IV. D-H PARAMETRIC TABLE

The Denavit-Hartenberg parameters (also called D-H parameters) are the four parameters associated witha particular convention for attaching reference frames to the links of a spatial kinematic chain,or robot manipulator.

The Denavit-Hartenberg parameter tables consist of four variables:

- θ (theta) - rotation around z_{n-1} that is required toget x_{n-1} to match x_n, with the joint variable θ if joint is revolute/twisting joint.
- a (alpha) - rotation around x_n that is required to match z_{n-1} to z_n.
- d - The distance from the origin of n-1 and n frames along the z_{n-1} direction, with joint variable if joint is prismatic.
- r - The distance from the origin of n-1 and n frames along the x_{n-1} direction.

The Articulated Manipulator consists of three revolute joints and it can be seen on the three frames of the manipulator from frame 0, frame 1, and frame 2.

n	θ	α	r	d
1	$0° + \theta_1$	90°	0	a_1
2	$0° + \theta_2$	0°	a_2	0
3	$0° + \theta_3$	0°	a_3	0

As seen in the table is parametric table of articulated manipulator, each column represents the number of parameters that are needed to complete the table such as parameter theta and alpha which represents the rotation of the manipulator, and the parameter r and d which represents the translation of the manipulator per frame.

Supplementary Video about the D-H Parametric Table of Articulated Manipulator

To further understand how to get the D-H Parametric Table, here is a supplementary video explaining how to get it.
(https://drive.google.com/file/d/18cw6NJNt64Ajvra6pkWnRcIHqiqVB5f5/view)