ROBO SPORT 370 User Manual

---Matthew Wind --- Levi Paradis --- Cory Hickson --- Daniel Sanche --- Landon Tetreault---

Introduction

RoboSport370 is a group project created by the team C3 for a U of S Software Engineering class. The program is essentially a simulation where robots that have been written in a special Forth coding language can fight and battle. The forth code is brought from a server and is stored in JSON files.

Game Rules

The game is very simple for the user, simply enter your robot or choose your robot from the robot selection options and watch them battle. The Robots have 3 different stats and a limited amount of points divided between them. These stats are movement, health, and attack. Each robot also has different logic on how its AI will act. This means that almost

no two robots will be alike. The robots will each take turns on the simulation attacking each other. Once a robot is attacked it will take damage and once its health reaches zero it will be destroyed and removed from the game. The winner of the game is the team with the last remaining robot/robots.

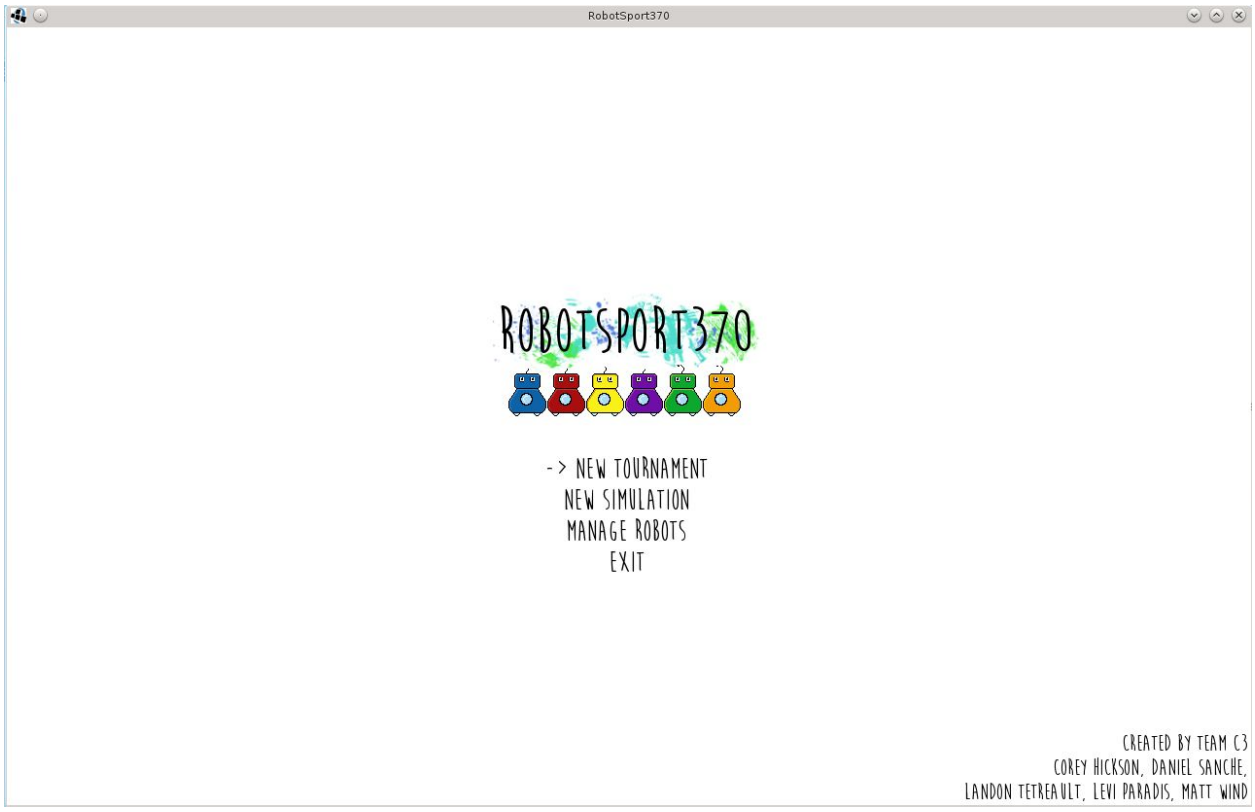
Main Menu

Fromt the main menu the User can select 4 different options

New Tournament: Takes you to the setup screen for a new tournament

New Simulation: Takes you to the setup screen for a new simulation

Manage Robots: Takes you to a menu for creating/editing robots



Game Setup

The Game Setup screen gives the user 6 options to choose from

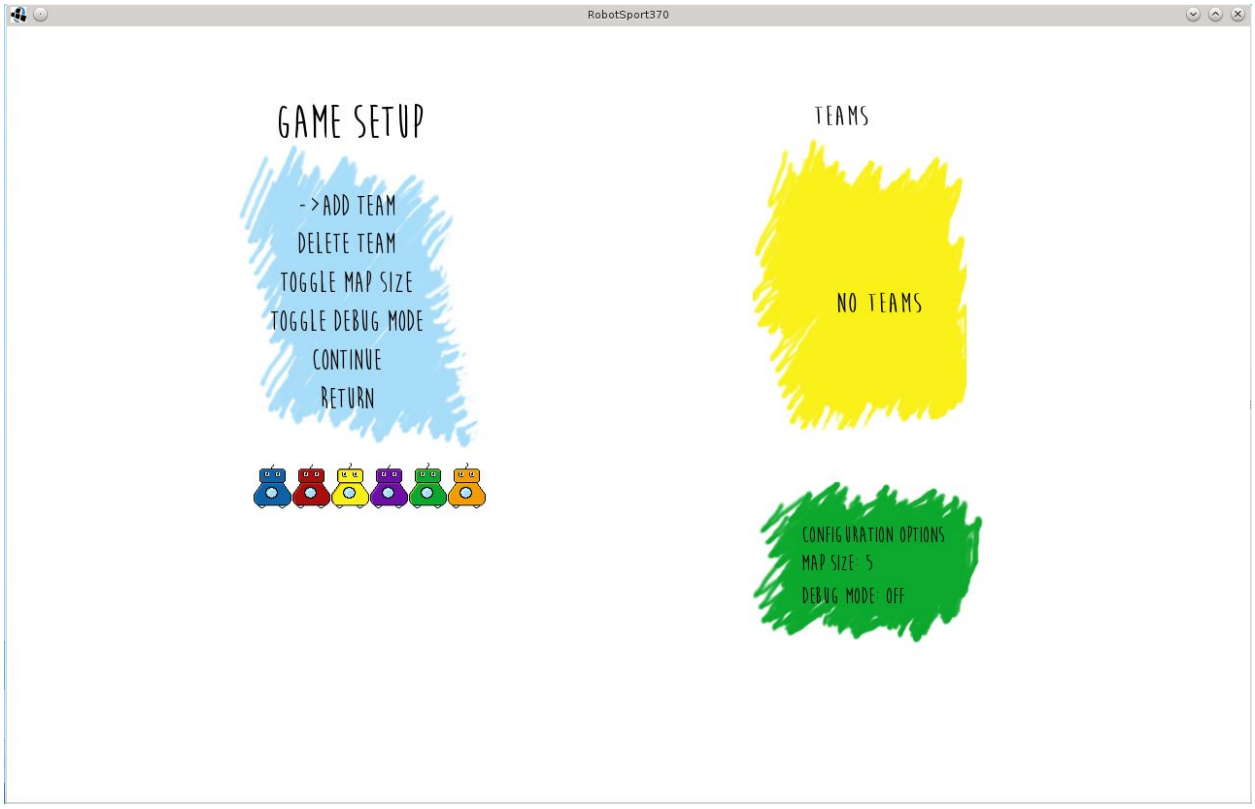
Add Team: This takes the user to the create team menu

Delete Team: This deletes the bottom team from the current list of teams

Toggle Map Size: This changs the map size option in the bottom right corner of the screen, the available map sizes are 5,7,9, and 11

