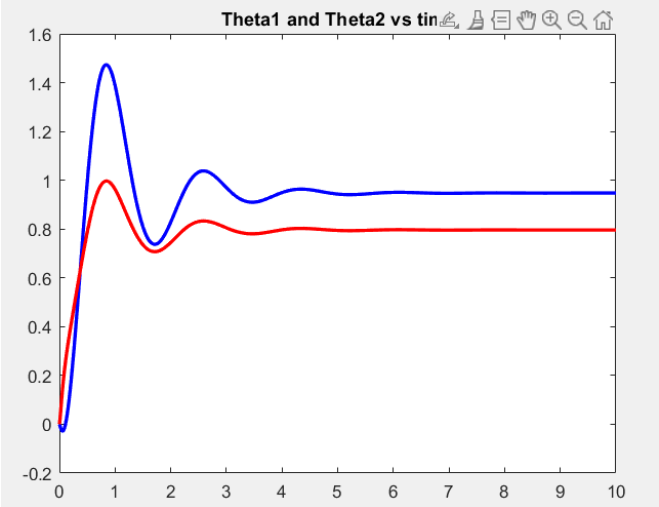
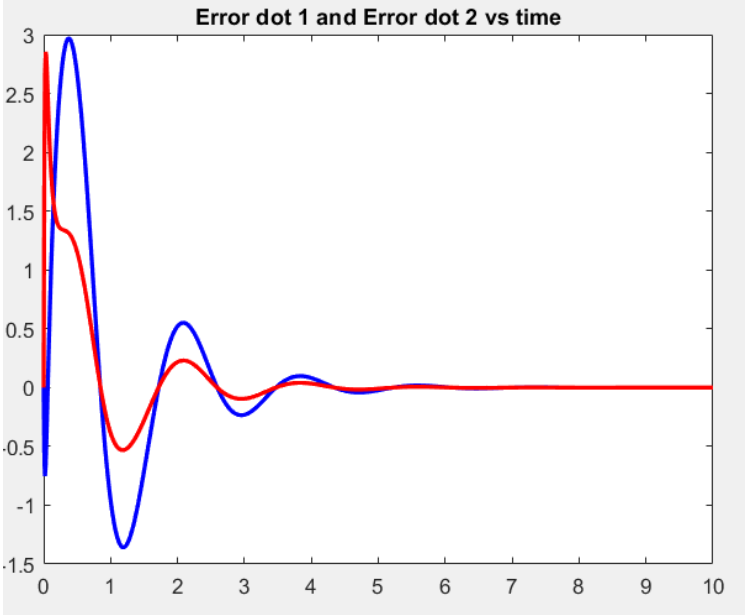
ASSIGNMENT 1

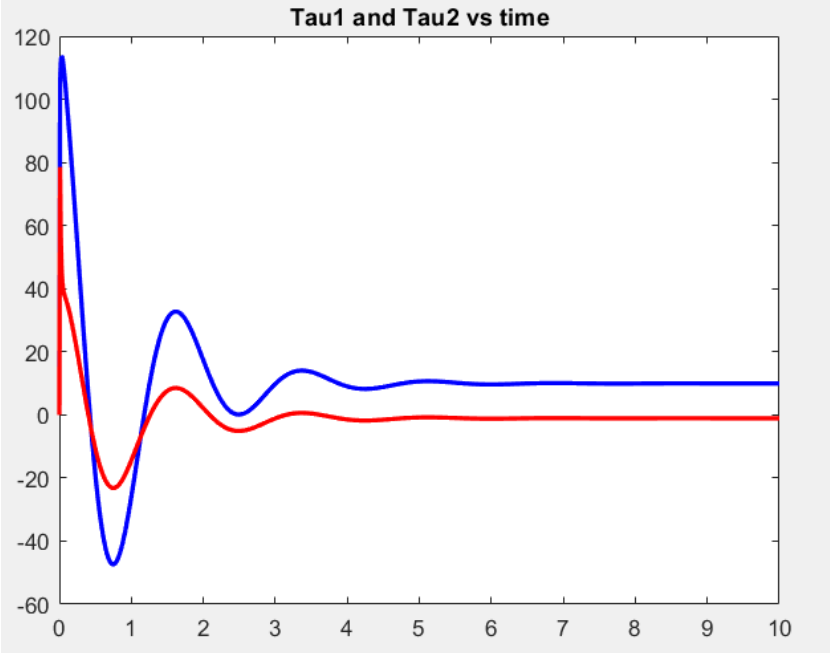
PART A)



a) The error converges almost to 0 as the angles q become equal to the desired angles. This shows the system is effectively following the reference trajectory and reaching the desired state as time progresses.

