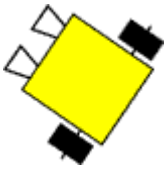

CISC 1003

Group #: ____ Name: 1. _____

2. _____

3. _____

Spring, 2022
Section T8

Unit D – Lab Assessment

Instructions:

1. For each project, first create an algorithm describing in detail how the robot solves the problem step by step. Write your algorithm in plain English as a numbered list of executable steps. Then create a corresponding VEXcode VR program and test it to make sure it works.
2. Submit your finished two projects as five files: 1) one PDF file containing the algorithms for the two projects 2) two PDF files for the two project programs 3) two .vrblocks files for the two project programs.

Project #1:

Program the robot to move forward. Once its front eye sees the wall, it should back up a little bit. Then it turns 90° either left or right ***in random*** (direction). After turning it should stop moving immediately.

Project #2:

Program the robot to mimic the movement of a robotic vacuum machine. In the beginning, the robot will turn right a random angle between 20° and 70°. Then the robot will start to move ahead. Once the robot hits the wall, it will turn. If its left bumper hits the wall, it will turn right a random angle between 40° and 180°. If its right bumper hits the wall, it will turn left a random angle between 40° and 180°. After the turn the robot will continue to move ahead until it hits the wall, and then it will turn again as described before. This process will continue forever.