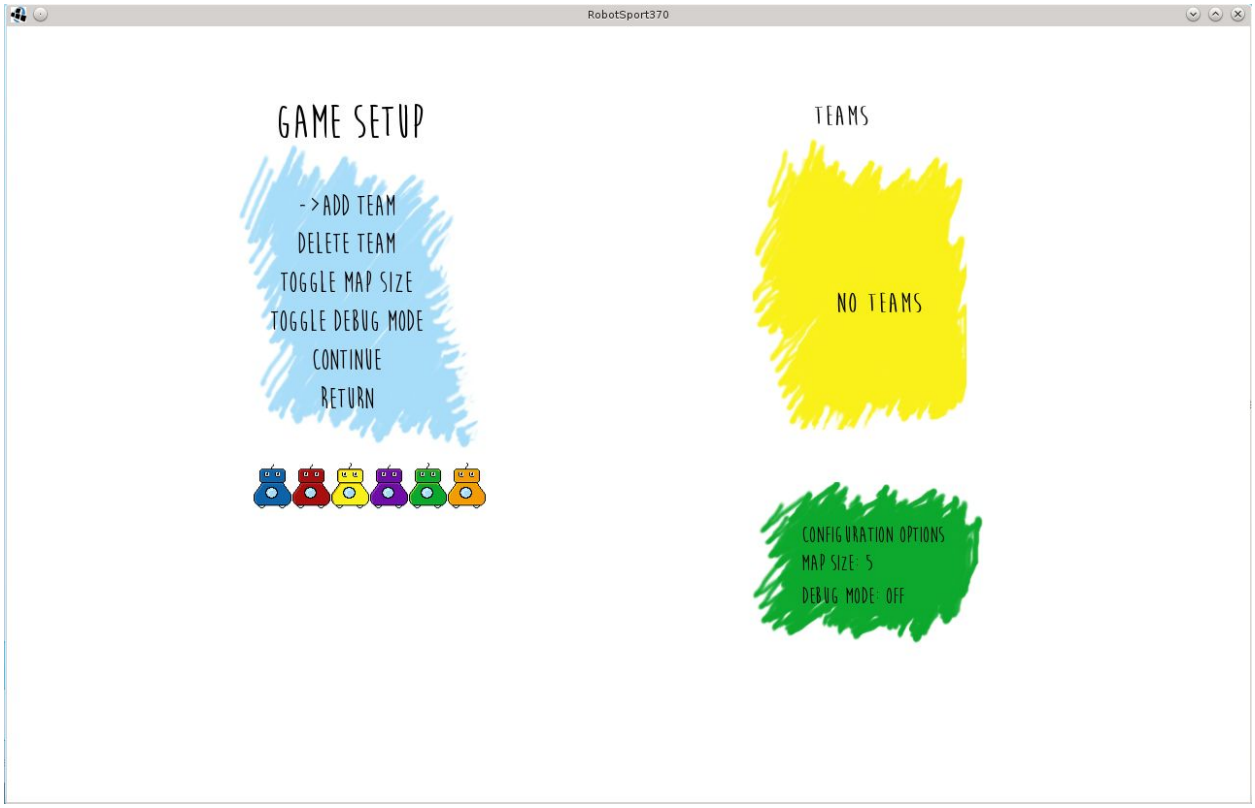
Toggle Debug Mode: This mode enables debugging features during the simulation

Continue: Will take the user to the simulation using all the the current settings and teams

