Question 9

Robot Pirouette [10]: Repeat the same steps as specified in (7) but now with heading commands that cause the robot to point to the center of the ellipse (second trajectory phase). How does the performance change when introducing time-varying heading commands at high-speeds?

Q9 Performance

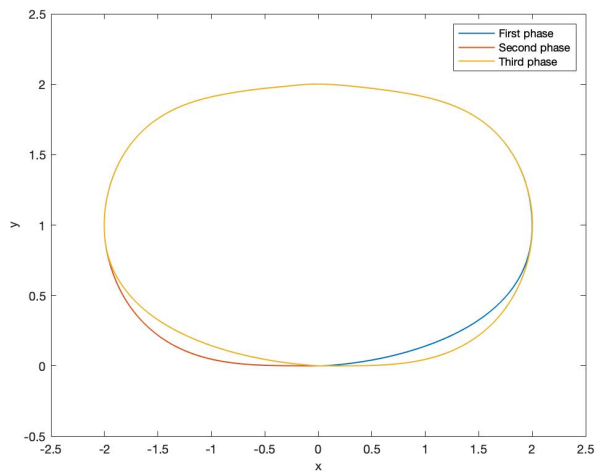9.1 Below are the figures showing the trajectory, as well as the errors in pose and velocities.
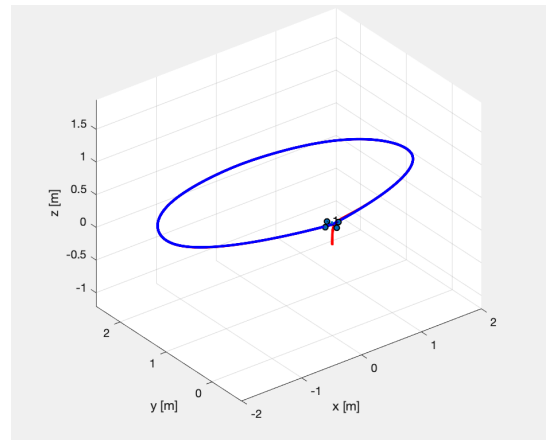

Figure 1. Actual trajectory

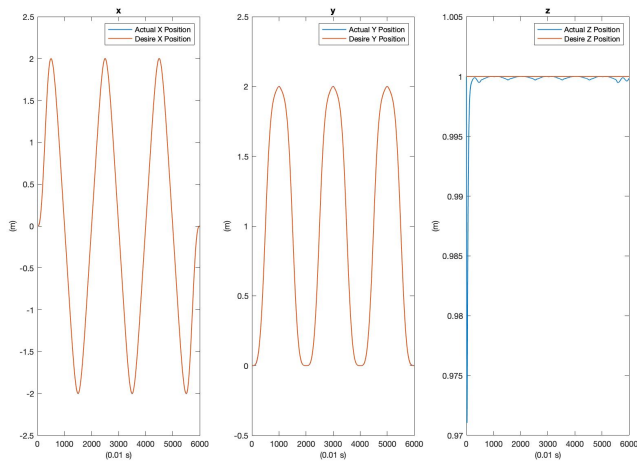Figure 2. 3D actual trajectory
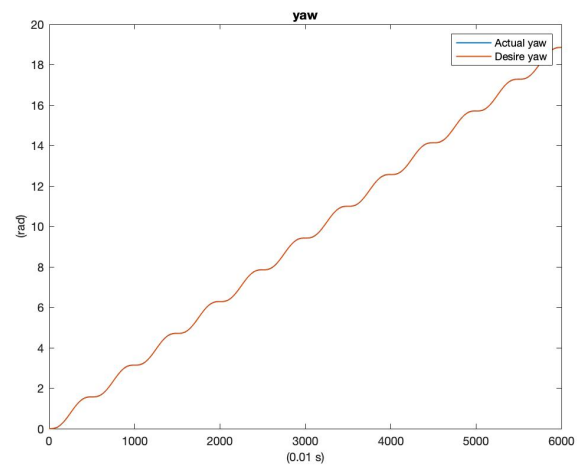
Figure 3. Actual Position vs Desired Position

