Comp Lab 5

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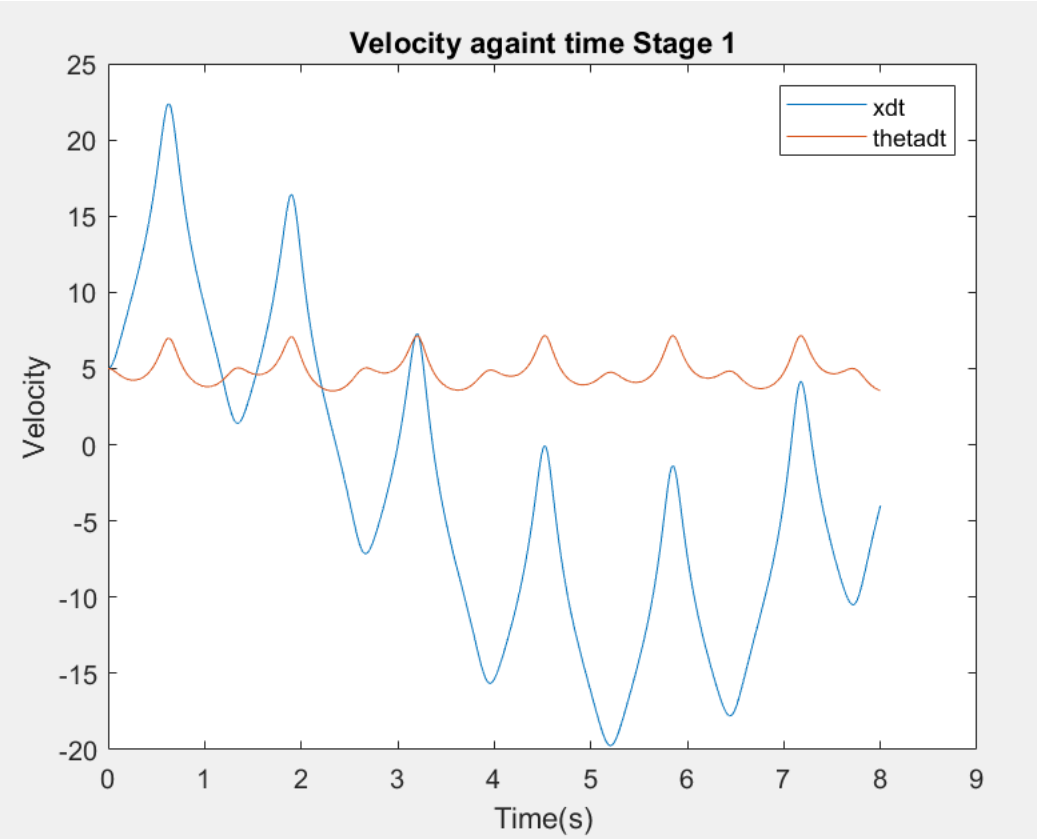
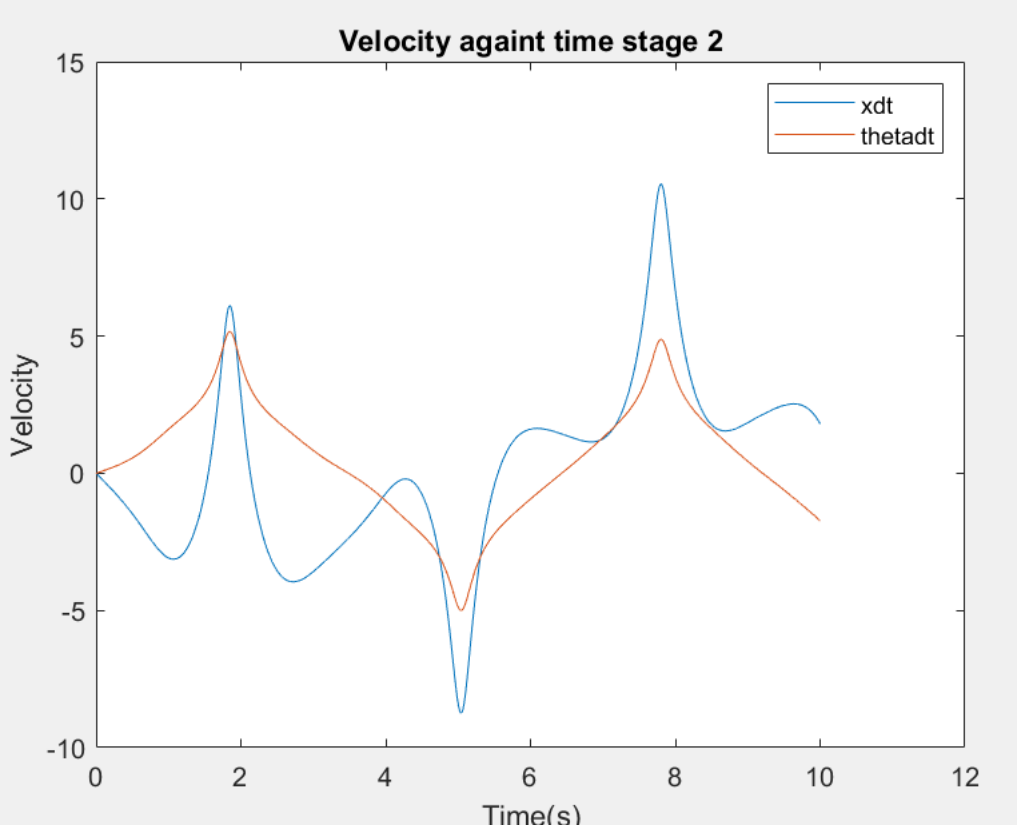
Stage 1:

