

Assignment 2 report:

Objective:

Trajectory generation and follow using a controller

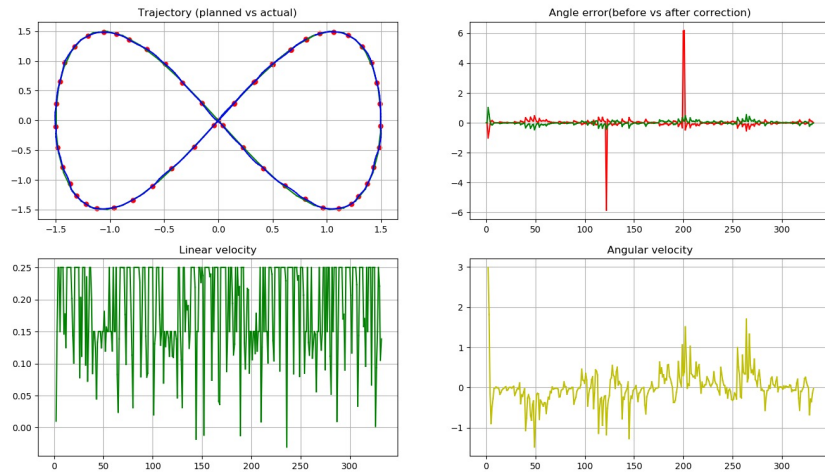
Steps:

1. Generate trajectory using x , y functions and timestep.
2. Send trajectory points to controller (PID) and generate v and w .
3. Plot the graphs using points generated in step 2.

Formulas for trajectory:

```
x = self.A_x*sin(2*pi/self.T*t)
y = self.A_y*sin(4*pi/self.T*t)
theta = arctan2(y,x)
```

Option-1: generating next point after reaching



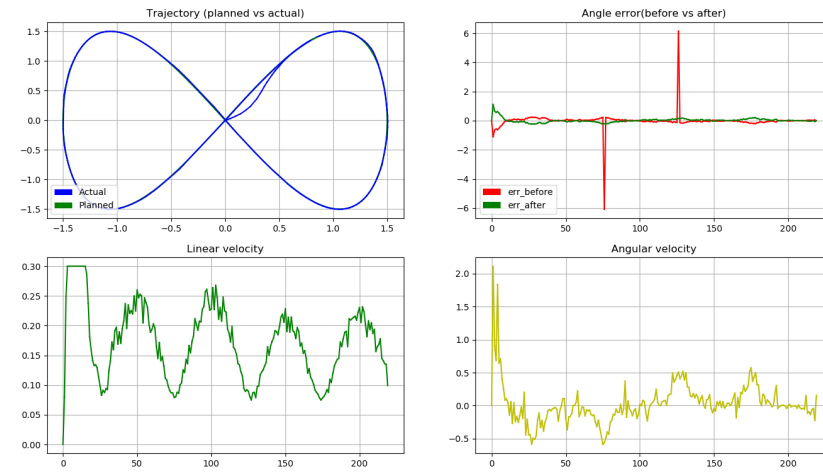
Advantage:

- Accurate

Disadvantage:

- Slow

Option-2: continuously generate points



Advantage:

- Fast

Disadvantage:

- Slightly inaccurate at the beginning.