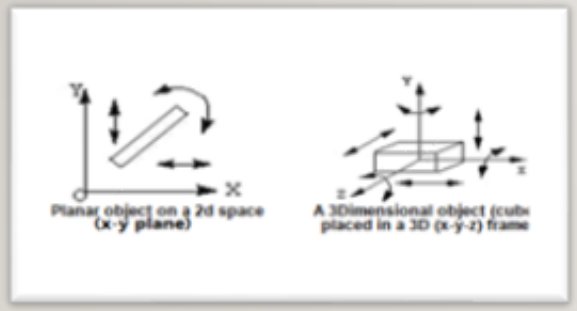
ROC - 2021

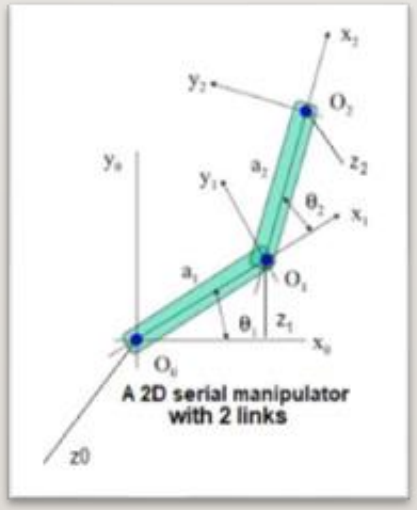
We certify that this project was undertaken by the members of **TEAM NO.B1** for the RoboAnalyzer based Online Competition (ROC) as a virtual summer internship conducted by Dr. Nayan M. Kakoty of Tezpur University, Assam in collaboration with Prof. S K Saha of IIT Delhi, New Delhi and Mr. Rajeevlochana C.G. of Amritha Vishwa Vidyapeetham, Bengaluru during May – July 2021.

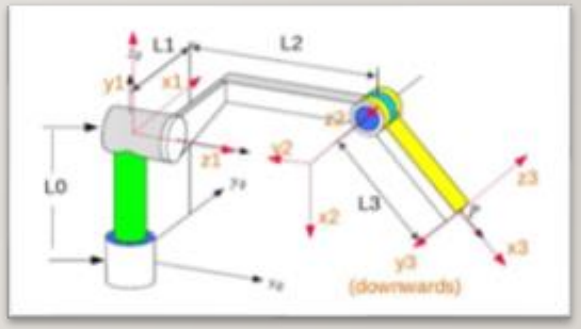
Team Members:

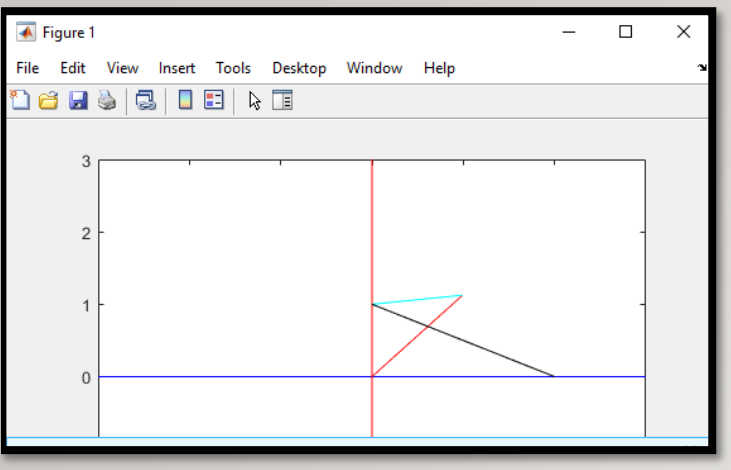
1. Katta Tejashwini Reddy, JNTUH, Team co-Coordinator.
2. Peeyusha Kollipara, JNTUH, Team member.
3. Prithwish Sarkar, MAKAUT, WB , Team Co-Ordinator (Acting).

