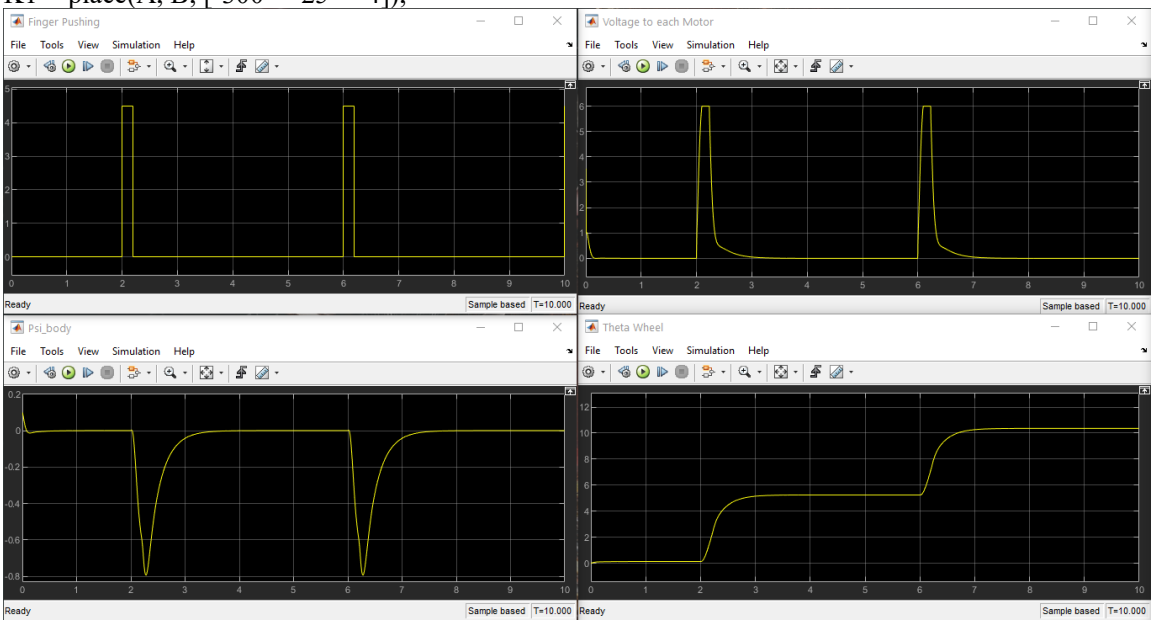
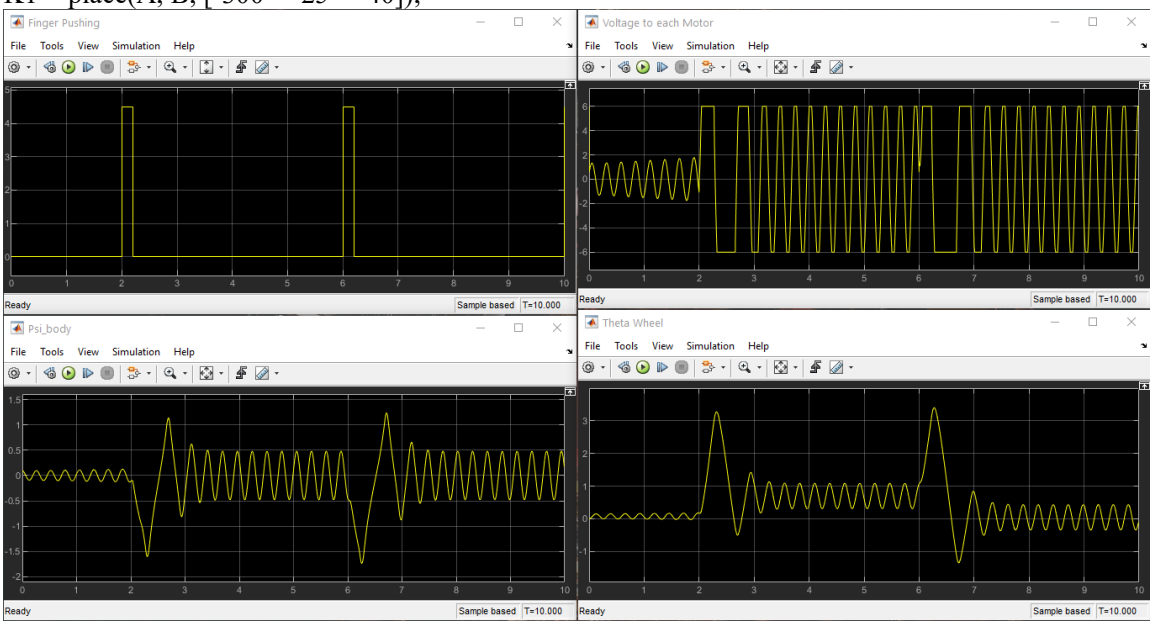
Case 1:
Finger Pushing = 4.5, Period = 4s, Pulse Width = 5%, Phase Delay =2s