Figure 4. Actual Yaw vs Desired Yaw
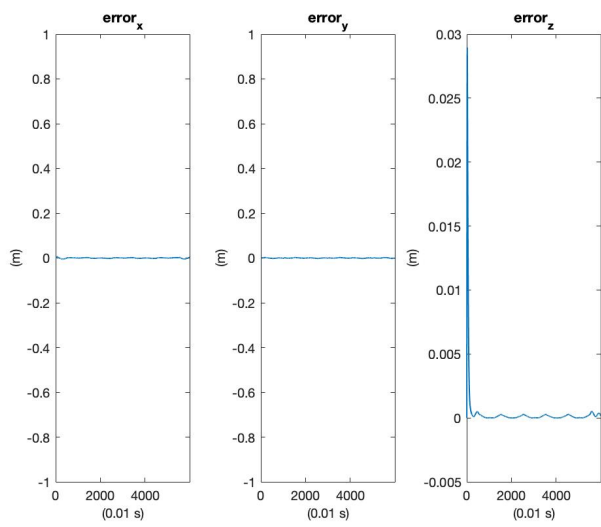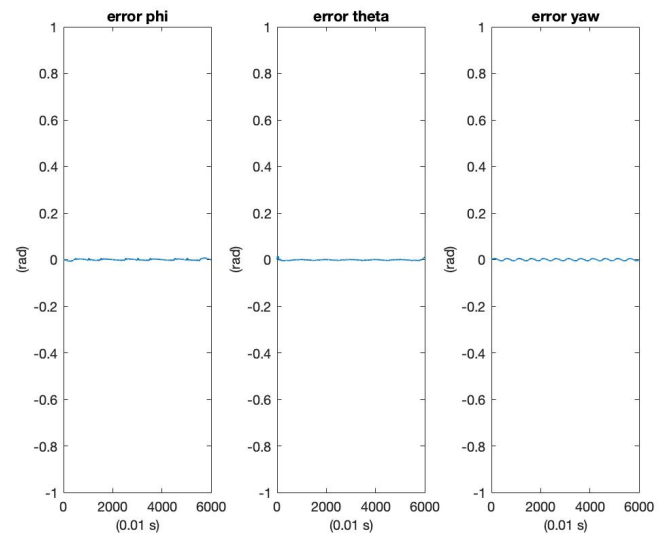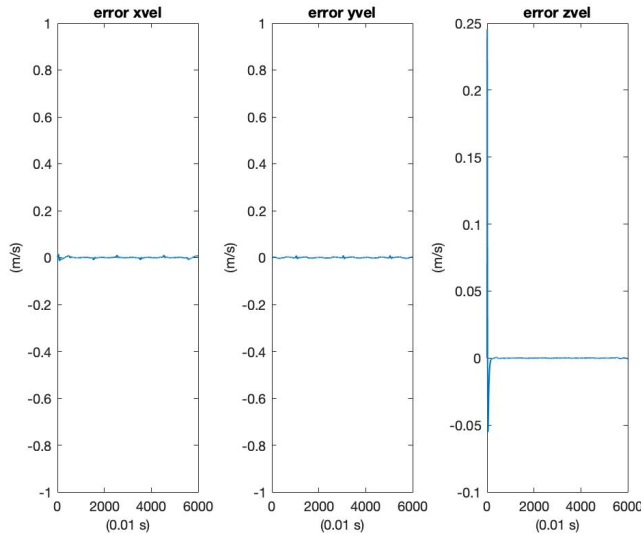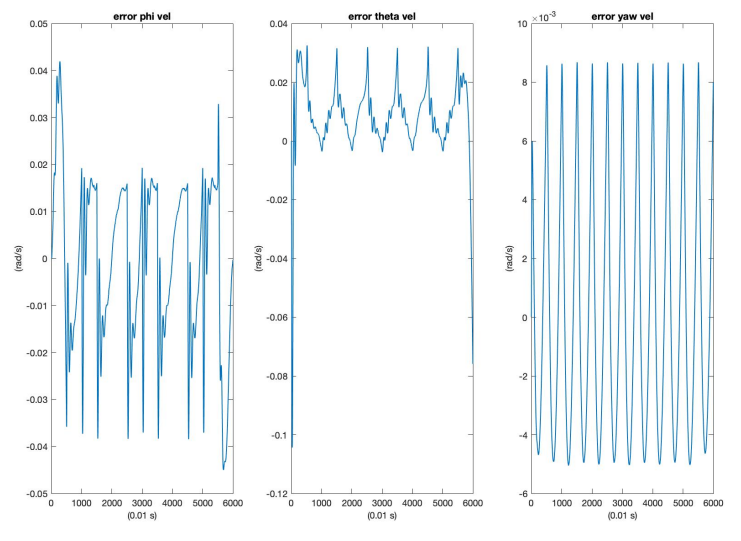

Figure 5. Position Error

Figure 6. Rotaiton Error

Figure 7. Linear Velocity Error

Figure 8. Angular Velocity Error