Robot War: Requirements Document

Group B1

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CMPT 370

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Group Information

Group B1 will be developing and implementing the Robot War game described below. The group consists of five members: Wynston Ramsay, Evan Snook, Adam Ronellenfitsch, Matthew Frisky, and Dylan Prefontaine.

Game Summary

Robot War is a two, three or six player turn-based strategy game in which the goal is to be the player with the last unit(s) standing. Each player begins on a designated tile on the board with their three units, each with slightly different properties. A scout which can move 3 spaces, has an attack range of 2, health of 1 and deals 1 damage on attack, a sniper which can move 2 spaces, has an attack range of 3, health of 2 and deals 2 damage, and a tank which can move 1 space, has an attack range of 1, health of 3 and deals 3 damage. Players can move and shoot in any order, but they cannot exceed their unit’s maximum move distance in their turn. The red player starts the game using their scout, they may move and shoot any units within its range, then the next player to reds left does the same and this continues until it is reds turn again. Red then continues by controlling his sniper unit, the other players follow in order and finally red moves their tank unit. This process repeats until there is only one colour standing who becomes the winner.

Interfaces

Main menu, create game screen, rules screen, stats screen, game board, and end game screen.

System

Sub-Systems: Librarian, Interpreter

Actors and Actions

Actors are entities outside the system that change or interface the system in a particular event. Actions are

Player: command robot (shoot, move), end turn, create game, quit game

Menu Operator: start, rules, stats, quit

Observer: spectator options (pause, next turn, vision, robot turn timer)

Time: end turn

Robot Librarian (A.I.): command robot (shoot, move)

Scenarios

Platform

This piece of software will be developed using a specific platform of other programs and software that meet the group’s needs. The hardware this game is designed for will be on the Tuxworld computers in the Spinks Laboratory of the University of Saskatchewan. The game will be designed, and implemented using software that help make completing a task easier. The main software used will be: GitLab for version control, JSON for structuring data, Microsoft Word for creating documents, Discord for group communication, Gliffy for sequence diagrams, Sublime for text editing, and either Netbeans or Eclipse to server as an IDE. Java and JavaSwing will be the language used to develop most of the game. The only thing that Java will not be used for is artificial intelligence decision making, which will be done with Forth.

Executive Summary