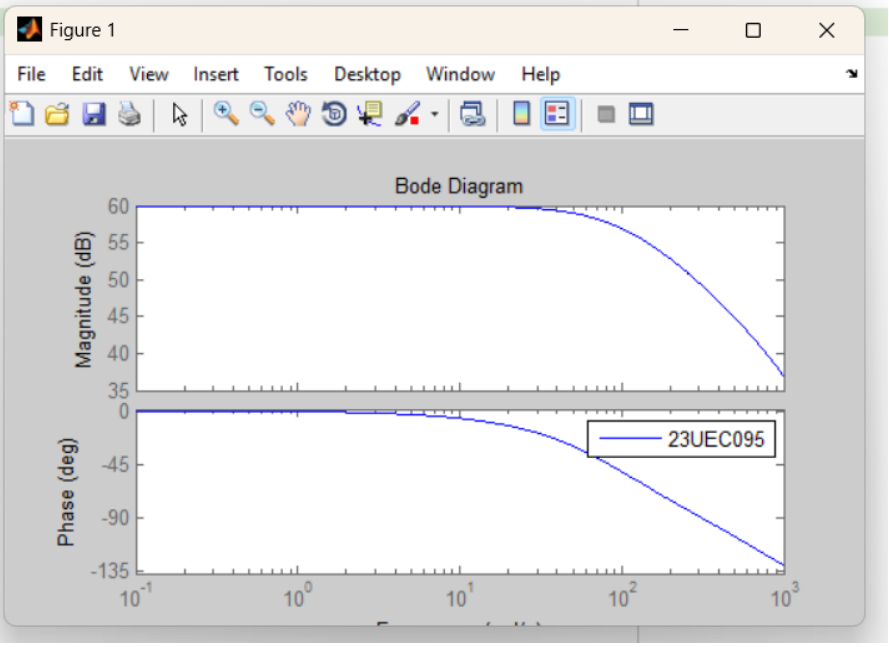
Bode Plot Code

The transfer function is

$$H_1(s) = \frac{1000}{0.01s + 1} \cdot \frac{1}{0.001s + 1} = \frac{1000}{(0.01s + 1)(0.001s + 1)}$$

```
num = [0 1000];
den1  = [0.01 1];
den2 = [0.001 1];
den = conv(den1,den2);

f = tf(num,den) ;
k = logspace(-1,3,1000);
bode(f,k)
legend('23UEC095')
```



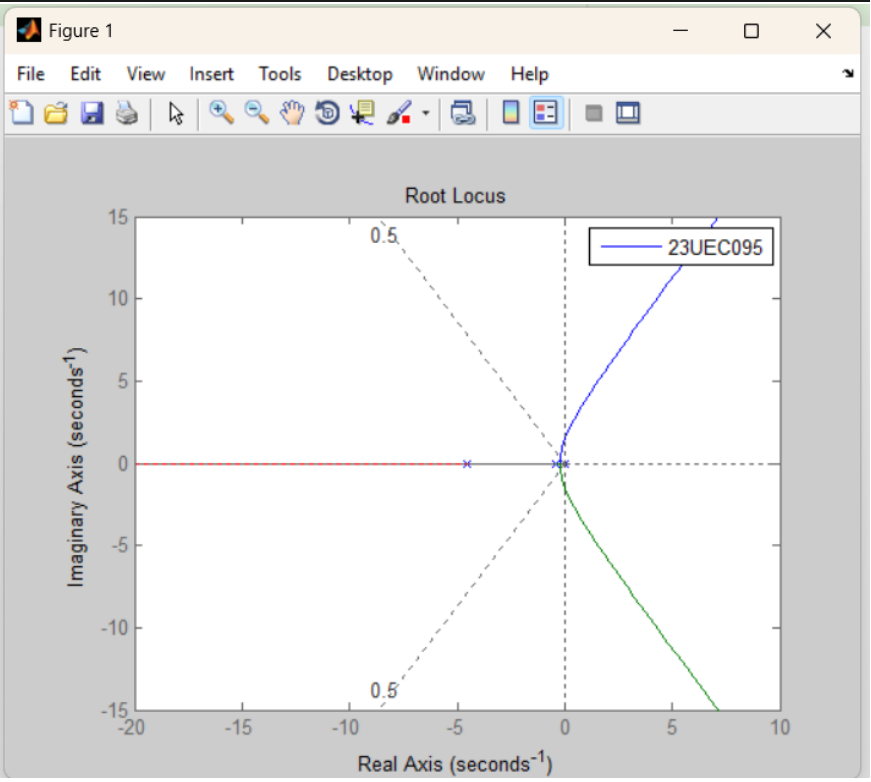
Root Locus Code

The transfer function is

$$H_2(s) = \frac{s}{s^3 + 5s^2 + 2s}$$

```
num  = [ 0 1 ];
den  = [1 5 2 0];

f = tf(num,den);
rlocus(f)
sgrid(0.5,[])
legend('23UEC095')
```



Nyquist Plot Code

The transfer function is

$$H_3(s) = \frac{10}{(s+2)(s+4)}$$

```
num  = [0 10];
den1  = [1 2];
den2 = [1 4];
d = conv(den1,den2);

f = tf(num,d);
nyquist(f)
legend('23UEC095')
```