Homework #4

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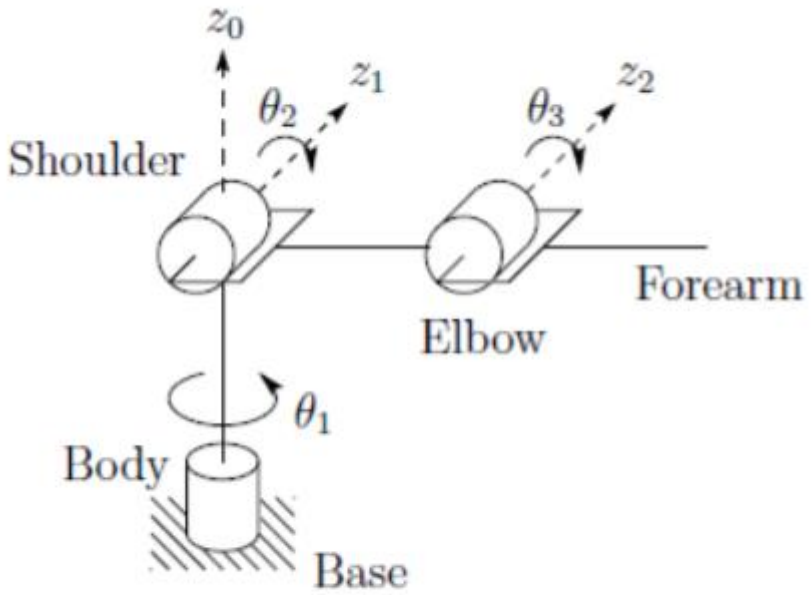
Github link: github.com/BorisAnimal/jacobian-practice

RRR arm or robot from H

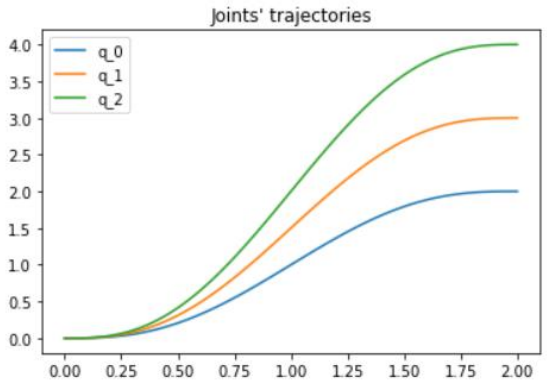


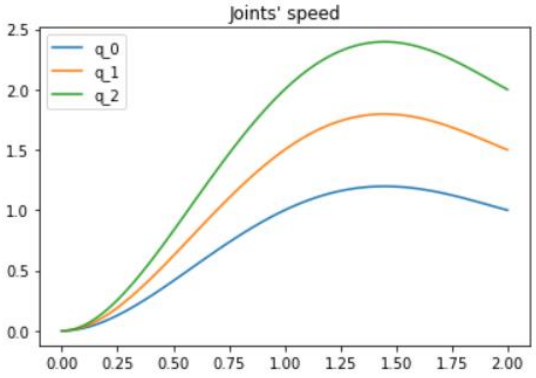
L1 = L2 =L3 = 1 m;

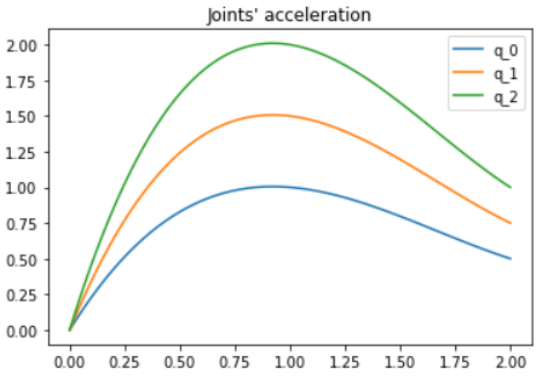
Calculate Jacobian

Skew theory method presented in code.

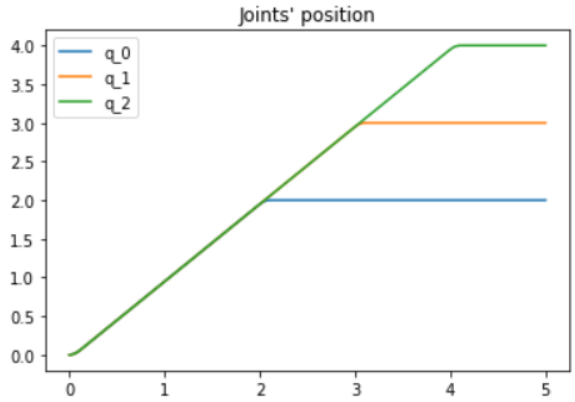
Joint trajectory q(t) (polynomial)

