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#! /usr/bin/env python

from re import T
import rospy
import time
from nav_msgs.msg import Odometry
import matplotlib.pyplot as plt

from geometry_msgs.msg import  Point, Twist

rospy.init_node("speed_controller")
x = 0.0
def newOdom(msg):
    global x
    x = msg.pose.pose.position.x

pub=rospy.Publisher("cmd_vel", Twist,queue_size=1)
sub = rospy.Subscriber("/odom", Odometry, newOdom)


print(" Input time")
t=float(input())
t_end=time.time() + t
print("Input distance")
goal=float(input())

speed= Twist()

r= rospy.Rate(4)

data=[]
time_t=[]
speed.linear.x=goal/t



while time.time()< t_end:

    data.append(x)
    time_t.append(time.time())

    pub.publish(speed)
    r.sleep()

speed.linear.x=0
pub.publish(speed)

plt.plot(data)
plt.xticks(range(len(time_t)), time_t)
plt.show()
```