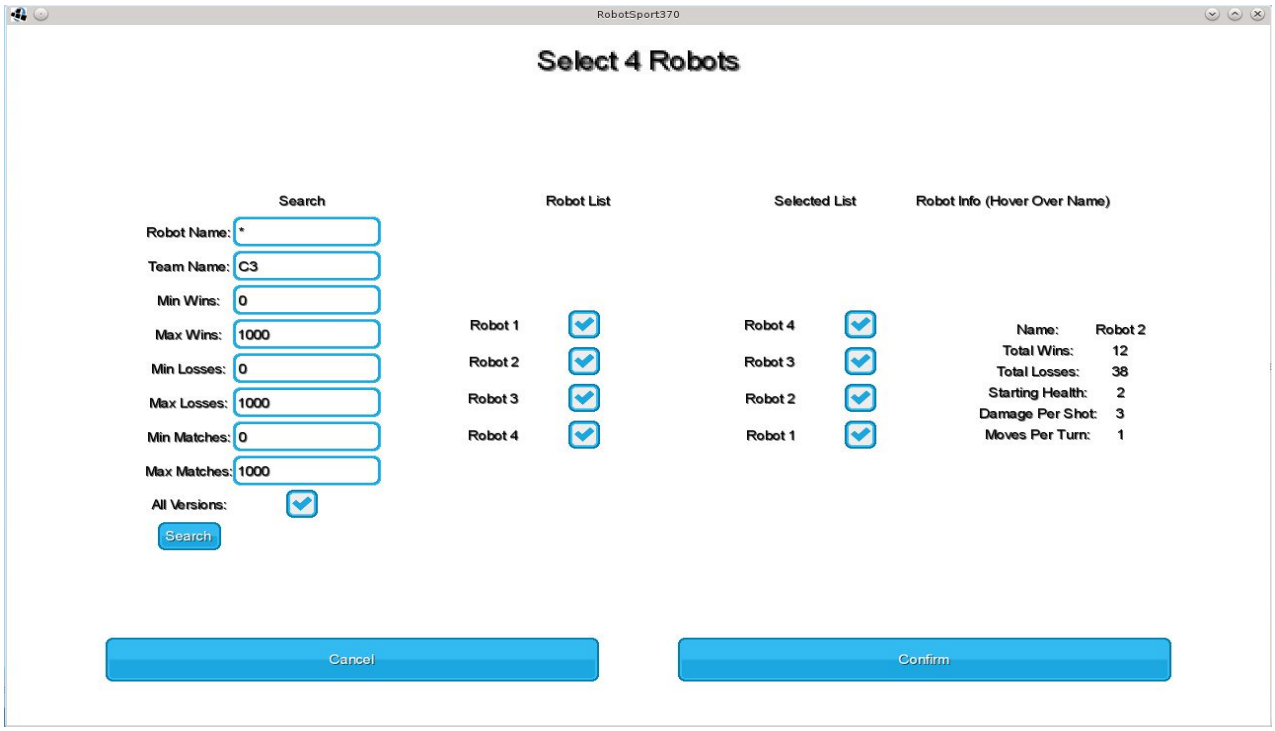


Creating and Managing Teams

The simulation is made to allow the user to create and manage their own teams. To create or edit your own team select the Add Team option from the game setup view. This will bring up the screen seen in the screenshot below. From here you can enter in any information about a robot you want into the search fields and the program will search the server for robots that match these fields.



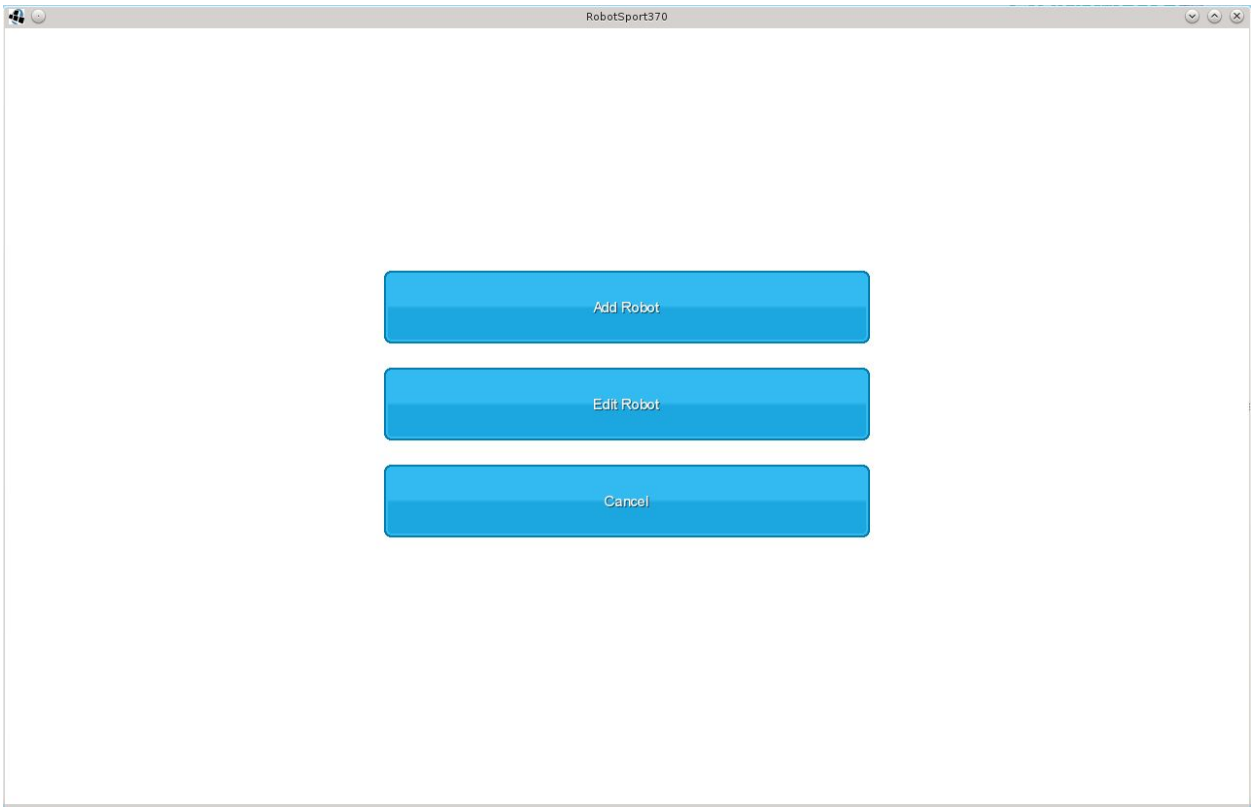
A list of the qualifying robots will then be brought up allowing you to check off the robots you want to add to your team. To see information about these robots you must hover over the name of the robot as seen in the screenshot below.



