

EECS 448 – Software Engineering I  
Project 02  
System Documentation

Group 08:  
Huzaifa Zahid  
Mir Shazil Faisal  
Junyi Zhao  
Zhenzhou Wang

**Story Point Analysis of previous EECS projects:**

1	2	3	5	8	13
Lab 1 – Simple Printing Exercise	Lab 6 – Array reversal, file I/O	Lab 3 – Lidar Sensor	Lab 10 – Intro to OOP	Lab 11 – DMV Class	Lab 7 - Recursion & Backtracking
Lab 4 – Fibonacci numbers, ASCII Conversion, etc.	Lab 1 – Command-line argument file manipulation	Lab 6 – Recursion exercises	Lab 4 – Elevator (Queues & Stack)	Lab 9,10 - Binary Search Tree	EECS 448 – Project 1
Homework Assignment 1	Lab 8 – Time Complexities	Homework Assignment 2	Homework Assignment 3	Lab 5 – Browser Tracking (Lists)	EECS 448 – Project 2

**Legend:**

	EECS 168 (Spring 2021)
	EECS 268 (Fall 2021)
	EECS 368 (Spring 2022)
	EECS 388 (Spring 2022)
	EECS 448 (Spring 2022)

**Breakdown of EECS 448 Project 2:**

1	2	3
Playing and understanding other group's game*	Documentation	Adding additional feature/s
Estimating hours	Debugging and stress testing	Implementing the AI logic
Outlining the AI logic	-	-

\* Understanding other programmers' code is usually a much more difficult task, but since the project is written in the same language and platform that all our group members are familiar with, and worked with on the first project, it is comparatively an easier task for us.

### **3 hours/story point:**

Provided we all are comfortable with C++ and had a fully functional project 1 from the other team, we decided to allocate 3 hours per story point because we felt like it is a sufficient estimation with room for error correction too, if we come across any errors. Additionally, we also divided the more complicated tasks into smaller more doable tasks (with help from helper functions) which makes the 3-hour per story point estimation valid.

### **Custom Additions to the project:**

In totality we have made three custom additions to the game:

1. In a standard battleship game, the turn is switched after every move. However, we included a custom addition where we ask the user/s after how many moves would they like to switch turns (the maximum moves they can have in one turn is 3). This mode is available with both, Player VS AI, and Player VS. Player modes.
2. In the Player vs. AI mode with the standard 1-attack/turn mode, we have added a bonus move after every five turns for both, the player, and the AI.
3. It is now shown on the terminal which attack number the players or the AI are going to play. However, the Attack number does not include the bonus moves.