



University Institute of Engineering

First Year Engineering

EXPREMENT :- 3.2

Student Name

UID :

Branch: Computer Science & Engineering

Section/Group:

Semester: 2nd

Date of Performance: 18/04/22

Subject Name: DISRUPTIVE TECHNOLOGIES - 2

Aim: Design a two wheel line following robot integrated with infrared sensors.

The robotics simulator CoppeliaSim, with integrated development environment, is based on a distributed control architecture: each object/model can be individually controlled via an embedded script, a plugin, a ROS node, a remote API client, or a custom solution. This makes CoppeliaSim very versatile and ideal for multi-robot applications. Controllers can be written in C/C++, Python, Java, Lua, Matlab or Octave.

CoppeliaSim is used for fast algorithm development, factory automation simulations, fast prototyping and verification, robotics related education, remote monitoring, safety double-checking, as digital twin, and much more. You can find a feature overview here.

News

CoppeliaSim Release 4.3.0 is out (Jan. 27th 2022)
-> [Change log here](#) <-

CoppeliaSim Release 4.2.0 is out (April 6th 2021)
-> [Change log here](#) <-

CoppeliaSim Release 4.1.0 is out (July 21st 2020)
-> [Change log here](#) <-



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Screenshot of a web browser showing the Coppelia Robotics download page. The URL is https://www.coppeliarobotics.com/downloads. The page displays a comparison chart for three editions: player, edu, and pro.

	player	edu	pro
Full simulation functionality	✓	✓	✓
Full editing capabilities		✓	✓
Commercial usage	✓		✓
Free for everyone. Freely distributable.		May only be used by students, teachers, professors, schools and universities.	No usage restrictions. Contact us for pricing.

Below the chart are three download links with arrows:

- Download CoppeliaSim Player
- Download CoppeliaSim Edu
- Download CoppeliaSim Pro

Screenshot of the CoppeliaSim software interface running on a Windows 10 desktop. The taskbar shows the application is titled "CoppeliaSim Edu - New file - rendering: 4 ms (8.0 fps) - SIMULATION STOPPED".

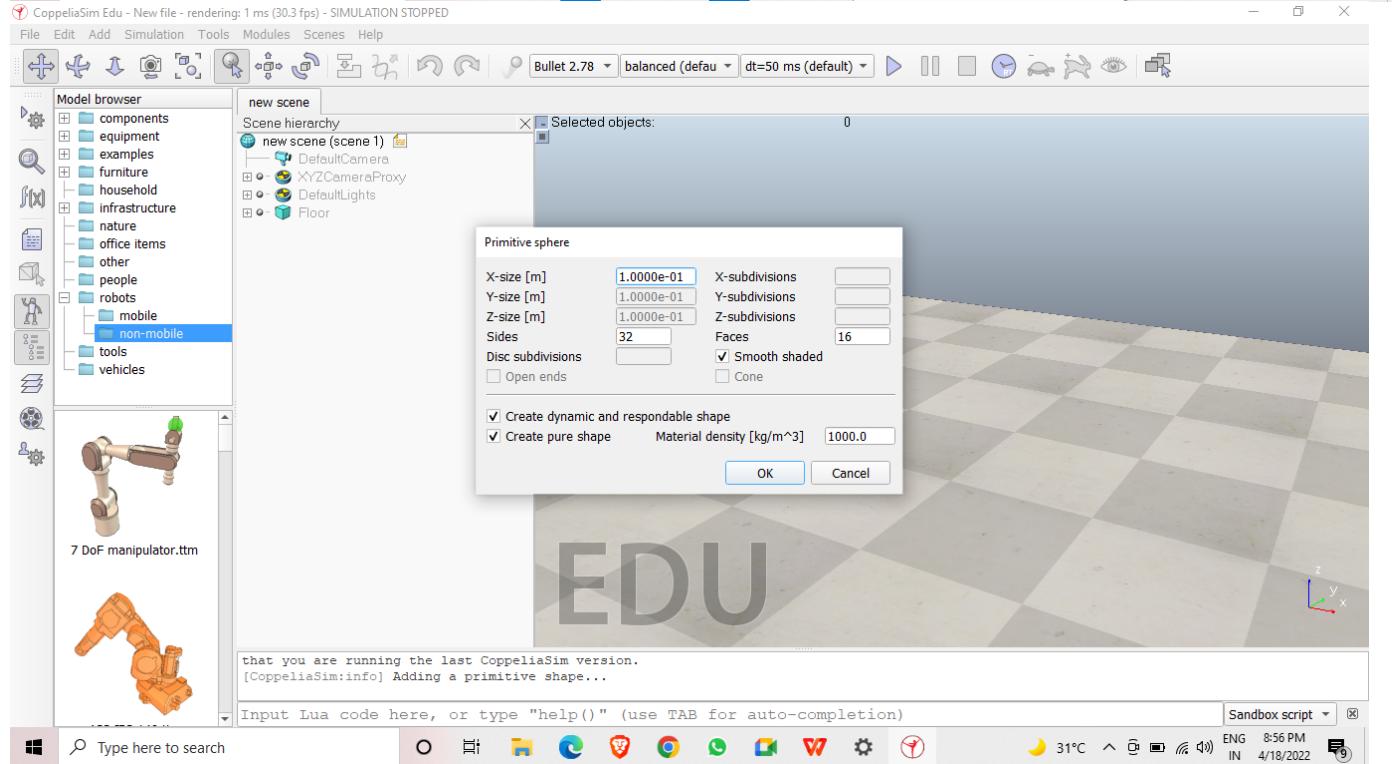
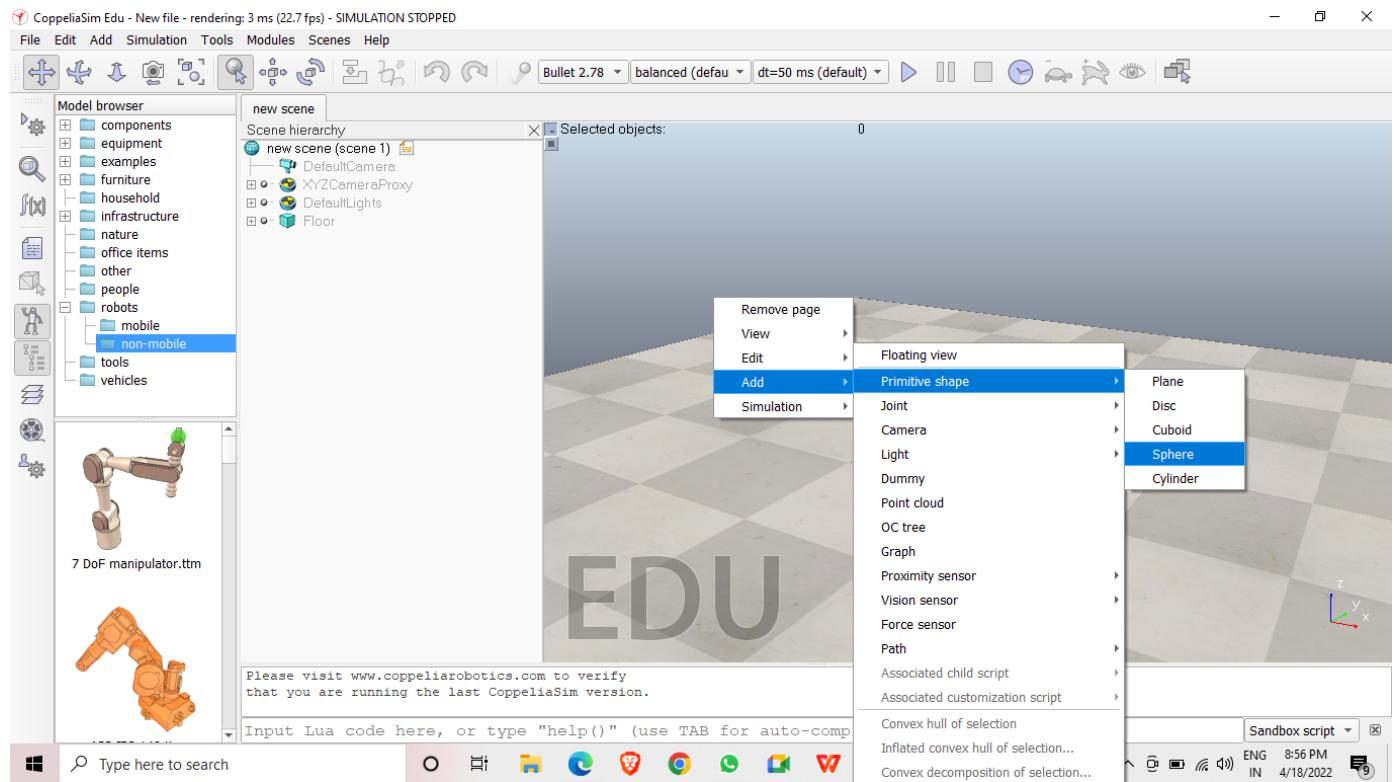
The interface includes:

- A top menu bar with File, Edit, Add, Simulation, Tools, Modules, Scenes, Help.
- A toolbar with various icons for simulation control.
- A "Model browser" panel on the left listing categories like components, equipment, examples, furniture, household, infrastructure, nature, office items, other, people, robots, tools, and vehicles. A "7 DoF manipulator.ttm" file is selected.
- A "Scene hierarchy" panel showing the structure of the current scene, which contains objects like DefaultCamera, XYZCameraProxy, DefaultLights, and Floor.
- A 3D simulation window displaying a checkered floor and a large gray "EDU" watermark.
- A status bar at the bottom with a Lua input field, a "Sandbox script" dropdown, and system information (31°C, 8:54 PM, 4/18/2022).



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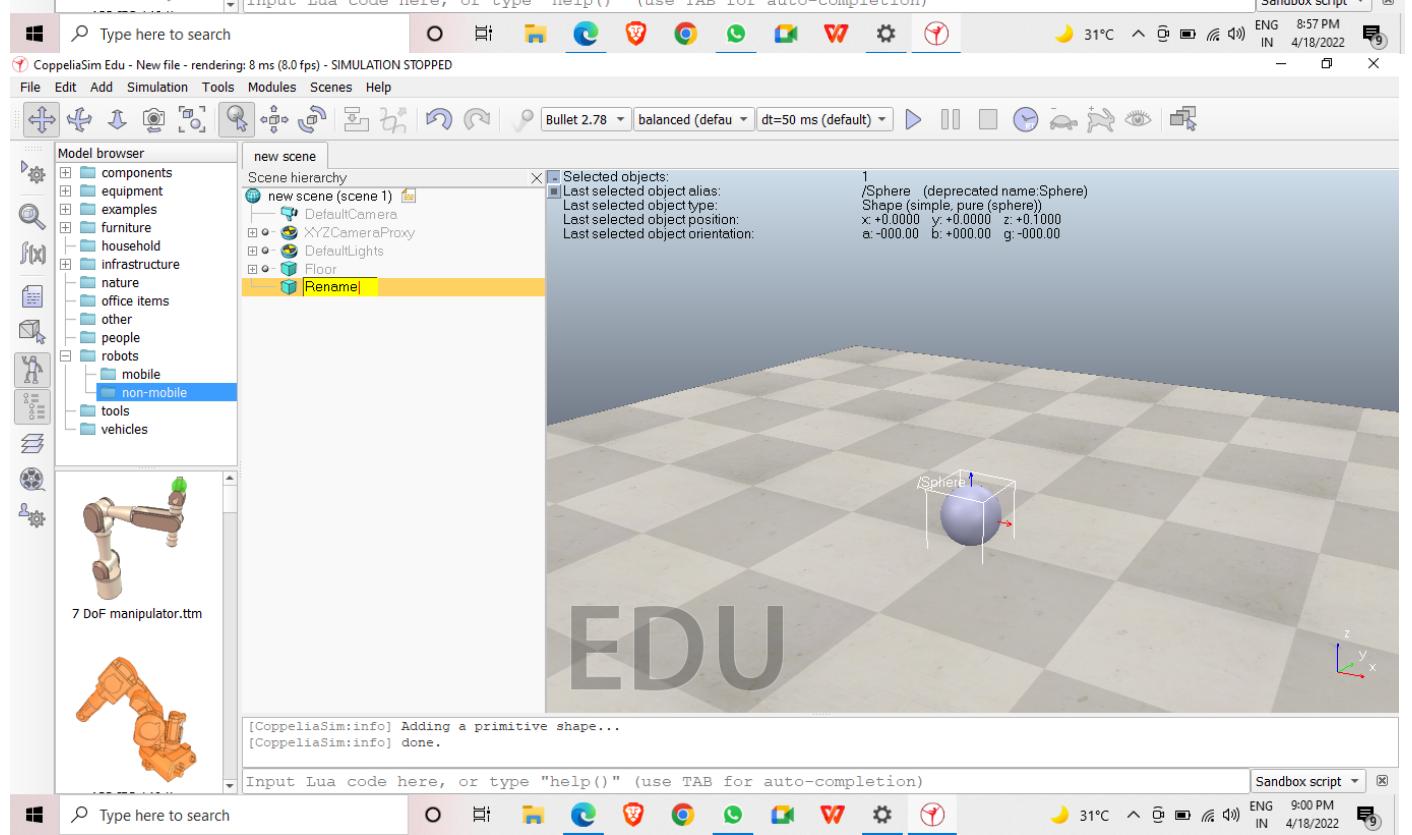
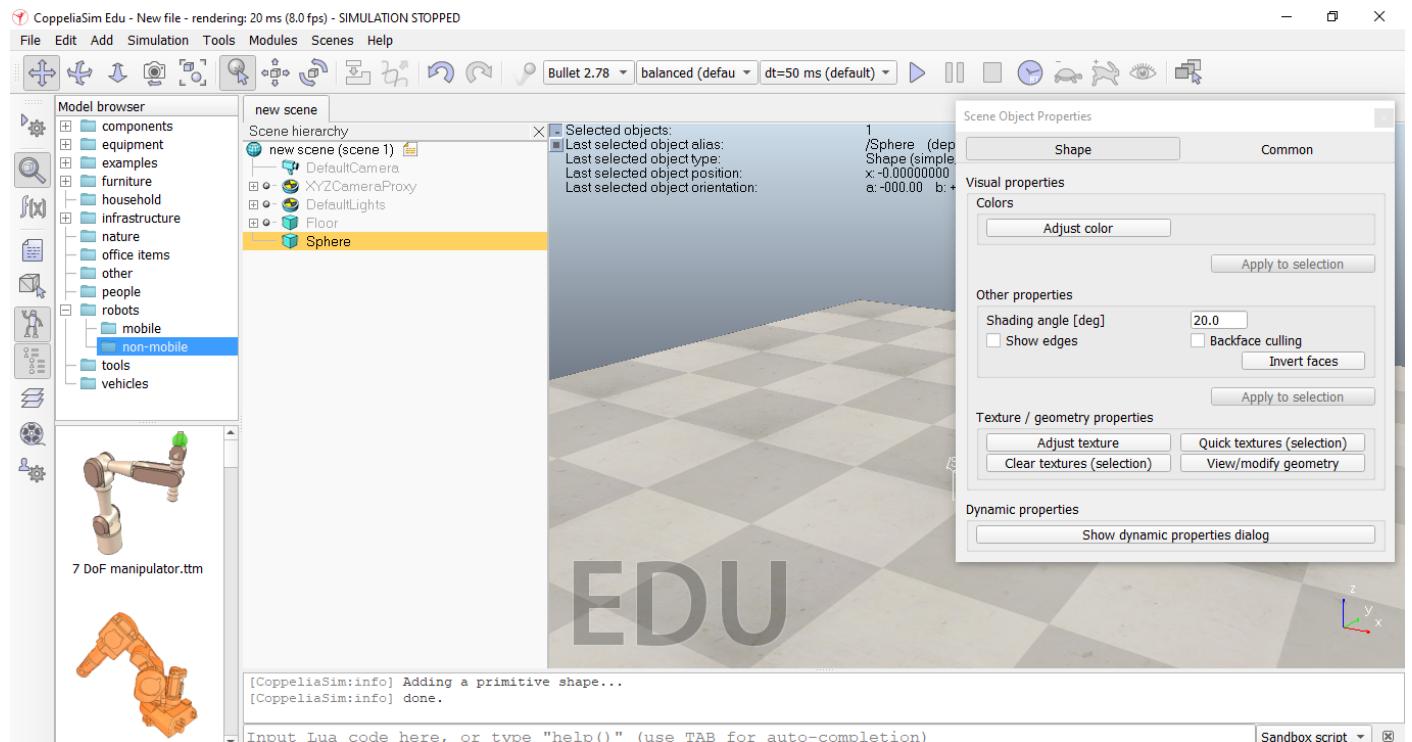
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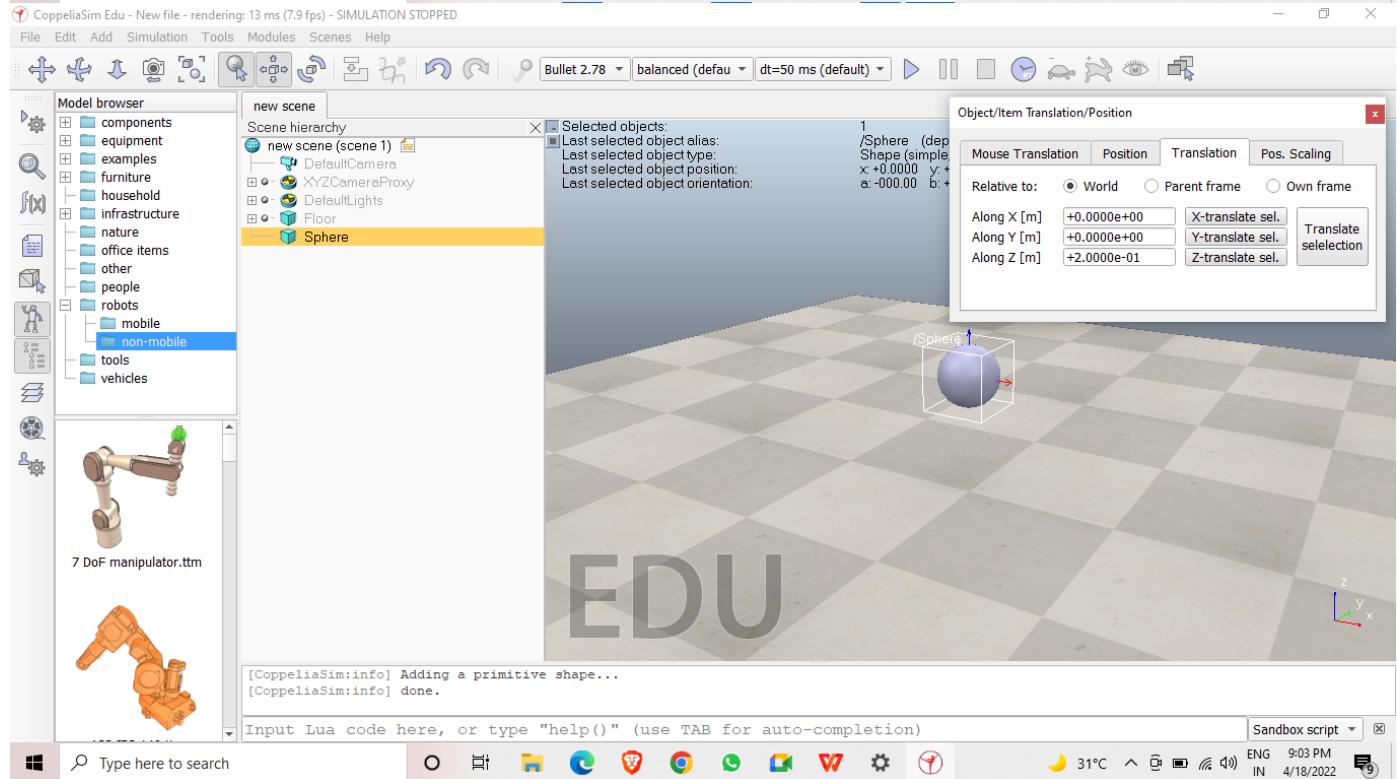