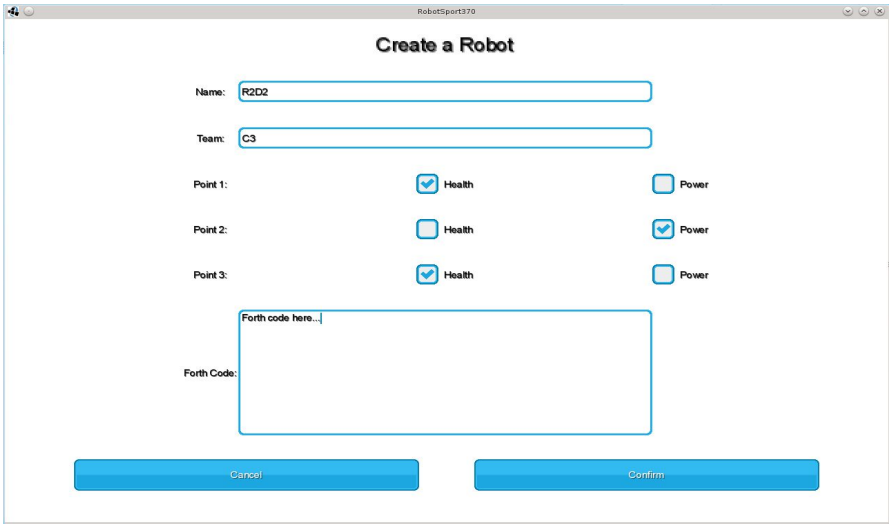
Creating and Managing Robots

The program also allows users to create and manage their own robots.

