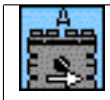
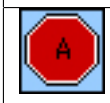
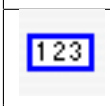
homework unit D: introductory robotics programming

- This assignment is worth 10 points, 10% of your term grade.
- **It is due on MONDAY OCTOBER 30 IN CLASS. Bring a hardcopy to class.**

Name:

Individual Assessment: to be done alone!

1. Describe what each of the following icons represents or causes to happen *(1 point total)*:

2. Explain the two methods we discussed in class for getting your robot to turn. Feel free to draw sketches to aid your description. *(1 point)*

3. Reflection *(2 points total)*:

   - What worked well during lab? What failed?

   - What did you run out of time to do in the lab?

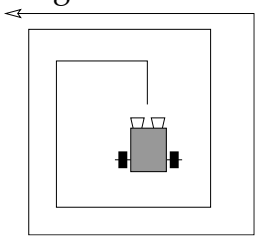
   - What did you learn from the lab?

   - Discuss a particular hardware or software problem you had during lab (and how you solved it).

Group Assessment: to be done in the labs with your partner

- Each program is worth *3 points*.
- After you get each program to work, draw the code in the boxes provided. Partial credit will be given! You will have 2 class periods dedicated to labs to complete this assignment: Monday Oct 23 and Thursday Oct 26.
- **Demonstrate each working program for your instructor.**

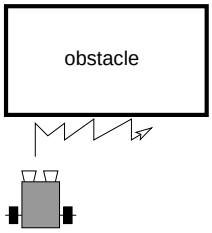
1. Program the robot to go in a spiral pattern like this:



(a) Design your code before you start programming. Write your *algorithm* below:

(b) Now in the box below, draw your **code**:

2. Program the robot to do "wall-following" in order to navigate around an obstacle:



(a) Design your code before you start programming. Write your *algorithm* below:

(b) Now in the box below, draw your **code**: