    +      s = _Scores[i];
139    146      // for scores 1 - 9 use 01 - 09
140    147      if (i < 9)
@@ -169,7 +177,7 @@ static class HighScoreController
169    177      LoadScores();
170
171    179      // is it a high score
172    -      if (value > _Scores.Item[_Scores.Count - 1].Value)
173    180    +      if (value > _Scores[_Scores.Count - 1].Value)
174    181      {
175    182        Score s = new Score();
176        s.Value = value;
```

Figure (1) Bugs that I have fixed in HighScoreController file by deleting .Item as in the current context it is not used to access the index in C# and also adding in the files being used at the top.

```

11 11 @@ -11,6 +11,14 @@
12 12 using System.Threading.Tasks;
13 13 using SwinGameSDK;
14 14 +using static HighScoreController;
15 15 +using static MenuController;
16 16 +using static DeploymentController;
17 17 +using static DiscoveryController;
18 18 +using static UtilityFunctions;
19 19 +using static EndingGameController;
20 20 +using static GameController;
21 21 +using static GameResources;
22
23 /// <summary>
24
@@ -30,7 +38,7 @@ static class DiscoveryController
30 38     public static void HandleDiscoveryInput()
31 39     {
32 40         if (SwinGame.KeyTyped(KeyCode.vk_ESCAPE))
33 41             - AddNewState(GameState.ViewingGameMenu);
34 42         + GameController.AddNewState(GameState.ViewingGameMenu);
35 43         if (SwinGame.MouseClicked(MouseButton.LeftButton))
36 44             DoAttack();

```

Figure (2) Bugs that I have fixed in Discovery Controller by adding the necessary files that is being used by the DiscoveryController file.

```

1 @@ -1,4 +1,12 @@
1 *using SwinGameSDK;
2 +using static HighScoreController;
3 +using static MenuController;
4 +using static DeploymentController;
5 +using static DiscoveryController;
6 +using static UtilityFunctions;
7 +using static EndingGameController;
8 +using static GameController;
9 +using static GameResources;
10
11 /// <summary>
12

```

Figure (3) Bugs that I have fixed in EndingGameController by adding the necessary files that is being used by the EndingGameController file.

```

1 @@ -1,4 +1,12 @@
1 *using SwinGameSDK;
2 +using static HighScoreController;
3 +using static MenuController;
4 +using static DeploymentController;
5 +using static DiscoveryController;
6 +using static UtilityFunctions;
7 +using static EndingGameController;
8 +using static GameController;
9 +using static GameResources;
10
11 static class GameLogic
12 {

```

Figure (4) Bugs that I have fixed in GameLogic by adding the necessary files that is being used by the GameLogic file.

```

@@ -134,7 +134,7 @@ public abstract class AIPlayer : Player
134   134         result = _game.Shoot(row, column);
135   135         ProcessShot(row, column, result);
136   136     }
137 -     while (result.Value != ResultOfAttack.Miss && result.Value != ResultOfAttack.GameOver && !SwinGame.WindowCloseRequested)// generate coordinates for shot// take shot
137 +     while (result.Value != ResultOfAttack.Miss && result.Value != ResultOfAttack.GameOver && !SwinGame.WindowCloseRequested())// generate coordinates for shot// take shot //unconfirmed bug fixed//
138   138     ;
139   139
140   140     return result;

```

Figure (5) Fixed bugs in AI player file by adding the parentheses at the end of SwinGame.WindowCloseRequested to call the method properly.

```

@@ -133,7 +143,7 @@ public class Player: IEnumerable<Ship>
133   143         if (name == ShipName.None)
134   144             return null/* TODO Change to default(_) if this is not a reference type */;
135   145
136 -     return _ships.Item[name];
136 +     return _ships[name];
137   147     }
138   148   }
139   149

```

Figure (6) Fixed bugs in player file by removing the .Item as in the current context it is not used to access the index in C#

```

@@ -108,7 +108,7 @@ public class Ship
108   108         _tiles = new List<Tile>();
109   109
110   110         // gets the ship size from the enumerator
111 -         _sizeOfShip = _shipName;
111 +         _sizeOfShip = (int)_shipName; // unconfirmed bug fix
112   112     }
113   113
114   114     /// <summary>

```

Figure (7) Fixed Bugs in ship file by adding an (int) in front of \_shipName because we are trying to convert a string into an int into \_sizeOfShip.

## Things that I am currently still doing

While most bugs are fixed, there are still bugs that I am still currently trying to fix like the bug I have found in the player.cs file. An example of the error can be seen in figure 8 and 9.

```
private Dictionary<ShipName, Ship> _Ships = new Dictionary<ShipName, Ship>();
private SeaGrid _playerGrid = new SeaGrid(_Ships);
private ISeaGrid _enemyGrid;
protected BattleshipsGame _game;
```

Figure (8) error in player.cs file

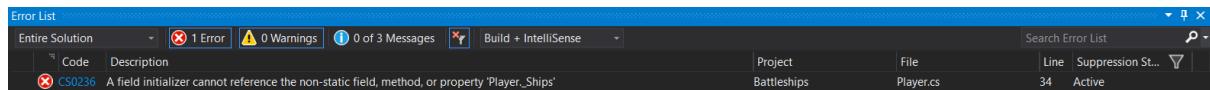
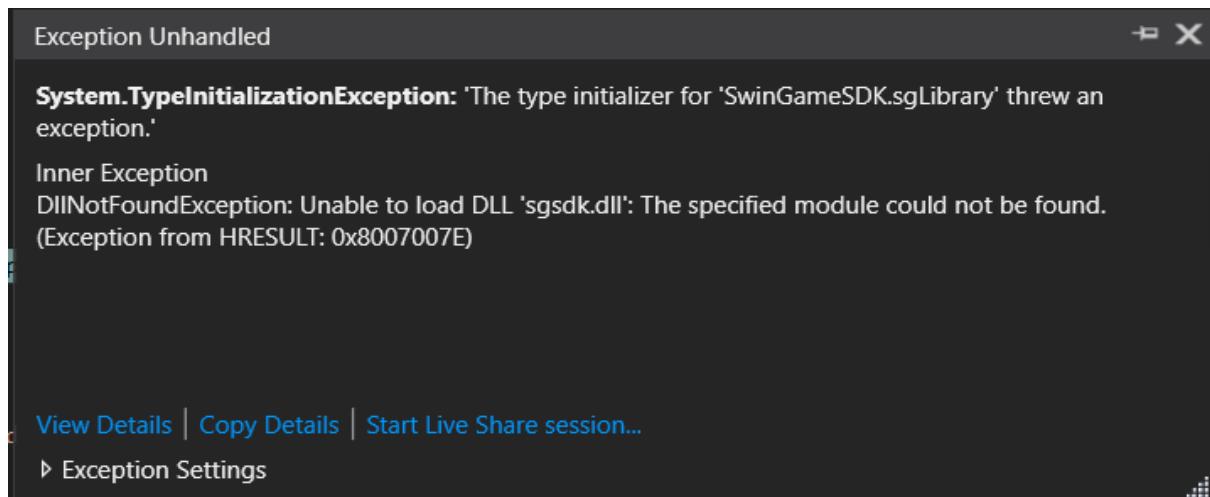


Figure (9) a more detailed example of the error.

Other than that, we have also tried to run the program after putting a temporary fix on the bugs that we are unsure of if it is the correct way to fix the bug, but we still couldn't run it. The error that we keep facing is related to the SwinGame.SDK file and the example of the problem can be seen in figure (10)



[View Details](#) | [Copy Details](#) | [Start Live Share session...](#)

► [Exception Settings](#)

Figure (10) Error shown by the IDE stating that are some problems with the SwinGameSDK.DLL file.

Even after several attempts to fix the following files, we couldn't find any way to fix it.

## Things that I will be doing in the future

I will try to work with my team to make the battleship game run so that I can continue to fix on smaller bugs in the game as stated in the meeting agenda above like fixing the arrow not showing in the correct direction, assigning different colors to AIs, and fixing the button disappearing.

## Trello Board

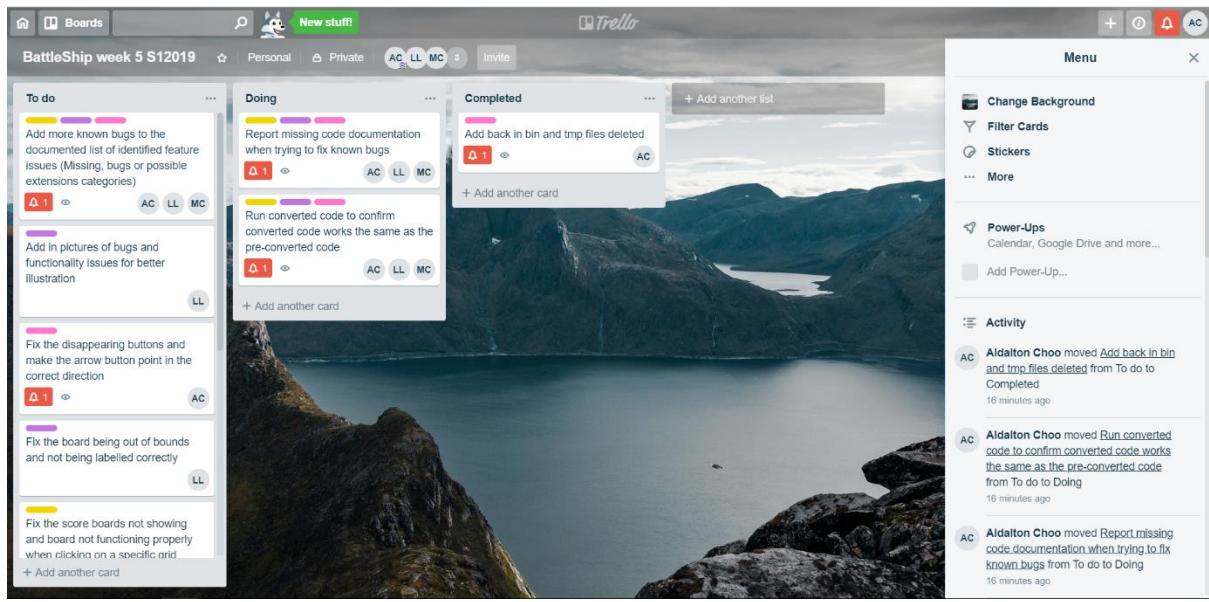


Figure (11) Week 5's Trello board of the tasks that we have done and currently doing.

## Toggl Board

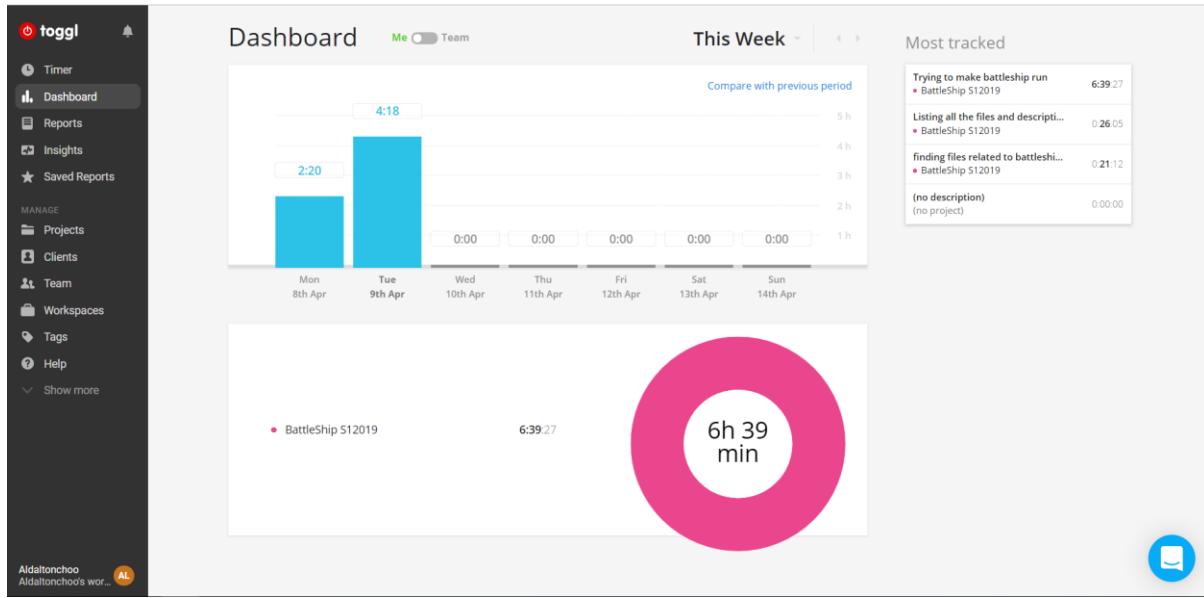


Figure (12) My hours spent on the battleship project for this week.

## Git Hub Contribution graph and Network graph

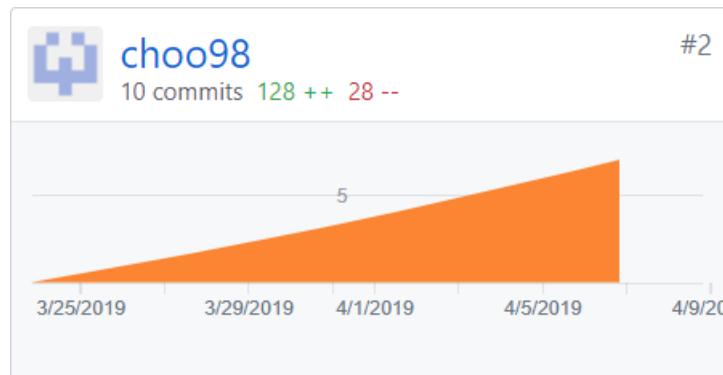


Figure (13) My contribution graph for the battleship project on week 5



Figure (14) My network graph for the battleship project on week 5

## **Pass task 6.1: Battleship sprint**

# **Meeting Agenda**

---

Date/Location: 11-April-2019 at 2:00PM in A302

## **Information Updates/Reminders**

---

- Last week was about converting and documenting the code
- This week we will use a sprint process over two weeks to fix bugs and extend the project. (No bug fixing or extensions yet!)
- Help from an external consultant has been provided to help get the code converted and working if that was not done.
- Everyone should have used toggl.com to track their time last week. Also track time on tasks this week with Toggl.
- Tutor must be added to GitHub, Trello and Toggl.
- Slack will be used to show the changes in the Trello board during the sprint of activity
- The Programming Help Desk ATC620 is *still* available to help us with programming for this unit.

## **Decisions Needed**

---

- Action(s) created to fix missing code documentation (Should not be one person – break into smaller tasks the team can share)
- Action(s) created to confirm converted code works the same as the pre-conversion code (simple functional side-by-side equivalence testing).
- Action(s) to improve the documented list of identified feature issues (Missing, bugs or possible extensions categories)
- Solving the known bugs
- Fix the functionality issues
- Add in extension ideas

## General Items

---

- The Trello board needs to be updated ready for the planned Sprint process. In particular columns for project backlog and sprint backlog will be needed.
- Create and link the team slack so that we can be notified and have a nice record of the Trello updates.
- The project backlog of tasks needs to be created. Use the existing bugs and features we have documented, and convert to the required format. Need a meeting after this meeting to get that done and into Trello (today).
- Project backlog tasks need to be prioritised and their time estimated using 1,2,4,8 hour categories. (Today)
- The new Sprint backlog needs to be pre-selected ready for discussion and approval with the project owner. (Today)
- Once Sprint has started, hold a daily scrum meeting. (Start next week?)
- Still need to make then SwinGameSDK to work as the program could not run without it.
- Game bugs that exist from the previous week still need fixing as the program could not run
- Game functionality that is missing or not working from the previous week still need fixing as the program could not run

# Meeting Minutes

---

Date/Location: 11/4/19 at Swinburne University of Technology in A302

Attendees: Marc Chai, Lim Jia Lok, Aldalton Choo

Start Time: [2:30 p.m.]

End Time: [3:30 p.m.]

## Decisions

---

- AC will be fixing the buttons disappearing and making the arrow button point in the correct direction
- LL will be fixing the board being out of bounds and coordinates not labelled correctly.
- MC will do the fixing of the board not functioning properly when clicking on a specific grid.
- LL will add in an extension for the UI portion of the battleship program by adding new sound for the AI, different colour for the AI, and also a reset button in the playing interface to clear the board.
- LL will add in an extension for the score board in the playing interface to show the players' score.
- AC will add in an extension to have an easy mode as the current game logically only has two modes which is medium and hard.
- MC will add in an extension to have an undo button to redo one move in the playing interface.

## **Actions**

---

- 15-4-19 AC should be done with fixing the buttons disappearing and making the arrow button point in the correct direction
- 15-4-19 LL should be done with fixing the board being out of bounds and coordinates not labelled correctly.
- 15-4-19 MC should be done with fixing the board not functioning properly when clicking on a specific grid.
- 20-4-19 LL should be done adding the new sound and colour for the AI and also a reset button to clear the board
- 20-4-19 LL should be done adding in the scoreboard
- 20-4-19 AC should be done adding in easy mode for the game
- 20-4-19 MC should be done adding in an undo button

## Scrum meeting

### Scrum meeting 15<sup>th</sup> of April 2019

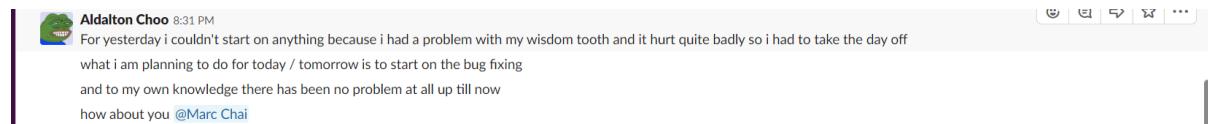


Figure (1) Scrum meeting 1 on the 15<sup>th</sup> of April 2019

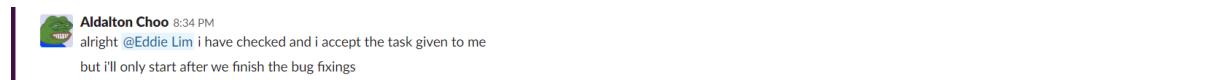


Figure (2) Scrum meeting 1 on the 15<sup>th</sup> of April 2019

### Scrum meeting 16<sup>th</sup> of April 2019

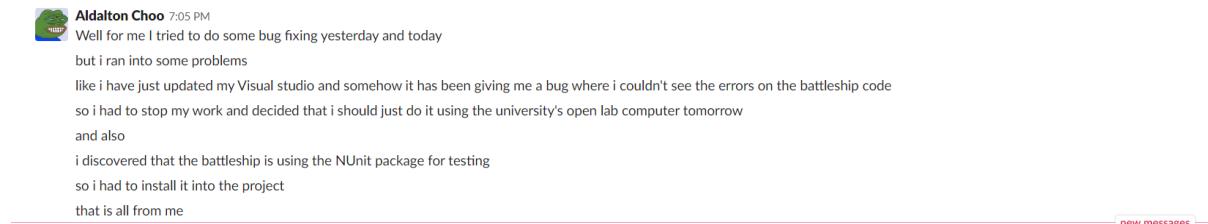


Figure (3) Scrum meeting 2 on the 16<sup>th</sup> of April 2019

### Scrum meeting 17<sup>th</sup> of April 2019

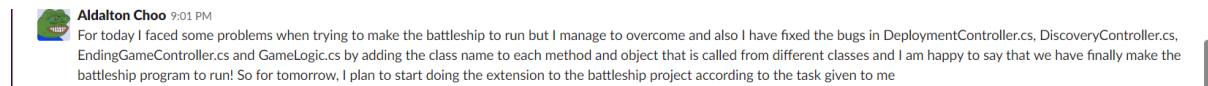


Figure (4) Scrum meeting 3 on the 17<sup>th</sup> of April 2019

Bug fixes done on the 17<sup>th</sup> of April 2019:

The bug fixes that I've done are too tedious, so I will give a few examples of what I did. In figure 5, HumanPlayer is an object belonging to the class GameController but since it is being called in the DeploymentController class so it currently doesn't exist in the context of the DeploymentController class, I had to call the GameController class inside the DeploymentController class so that the IDE understands where I am trying to call the HumanPlayer object from.