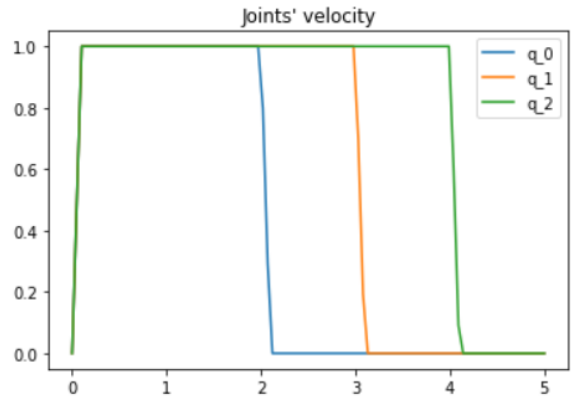


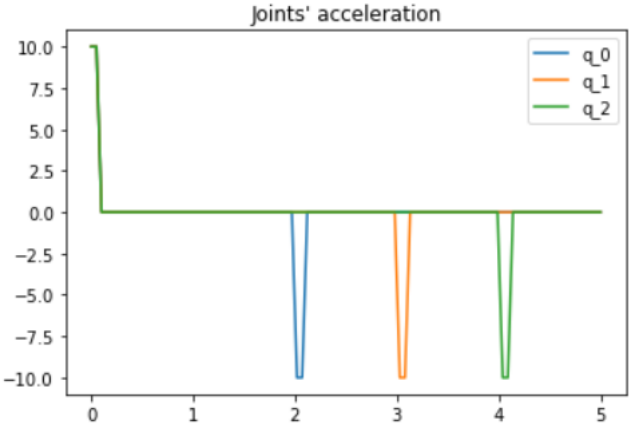




Joint trajectory for the PTP

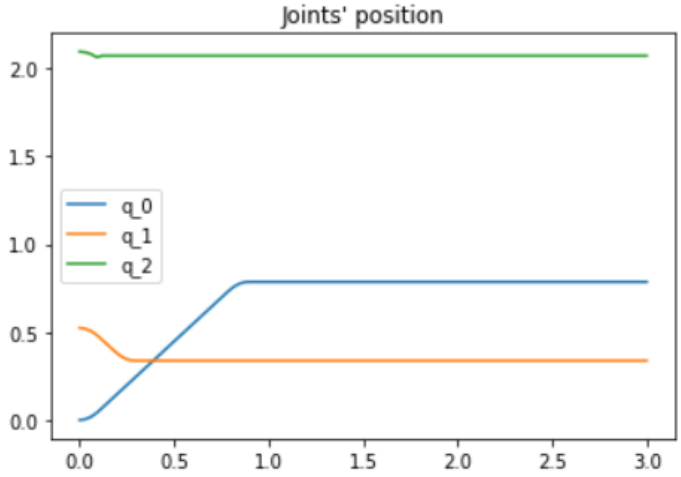


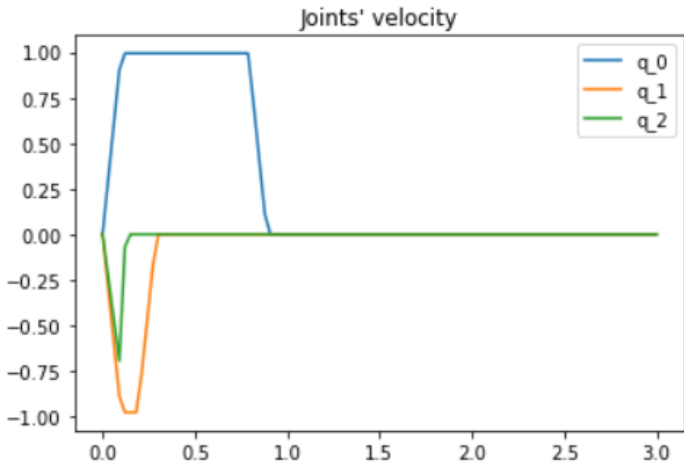


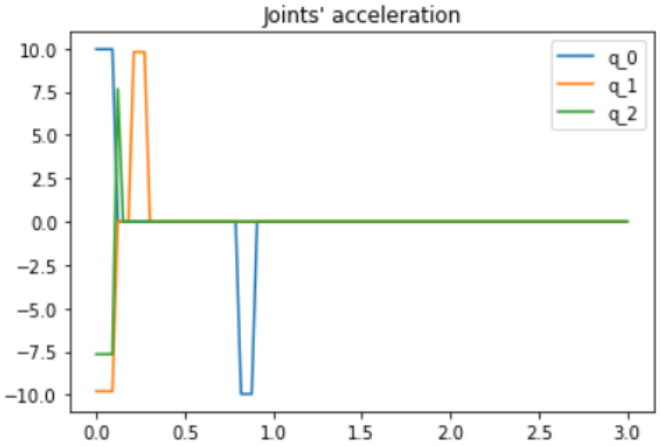


Joint trajectory for the LIN

It wasn't specified in task what exactly must follow constraints, so made this for each particular joint relative its reference frame (RF).







Following synchronization techniques and using FK, I calculated error: 1.57 *10^-13 mm. Before recalculation of angular velocity and acceleration, error was in range 10-17mm.