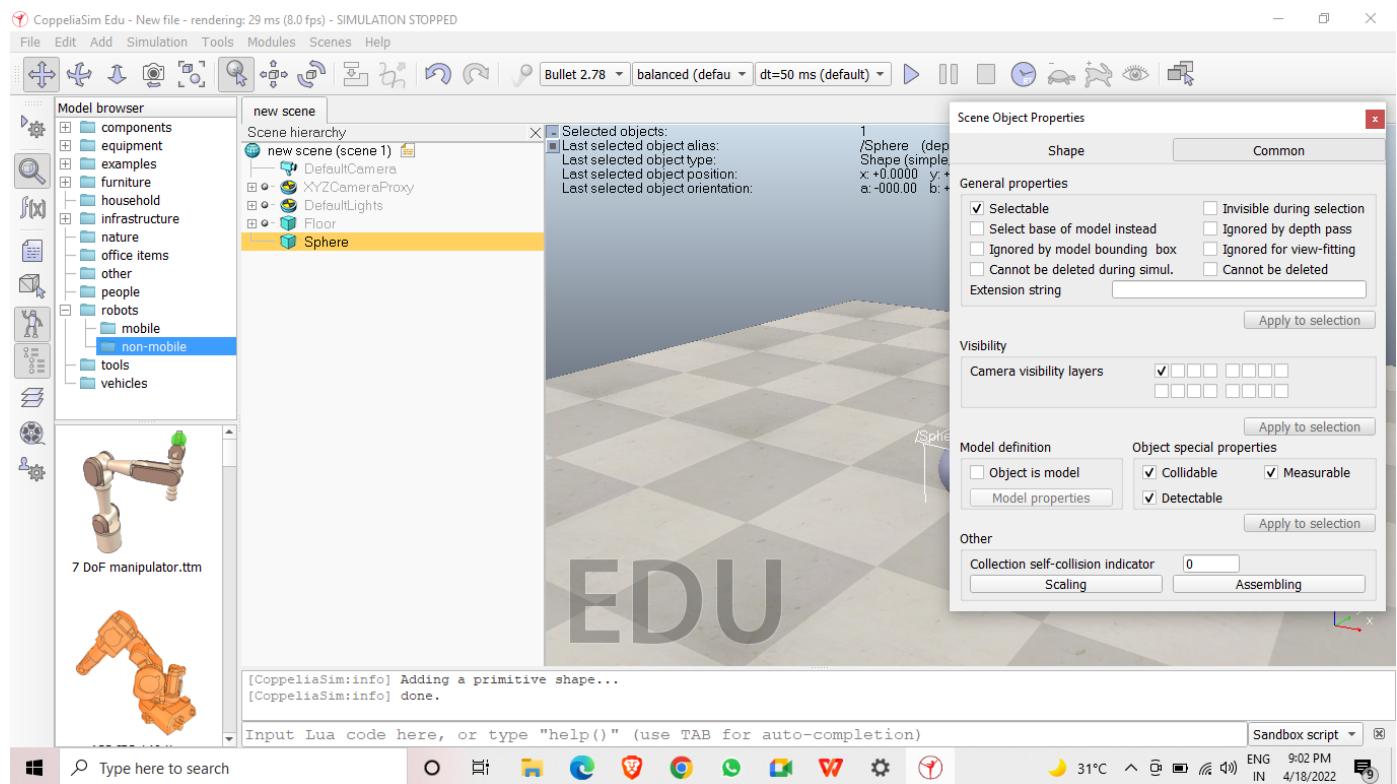
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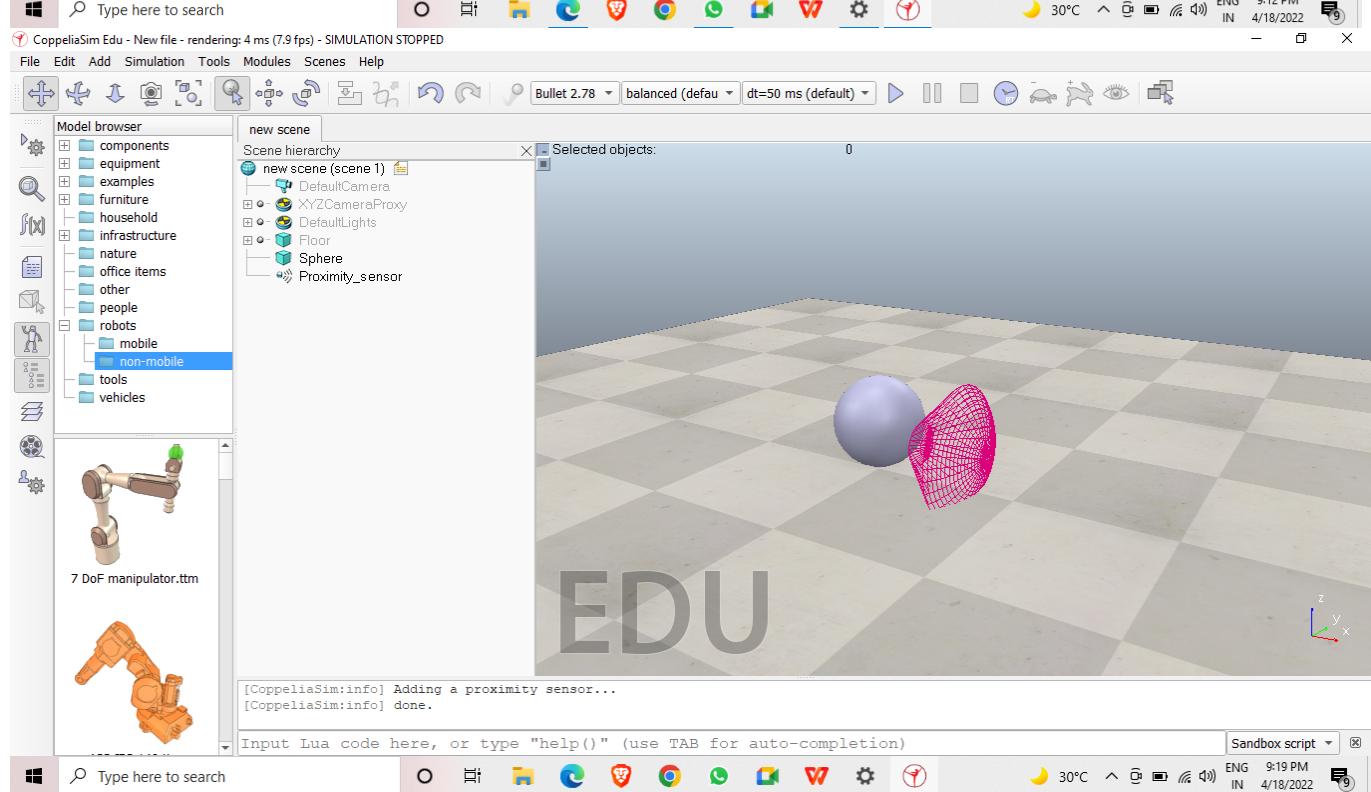
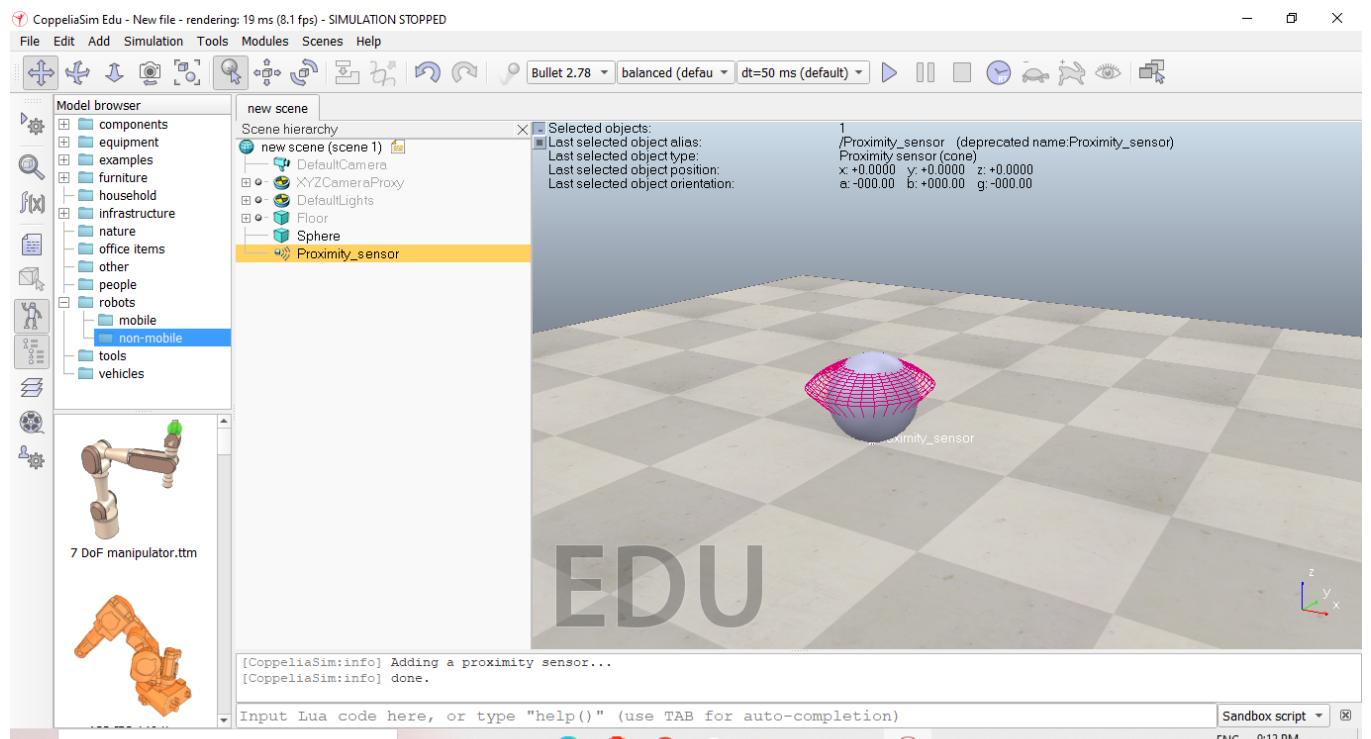
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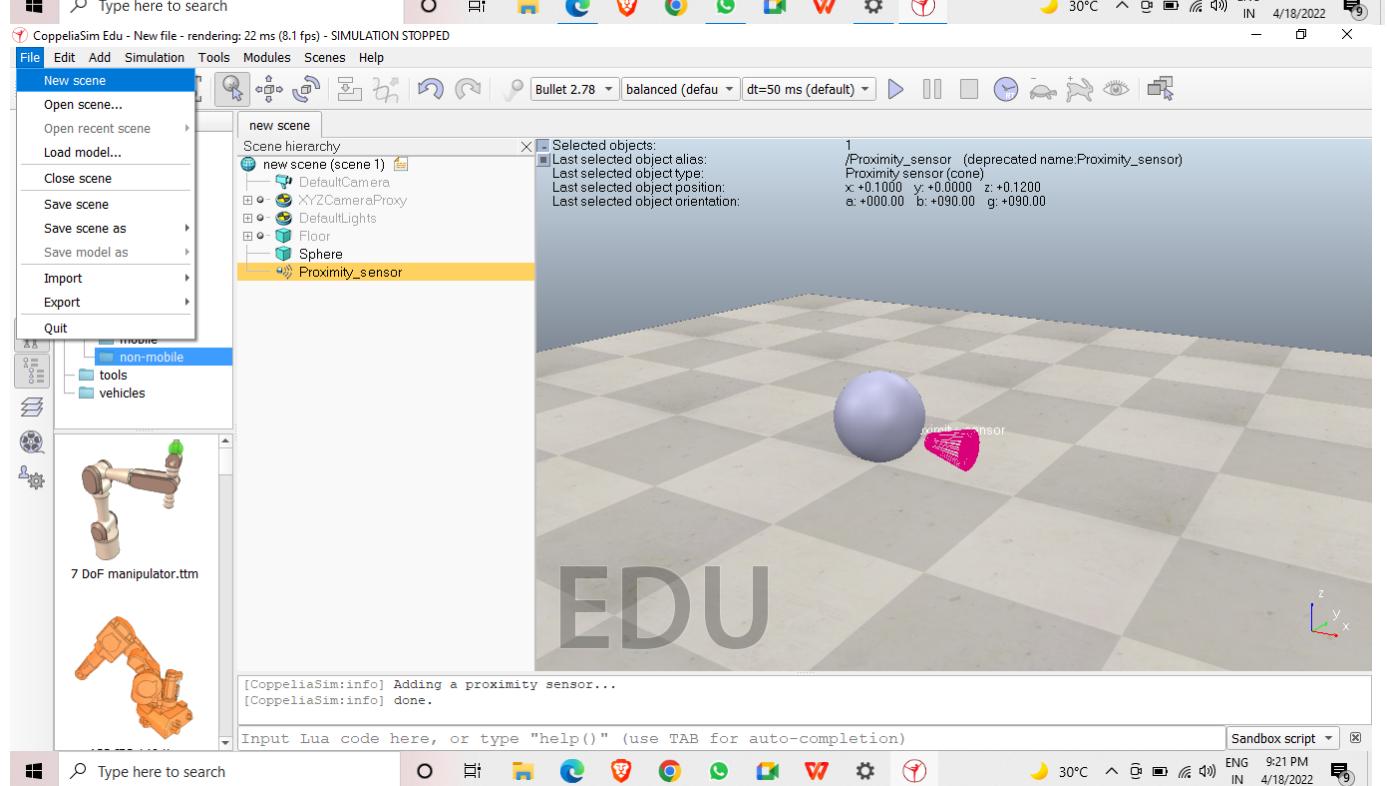