```
diff --git a/DeploymentController.cs b/DeploymentController.cs
index 1234567..8901234 100644
--- a/DeploymentController.cs
+++ b/DeploymentController.cs
@@ -11,7 +11,7 @@ namespace Battleship
     if (SwingGame.KeyTyped(KeyCode.vk_r)) {
         - HumanPlayer.RandomizeDeployment();
         + GameController.HumanPlayer.RandomizeDeployment();
     }
 }
```

Figure (5) Bug fixing in DeploymentController.cs

Another example of the bug fixes that I have done is the battleship deploying a few squares above the square box that you have clicked on to deploy the ship. In figure 6 you can see that the line of code with mouse.y is missing a direction and this is what caused the battleship to deploy a few squares above. So in order to fix this problem, I just added a .FIELD\_TOP to beside the mouse.Y and this fixed the bug.

```
diff --git a/Battleship.cs b/Battleship.cs
index 1234567..8901234 100644
--- a/Battleship.cs
+++ b/Battleship.cs
@@ -104,3 +104,3 @@
     row = Convert.ToInt32(Math.Floor((mouse.Y) / (CELL_HEIGHT + CELL_GAP)));
     col = Convert.ToInt32(Math.Floor((mouse.X - FIELD_LEFT) / (CELL_WIDTH + CELL_GAP)));
 
@@ -102,3 +102,3 @@
+     row = Convert.ToInt32(Math.Floor((mouse.Y - UtilityFunctions.FIELD_TOP) / (UtilityFunctions.CELL_HEIGHT + UtilityFunctions.CELL_GAP)));
+     col = Convert.ToInt32(Math.Floor((mouse.X - UtilityFunctions.FIELD_LEFT) / (UtilityFunctions.CELL_WIDTH + UtilityFunctions.CELL_GAP)));
 }
```

Figure (6) Fix bug in deployment of ship appearing a few squares above the square box that was clicked to deploy the ship.

Scrum meeting 18<sup>th</sup> of April 2019

Aldalton Choo 8:45 PM  
For yesterday I tried to implement the extension on the battleship game but it didn't work out so i plan to continue working on it.  
For today i couldn't do anything because i got my wisdom tooth plucked out so i might not be able to do any work on the battleship but i will try my best to finish the extension as soon as possible.  
As for problems, i wouldn't say there is any with my extension it is more to trial and error until i manage to make the code work.

Figure (7) Scrum meeting 4 on the 18<sup>th</sup> of April 2019

Aldalton Choo 10:04 PM  
For yesterday and today i was researching ways to implement the easy AI as an extension to the battleship project but i stopped after awhile because i am still recovering from my wisdom tooth removal yesterday  
as for problems there are no problems so far but will keep you guys posted if i have any

Figure (8) Scrum meeting 5 on the 19<sup>th</sup> of April 2019

Aldalton Choo 10:03 PM  
Hey guys  
For yesterday i took a break because i was still recovering from my wisdom tooth removal.  
As for today i put the extension on hold because i had other assignment to finish due to the due date getting closer  
as for problems i faced no problems at all (edited)

Figure (9) Scrum meeting 6 on the 20<sup>th</sup> of April 2019



Aldalton Choo 10:40 PM

1. For yesterday, i was doing some research on how to code the easy AI opponent and did not put much time into the battleship because i had other assignments to do.  
2. For today, I tried to do the coding for easy AI but it kept failing due to some error so i decided to put it aside as i have other assignments due.  
3. For problems, so far no problems  
thats all from me today  
see you guys tomorrow!

Figure (10) Scrum meeting 7 on the 21<sup>st</sup> of April 2019



Aldalton Choo 10:34 PM

For yesterday, i was conducting some research on how to implement the easy ai mode for the battleship game but didn't spend a lot of time on it because i had other assignments to do. for today, i am happy to announce that i manage to implement the easy ai mode and it finally works now in the battleship game and i have also fixed the bug where you can't deploy the battleship in a vertical position  
for problems, i had no problems while doing the above stuff.

Figure (11) Scrum meeting 8 on the 22<sup>nd</sup> of April 2019

Implementing easy AI mode and fixing the bug where the battleship cannot deploy in a vertical position on the 22<sup>nd</sup> of April 2019:

For me to implement the easy AI mode, I had to create a new class for the easy ai and to do this I used the medium AI class as a template and edit accordingly to make the AI easier. In figure 12, I edited the ProcessShot method for the easy AI class so that the AI will only be able to attack either in an upwards direction or a left direction. When doing this, I noticed that the default AI difficulty was set to hard to I changed it to easy by default.

```
96 +     protected override void ProcessShot(int row, int col, AttackResult result)
97 +     {
98 +         if (result.Value == ResultOfAttack.Hit)
99 +         {
100 +             _currentState = AIStates.TargetingShip;
101 +             AddTarget(row - 1, col);
102 +             AddTarget(row, col - 1);
103 +
104 +         }
105 +         else if (result.Value == ResultOfAttack.ShotAlready)
106 +         {
107 +             throw new ApplicationException("Error in AI");
108 +         }
109 +     }
110 +
```

Figure (12) Example of easy AI mode

Other than that, I have also fixed the bug where you were not able to deploy the ship in a vertical position before by changing the direction from LeftRight to UpDown as shown in figure 13.

