$$Trans_{z_{n-1}}(d_n) = \left[\begin{array}{ccc|c} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & d_n \\ \hline 0 & 0 & 0 & 1 \end{array}\right]$$

$$Rot_{z_{n-1}}(\theta_n) = \left[\begin{array}{ccc|c} cos\theta_n & -sin\theta_n & 0 & 0 \\ sin\theta_n & cos\theta_n & 0 & 0 \\ 0 & 0 & 1 & 0 \\ \hline 0 & 0 & 0 & 1 \end{array}\right]$$

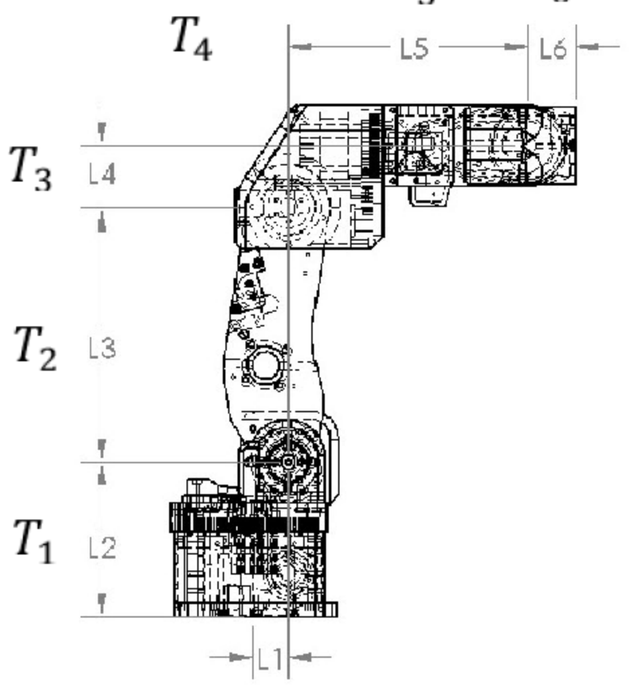
$$Trans_{x_n}(r_n) = \left[\begin{array}{ccc|c} 1 & 0 & 0 & r_n \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ \hline 0 & 0 & 0 & 1 \end{array}\right]$$

$$Rot_{x_n}(\alpha_n) = \left[\begin{array}{ccc|c} 1 & 0 & 0 & 0 \\ 0 & cos\alpha_n & -sin\alpha_n & 0 \\ 0 & sin\alpha_n & cos\alpha_n & 0 \\ \hline 0 & 0 & 0 & 1 \end{array}\right]$$

n	θ	α	r	d
1	θ	90°	L1	L2
2	θ+90°	0°	L3	0
3	θ	90°	L4	0
4	θ	270°	0	L5
5	θ	90°	0	0
6	θ	0°	0	L6

$$T_1 \cdot T_2 \cdot T_3 \cdot T_4 \cdot T_5 \cdot T_6 = [R|T]$$

$$T_n = \left[\begin{array}{ccc|c} cos\theta_n & -sin\theta_n cos\alpha_n & sin\theta_n sin\alpha_n & r_n cos\theta_n \\ sin\theta_n & cos\theta_n cos\alpha_n & -cos\theta_n sin\alpha_n & r_n sin\theta_n \\ 0 & sin\alpha_n & cos\alpha_n & d_n \\ \hline 0 & 0 & 0 & 1 \end{array}\right] = \left[\begin{array}{ccc|c} & R & & T \\ \hline 0 & 0 & 0 & 1 \end{array}\right]$$



$$T_1 = \left[\begin{array}{ccc|c} cos\theta_1 & -sin\theta_1 cos\alpha_1 & sin\theta_1 sin\alpha_1 & r_1 cos\theta_1 \\ sin\theta_1 & cos\theta_1 cos\alpha_1 & -cos\theta_1 sin\alpha_1 & r_1 sin\theta_1 \\ 0 & sin\alpha_1 & cos\alpha_1 & d_1 \\ \hline 0 & 0 & 0 & 1 \end{array}\right] \quad T_4 = \left[\begin{array}{ccc|c} cos\theta_4 & -sin\theta_4 cos\alpha_4 & sin\theta_4 sin\alpha_4 & r_4 cos\theta_4 \\ sin\theta_4 & cos\theta_4 cos\alpha_4 & -cos\theta_4 sin\alpha_4 & r_4 sin\theta_4 \\ 0 & sin\alpha_4 & cos\alpha_4 & d_4 \\ \hline 0 & 0 & 0 & 1 \end{array}\right]$$

$$T_2 = \left[\begin{array}{ccc|c} cos\theta_2 & -sin\theta_2 cos\alpha_2 & sin\theta_2 sin\alpha_2 & r_2 cos\theta_2 \\ sin\theta_2 & cos\theta_2 cos\alpha_2 & -cos\theta_2 sin\alpha_2 & r_2 sin\theta_2 \\ 0 & sin\alpha_2 & cos\alpha_2 & d_2 \\ \hline 0 & 0 & 0 & 1 \end{array}\right] \quad T_5 = \left[\begin{array}{ccc|c} cos\theta_5 & -sin\theta_5 cos\alpha_5 & sin\theta_5 sin\alpha_5 & r_5 cos\theta_5 \\ sin\theta_5 & cos\theta_5 cos\alpha_5 & -cos\theta_5 sin\alpha_5 & r_5 sin\theta_5 \\ 0 & sin\alpha_5 & cos\alpha_5 & d_5 \\ \hline 0 & 0 & 0 & 1 \end{array}\right]$$

$$T_3 = \left[\begin{array}{ccc|c} cos\theta_3 & -sin\theta_3 cos\alpha_3 & sin\theta_3 sin\alpha_3 & r_3 cos\theta_3 \\ sin\theta_3 & cos\theta_3 cos\alpha_3 & -cos\theta_3 sin\alpha_3 & r_3 sin\theta_3 \\ 0 & sin\alpha_3 & cos\alpha_3 & d_3 \\ \hline 0 & 0 & 0 & 1 \end{array}\right] \quad T_6 = \left[\begin{array}{ccc|c} cos\theta_6 & -sin\theta_6 cos\alpha_6 & sin\theta_6 sin\alpha_6 & r_6 cos\theta_6 \\ sin\theta_6 & cos\theta_6 cos\alpha_6 & -cos\theta_6 sin\alpha_6 & r_6 sin\theta_6 \\ 0 & sin\alpha_6 & cos\alpha_6 & d_6 \\ \hline 0 & 0 & 0 & 1 \end{array}\right]$$