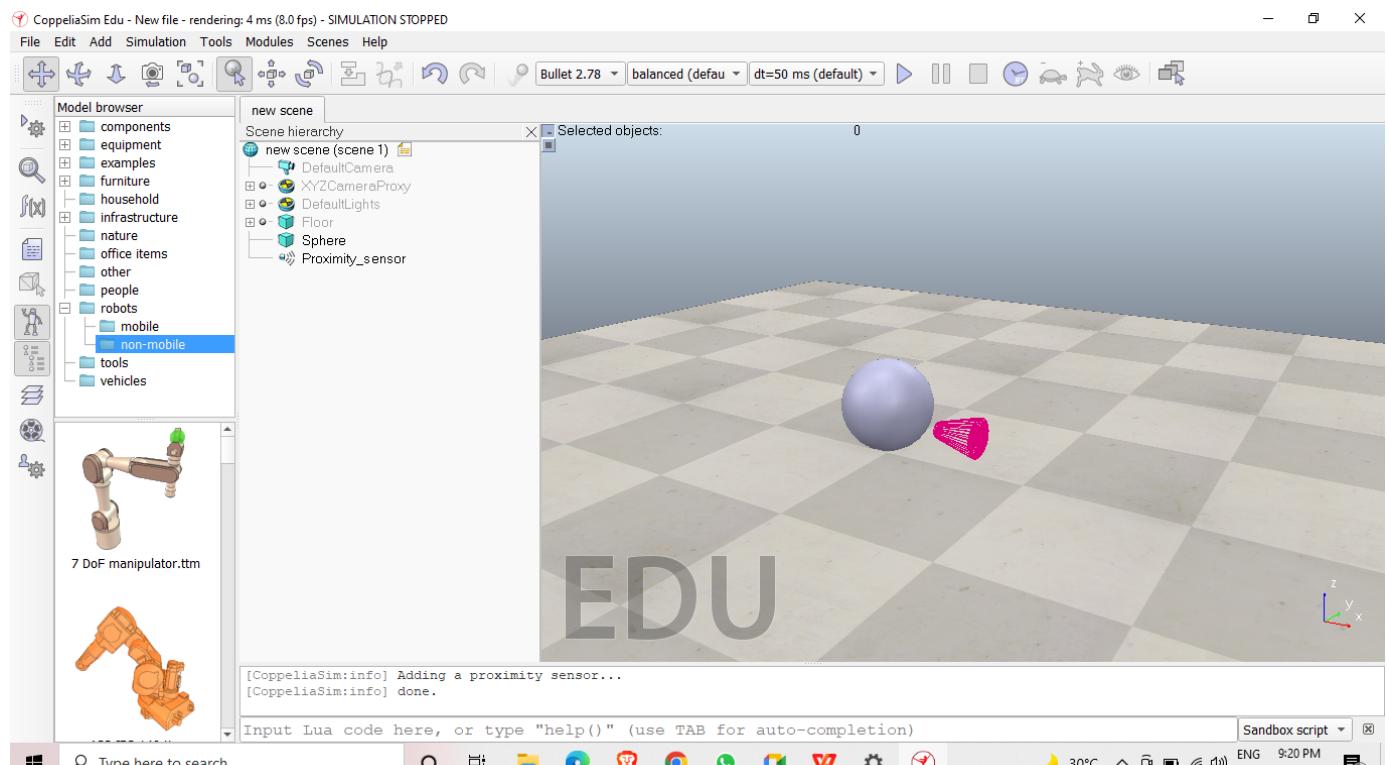
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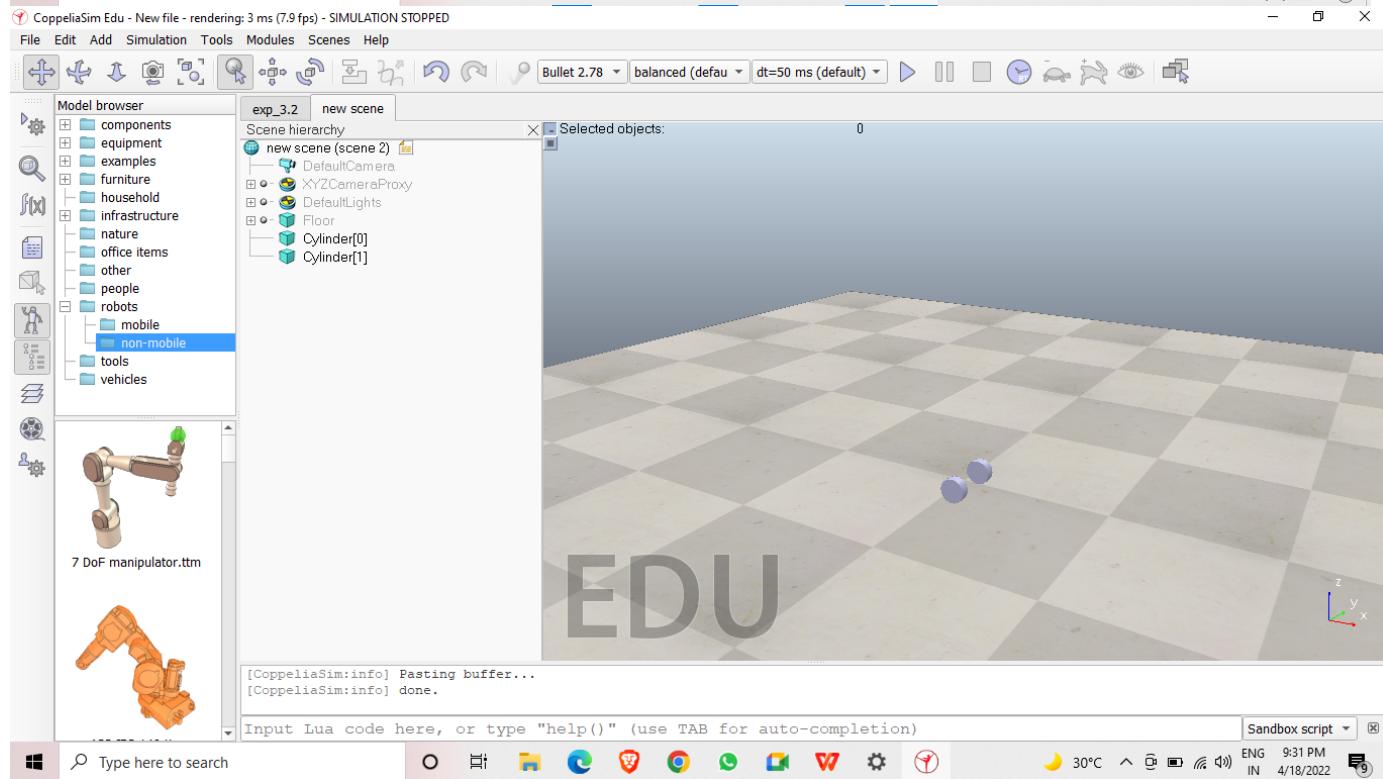
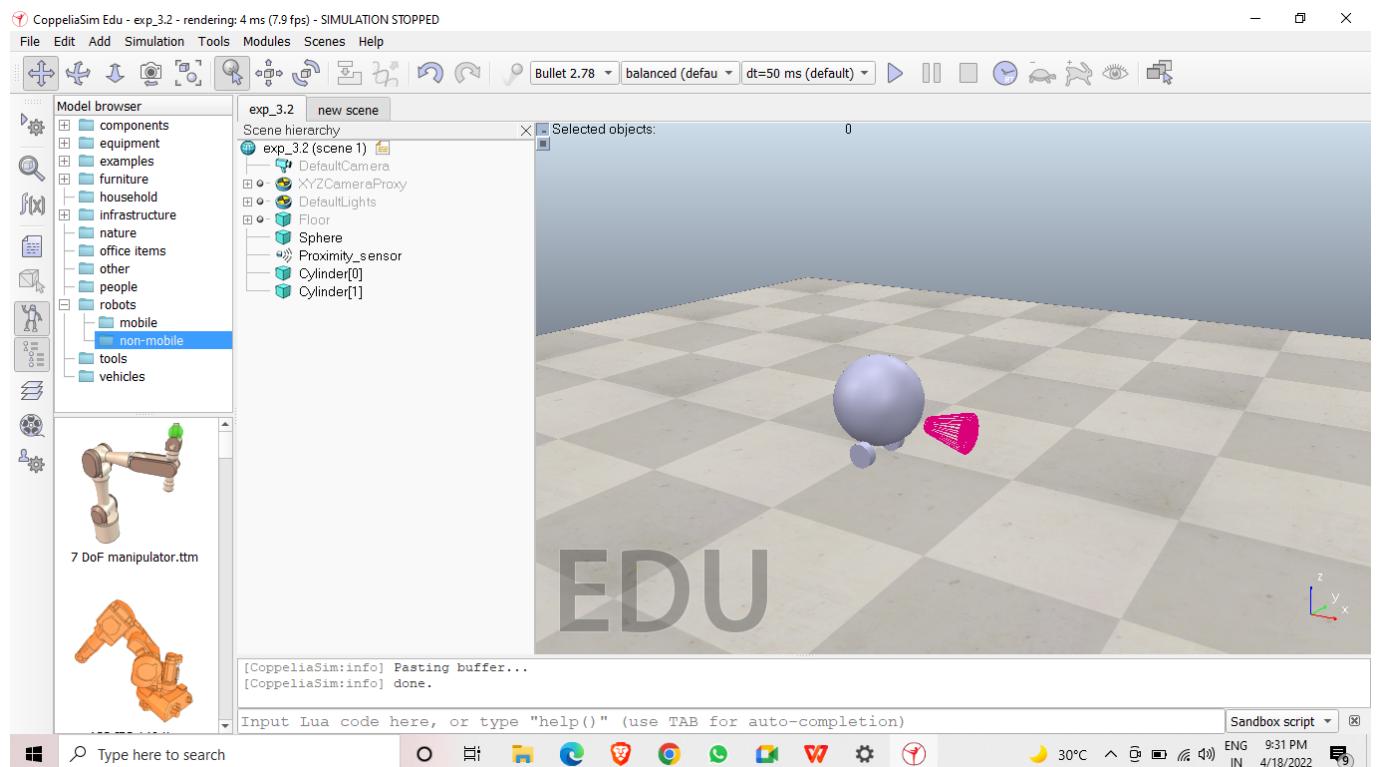
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