**1) Straight Line motion along x:**

Distance desired=2 m

Actual distance travelled= 2.1 m

time taken= 170 seconds

average velocity of the vehicle=0.0124 m/s

Distance travelled in y=-0.24m

Distnace travelled in x= -0.24m

yaw angle increase = 0.1 radians

**3) Straight line motion along 45 degree: (start at zero degree and end up at 45 degree and travel diagonally in xy)**

case1: Penalize deviation from 45 (get to 45 fast)

**4) Straight line motion along 45 degree: (start at 45 end at 45 travel diagonally in xy)**

**2) Straight line motion 90 degree:**