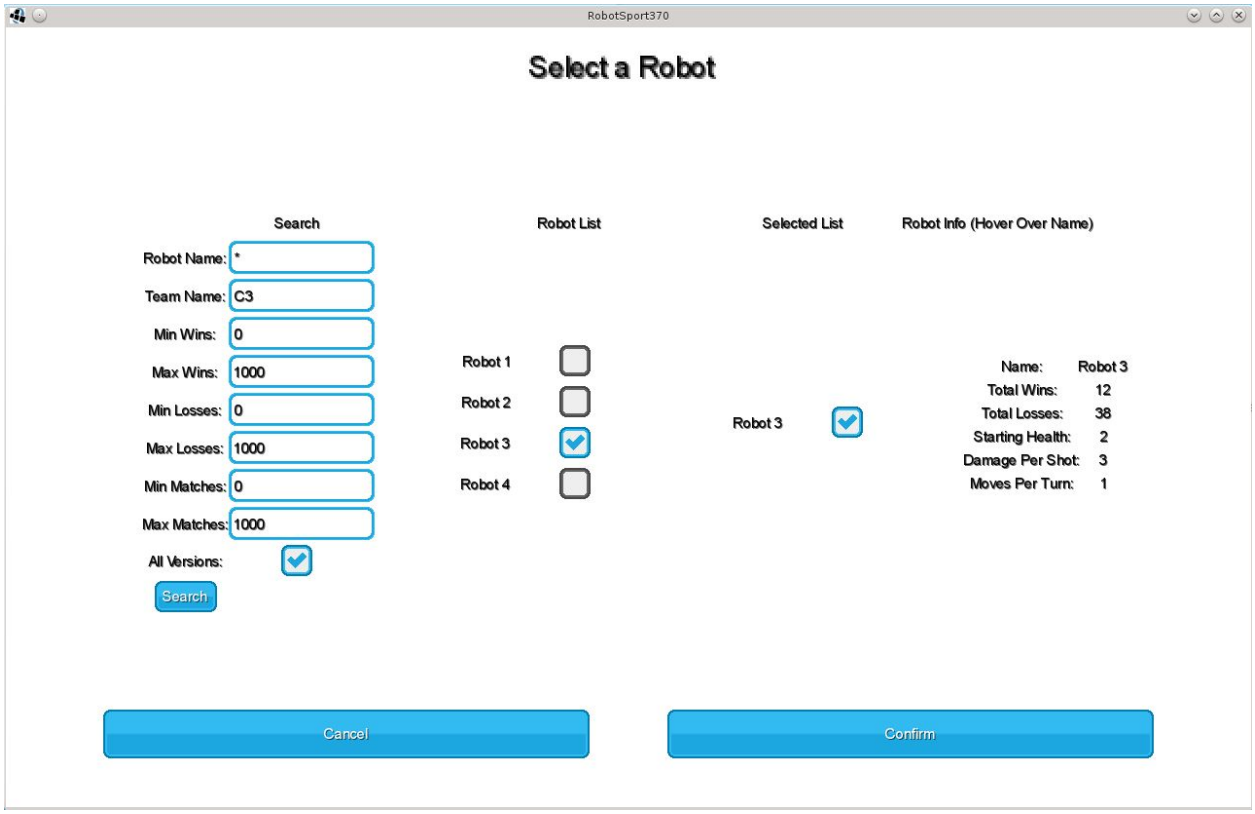
To create your own robot click “Manage Robots” which is the third selection from the main menu screen as shown in the screenshot below. This will bring up a selection menu that will allow you to choose between 3 options. Choosing the first option will then open up a second menu which will allow you to create a new robot.



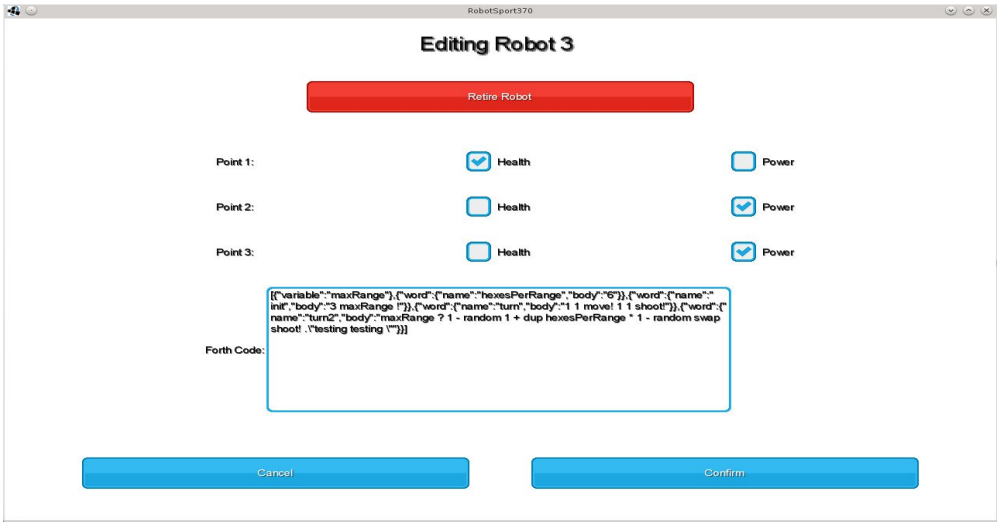
The Create Robot screen has a few different options. First is the name, this is what you want your robot's name to be. Second is the team, this is where you will assign a team to your robot. After that there is 6 checkboxes, these allow you to assign skill points to certain stats of your robot. Points can only be assigned to health and power and not both. Finally there is a box where the user can add their own forth code. This is the main logic of your robot and will determine how it fights in the simulation.



The program also allows users to edit an existing robot from the RobotLibrarian server. To do this select the second option from the menu and the screen below will be brought up.



