
ROBOANALYZER ONLINE COMPETITION 2021

BY:-TEAM –C2.

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ROBO ANALYZER

- RoboAnalyzer is a 3D-module based Robotics learning and teaching software
- Developed by prof. S. K. Saha and team (IIT Delhi).

We certify that this project was undertaken by us for the RoboAnalyzer based online competition(ROC). Conducted by prof. S. K. Saha of IIT delhi and Mr. Rajeevlochan. C. G of Amrits vishwa vidyapreetham Bangsluru campus during May 2,2021 to June 29,2021.

We did the 3 tasks from the starting of the roboAnalyzer online competition summer internship 2021,

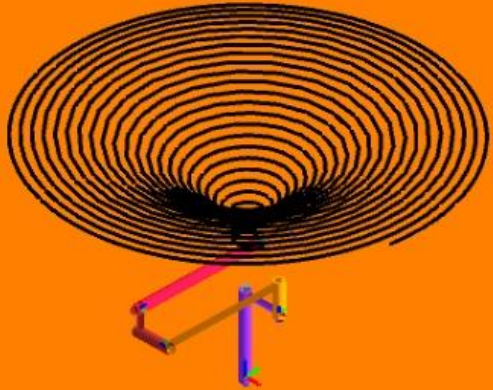
- Task -1:-one page report on the DH parameters and the Homogenous transformation matrix(HTM).
- Task -2:-By understanding idea of the forwardkinimatics(Fkin) and inversekinimatics(Ikin) , Preparing the one min video of the matlab/octave program.
- Task -3:-Making the one min video by understanding the motion planning, by using the virtual robot module(VRM)
- **ABOUT 'VRM'**
- The VRM can perform joint level and cartesian level jogging.
- It also can control the robot motion on the cartesian space by providing position and orientation trajectories of the end-effector.

GLIMPSE OF TASK WE DID THROUGHT ROC,21

RoboAnalyzer

File HTM Module Virtual Robots Help Feedback Contact Us

3D Model Graph



Browser

3D Model Graph

Analyses

Time (s) 5.00 No of Steps 1000

FKn IDyn

IKn FDyn

Gravity(m/s²)

Links

D-H Parameters

Joint No	Joint Type	Joint Offset (b) m	Joint Angle (theta) deg	Link Length (a) m	Twist Angle (alpha) deg	Initial Value (JV) deg or m	Final Value (JV) deg or m
1	Revolute	0.4	Variable	0.18	0	0	9000
2	Revolute	0.135	Variable	0.6	90	0	-90
3	Revolute	0.135	Variable	0.12	-90	0	90
4	Revolute	0.62	Variable	0	90	0	180

Visualize DH Link Config EE Config Joint Trajectory

Cycloidal Cubic

Cosine Quintic

File Input

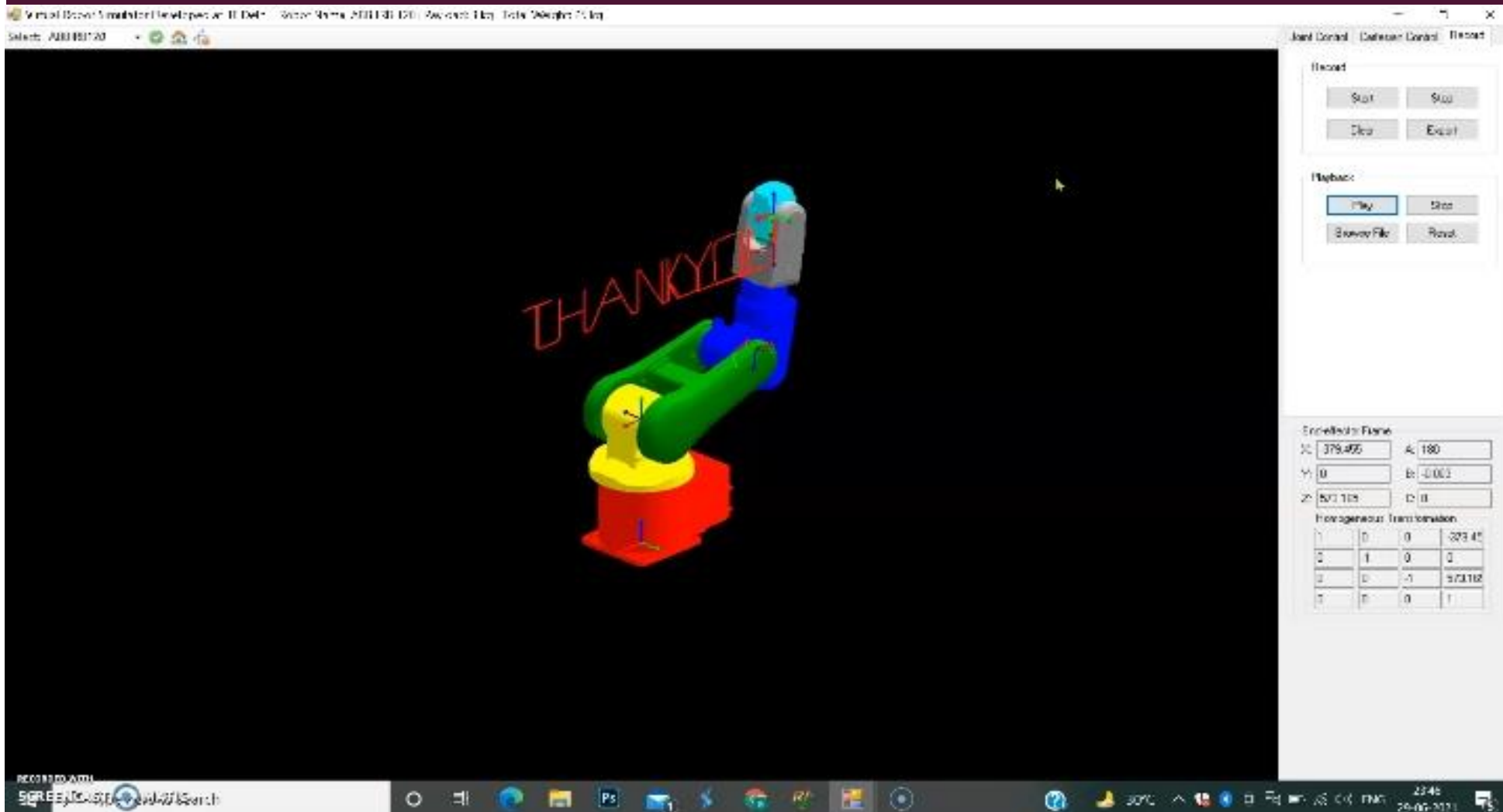
Activate Windows
Go to Settings to activate Windows.

00:20
30-06-2021

OUR LAST TASK

Virtual Robot Simulation Development - 11 Dec - 2020 10:10:00 - Windows File - Task Manager (1).png

Select: ABB IRB120



Thread

Start Stop
Clear Execute

Playback

Play Stop
Execute File Reset

End Effector Frame

X: 379.495 A: 180
Y: 0 B: -0.002
Z: 502.105 C: 0

Homogeneous Transformation

1	0	0	-279.495
0	1	0	0
0	0	-1	502.105
0	0	0	1

NC01870-AT01
SCREENCAST-O-MATIC
23:46
26-02-2021



THANK YOU!