Project Diary
Program Design and Data Structures (1DL201)

William Brunnsberg

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Contents

1 Introduction

Similar to the common project diary, this document states all occasions I have worked on the project by myself, as well as the duration and what I have been working on.

2 Diary

2.1 Tuesday 2021-02-16

Duration: 3 hours

I did some research regarding servers in general as well as in Haskell and came to the conclusion that it may be too difficult to follow through with, given our current knowledge regarding the subject.

After discussing with the group, I wrote a mail to Ghafour, our supervisor, where I explained our new project idea; a Battleships game.

I also did some research regarding 2D-arrays and tried making some functions to access and manipulate cells. Me and William Berger created some data types as well.

2.2 Sunday 2021-02-21

Duration: 7 hours

Firstly, I did some research on different methods for Battleships AI. I then started working on functions for the AI. I determined to use algorithms called *Hunt* and *Parity*.

Hunt means that if the AI hits a ship, it will search cohesive cells.

Parity means that the AI will check squares that are not next to each other to be more effective.

I had gotten quite far but ran into some bugs. I will primarily focus on

debugging the next session.

2.3   Monday 2021-02-22

Duration: 5 hours

Firstly I corrected bugs for the AI. However, upon fixing that bug, another bug was later discovered. I have not yet managed to fix the latter bug, but I found it and will fix next session.

Other than that I changed some functions for the AI and started writing the Report. I created a general structure and started writing the introduction.

2.4   Tuesday 2021-02-23

Duration: 1 hour

I fixed the bug in the AI by adding a new function. I also made some changes to other functions.

2.5   Thursday 2021-02-25

Duration: 6 hours

I continued writing on the report and made a more detailed structure.

Since we decided to add a new rule that does not allow ships to be placed next to each other, I worked on a new AI algorithm.

2.6   Friday 2021-02-26

Duration: 3 hours

I continued with improving the AI but unfortunately ran into a lot of bugs that had to be fixed.

2.7 Saturday 2021-02-27

Duration: 3 hours

I continued with the new AI algorithm, but it got very complex with many special cases, and therefore I decided to pause the development of that and instead focus on writing function specifications and examples for the AI functions.

I also wrote slightly more on the report, mainly the introduction and the explanation of how Battleships work.

2.8 Sunday 2021-02-28

Duration: 2 hours

I wrote some more function specifications and examples for AI functions and wrote some more on the report.

2.9 Monday 2021-03-01

Duration: 9 hours

I started off by writing data type specifications for the data types and type synonyms. I also added more examples to function specifications.

I wrote a lot on the report, for instance a big part of the AI, the entire Shortcomings part and the explanation of the important data types and type synonyms.

2.10 Tuesday 2021-03-02

Duration: 9 hours

I continued with writing the report. Most of the writing was focused on Use cases, but I also added and changed a lot on the AI part.

I also rewrote our common project diary and my own diary to be more detailed and in Latex instead of just a *.txt*-file.

Finally, I wrote many test cases for functions in logic.

2.11 Wednesday 2021-03-03

Duration: 6 hours

I added some parts to the report.

I wrote examples for functions. I also wrote a lot of test cases and structured them into different categories.

2.12 Thursday 2021-03-04

Duration: 1 hour

I added some final test cases to the logic module.

3 Total Time

My total individual time working on the project is 53 hours. Added with the time we have worked together, my total time is 85.5 hours.