Class: CS2040
Student: Kevin Paganini
Assignment: Lab 5 Raider bot
Professor: Dr. Hasker
Date: 4/12/2022

What did you learn from doing this lab?
The main thing I learned from doing this lab was how to work with multidimensional arrays. While at first this was a little daunting it proved to not be that difficult and was an interesting task. Another thing I learned about is how to have classes interact between each other. Making sure header files and .cpp files all link up together and that classes can be used inside header files was a good lesson to learn. Lastly, I learned how to use pointers. Passing pointers instead of references is a valuable C++ programming lesson.

What did you find challenging about the lab?
Conversely the main thing I found challenging about this lab was the use of pointers. Using pointers is a lot different from things that I have done in the past. I am used to just passing the object around from method to method instead of having to pass around an address. Another thing I found challenging was how to move the robot around the game space. This involved making multiple methods to first parse and validate the direction and then actually enter that square and make sure all the methods are called in the correct order.

What would you recommend changing if this lab is reused in future years?
This lab already has a good foundation and had a good difficulty level with enough new concepts to make it challenging, but not overwhelming. One idea I had is what if you could make the game space expandable. So instead of having a set width and height from the start, the student would have to read in a height and width measurement for the game space and then produce that game space accordingly. Another interesting thing that could make the lab a little more challenging is to have multiple RAAAIDDDEERRR bots that could work together to capture as much gold as possible. These bots could even be adversarial and compete against each other in some sort of way. This lab has a good base and one could expand this in many different ways to make it a two week lab. I could see this lab becoming like the bee lab from SE2811.