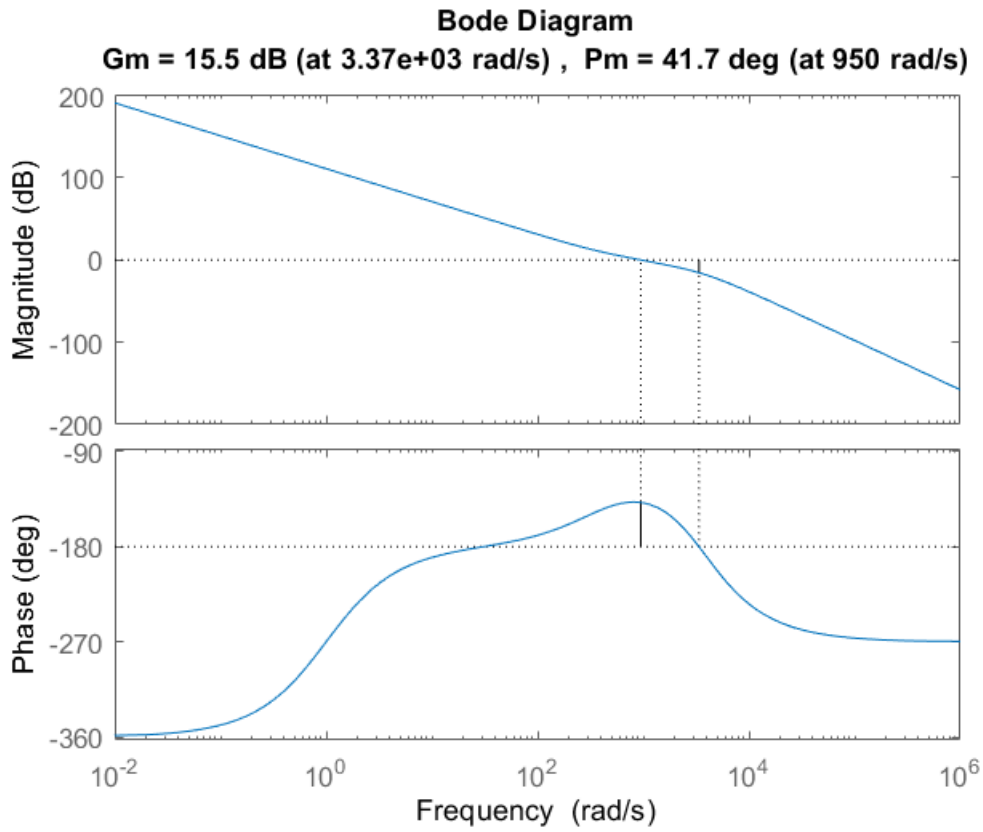
Initializa transfer function

```
s = tf('s');
G = (s+5)/((-s+1)*(s+1000));
wc = 1100;
```

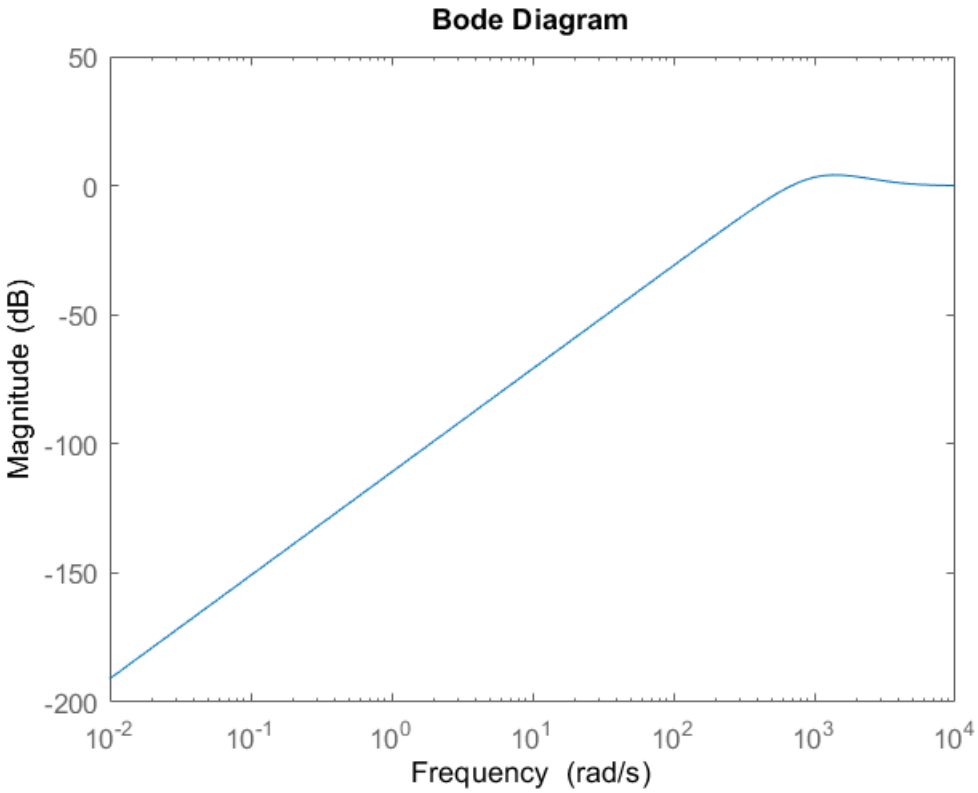
Obtain the desired loop shape using loopsyn.

```
[K,CL,GAM] = loopsyn(G,wc^2/s^2);
[Gm,Pm,Wcg,Wcp] = margin(G*K);
margin(G*K)
```



bode magnitude plot for the sensitivity function.

```
bodemag(1-CL)
```


Bode Diagram
Magnitude (dB)
50
0
-50
-100
-150
-200
10^{-2}
10^{-1}
10^{0}
10^{1}
10^{2}
10^{3}
10^{4}
Frequency (rad/s)