TASK – 1 (A moderated Output from all 4 members)





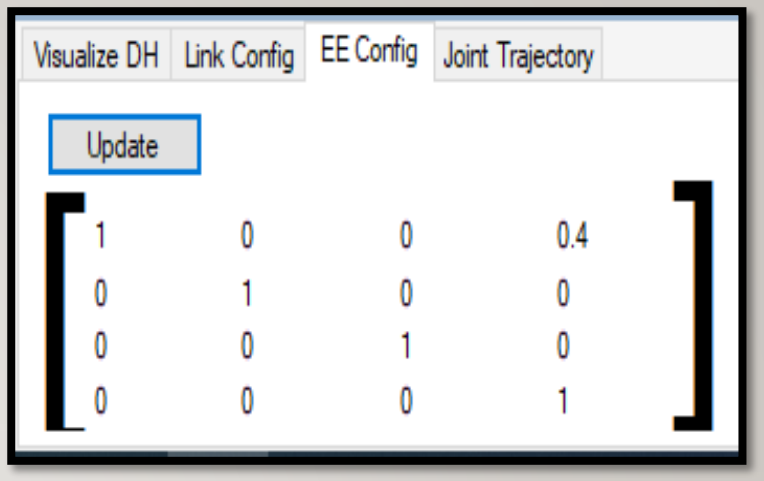




TASK-2

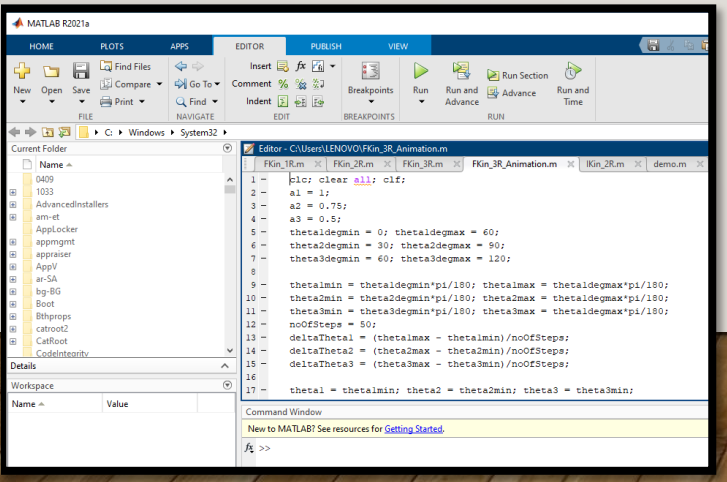
KEEP GOING, NEVER GIVE UP

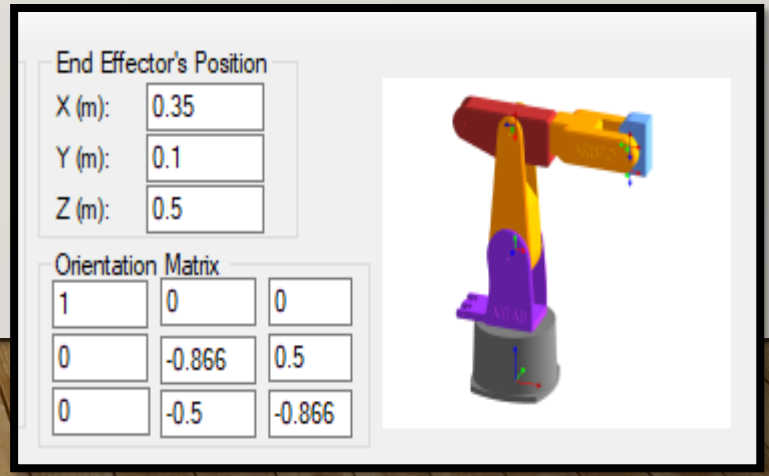
- Searching for information…
- Going through the videos.
- Executing the code and getting the outputs.
- Using Roboanalyzer to perform the same experiment on the same robot with the same parameters.
- Tally the results.
- Job done !!!!