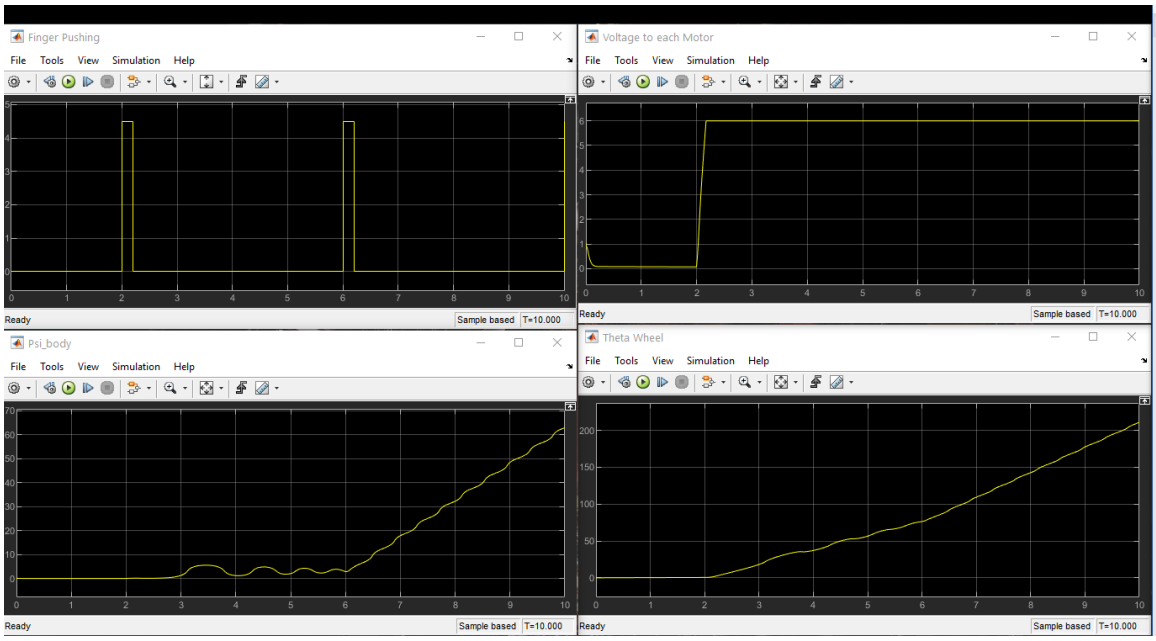
More responsive:
K1 = place(A, B, [-300 -25 -4]);




Over responsive:
K1 = place(A, B, [-300 -25 -40]);