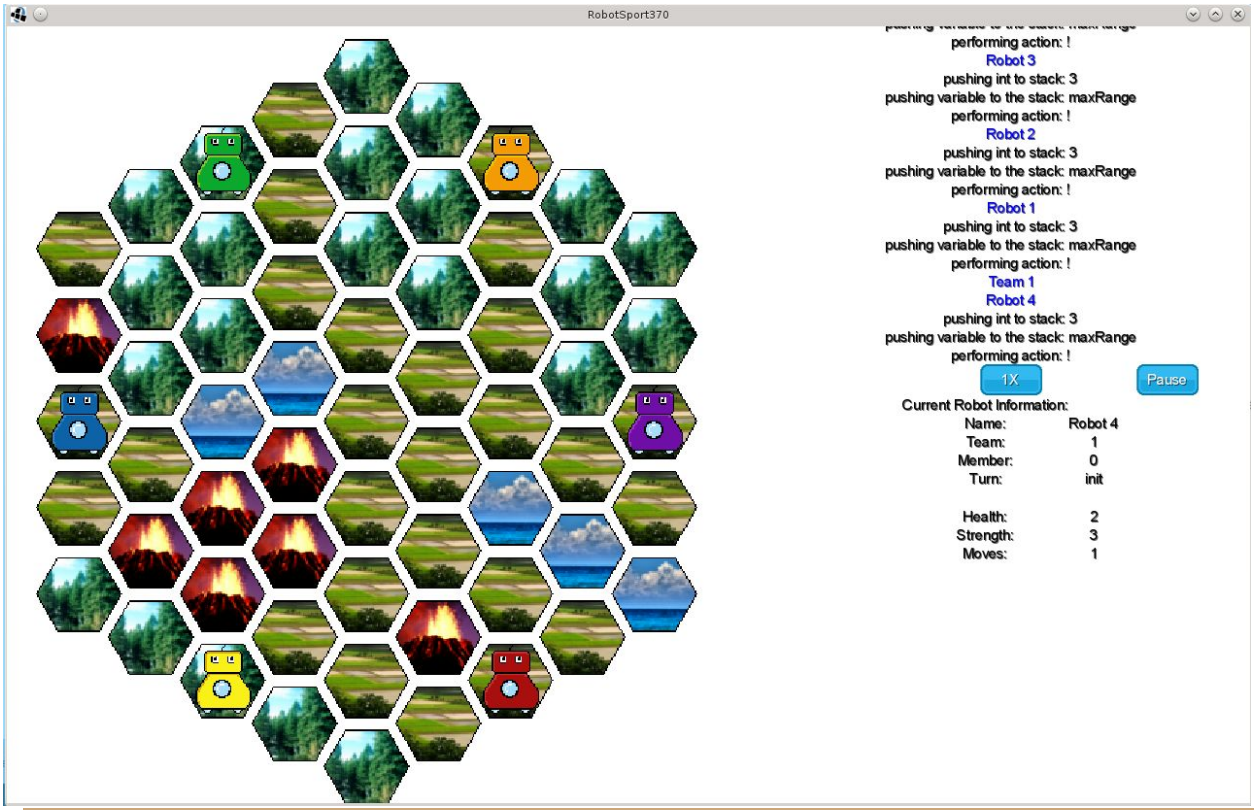
This screen is almost identical to the Create Team screen, and it functions in the same way. The only difference with this screen is that you can only select on robot for editing. Selecting your robot and clicking confirm will bring up a new menu for editing the robot you selected. The screen can be seen here.



Selecting “Retire Robot” Will delete the robot from the server completely. You can also re-allocate stat points by using the check boxes, and finally you can change the current forth code by using the forth code box. Clicking confirm will save this robot into the server.

Map View

The map view shows the current simulation. On the right the user can see a live stream of the instructions being ran to each robot. There 1x button allows the user to change the speed of the simulation with 1x,2x,4x, and 16x all as options. There is also a pause button which will pause the simulation.



The map itself has 4 different types of tiles, Water,Mountains,Forest, and Plains. Each tile has a different movement cost to enter.

Mountain: 3

Forest: 2

Plains: 1

Water: Can not enter

End Screen

This is the screen shown when the simulation is complete and all but one of the remaining teams has been elimanated. This shows the robots that are left standing in green and the robots that have been destroyed in red from this menu the user can go back to the main menu or exit.