Before configurate the IK group and robot arm’s collection, you must make sure you have the following:

1. UR5 robot arm with Robotiq\_85 gripper(This configuration is supported by RLbench, other configurations are not supported)

2. Your coppeliasim version MUST be 4.1, current default is 4.2. You need to retrieve the previous version.

Follow the following step to finish the configuration of the environment:

1. Add target and tip dummy, the target dummy must under Robot's tree and tip must be under gripper's tree. Rename them as “UR5\_tip” and “UR5\_target”

2. Select both dummy just created by “ctrl” and right click > Edit > Link selected dummy > IK, tip-target, then you will see a red line with arrow shown on the screen.

3. Click Tools > Calculation Modules Properties > Kinematics > Add new IK group > rename the added IK group to “UR5\_ik” > modify this page like the following Fig1 > Click “Edit IK elements” > Add new IK element with tip > Click right pull-down menu and select UR5\_tip > modify this page as following Fig2.

A picture containing text, indoor, rack

Description automatically generated

Fig1

A picture containing diagram

Description automatically generated

Fig2

4. Click Tools > Collections > Add new collections > Rename the added new collection to “UR5\_arm” and click it > Select all items under UR5’s tree like the following Fig3 > Click add

A picture containing text, indoor, display

Description automatically generated

Fig3

You can go to PyRep’s example folder to get more information.