```
82 | -         _currentDirection = Direction.LeftRight;
82 | +         _currentDirection = Direction.UpDown;
```

Figure (13) Bug fix of ship not able to deploy in vertical position



Aldalton Choo 10:34 PM

For yesterday, I did the implementation of the easi AI mode in the battleship game and i also fixed the bug where the ship is not able to deploy in a vertical position.  
For today, did not do much because we are done the extension for the battleship.  
For problems, i did not have any problems

Figure (14) Scrum meeting 9 on the 23<sup>nd</sup> of April 2019

## Trello board:

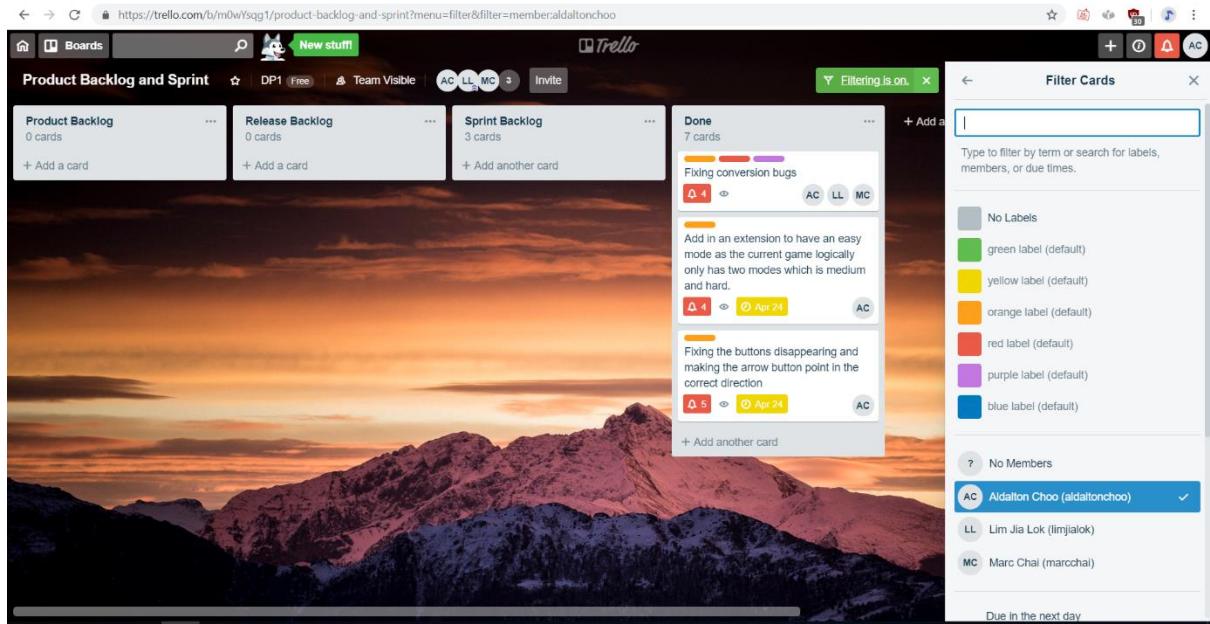


Figure (15) Trello board for Aldalton Choo

## Toggl report:

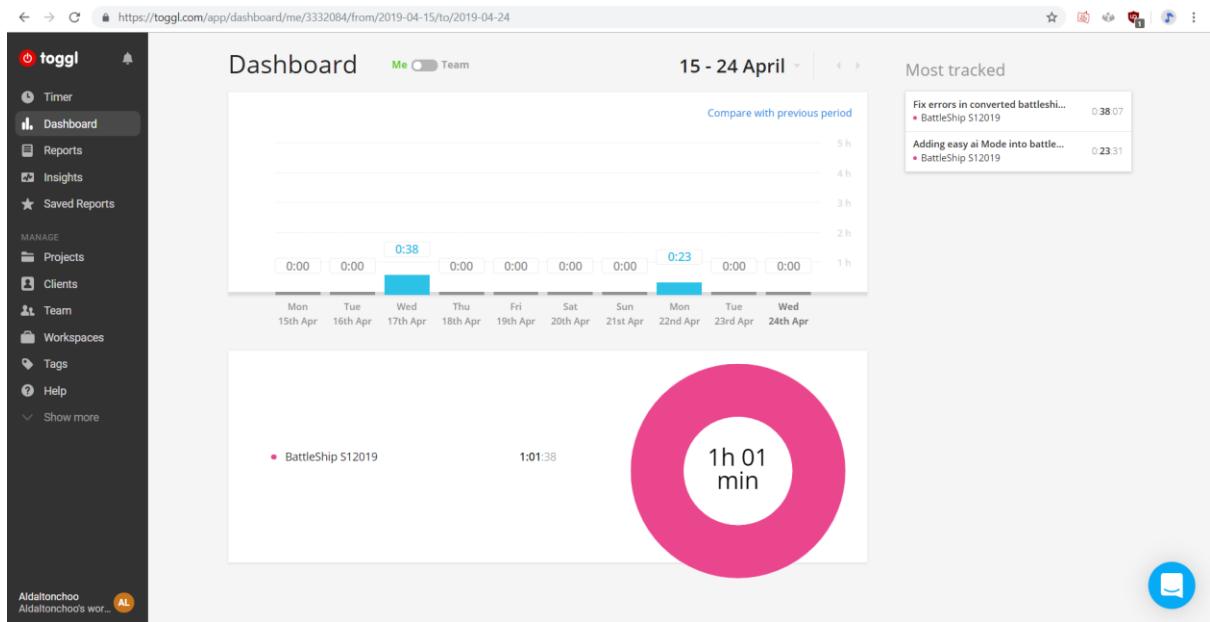


Figure (16) Toggl graph for Aldalton Choo

Git hub contribution and network graph:

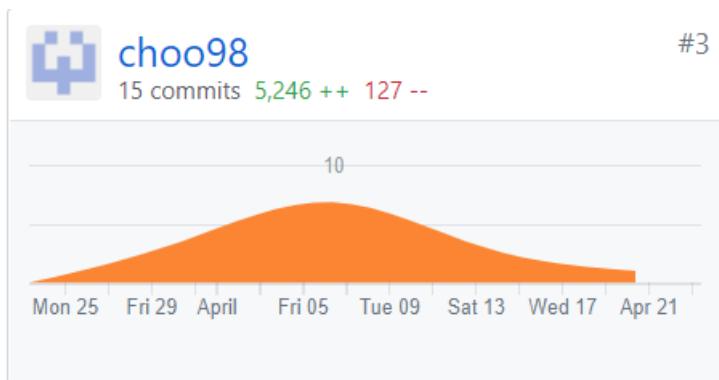


Figure (17) git hub contribution graph for Aldalton Choo

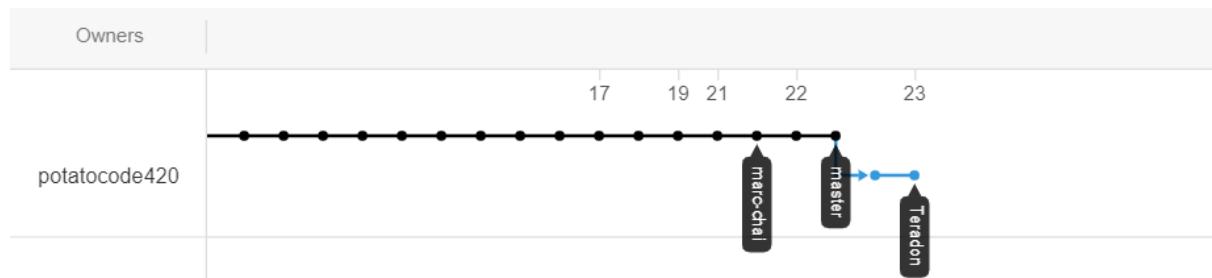
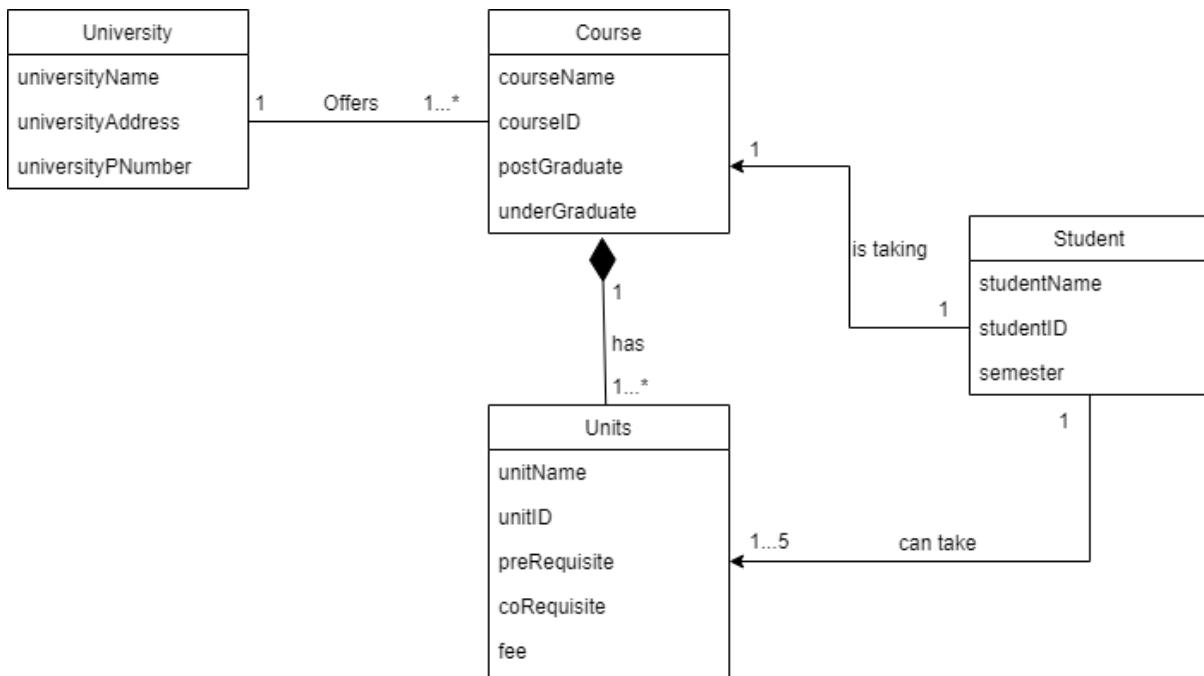


Figure (18) git hub network graph for Aldalton Choo

## **Credit task 6.2 : System Modelling**

### **Part 1: Domain Model**



### **Part 2: Models in software development project.**

Software development models are different processes or methodologies that are used in a project's task or function and the method that is used is dependent on the software development team's goals and objectives. There are different types of models like visual, non-visual, static and dynamic. An example of static would be the waterfall methodology and an example of dynamic would be the scrum method.

Models in software development project is important because it helps a software development team to plan, design, build, release and review a project. Choosing the right model is important as it can help a company or software development team to save time and money but still achieve the result that they want according to their objectives. Other than that, modelling also helps to draw out the blueprint of the project that we want to create. Modelling also allows us to design the pattern or how we want a system to be according to our objectives. Finally, modelling is important because it allows us to record down the decisions or changes that we have made on a system.

### **Part 3: common / domain vocabulary**

Common / domain vocabulary is required as it helps to highlight the important elements, facts, relationships, and procedures in a software development project so that people who are not familiar with programming has a better understanding of what is happening in a software development project.

Example of 5 words from the context of the case study and their definition:

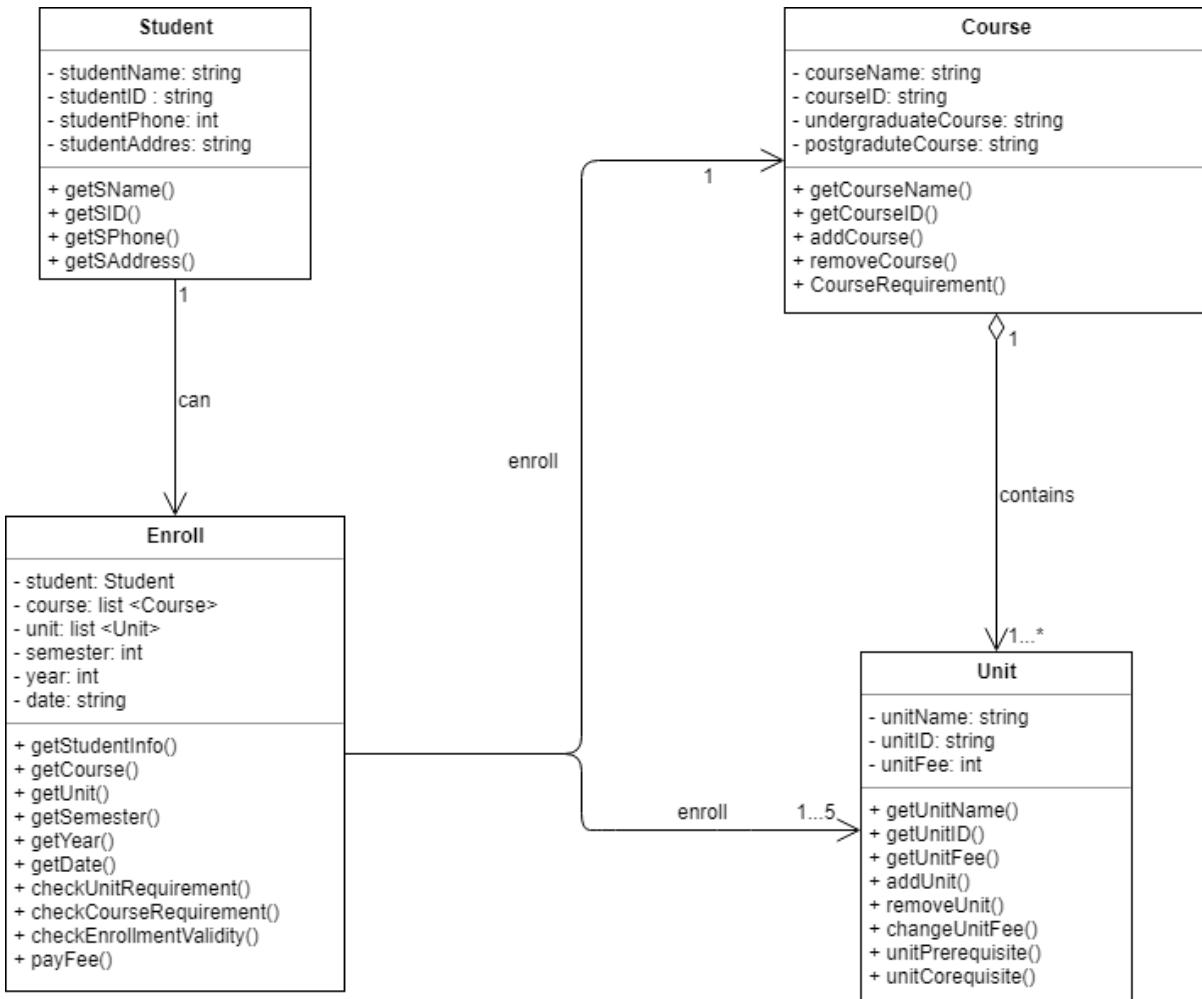
- a) Course: A plan of study on a particular subject.
- b) Unit: A single object or something part of a bigger object.
- c) Student: A person who is studying in a school, college or university.
- d) Semester: One of the periods into which a year is divided at college or university
- e) Fee: A specific amount of money that is needed to be paid off for a particular object in this case a particular unit.

## **Part 4:**

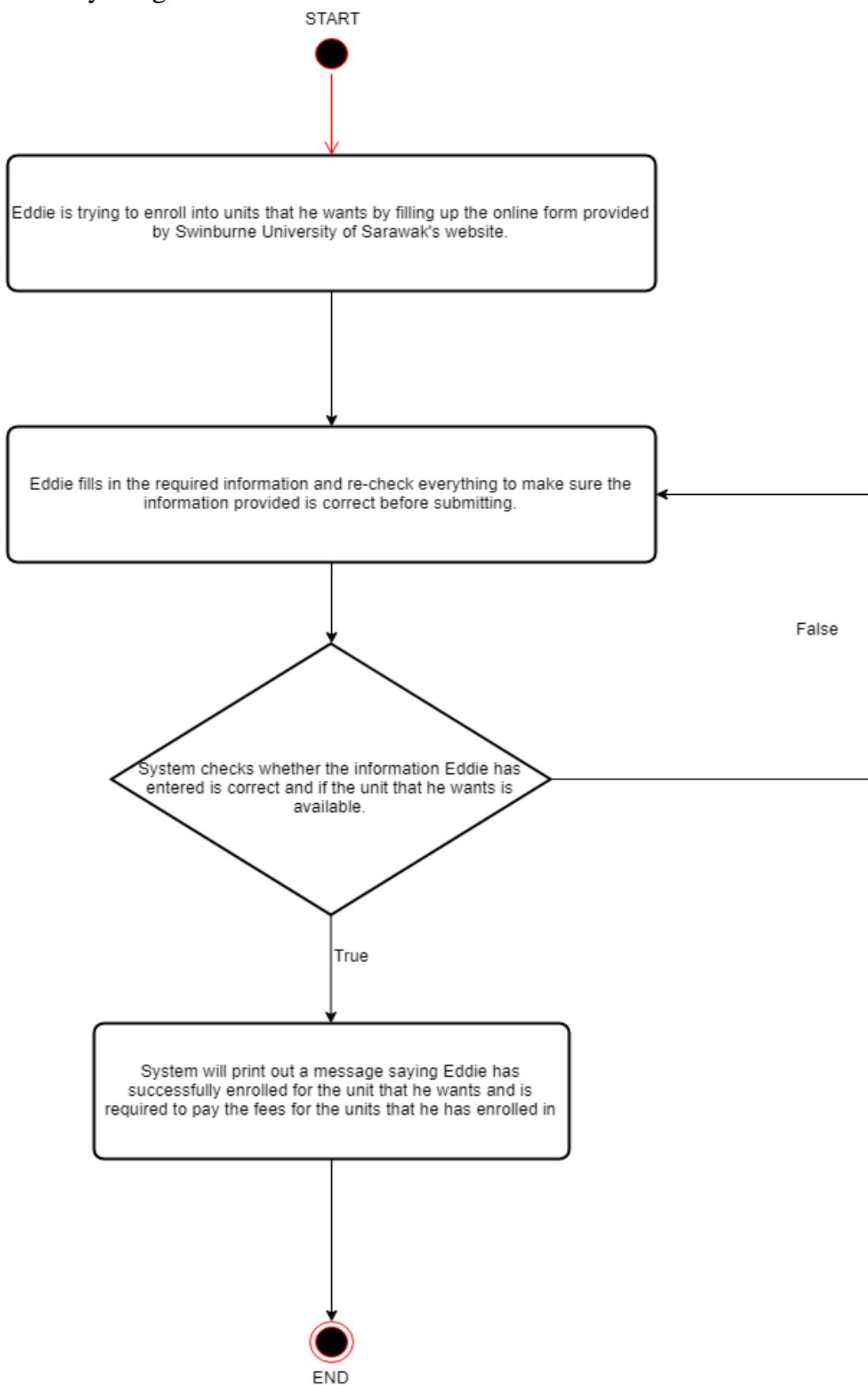
- a) Eddie is enrolling for units that he wants in Swinburne University of Sarawak through their website.
- b)
  - 1) Alternatives: Eddie can go to Swinburne University of Sarawak physically and fill out the hard copy form from there to enroll into a unit.
  - 2) Extensions:
    - 1a) Eddie enters his information wrongly.
      - I. System will check the information on the form submitted by Eddie and cross reference it to the database in Swinburne University of Sarawak.
      - II. System will signal an error to Eddie and request that he enter his information again.
    - 2a) Website is down for maintenance
      - I. System will inform Eddie that the website to fill out the form for enrolling into a unit is under maintenance and request that Eddie try again later.
- c) UseCase:
  - a. Name: Eddie is trying to enroll into a unit.
  - b. Primary actor: Eddie.
  - c. Pre-condition: Eddie is a student in Swinburne University of Sarawak and his information is authenticated.
  - d. Success guarantee: Eddie's information is stored. A success message that says Eddie has successfully enrolled into the unit that he wants after all the information that Eddie entered has been checked and is valid.
  - e. Main success scenario:
    - i. Eddie fills out the online form that he obtained from the Swinburne University of Sarawak's website to enroll into a unit.

- ii. Eddie makes sure that his student information, units that he wants to enroll in, and the semester that he wishes to enroll in is correct before submitting it.
  - iii. System will check the information on the form that Eddie has submitted and verify all the information.
  - iv. System will then print out a success message that indicates Eddie has successfully enrolled into the unit that he wants.
- f. Extensions:
  - i. Unit is not available for the semester
    1. System will alert Eddie that the unit that he wants to take is not available for the semester.
    2. System will prompt Eddie to refill the enrolment form again but with a different unit this time.
  - ii. Eddie submits the enrolment form after the due date
    1. System will check the enrolment form that is submitted by Eddie and verify all the information on it.
    2. System will print out a success message that indicates Eddie has successfully enroll into the units that he wants but with a note saying Eddie is required to pay the late penalty fee.
  - iii. Enrolment form is not filled out completely.
    1. System will print out an error message saying some of the required information is not filled out by Eddie.
    2. System will show Eddie which information that he has not filled out yet by highlighting the text box with the color red.
  - iv. Eddie has not paid the remaining fees from last semester.
    1. System will reject the enrolment form submitted by Eddie with a warning message saying that Eddie must pay the remaining fees from last semester before he could enroll into new units for this semester.
  - v. Eddie could not load the enrolment form page.
    1. System will print out a message saying that the enrolment form page is not available.
    2. System will bring Eddie back to Swinburne University of Sarawak's main website.

d) Class Diagram:



e) Activity Diagram:



Resources used:

Boyd, NS 2009, *Domain Vocabulary*, Educery, viewed 20<sup>th</sup> April 2019,  
<<http://educery.com/educe/patterns/domain-vocabulary.html>>

Activity Diagram - Activity Diagram Symbols, Examples, and More n.d., *Activity Diagram*, smartdraw, viewed 20<sup>th</sup> April 2019,

<<https://www.smartdraw.com/activity-diagram/>>

# SWE20001 Development Project 1: Tools and Practices 1

## Credit Task 6.3 Version Control

Aldalton Choo Chien Khin (Student ID: 101212783)

## **Credit Task 6.3 Version Control**

### **Version Control:**

Version control system helps a software team to handle the changes that have been made on to the source code over time. It helps to keep an eye on changes that have been made to the source code in a special database storage. If an error has been made by one of the members in a software team, they can retrieve an older version of the source code and this can help to identify and fix the errors without causing a huge disturbance to the progress of the other software team members. There are several kinds of version control systems available in the market but the ones that I am going to talk about is the centralized and distributed version.

CVS or also known as Centralized Version Control System is where the single master copy of a project or a source code is stored in a central server and all version history or changes that has been made on a project or source code is also stored in the central server. This means that all developers must push their changes to the central server and other developers working on the same project can see the changes that has been made once it is committed. CVS only allows one developer to edit or make changes to the project at a time and once the developer is done editing and commits the changes to the central server, CVS then allows other developer to edit the project. One of the disadvantages of CVS is if the central server is down, developers won't be able to save their changes to the central server.

DVCS or also known as Distributed Version Control System on the other hand does not rely on a central server. Instead, it allows the developers to clone or copy the repository and this means that the developers will have the entire history of a project on their local computer. Developers will then be allowed to make changes on the project without being locked out by the central server unlike in CVS only one developer is only allowed to make changes at a time. Once the developers are satisfied with the changes that they have made, they will have to ask the developer or person that created the master copy to push the changes that they have made into the master copy as the owner is the only one with the power to do so. One of the disadvantages of DVCS is that when developers work on the same project at the same time, merge conflicts tends to happen.

## How does Version Control work?

Version control systems uses a database of changes called repository and a working copy of where a developer is doing their work. On the repository, version control system usually stores the information of all the edits that a developer has made on their projects and historical/older version of the developer's projects.

A working copy is also known as the private or individual duplicate of all the files in a developer's project that is usually located on the developer's local computer. The developer can make changes to their working copy without having the fear of disrupting the progress of the other members in the software team and once they are done with the editing or changes made to the project, the developer can commit these changes to the repository. Once a commit is pushed, the other team members can update their own working copy from the repository and see the changes that has been made by a developer of the software team.

Version control system also allows different members in a software team to work simultaneously on the same project but if two or more team members pushed their changes on the same line in the same file of the same project at the same time, a conflict occurs, and this is called a merge conflict.