MATLAB
-The Mathematical way

ROBOANALYZER
- The Analytical way

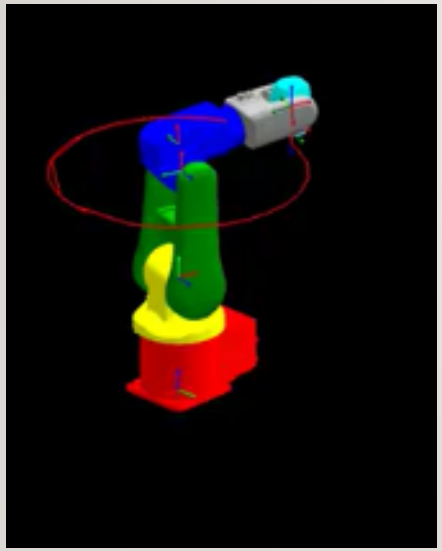


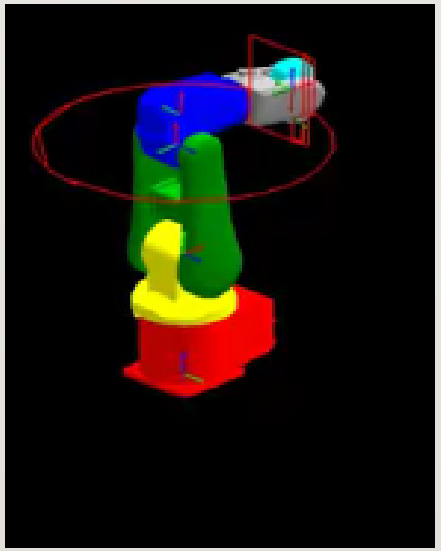


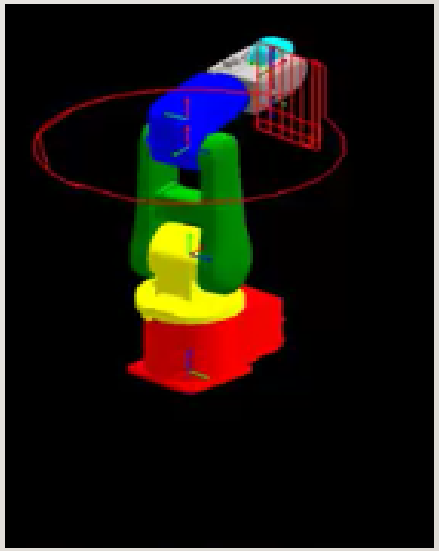
TASK - 3

DIVIDE AND RULE !!!!

(Each member takes up the part of the job they know the best)







TASK - 4

UNLEASHING CREATIVITY...

Editor - C:\Users\LENOVO\Downloads\final.m

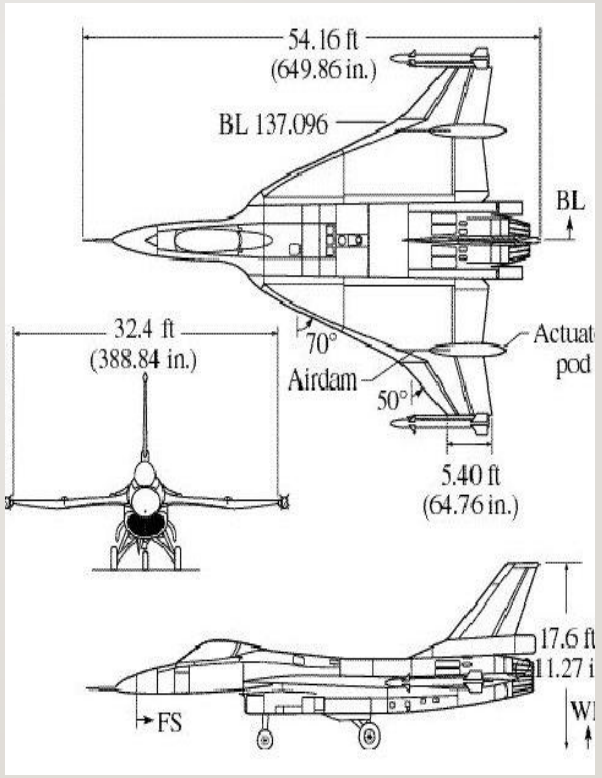
FKin_1R.m | FKin_2R.m | FKin_3R.m | FKin_3R_Animati