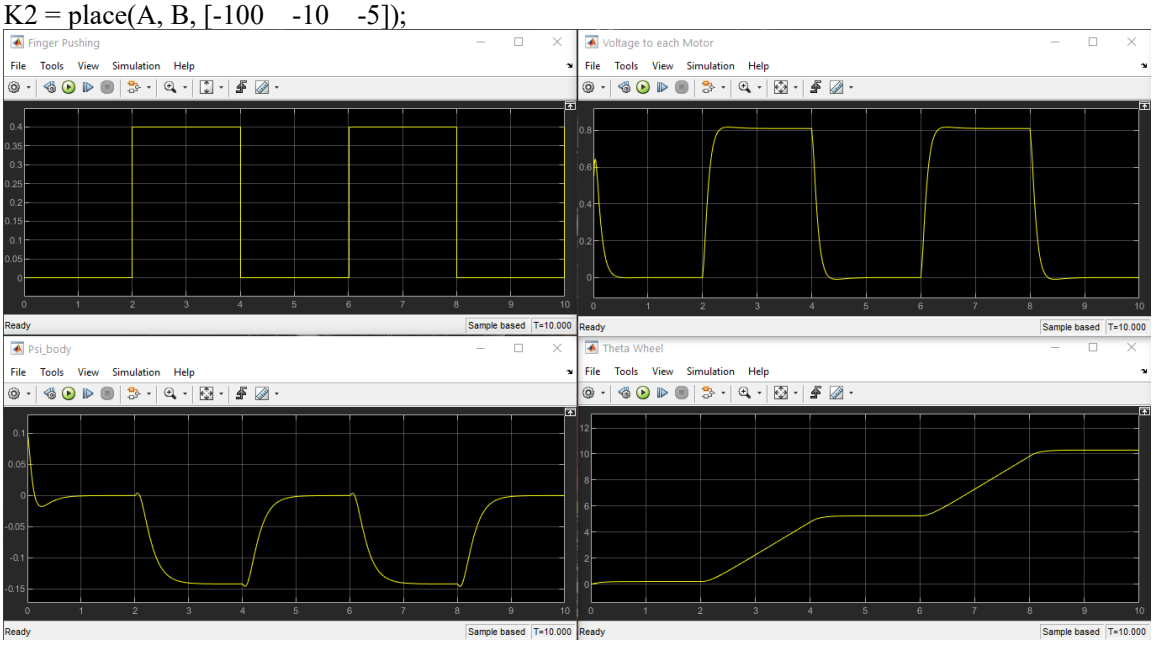



Poor responsive:
K1 = place(A, B, [-100 -25 -0.1]);




Case 2:
Finger Pushing = 0.4, Period = 4s, Pulse Width = 50%, Phase Delay =2s

More responsive:
K2 = place(A, B, [-100 -10 -5]);

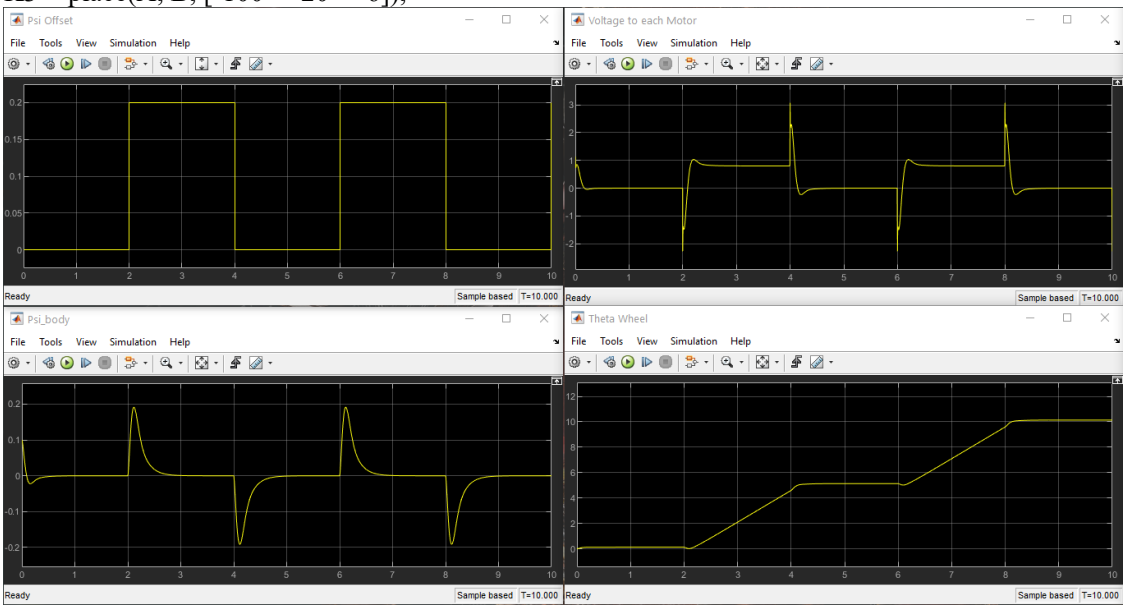



The response is as expected. When the offset step up, the segbot keep moving forward and when the offset step back, the segbot stop immediately.
Because the force applied is on the bottom of the segbot, which is below the center of mass. So the segbot will have a angular velocity along the x-axis while moving forward. So the segbot weill lean back.

Case 3:
Psi Offset = 0.2, Period = 4s, Pulse Width = 50%, Phase Delay = 2s

More responsive:

K3 = place(A, B, [-100  -20  -6]);




The response is as expected. When the offset step up, the segbot keep moving forward and when the offset step back, the segbot stop immediately.