CS 3651 Skill Demo #3 Robot Navigation Part A

Student Name:

Student GTID:

Follow pages 73-142 in the BoeBot book

**Task 1: One Foot Counter Clockwise Triangle (20%)**
Program your robot to drive in an Isosceles with one-foot long sides.

Tags each corner, ____, ____, ____,
Arrives at start point ____
Orients to correct starting angle ____

TA/Instructor initials______________ date______________

**Task 2: BoeBot 500: 5 Laps Around 20” Square (80%)**
Program your robot to drive around a square with 20” sides. The robot will be placed within a "starting box" then started. Your score for this task will be computed as follows:

\[ \text{Score} = X \times 10 + (10 - Y) \times 3 - P \times 10 \]

Where X is the number of laps completed, Y is how far in inches the closest part of the robot is from the closest part of the starting box, P is the number of times your robot (both wheels) cross from outside the 20” square to fully inside the square.

In order to receive a perfect score, your robot must complete all 5 laps, and end with some part of the robot touching the starting square.

You can run the challenge a total of 5 times. We will take your best score.

\[ X = ____, ____, ____, ____, ____ \text{ (laps completed)} \]
\[ Y = ____, ____, ____, ____, ____ \text{ (inches from starting location)} \]
\[ P = ____, ____, ____, ____, ____ \text{ (number of times crossing white line)} \]
\[ S = ____, ____, ____, ____, ____ \text{ (score)} \]
\[ I = ____, ____, ____, ____, ____ \text{ (TA initials)} \]

Best score =

TA/Instructor initials______________ date______________