Homework 4

Due Date: May 17th, 2023

1 Design question

Design a system using the publisher subscriber model , for the follow scenario
- a robot displays a tennis ball in its visual field(camera) then navigates to the
position of the tennis ball. Assume you are in a room where the only yellow
object is the tennis ball.

2 Programming question

1. Use theconstructsim.com to develop a node that uses turtlesim to draw a
hexagon with sides equal to 1. Do not hard code the points and instead try to
use the geometric properties of the hexagon to draw the shape.

2. Given point $^{A}P_1 = \begin{bmatrix} 2 \\ 1 \end{bmatrix}$ in the turtles frame, write a node that prints this
point in the world frame(the map on simulator), run this node alongside part 1
of this question.