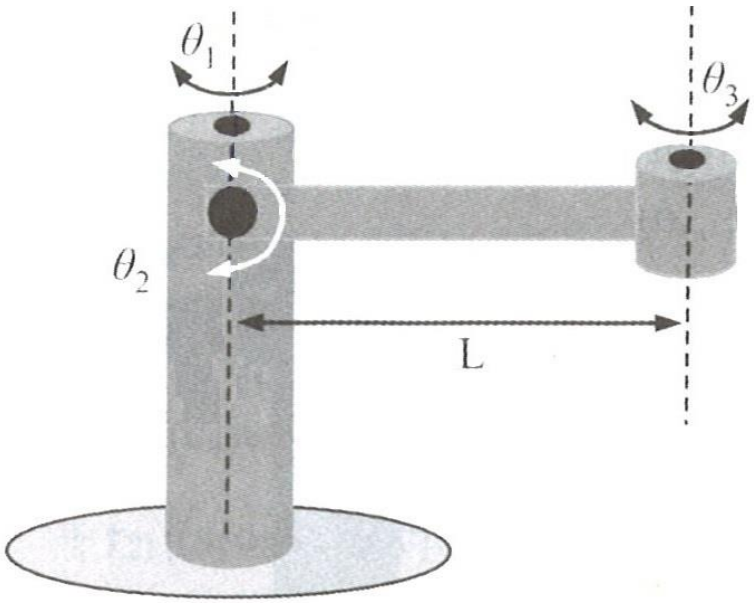
Forward and Inverse Kinematics exercise:

The robot shown in the figure below has three revolute joints.



a. Find the DH parameters
b. Find the homogeneous transformation matrices that connect each joint to its previous
c. Find the solution of the inverse kinematics. i.e. given the orientation and position of the tip of the robot,

$$T_{03} = [n \quad o \quad a \quad p] = \begin{bmatrix} n_x & o_x & a_x & p_x \\ n_y & o_y & a_y & p_y \\ n_z & o_z & a_z & p_z \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

find the expression of the joint variables in relation to the elements of matrix T_{03} as well as the parameters of the robot.