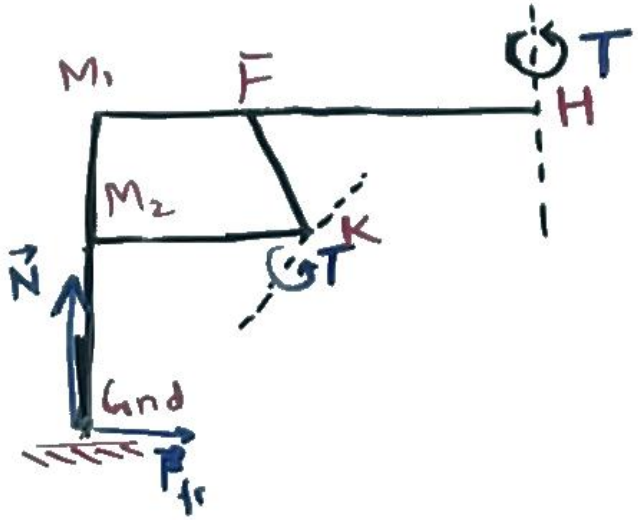
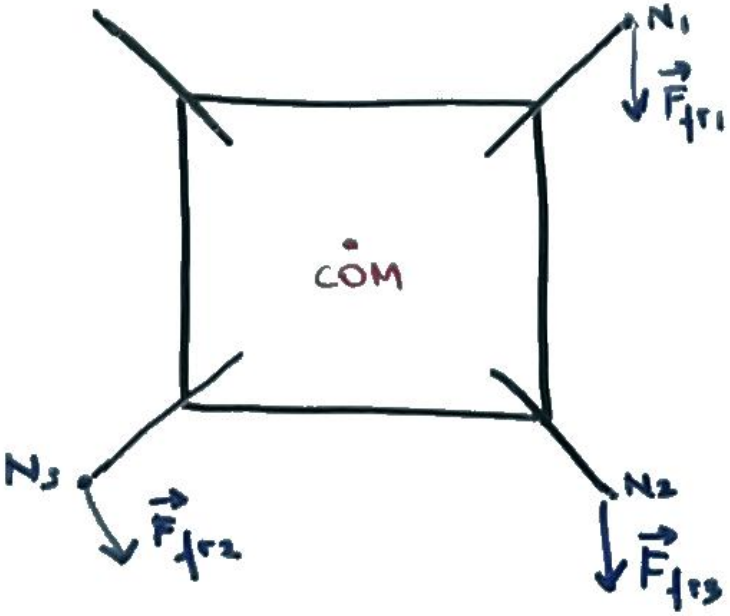
Everyday it gets easier. But you have to do it Everyday

$T = 2.5 \text{ kg cm}^{-1} = 250 \text{ kg m}^{-1}$





- Assumptions
  - The diagram represents a simplified model for the robot during creep gait
  - The robot is moving with a constant velocity, thus we will solve the dynamics equations for the leg for equilibrium.
  - Torque from the servos is constant
  - COM is at the center of the quadruped at rest.

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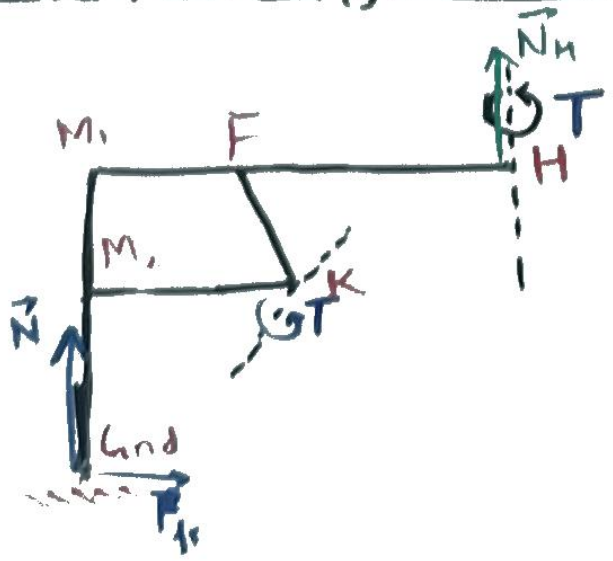
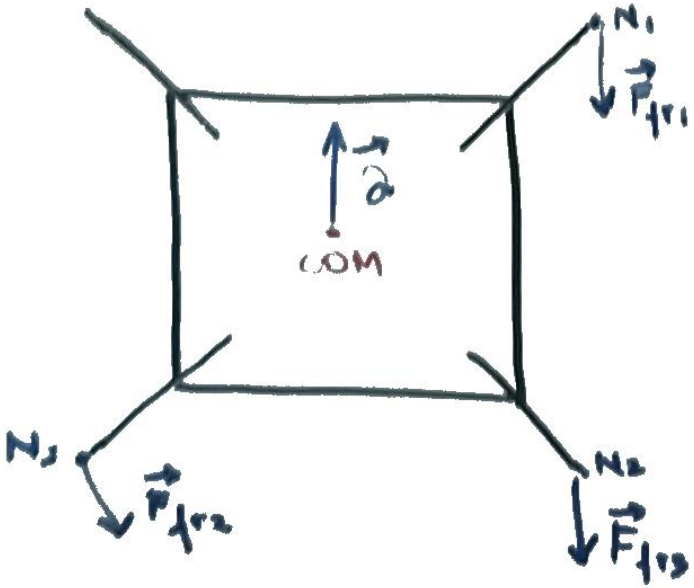