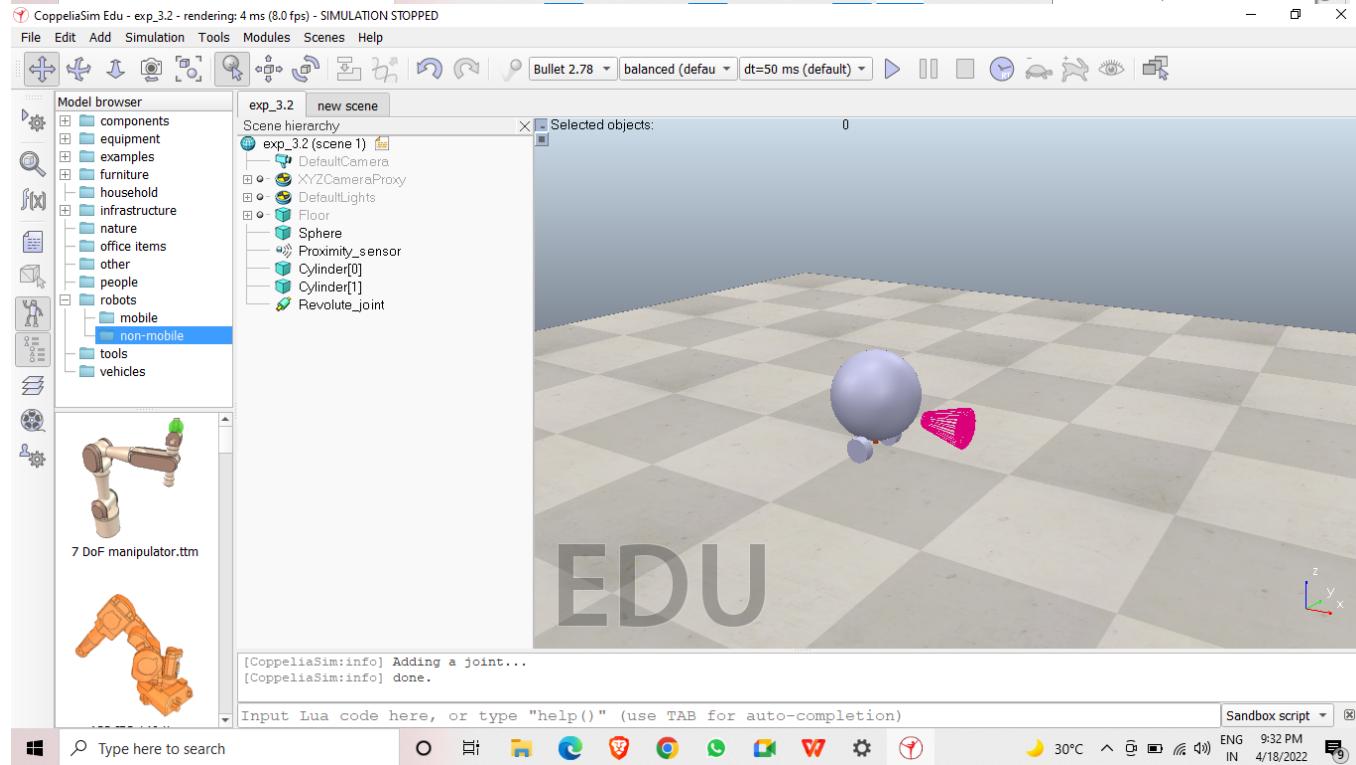
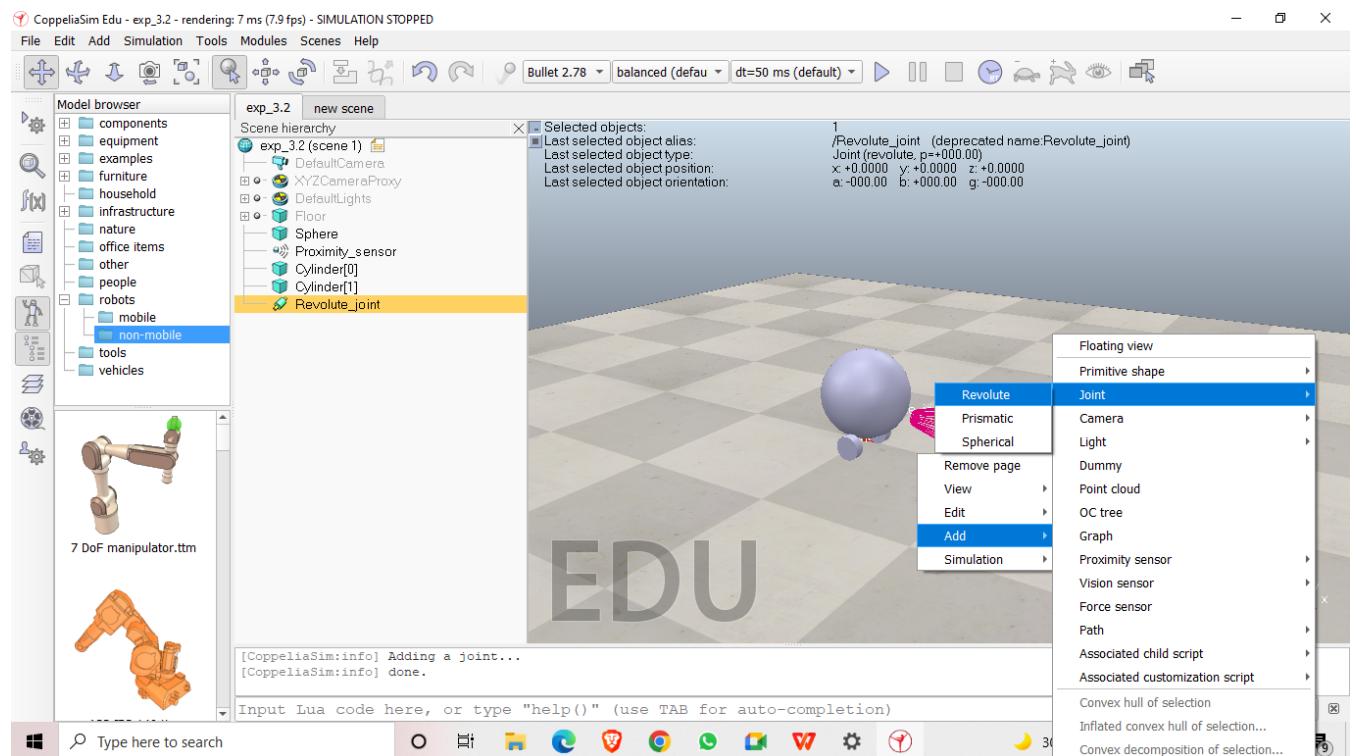
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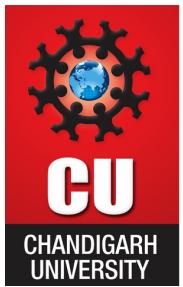




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