Business Proposal - Project 3

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**Problem Summary:**

Project Management 405/562 is in need of a robot built with Robocode. The robot needs to have a different color than the default, consistently win against a collection of three of the default sample bots and include a victory dance once it wins! We will be programming using the Java language.

**Goals:**

Learn how to program using Robocode and then create a robot using Robocode/Java programming with our own code that can constantly win the majority of matches out of 10 in a battle against default sample bots. We will also start implementing SCRUM techniques in regards to sprints and agile teamwork.

**Cost Estimate:**

$34/hour

The national average pay for junior developers is $31, but with our expertise in the BYU business school we decided to charge slightly more to reflect our experience. Given the estimate of 20 hours of work, we estimate the total cost of the project to be $680.00.

**Timeline Estimate:**

We propose that this team will spend a collective 20 hours of labor by Saturday September 24, 2022. It will take an estimated hour to download and learn Robocode for each of the four students, 10 hours for coding, four hours for testing the robot, and two hours for fixing bugs, commenting code, and writing the business report.

**Actual Timeline - Broken down by person:**

***Individual:***

Madison: 2 hrs

Landon: 3 hrs

Parker: 2 hrs

Matthew: 4 hrs

***Team:*** 4 hrs

**Total time:** 15 hrs

There was a total time of **5 hours** downloading, planning, and learning Robocode combined with the group. Matthew and Landon were able to work on multiple Robocodes and decided to take Matt’s final robot because of the awe inspiring performance and winning percentage. The time involved in coding and testing the different robots were **5 hours**. As a collective team, we met together for **1 hour** to add finishing touches, comments, and a victory dance to the code. Madison and Parker worked on the project write-up for **1 hour**.

Our robot (Frank) needs to fight against **Crazy**, **MyFirstRobot**, and **SittingDuck** in order to win.

**Actual Cost:**

The costs incurred while completing this project total $510.00. This total reflects downloading Robocode, learning and testing code for robots, making final edits and creating the project report. **We came in under budget by $170.**