transfer function of a mercury thermometer and plot the step response of the system

prompt = 'enter the mass of mercury in kg, m: ';

m = input(prompt);

prompt = 'enter heat capacity of mercury in J/kg-K, c: ';

c = input(prompt);

prompt = 'enter film coefficient (convection coefficient)

value of heat transfer in W/m^2-K, h: ';

h = input(prompt);

prompt = 'enter the surface area of bulb for heat transfer

in m^2, A: ';

A = input(prompt);

t = m\*c/(h\*A);

nmtr = 1;

dmtr = [t,1];

sys = tf(nmtr,dmtr)

stepplot(sys)

Result



