Editor - C:\Users\Hp\Documents\MATLAB\BlockDIAGRAMreduction.m

BodePlot.m
Rlocus.m
Nyquist.m
PIDcontroller.m
timeResponse.m
BlockDIAGRAMreduction.m

```
% Program for block diagram reduction technique
ng1=1; dg1=[1 10]; sysg1=tf(ng1,dg1);
ng2=1; dg2=[1 1]; sysg2=tf(ng2,dg2);
ng3=[ 0 1]; dg3=[1 44]; sysg3=tf(ng3,dg3);
ng4=[1 1]; dg4=[1 6]; sysg4=tf(ng4,dg4);
nh1=[1 1]; dh1=[1 2]; sysh1=tf(nh1,dh1);
nh2=2; dh2=1; sysh2=tf(nh2,dh2);
nh3=1; dh3=1; sysh3=tf(nh3,dh3);
sys2=series(sysg3,sysg4);
sys3=feedback(sys2,sysh1,+1);
sys4=series(sysg2,sys3);
sys1=sys2/sys4;
sys5=feedback(sys4,sys1);
sys6=series(sysg1,sys5);
sys=feedback(sys6,1);
tf(sys)

```

Command Window

```
>> BlockDIAGRAMreduction

ans =

                          s^6 + 56 s^5 + 577 s^4 + 2246 s^3 + 4036 s^2 + 3368 s + 1056
  ------------------------------------------------------------------------------------------------------------------------------
  s^9 + 116 s^8 + 4701 s^7 + 82339 s^6 + 720503 s^5 + 3.492e06 s^4 + 9.238e06 s^3 + 1.332e07 s^2 + 9.722e06 s + 2.794e06

Continuous-time transfer function.
```