To avoid or resolve merge conflicts, sharing changes that has been made frequently is one of the ways to do it. Once you are done editing or making changes to the project and have committed the changes, share it with your software team members as soon as possible. Your team members can then update their working copy with the changes you have made it in and this helps to avoid conflicts and manual intervention needed to undo the merge conflict. Another method to prevent merge conflicts is splitting different tasks to different team members. This means two or more developers cannot make changes to the same line of codes because they have different tasks assigned to them. This helps to avoid merge conflict and at the same time increase the quality of code written. The last method to avoid merge conflicts is keep the changes you have made small and frequently commit them to the repository. This helps to lessen the chances of merge conflicts from occurring and even if a merge conflict did occur, it will not take much time and effort to fix the merge conflict as the changes made to the code is small.

## Different version control software in the existing market

The three version control software available on the existing market that I have chosen are:

- Git
- Bazaar
- Apache Subversion (or also known as SVN)

All these version control software are available free to everyone and is open source but each version control software provides different features to its users. For Git, it is known to have super-fast and efficient performance when compared side by side with the other two version control software. For Bazaar, it allows the developers to work with or without a central server. For SVN, it supports atomic commits, where either all edit, or changes made to the master copy are applied or none are applied and this helps to prevent data corruption in the database.

### Git

Advantages:

- Available on multiple platforms
- A powerful version control software and easy to maintain
- Changes made on codes can be easily tracked
- Fast operational speed and more efficient.

Disadvantages:

- More complicated and larger history log is harder to understand
- Timestamp preservation is not supported.
- Linux has more support compared to windows

### Bazaar

Advantages:

- Directories tracking is supported well in Bazaar
- Plugin system is easier to understand and use
- High storage efficiency and speed
- Available on multiple platforms

Disadvantages:

- Does not support cloning
- Does not support Timestamp preservation

## SVN

Advantages:

- Easier to set up and administer
- Have better windows support unlike in Git
- Has a benefit of good GUI tools like TortoiseSVN
- Integrates well with Windows.

Disadvantages:

- Does not record down the time of when a file is modified
- Does not manage the filename normalization properly
- SVN uses centralized version control system so this mean one person is only allowed to edit their code at a time.

## Resources used:

Ernst, M 2012, *Version control concepts and best practices*, University of Washington Computer Science & Engineering community, viewed 20 April 2019,

<<https://homes.cs.washington.edu/~mernst/advice/version-control.html>>

Manandhar, G 2016, *3 simple rules for less or no git conflicts*, Geshan's Blog, viewed 20 April 2019,

<<https://geshan.com.np/blog/2016/04/3-simple-rules-for-less-or-no-git-conflicts/>>

Ramos, J 2018, *Recommendations to avoid merge conflicts*, ITNEXT, viewed 20 April 2019,

<<https://itnext.io/recommendations-to-avoid-merge-conflicts-845ec133676e>>

Ecker, R 2016, *4 simple tricks to avoid merge conflicts*, The Team Coder, viewed 20 April 2019,

<<https://team-coder.com/avoid-merge-conflicts/>>

Rawson, R 2019?, *2019 version control software comparison: SVN, Git, Mercurial*, Time Doctor, viewed 20 April 2019,

<<https://biz30.timedoctor.com/git-mecurial-and-cvs-comparison-of-svn-software>>

Gupta, L 2012?, *How distributed version control system works?*, HowToDoInJava, viewed 20 April 2019,

<<https://howtodoinjava.com/vcs/how-distributed-version-control-system-works>>

Johnson, E 2014, *CVCS & DVCS: The needs That Version Control Systems Serve*, INTLAND SOFTWARE, viewed 20 April 2019,

<<https://content.intland.com/blog/sdlc/the-needs-that-version-control-systems-serve>>

Lionetti, G 2012, *What is version control: centralized vs. DVCS*, Atlassian, viewed 20 April 2019,

<<https://www.atlassian.com/blog/software-teams/version-control-centralized-dvcs>>

*What is version Control 2012?*, Atlassian, viewed 20 April 2019,

<<https://www.atlassian.com/git/tutorials/what-is-version-control>>

*15 BEST Version Control Software (Source Code Management Tools) 2018*,  
Software Testing Help, viewed 20 April 2019,

<<https://www.softwaretestinghelp.com/version-control-software/>>

## Pass task 7.1 Sprint Retrospective

# Meeting Agenda

---

Date/Location: 25-April-2019 at 2:00PM in A302

## Sprint Review

---

- Added an easy AI mode by AC
- Added mute button by Marc
- Added reset button by LL and change the colour of the AI
- AC fixed the bug where ships deployed will be a few square above the mouse cursor
- AC fixed the bug where the ship is not able to deploy in a vertical position
- Product owner was satisfied with the easy AI mode, mute button, and reset button after the presentation
- Product owner said highscore is not stored in the txt file so that needs to be fixed. She also said to add two more extention during the upcoming sprint week

## Sprint Retrospective

---

- After a lot of attempts, we managed to make the battleship run
- Everyone attended the scrum meeting
- Manage to overcome all the problems encountered
- Make the shots taken by both the AI and player more distinctive
- The font of the game needs to be enlarged to increase the visibility.
- The UI of the game has to be improved on to better improve upon the aesthetics
- Fix the coordinate bug
- Add an instruction page to help user understand how to play
- The highscore did not record into the txt file so that needs fixing
- AC had his wisdom tooth removed during the sprint week so it was not a good week for him
- Everyone had other responsibilities and assignments to do so the air around the team is tense

## Information Updates/Reminders

---

- Last week was about adding the extensions and documenting the code
- This week we will do a sprint review of our product and process and also continue adding in any extensions or game bugs that are not done yet
- Help from an external consultant has been provided to help get the code converted and working if that was not done.
- Everyone should have used toggl.com to track their time last week. Also track time on tasks this week with Toggl.
- Tutor must be added to GitHub, Trello and Toggl.
- Slack will be used to show the changes in the Trello board during the sprint of activity
- The Programming Help Desk ATC620 is *still* available to help us with programming for this unit.

## **Decisions Needed**

---

- Solving the leftover known game bugs
- Implement the extensions that re not implemented yet
- Fix some functionality issues with the extensions implemented
- Fix the the issue where the high score is not saved and not outputted to the highscore.txt file.
- Improve upon the UI of the game

## **General Items**

---

- The Trello board needs to be updated ready for the planned Sprint process. In particular columns for project backlog and sprint backlog will be needed.
- Create and link the team slack so that we can be notified and have a nice record of the Trello updates.
- The project backlog of tasks needs to be created. Use the existing bugs and features we have documented, and convert to the required format. Need a meeting after this meeting to get that done and into Trello (today).
- Project backlog tasks need to be prioritised and their time estimated using 1,2,4,8 hour categories. (Today)
- The new Sprint backlog needs to be pre-selected ready for discussion and approval with the project owner. (Today)
- Once Sprint has started, hold a daily scrum meeting. (Start next week?)
- Game bugs that exist from the previous week still need fixing
- Game functionality that is missing or not working from the previous week still need fixing as the program could not run
- Extensions will need to be improved upon and those that are not implemented yet to be implemented and also fix the functionality issues that come with it.

# Meeting Minutes

---

Date/Location: 25/4/19 at Swinburne University of Technology in A302

Attendees: Marc Chai, Lim Jia Lok, Aldalton Choo

Start Time: [2:00 p.m.]

End Time: [3:30 p.m.]

## Decisions

---

- AC will be fixing the highscore problem
- LL will fix the font of the game
- LL will improve upon the aesthetic of the game
- MC will fix the coordinate bug

## Actions

---

- 1-5-19 AC should be done with fixing highscore probloem where the highscore is not saved upon quitting and not recorded in the highscfore.txt file.
- 1-5-19 LL should be done with improving the font design and size to increase the visibility.
- 1-5-19 LL should be done with improving aesthetic of the UI of the game to make it easier on the eyes.
- 1-5-19 MC will fix the coordinate bug that is causing the coordinate shown to be incorrect

## Scrum meeting

Scrum meeting on the 26<sup>th</sup> April



Aldalton Choo 10:39 PM

1. For yesterday, I didn't focus on the battleship project because i was studying for a test that is coming up this Saturday
2. For today, i could not do anything because i had a really bad stomachache and I had to study for a test that is coming up this Saturday.
3. As for problems, i faced no problems

Figure (1) Scrum meeting 10 on the 26<sup>th</sup> of April

Scrum meeting on the 29<sup>th</sup> April



Aldalton Choo 10:20 PM

- Today is 29/4/19, Monday and Scrum meeting #11
1. For yesterday, I was doing some research on how to make the highscore save into the txt file.
  2. For today, I tried to make the highscore save into the txt file but no success yet.
  3. For problems, i keep having a error when trying to make the highscore save into the txt file so I will try to work on this problem

Figure (2) Scrum meeting 11 on the 29<sup>th</sup> of April

Scrum meeting on the 30<sup>th</sup> April



Aldalton Choo 10:48 PM

1. Yesterday i was trying to make the highscore save into the txt file but to no avail.
2. Today, I somehow made the game to save the highscore even after closing and restarting the game the highscore is still saved at the highscore screen but i still can't make it save to the txt file
3. for problems, the only problems i have faced is the not able to save into the txt file

Figure (3) Scrum meeting 12 on the 30<sup>th</sup> of April

## Making the highscore save in game:

In order to make the highscore save in game, I called the function HighScore() before the EndCurrentState() function in the HighScoreController. This made the highscore to be saved in the battleship game even after you exited the game the previous highscore is still shown after you restarted the game again. This can be seen in figure (4). While this works I still could not make the highscore save into the txt file even after numerous attempts.