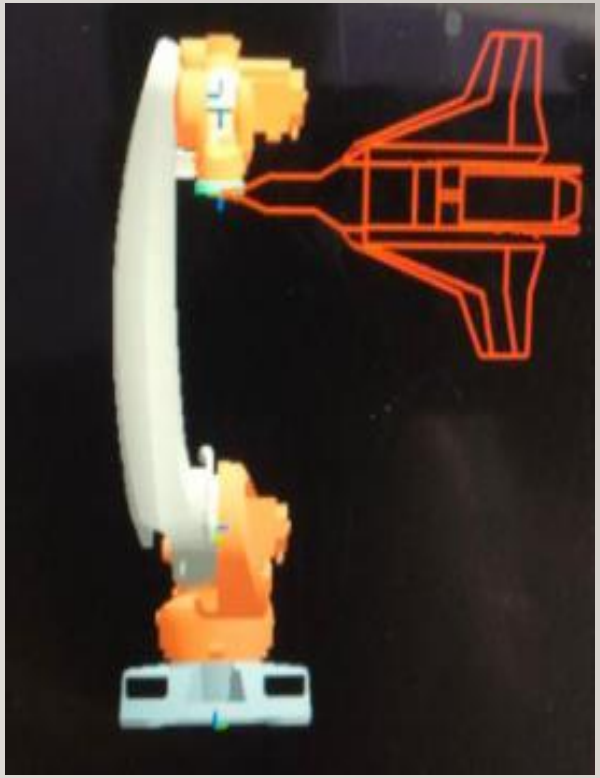
```
18 -        p = p0 + t*deltap;
19 -        pXarray(i) = p(1);
20 -        pYarray(i) = p(2);
21 -        pZarray(i) = p(3);
22 -    end
23
24 -    deltap = p2 - p1;
25 -    existingtragectory = length(pXarray);
26 -    for i=1:n
27 -        t = tarray(i);
28 -        p = p1 + t*deltap;
29 -        index = existingtragectory + i;
30 -        pXarray(index) = p(1);
31 -        pYarray(index) = p(2);
32 -        pZarray(index) = p(3);
33 -    end
34
35 -    deltap = p3 - p2;
36 -    existingtragectory = length(pXarray);
37 -    for i=1:n
38 -        t = tarray(i);
39 -        p = p2 + t*deltap;
40 -        index = existingtragectory + i;
41 -        pXarray(index) = p(1);
42 -        pYarray(index) = p(2);
```

A1 | 800

	A	B	C	D	E	F	G
1	800	0	800	180	0	0	
2	800	1.0101	800.15	180	0	0	
3	800	2.0202	800.3	180	0	0	
4	800	3.0303	800.45	180	0	0	
5	800	4.0404	800.61	180	0	0	
6	800	5.0505	800.76	180	0	0	
7	800	6.0606	800.91	180	0	0	
8	800	7.0707	801.06	180	0	0	
9	800	8.0808	801.21	180	0	0	
10	800	9.0909	801.36	180	0	0	
11	800	10.101	801.52	180	0	0	
12	800	11.111	801.67	180	0	0	
13	800	12.121	801.82	180	0	0	
14	800	13.131	801.97	180	0	0	
15	800	14.141	802.12	180	0	0	
16	800	15.152	802.27	180	0	0	
17	800	16.162	802.42	180	0	0	
18	800	17.172	802.58	180	0	0	
19	800	18.182	802.73	180	0	0	
20	800	19.192	802.88	180	0	0	
21	800	20.202	803.03	180	0	0	
22	800	21.212	803.18	180	0	0	
23	800	22.222	803.33	180	0	0	

final





ALL'S WELL THAT ENDS WELL !!!

THANK YOU