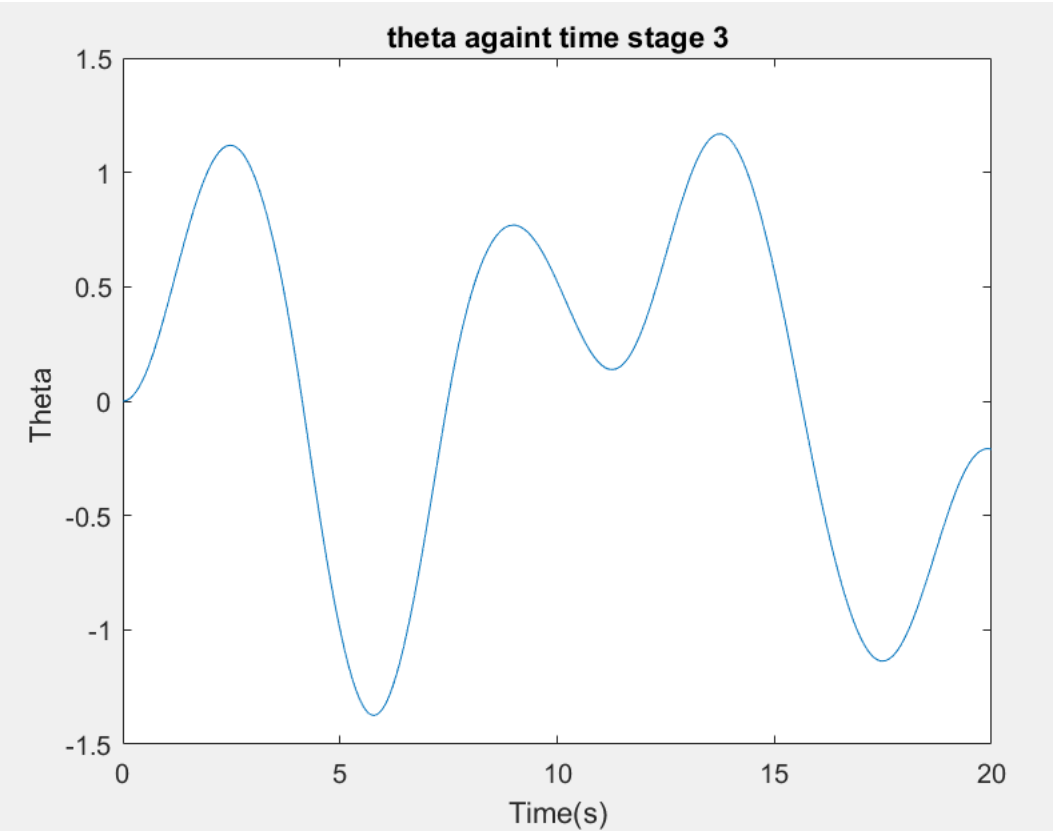


Stage 2:



The velocity of theta and x are in sync. They are in phase (peak and through at the same time) with the same frequency

Stage 3:



The minimum K2 needed is 10N/m .

As x(0) increases, the initial potential energy increases, hence, when the system starts to move, its initial velocity of m1 will increase. Hence, more resistive force is required to constrain the pendulum to the range, hence a larger k2 will be required.

Conclusion: As x(0) increases, k2 increases.