```
164      164      const int ENTRY_TOP = 500;
165      165
166      -      if (_Scores.Count == 0)
167      -      LoadScores();
168      +      if (_Scores.Count == 0)
169      +      {
170      +          LoadScores();
171      +
172      //is it a high score
173      -      if (value > _Scores[_Scores.Count - 1].Value) {
174      +      if ((value > _Scores[_Scores.Count - 1].Value)) {
175          Score s = new Score();
176          s.Value = value;
177
178          @@ -183,7 +186,7 @@ static class HighScoreController
179          SwinGame.ProcessEvents();
180
181          UtilityFunctions.DrawBackground();
182
183          -      DrawHighScores();
184
185          +      HighScoreController.DrawHighScores();
186          SwinGame.DrawText("Name: ", Color.White, GameResources.GameFont("Courier"), SCORES_LEFT, ENTRY_TOP);
187          SwinGame.RefreshScreen();
188
189      }
190
191      @@ -198,6 +201,8 @@ static class HighScoreController
192          _Scores.Add(s);
193          _Scores.Sort();
194
195          +      SaveScores();
196
197          GameController.EndCurrentState();
198
199      }
200
201      }
202
203      }
```

Figure (4) fixing saving high score in the game.

## Trello Board

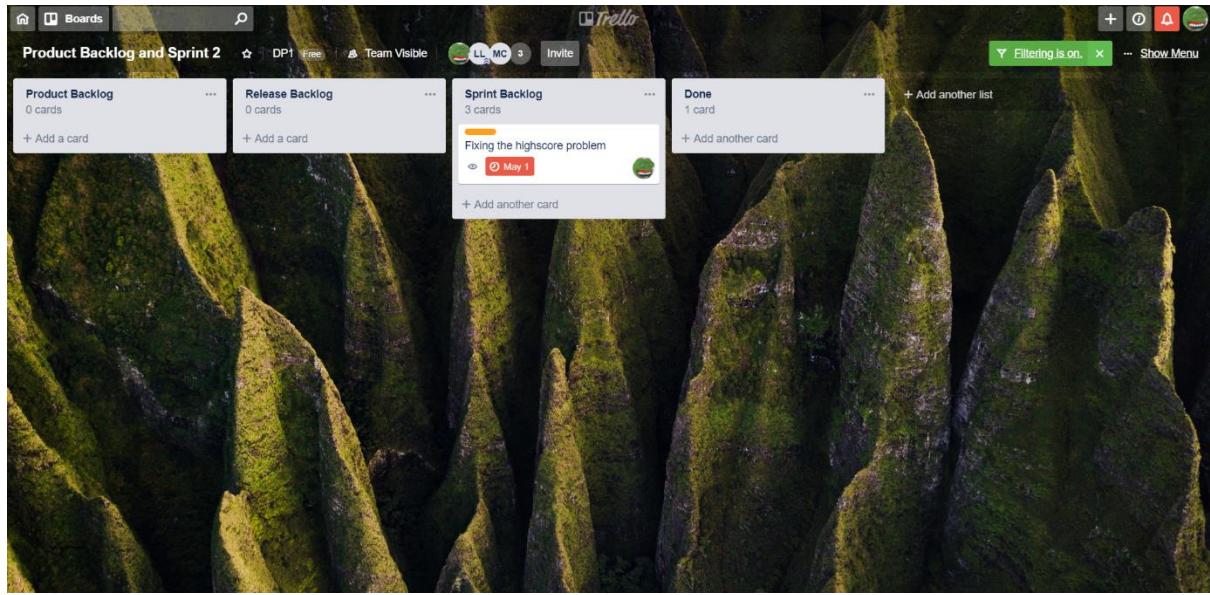


Figure (5) Trello Board

## Toggl Board

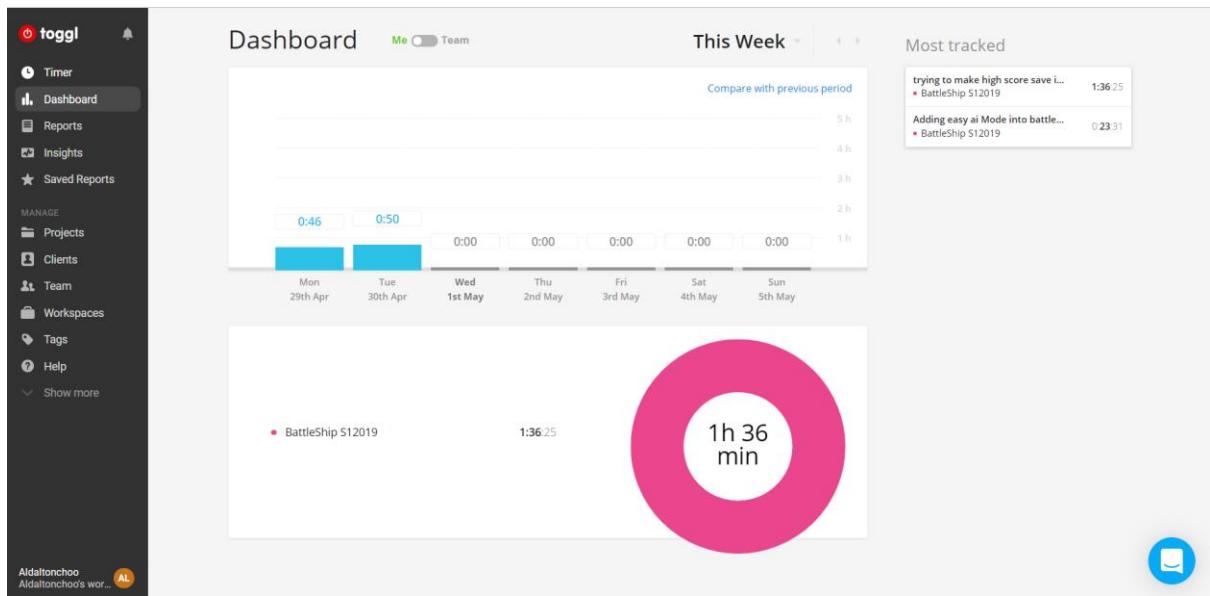


Figure (6) Toggl Board

## GitHub Contributors and Network graph

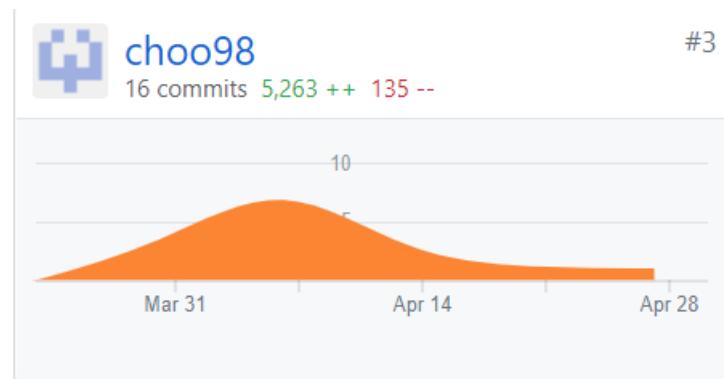


Figure (7) Contributor graph

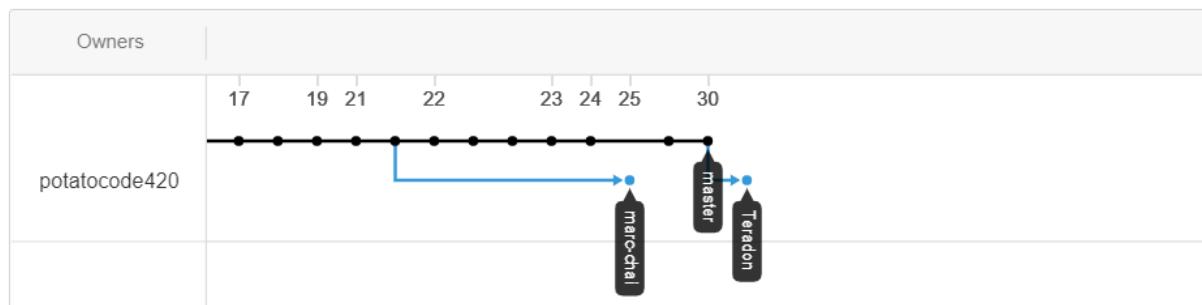


Figure (8) Network graph

## **Pass Task 8.1: BattleShip Sprint 2**

# **Meeting Agenda**

---

Date/Location: 2-May-2019 at 2:00PM in A302

## **Information Updates/Reminders**

---

- Last week was about adding the extensions and documenting the code
- This week we will do a sprint review of our product and process and also continue adding in any extensions or game bugs that are not done yet
- Help from an external consultant has been provided to help get the code converted and working if that was not done.
- Everyone should have used toggl.com to track their time last week. Also track time on tasks this week with Toggl.
- Tutor must be added to GitHub, Trello and Toggl.
- Slack will be used to show the changes in the Trello board during the sprint of activity
- The Programming Help Desk ATC620 is *still* available to help us with programming for this unit.

## **Decisions Needed**

---

- Code in new extensions to further improve on the game
- Repair some issues that might occur from adding extension
- Improving on the overall user interface

## **General Items**

---

- The Trello board needs to be updated ready for the planned Sprint process. In particular columns for project backlog and sprint backlog will be needed.
- Create and link the team slack so that we can be notified and have a nice record of the Trello updates.
- The project backlog of tasks needs to be created. Use the existing bugs and features we have documented, and convert to the required format. Need a meeting after this meeting to get that done and into Trello (today).
- Project backlog tasks need to be prioritised and their time estimated using 1,2,4,8 hour categories. (Today)
- The new Sprint backlog needs to be pre-selected ready for discussion and approval with the project owner. (Today)
- Once Sprint has started, hold a daily scrum meeting. (Start next week?)
- New extensions will need to be implemented

# Meeting Minutes

---

Date/Location: 2/5/19 at Swinburne University of Technology in A302

Attendees: Marc Chai, Lim Jia Lok, Aldalton Choo

Start Time: [2:00 p.m.]

End Time: [3:30 p.m.]

## Decisions

---

- AC will implement new background music
- AC will try to implement a new menu background image
- LL will add instruction page
- LL will change ship images
- MC will make the high score UI look better

## Actions

---

- 8-5-19 AC should be done implementing a new background music to improve on the user experience when playing the game
- 8-5-19 AC will implement new menu background image to improve on the aesthetic of the menu
- 8-5-19 LL will add an instruction page to help the user understand how to play the game
- 8-5-19 LL will change the ship images to a more realistic one to help improve the look of the ship
- 8-5-19 MC will improve on the high score UI to include options to cycle from easy, medium, and hard mode scores and also the background image to improve visibility.

## Scrum meeting

Scrum meeting 2<sup>nd</sup> of May 2019



Aldalton Choo 10:41 PM

1. Yesterday, i tried doing to make the highscore save into the txt file and it finally worked
2. Today, i managed to change the main menu background and music too look and sound better and also changed the loading menu image to make it look better
3. for problems, no problems faced at all

Figure (1) Scrum meeting 13

I changed the background image and music of the main menu by replacing the image file and music file respectively with the image and song that I wanted. The figure below is an example of the main menu with a new background image

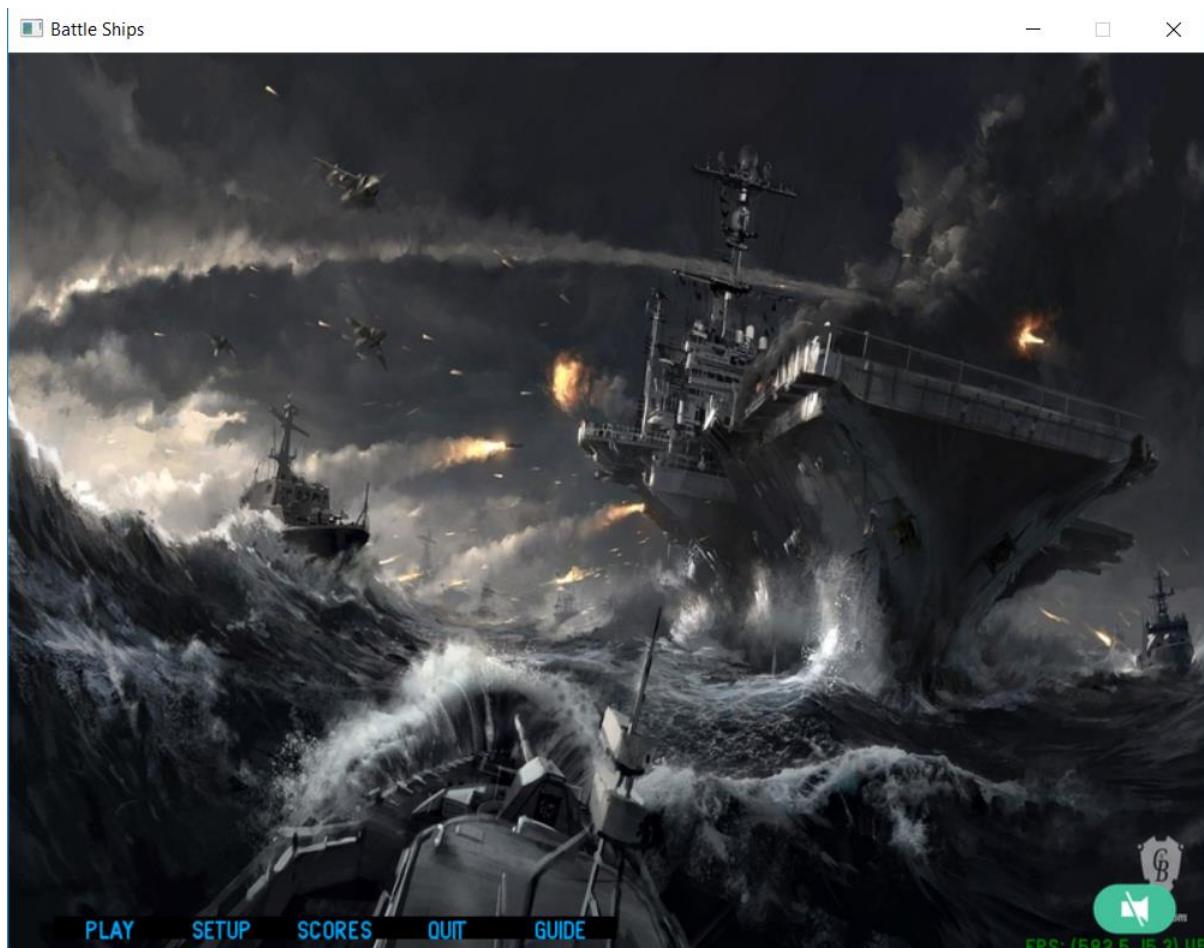


Figure (2) background image of the main menu after changing  
Scrum meeting 3<sup>rd</sup> of May 2019



Aldalton Choo 10:40 PM  
Scrum meeting #14

1. Yesterday i finished changing the menu background picture, menu background music and loading screen picture
2. Today, Since i have finish my part for this week's sprint I am focusing on other assignments
3. no problems faced at all

Figure (3) Scrum meeting 14

## Scrum meeting 4<sup>th</sup> of May 2019

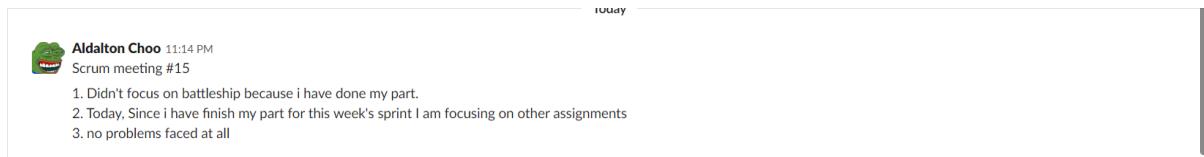


Figure (4) Scrum meeting 15

## Scrum meeting 6<sup>th</sup> of May 2019

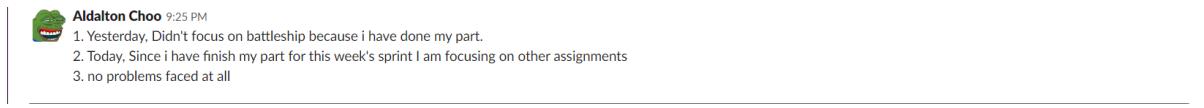


Figure (5) Scrum meeting 16

## Scrum meeting 7<sup>th</sup> of May 2019

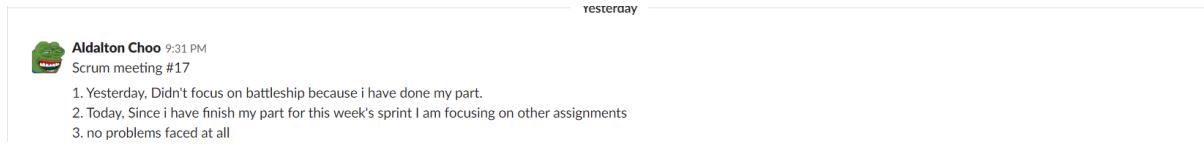


Figure (6) Scrum meeting 17

## Trello Board:

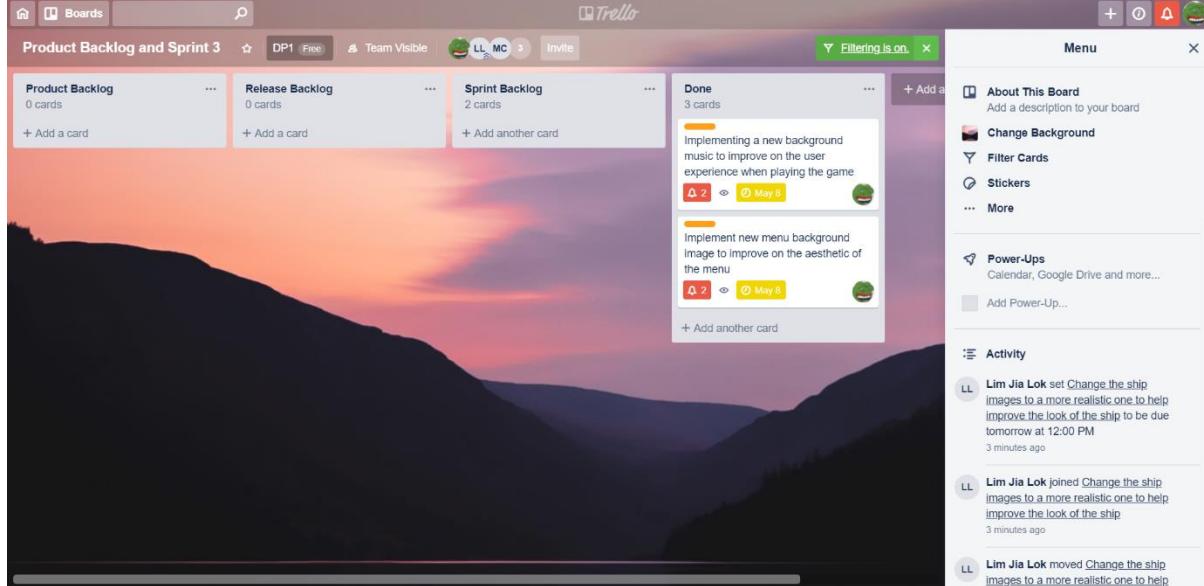


Figure (7) Trello Board

## Toggl Board:

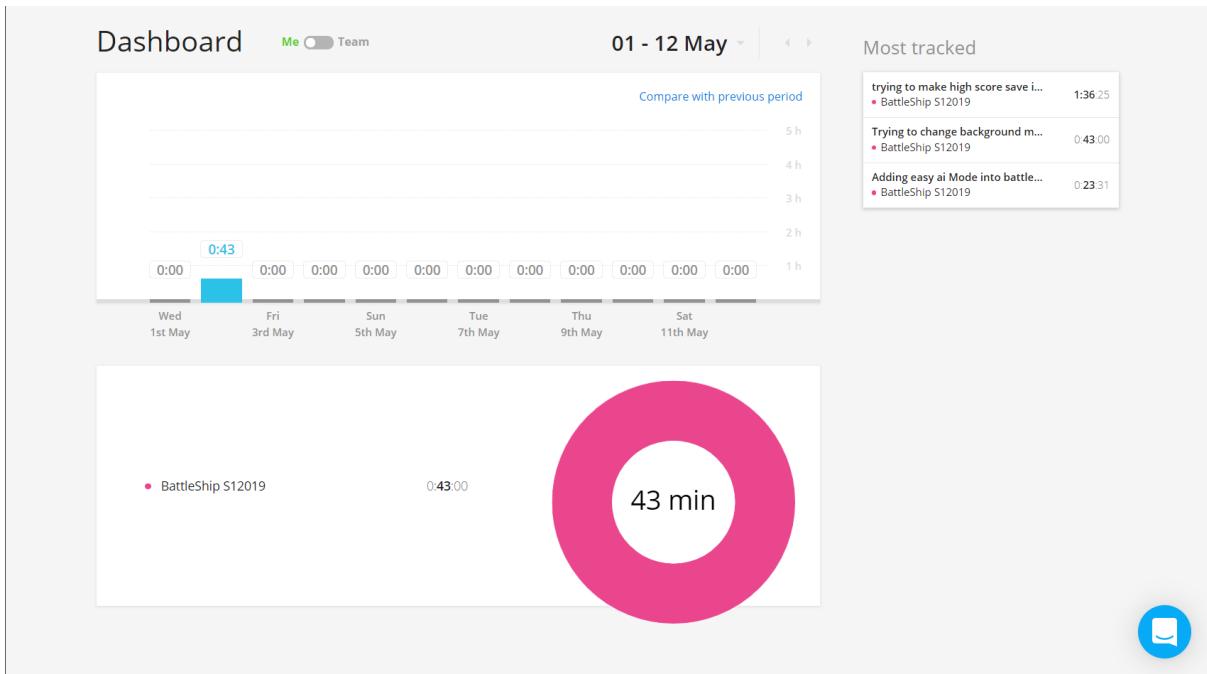


Figure (8) Toggl Board

## Git-Hub Contribution graph:

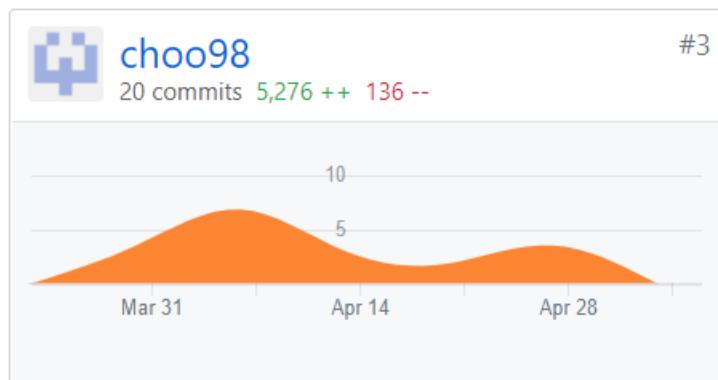


Figure (9) Contribution graph

## Git-Hub Network graph:

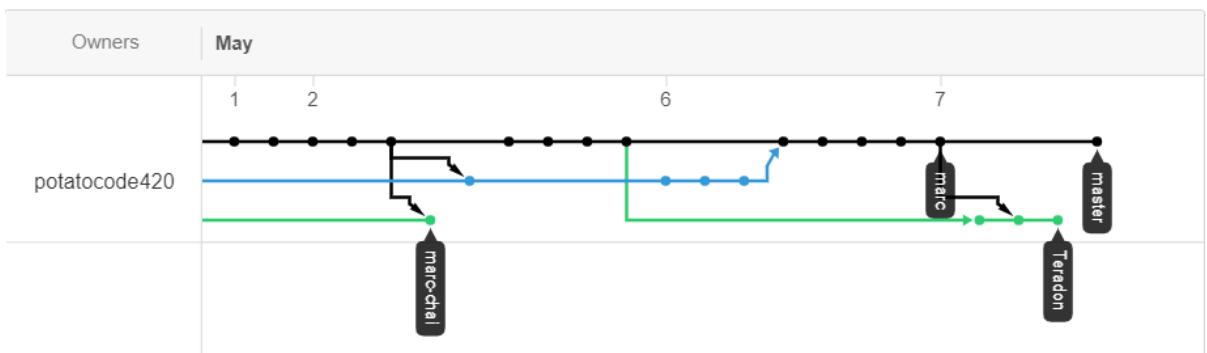


Figure (10) Network graph

## Pass task 9.1 Sprint 2 Retrospective

# Meeting Agenda

---

Date/Location: 9-May-2019 at 1:30PM in A302

## Sprint Review

---

- LL fixed font size and selection in deployment phase
- LL improved game game aesthethic
- AC fixed highscore problems where it wnot save into the txt file
- AC fixed the coordinate bug
- AC improved game aesthehic by changing background image, background music and loading screen image
- MC make the highscore to be able to sort according to the level of difficulty
- LL made the instruction page

## Sprint Retrospective

---

- AC had a lot of troubles fixing the highscore bug
- Everyone attended all scrum meetings
- Everyone manage to complete their tasks and overcome all problems during the process
- Marc broke his glasses
- Battleship game looks better and sound better
- It was the last few weeks of the semester so everyone had assignments which causes a tense atmosphere and jeopardize communication a bit.

## Information Updates/Reminders

---

- Last week was about adding the extensions and documenting the code
- This week we will do a sprint review of our product and process and also continue adding in any extensions or game bugs that are not done yet
- Help from an external consultant has been provided to help get the code converted and working if that was not done.
- Everyone should have used toggl.com to track their time last week. Also track time on tasks this week with Toggl.
- Tutor must be added to GitHub, Trello and Toggl.
- Slack will be used to show the changes in the Trello board during the sprint of activity
- The Programming Help Desk ATC620 is *still* available to help us with programming for this unit.

## Decisions Needed

---

- Create new extensions to extend the features
- Fix any extensions bugs that had occurred

## General Items

---

- The Trello board needs to be updated ready for the planned Sprint process. In particular columns for project backlog and sprint backlog will be needed.
- Create and link the team slack so that we can be notified and have a nice record of the Trello updates.
- The project backlog of tasks needs to be created. Use the existing bugs and features we have documented, and convert to the required format. Need a meeting after this meeting to get that done and into Trello (today).
- Project backlog tasks need to be prioritised and their time estimated using 1,2,4,8 hour categories. (Today)
- The new Sprint backlog needs to be pre-selected ready for discussion and approval with the project owner. (Today)
- Once Sprint has started, hold a daily scrum meeting.
- Extensions that are new will be added

# **Meeting Minutes**

---

Date/Location: 9/5/19 at Swinburne University of Technology in A302

Attendees: Marc Chai, Lim Jia Lok, Aldalton Choo

Start Time: [1:30 p.m.]

End Time: [3:30 p.m.]

## **Decisions**

---

- AC will implement cheat mode
- LL will create a timer
- MC will create slider buttons to control the volume

## **Actions**

---

- 15-5-19 AC should create a cheat mode to give the players the ability to modify certain elements of the game like extra lives and etc.
- 15-5-19 LL should create a timer to restrain the user to choose a tile immediately within that time limit
- 8-5-19 Marc should create sliders to control the volume so that the value of the sound can be controlled from 0 to 100.

## Scrum meeting



Aldalton Choo 9:12 PM

1. Yesterday, i helped to make the meeting agenda
2. Today, researching on how to implement the cheat mode
3. no problems so far

Figure (1) Scrum meeting 18 9<sup>th</sup> May 2019

1. Yesterday, i researched on how to implement the cheat mode
2. Today, I am trying to implement the cheat mode but to no success
3. So far no problems

Figure (2) Scrum meeting 19 10<sup>th</sup> May 2019



Aldalton Choo 12:51 AM

1. Yesterday, i tried to implement the cheat mode
2. Today, I am trying to implement the cheat mode but to no success
3. I am having a really bad flu so i could not attend the scrum meeting on time (edited)

Figure (3) Scrum meeting 20 11<sup>th</sup> May 2019



Aldalton Choo 8:42 PM

1. Yesterday, i tried to implement the cheat mode
2. Today, i am taking a break because i have a really bad flu and sore throat
3. I am having a really bad flu so i could not do my task

Figure (4) Scrum meeting 21 12<sup>th</sup> May 2019



Aldalton Choo 8:42 PM

1. Yesterday, i tried to implement the cheat mode
2. Today, i am taking a break because i have a really bad flu and sore throat
3. I am having a really bad flu so i could not do my task

Figure (5) Scrum meeting 22 13<sup>th</sup> May 2019



Aldalton Choo 9:43 PM

1. Yesterday, i tried to continue implementing the cheat mode but stopped after a few hours because i was still sick
2. Today, i continued implementing the cheat mode but stopped after a few hours because i was still sick
3. I am having a really bad flu so i could not do my task properly

Figure (6) Scrum meeting 23 14<sup>th</sup> May 2019

## What I done this week

For this week I implemented the cheat mode for the player to use when they have difficulty beating the game. All they must do is press the button key ‘h’ and the position of the AI ships will appear on the board. Figure (7) is an example of how the cheat mode looks like.

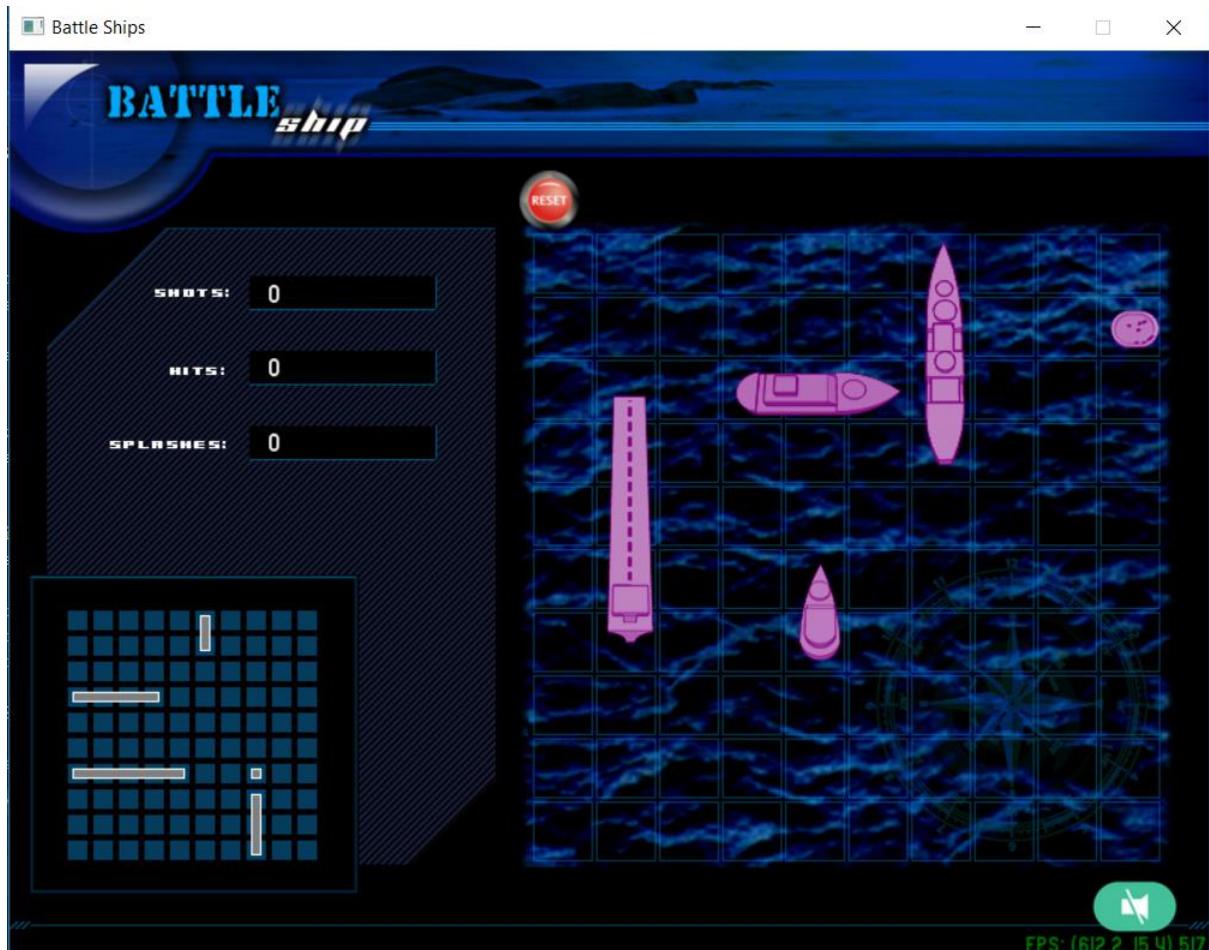


Figure (7) Cheat mode for battleship

I added a new line of code in the DiscoveryController class so that when the player clicks the key button ‘h’ the AI ships position will be revealed. Figure (8) is an example of how the line of codes looks like.