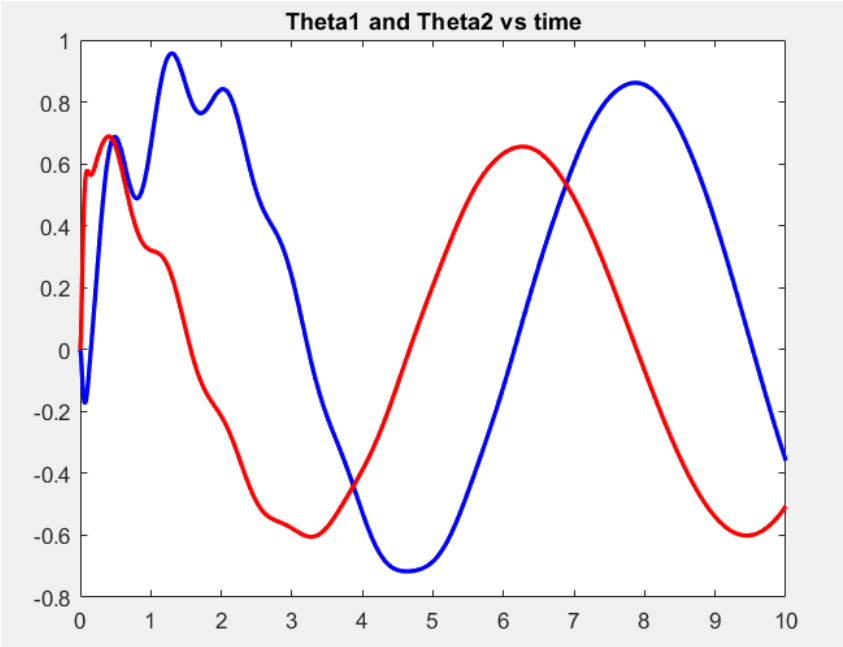


b) The error derivative also converges to 0 as the angles q become equal to the desired angles and become equal. This shows the system is effectively following the reference trajectory and reaching the desired state as time progresses.

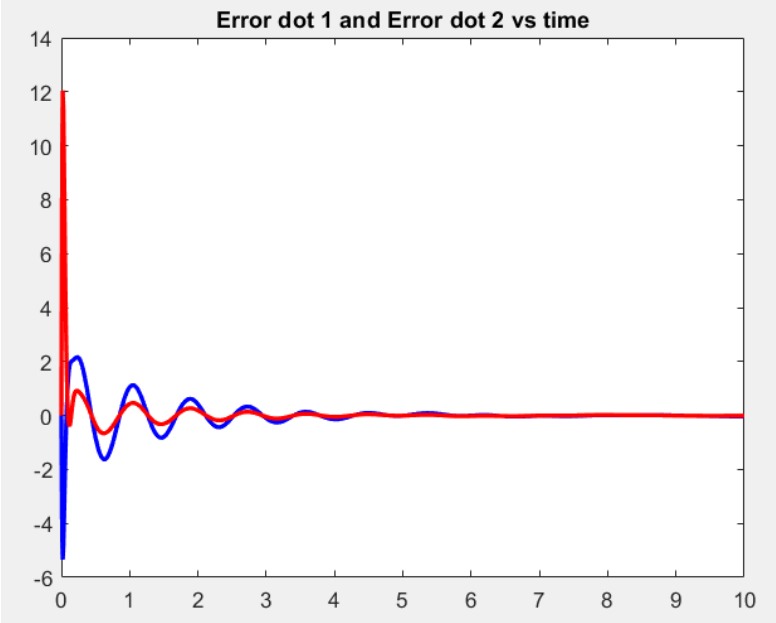


The tau values also converges to almost 0 value as the angles q become equal to the desired angles and become equal. This shows the system is effectively following the reference trajectory and reaching the desired state as time progresses and hence the control input to get the desired trajectory reduces but still need some control to maintain a constant angle.

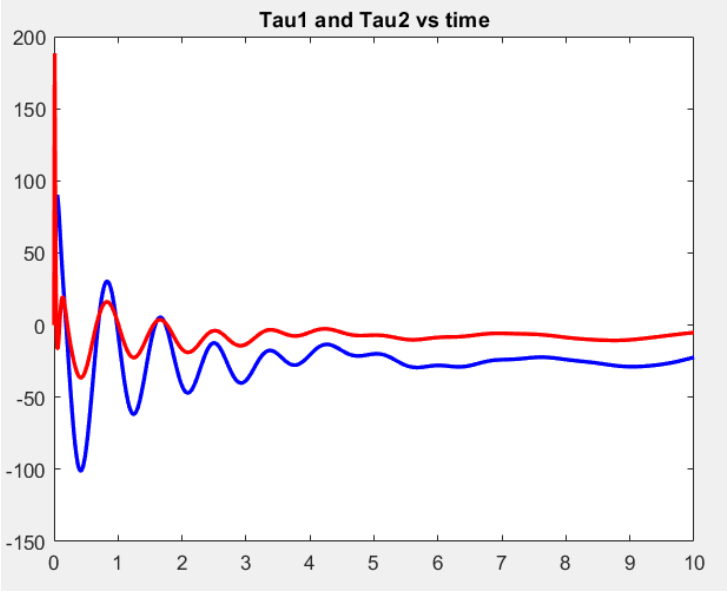
PART B)



The error converges almost to 0 as the angles q become equal to the desired angles. This shows the system is effectively following the reference trajectory and reaching the desired state as time progresses. The error first oscillates then becomes a steady state.



The error derivative also converges to 0 as the angles q become equal to the desired angles and become equal. This shows the system is effectively following the reference trajectory and reaching the desired state as time progresses.



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