Go to goal robot

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The robot starts at 0,0 and wants to go to 5,5

After 10000 iterations with proportional gain the robot wanders around every ware and reaches upto 4.1,4.1

from scipy import \*

from pylab import \*

from scipy.integrate import odeint

import math

init=[0,0]

final=[5,5]

vel=-6

phid=math.atan((final[1]-init[1])/(final[0]-init[0]))

t=0

start=[vel,vel]

phi=math.atan((final[1]-start[1])/(final[0]-start[0]))

omg=-3

phi=phi\*omg

print(phi)

k=1.5 #pid term

x=[]

y=[]

while(phi!=phid and t<100000):

curr=[vel\*math.cos(phi),vel\*math.sin(phi)]

phi=omg\*(math.atan((final[1]-curr[1])/(final[0]-curr[0])))

err=phid-phi # error calculation for pid

omg=k\*err # PID with only p taken to account

phi=phi\*omg

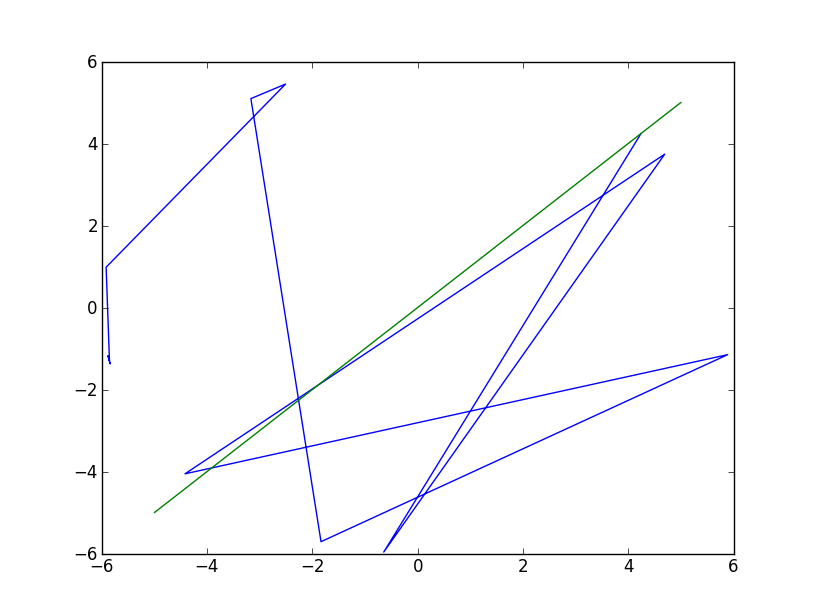
x.append(curr[0])

y.append(curr[1])

t=t+1

plot(x,y,[-5,5],[-5,5])

show()



The blue lines represent the path taken by the robot