```
| if ((SwingGame.KeyDown(KeyCode.vk_h))) {  
|     UtilityFunctions.DrawField (GameController.ComputerPlayer.PlayerGrid, GameController.ComputerPlayer, true);  
| }
```

Figure (8) Implementing the line of code for cheat mode in DiscoveryController class.

## GitHub contributor graph and network graph



Figure (9) Contributions graph for Aldalton Choo

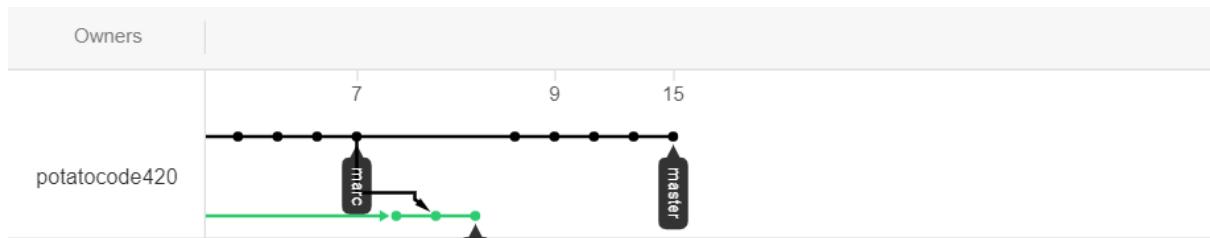


Figure (10) Network graph for Aldalton Choo

## Toggl Board

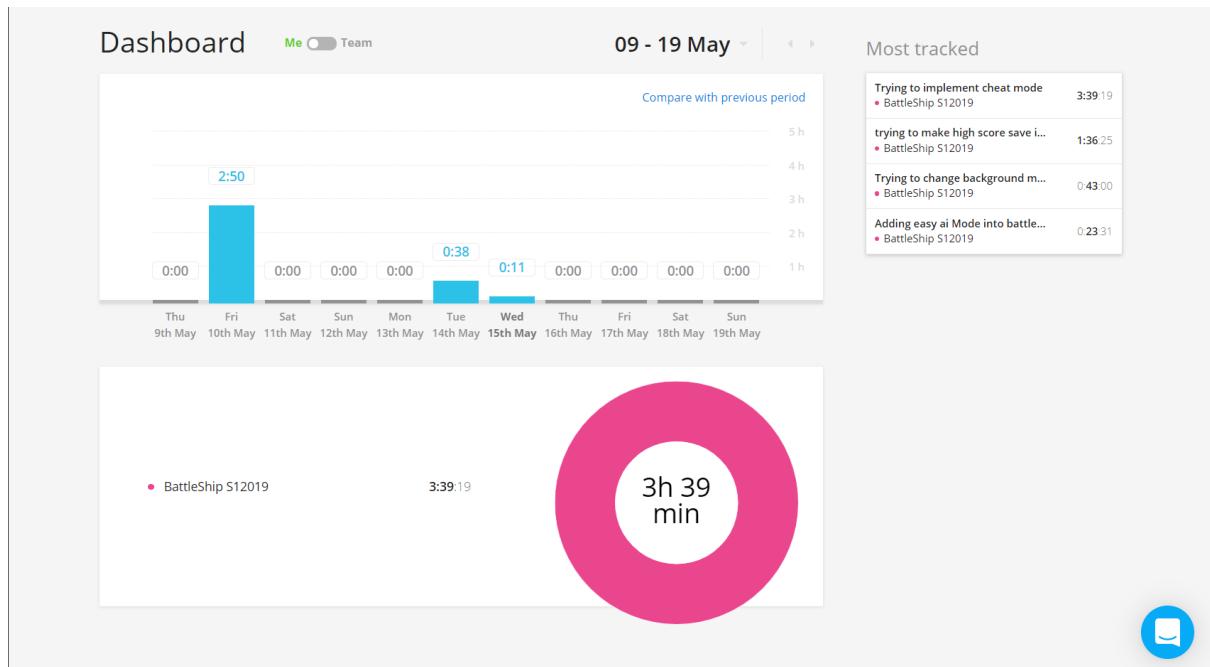


Figure (11) Toggl Board for Aldalton Choo

## Trello Board

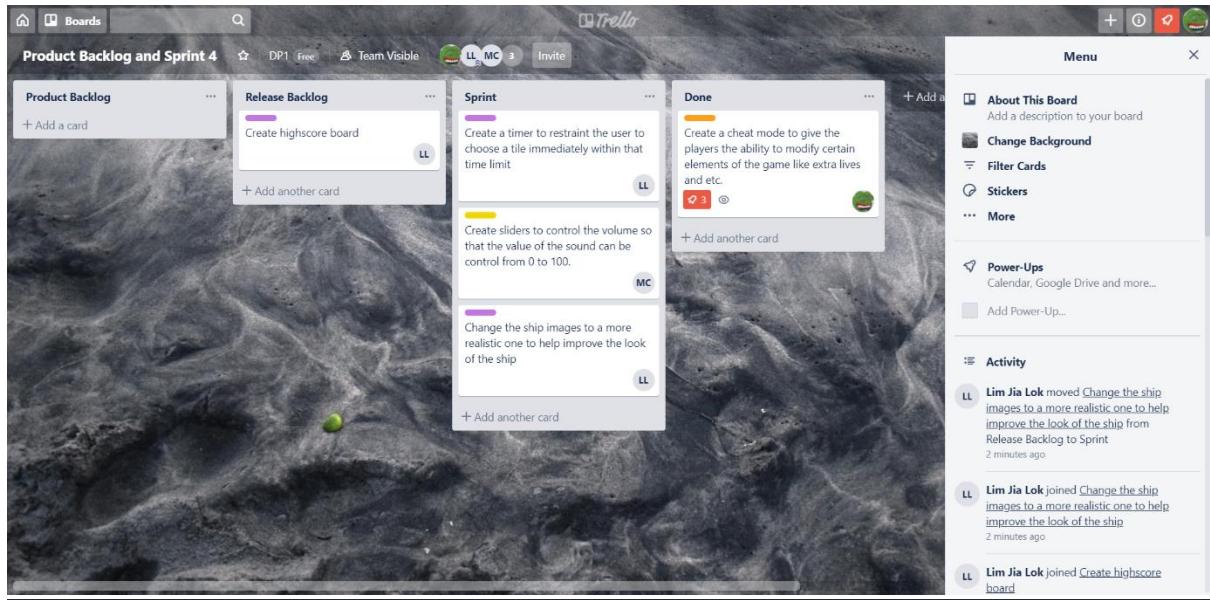


Figure (12) Trello board for Aldalton Choo

## Pass task 10.1: Unit Testing

### Part 1

