MMC HW6

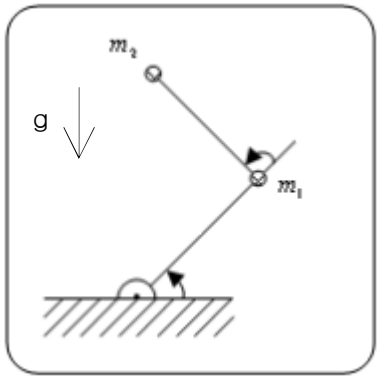
Do the following Problems about a manipulator shown in Text Book Fig. 6.6.

real parameter $m_1 = 5\text{kg}$, $m_2 = 3\text{kg}$, $l_1 = l_2 = 0.5m$

Static Initial Position $(\theta_1 , \theta_2) = (15° , 15°)$

Static Final Position $(x , y) = \left(-\frac{3}{4} , \frac{\sqrt{3}}{4}\right)$

Time elapsed 1 sec



1. 1) Set up joint cubic trajectory planning.
   2) Find Torque Trajectory for the obtained trajectory.
   3) Apply the obtained toruqe trajectory to the robot at initial position.
      Check if you can get the same trajectory as you planed.

2. 1) Set up Cartesian trapezoidal trajectory planning for straight line from initial position to final position.
   2) Find Torque Trajectory for the obtained trajectory.
   3) Apply the obtained toruqe trajectory to the robot at initial position.
      Check if you can get the same trajectory as you planed.