clear all

clc

close all

num=[1 2]

den=[1 3 -4]

sys=tf(num,den)

figure(1)

impulse(sys)



figure(2)

Step(sys)



figure(3)

bode(sys)



figure(4)

nyquist(sys)



figure(5)

rlocus(sys)



Exercice1 :

clear all

clc

close all

num=[10]

den=[1 2]

sys=tf(num,den)

figure(1)

step(sys)



num1=[5]

den1=[2 1]

sys1=tf(num1,den1)

num2=[5]

den2=[5 1]

sys2=tf(num2,den2)

figure(2)

impulse(sys,sys1,sys2)

legend(‘sys’,’sys1’,’sys2’)



figure(3)

step(sys1,sys2)

legend(‘sys’,’sys1’,’sys2’)



figure(4)

bode(sys,sys1,sys2)

legend('sys','sys1','sys2')



figure(5)

nyquist(sys,sys1,sys2)

legend('sys','sys1','sys2')





Exercice1 partie 3 :

clear all

clc

close all

k=1

w0=200

m1=0.5

m2=sqrt(2)/2

m3=1

m4=1.2

num=[k\*w0^2]

den1=[1 2\*m1\*w0 w0^2]

den2=[1 2\*m2\*w0 w0^2]

den3=[1 2\*m3\*w0 w0^2]

den4=[1 2\*m4\*w0 w0^2]

sys1=tf(num,den1)

sys2=tf(num,den2)

sys3=tf(num,den3)

sys4=tf(num,den4)

p1=roots(den1)

p2=roots(den2)

p3=roots(den3)

p4=roots(den4)

figure(1)

step(sys1,sys2,sys3,sys4)

legend('sys1','sys2','sys3','sys4')



figure(2)

bode(sys1,sys2,sys3,sys4)

legend('sys1','sys2','sys3','sys4')



figure(3)

nyquist(sys1,sys2,sys3,sys4)

legend('sys1','sys2','sys3','sys4')