```
public void combineArrayStringWithDelimiterTest()
{
    StringUtilities target = new StringUtilities(); // TODO: Initialize to an appropriate value
    string[] stringArray = {"DP1","is","cool"}; // TODO: Initialize to an appropriate value
    string delimiter = " "; // TODO: Initialize to an appropriate value
    string expected = "DP1 is cool"; // TODO: Initialize to an appropriate value
    string actual;
    actual = target.combineArrayStringWithDelimiter(stringArray, delimiter);
    Assert.AreEqual(expected, actual);
    //Assert.Inconclusive("Verify the correctness of this test method.");
}

/// <summary>
/// A test for replaceSpacesInStringByHyphens
/// </summary>
[TestMethod()]
public void replaceSpacesInStringByHyphensTest()
{
    StringUtilities target = new StringUtilities(); // TODO: Initialize to an appropriate value
    string aString = "DP1 is cool"; // TODO: Initialize to an appropriate value
    string expected = "DP1-is-cool"; // TODO: Initialize to an appropriate value
    string actual;
    actual = target.replaceSpacesInStringByHyphens(aString);
    Assert.AreEqual(expected, actual);
    //Assert.Inconclusive("Verify the correctness of this test method.");
}
```

Figure (1) Both test method for combineArrayStringWithDelimiter function and replaceSpacesInStringByHyphens function

