1 Attendance list (who attended, and who did not, and for what reason?)

Oluwatimilehin Tijani, Qianyu Hu, Kexin Zhang,

Dongjian Ma, Mengting Wang, Yutong Cui

Weitao Deng (absence), Botong Wen (absence): illness

2 Date, time and place for the meeting

Mon*day 9-11am. 2nd December 2024, QUAD-2.22 (NORTH)*

3 Report on the preparations (what issues, questions and challenges were brought up?)

(1). Poster presentation

(2). The specific progress in each subgroup

Detection: The object is detected and a bounding box with class is generated by the model.

Transformation: Transforms for static and moving frames were done using ROS and TF2; Successfully published and listened to transformations for static and moving frames; Investigated heuristics to identify the frames for each of the five table sections dynamically.

Motion planning: Position based RRT algorithms are designed and tested, which could avoid collision.

Control: Currently, after completing all the environment configurations, MATLAB has been able to successfully communicate with VirtualBox and manipulate the robotic arm and gripper for movement.

4 Advice that you received

Detection: In addition to obtaining the position information of the target object, this subgroup also needs to detect the pose of the target object.

Transformation: The subgroup will now handle the inverse kinematics algorithm, and focus on TF2 and Movelt!

Motion planning: The subgroup needs to more focus on how to get a higher score by grabbing items of a specific color in a shorter period.

Control: The subgroup does not need to pay attention to the gripper's clamping force due to the virtual environment.

5 Decisions that were made

Friday's regular meeting was canceled due to the completion of the week's meeting having been conducted at the Monday poster presentation lecture (2nd December).

6 Actions that were agreed on

The subgroups need to publish and subscribe to data through the ROS topics to enable messages to be delivered and fetched across modules.