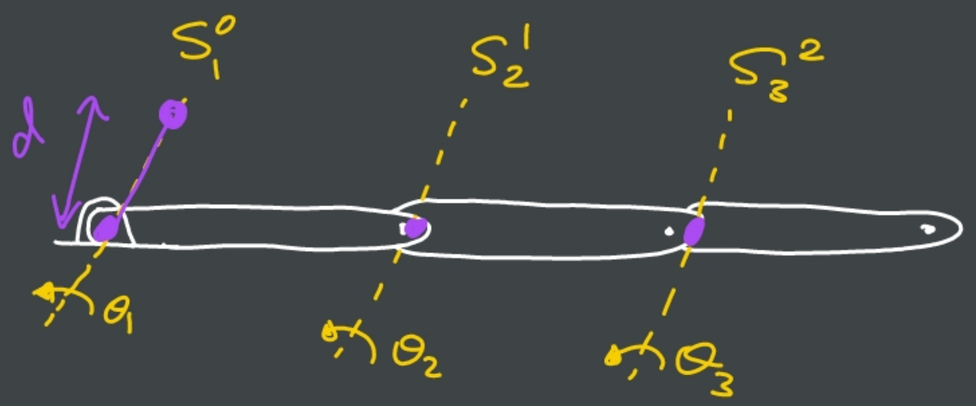
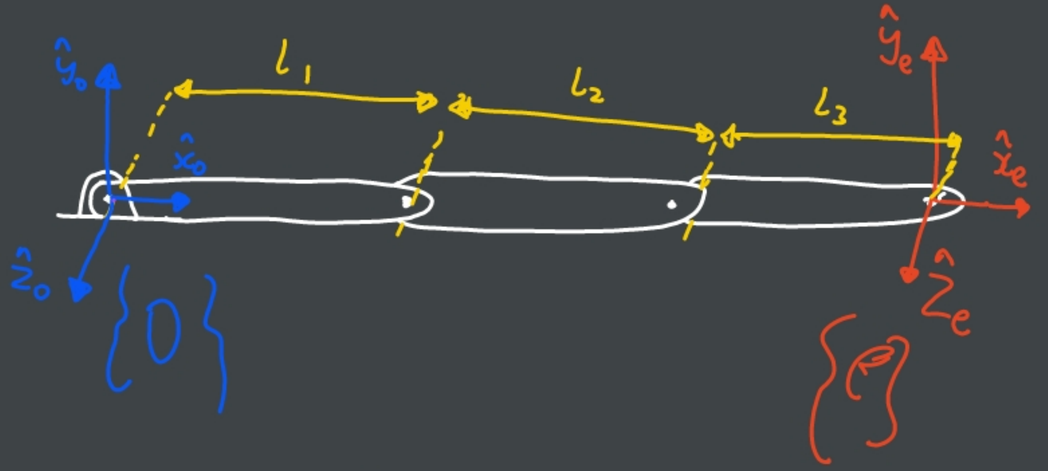
1) Forward Kinematics :

$$\parallel \begin{pmatrix} \hat{n}_i^{0,i-1} \\ -\hat{n}_i^{0,i-1} \wedge r^0 \end{pmatrix}$$

i	$\hat{n}_i^{0,i-1}$	r^0	$S_i^{0,i-1}$
1	$(0,0,1)$	$(0,0,d)$	✓
2	$(0,0,1)$	$(L_1,0,0)$	✓ $\begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix} \begin{pmatrix} 0 \\ L_1 \\ 0 \end{pmatrix}$
3	$(0,0,1)$	$(L_1+L_2,0,0)$	/





$$\xi_e^0(0) = \begin{pmatrix} L_1+L_2+L_3 \\ 0 \\ 0 \end{pmatrix} \quad H_e^0(0) = \begin{pmatrix} I_3 & \xi_e^0(0) \\ 0 & 1 \end{pmatrix}$$

$\theta_1 = \theta_2 = \theta_3 = 0$