```
public string combineArrayStringWithDelimiter(string[] stringArray, string delimiter)
{
    string str = default(string);
    foreach (string item in stringArray)
    {
        str += item + delimiter;

    }
    return str;
}
```

Figure (2) combineArrayStringWithDelimiter function before fixing it to meet the test criteria.

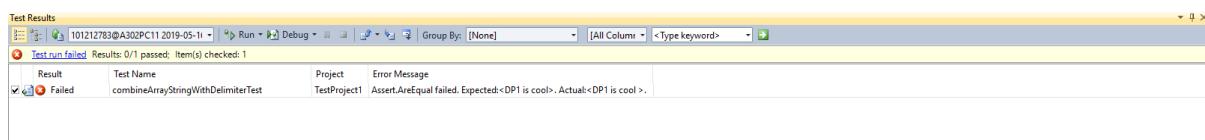


Figure (3) Test error for combineArrayStringWithDelimiter function

```

public string combineArrayStringWithDelimiter(string[] stringArray, string delimiter)
{
    string str = default(string);
    foreach (string item in stringArray)
    {
        str += item + delimiter;

    }
    return str.TrimEnd();
}

```

Figure (4) combineArrayStringWithDelimiter function after fixing it to meet the test criteria.

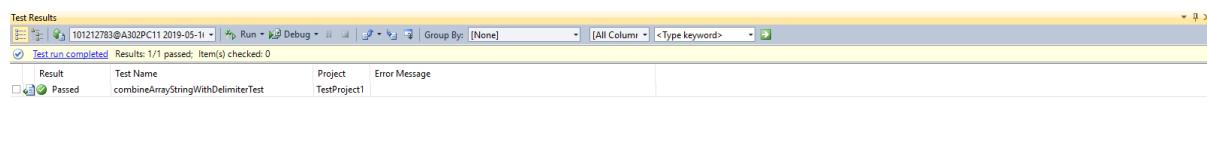


Figure (5) Test passed for combineArrayStringWithDelimiter function

```

public string replaceSpacesInStringByHyphens(string aString)
{
    string[] stringArray = aString.Split(null);
    return combineArrayStringWithDelimiter(stringArray, "-");
}

```

Figure (6) replaceSpacesInStringByHyphens function before fixing it to meet the test criteria.

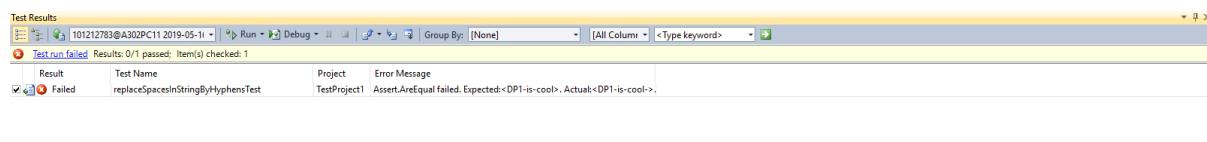


Figure (7) Test error for replaceSpacesInStringByHyphens function

```

public string replaceSpacesInStringByHyphens(string aString)
{
    string[] stringArray = aString.Split(null);
    return combineArrayStringWithDelimiter(stringArray, "-").TrimEnd(' ');
}

```

Figure (8) replaceSpacesInStringByHyphens function after fixing it to meet the test criteria.

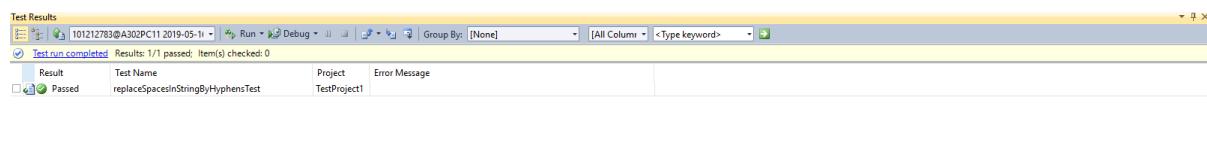


Figure (9) Test passed for replaceSpacesInStringByHyphens function

## Part 2



```
namespace Tests
{
    [TestClass()]
    public class AttackResultTests
    {
        [TestMethod()]
        public void AttackResultTest()
        {
            AttackResult attackResult = new AttackResult(ResultOfAttack.GameOver, "Game over", 0, 0);

            string result = attackResult.ToString();
            string outcome = "Game over";
            Assert.AreEqual(result, outcome);
        }
    }
}
```

Figure (10) Unit testing for AttackResult function

For the battleship testing I decided to test whether the AttackResult function is working as intended. In the unit testing class, I called the AttackResult function and assigned the values into a new variable called attackResult where the game is Over so ResultOfAttack.GameOver is passed into the function value and the string “Game over” will appear. I then passed on the value of attackResult into a new string variable called result and added the .ToString() function so that it will convert the values into a string. I then created another string variable called outcome and assigned the string value with “Game over” this is so that I can compare the result of the function and the expected outcome that the function should produce. I then use Assert.AreEqual function to compare both result and outcome. If both variables are equal, then the test is a success otherwise the test is a failure. The result of the test is a success as it is shown the figure (11).

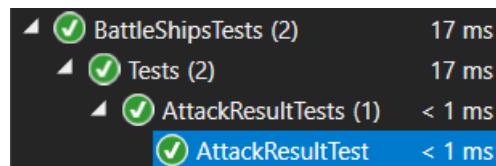


Figure (11) Test success for AttackResultTest Unit testing.