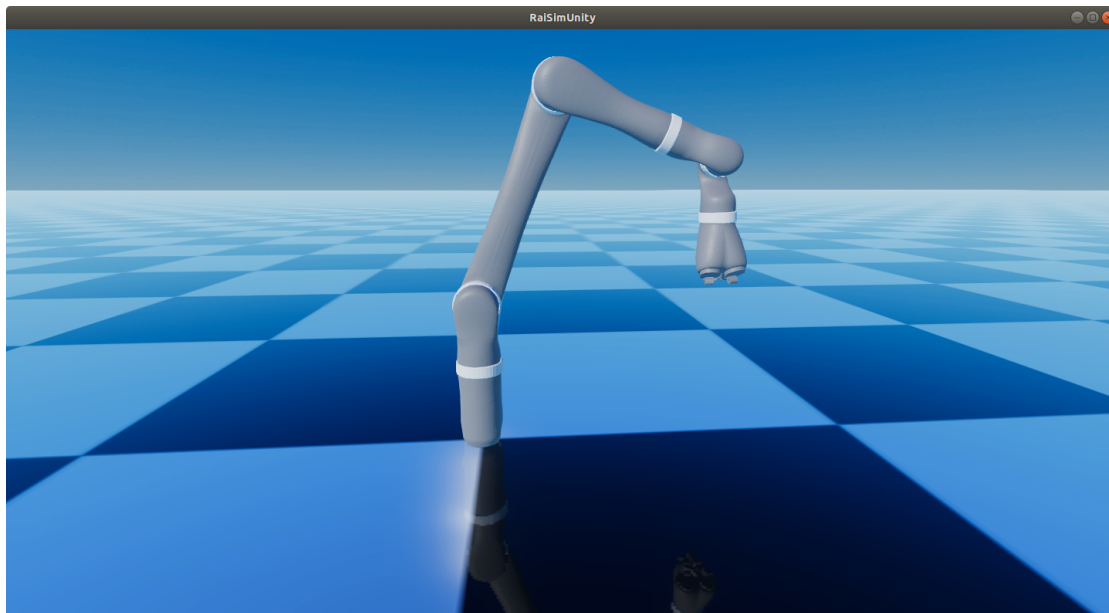


KAIST ME553 Robot Dynamics

Instructor: Jemin Hwangbo, Mechanical Engineering

Exercise 3

You will be using the Kinova model for this exercise. You should download or clone the exercise repo here: https://github.com/HuboLabKaist/KAIST_ME553. If you already have the project, pull (using git) or download it again. When you run RaiSimUnity.exe and exercise_3.exe after compilation, you should see this screen.



Note that we removed fingers for this exercise because they are necessary for this exercise.

The goal of this project is to write a velocity controller to track the end-effector position and orientation (i.e., “kinova_joint_end_effector”). We will assume that the velocity is perfectly tracked. In the code, you will see this line

```
kinova->setGeneralizedVelocity(getVelocityCommand(gc, posDes.e(), quatDes.e()));
```

This sets the generalized velocity of the robot to the output of your controller. So you have to write the function “getVelocityCommand”. Use the template provided

Deliverable: A single header file named “exercise_3_STUDENTID.hpp”. Use the provided template. You should replace “STUDENTID” with your real student id number. Submit it on KLMS.

Deadline: 5pm, 1st of April