$T = 2.5 \text{ kg}_0 \text{ cm}^{-1} = 250 \text{ kg}_0 \text{ m}^{-1}$

$$\sum_i \vec{N}_i = m \cdot \vec{0}_0$$

- Even if the robot is accelerating; the parameter a is controlled

$$\sum_i \vec{F}_{fri} = m\vec{a}$$



- How do we do the dynamic analysis of the legs?
- Where will be the mass of the legs considered? →
- Need for reconstruction of the Fusion model of the legs to fusion

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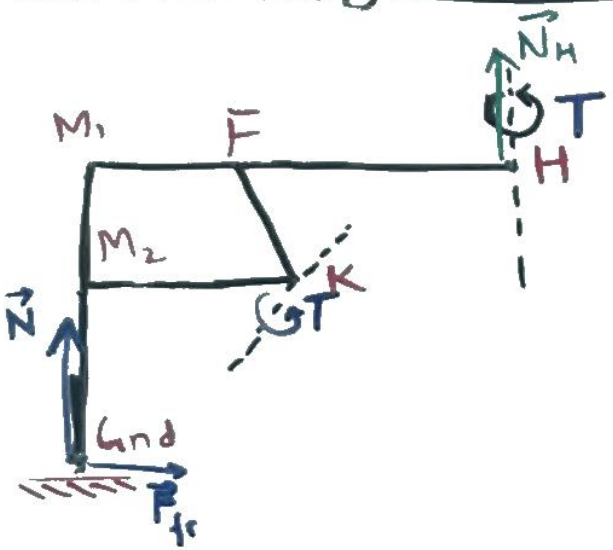
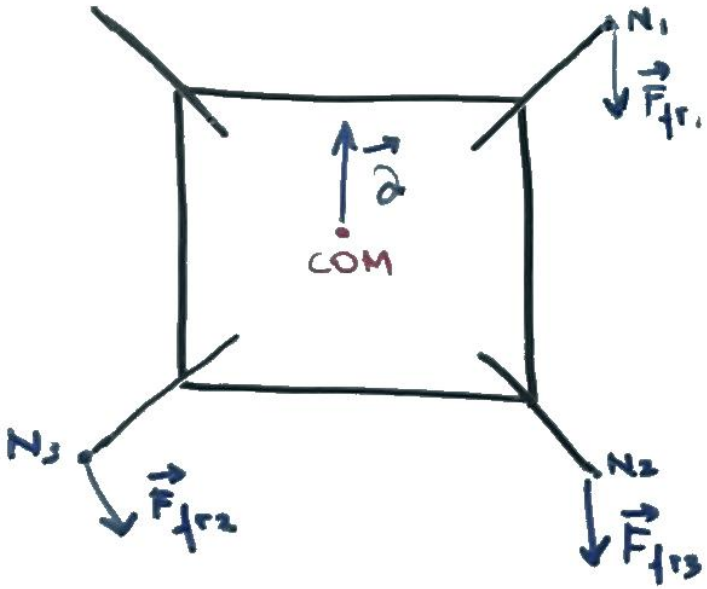
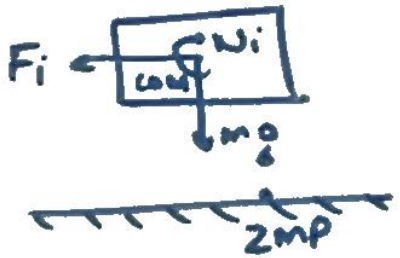




The final objective is get analytical expressions for the following -

- Inertial Force on the robot
- Inertial Moment on the robot
- Position of COM with movement

This is done to simplify the system as follows.



This will simplify calculation of ZMP.