## **RandomKitchen Protocol**

**Overall task summary:** The purpose of this task is to take a kitchen scene and stack the cups and bowls.

## **Required props:**

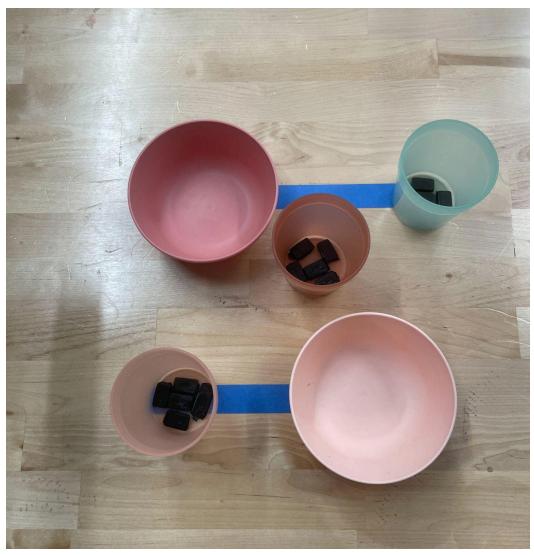
- 2-3 plastic bowls
- 2-3 plastic cups
- 4 utensils (at least 1 of each)
  - N plastic spoons
  - M plastic forks
  - N+M = 4

## Resetting the scene

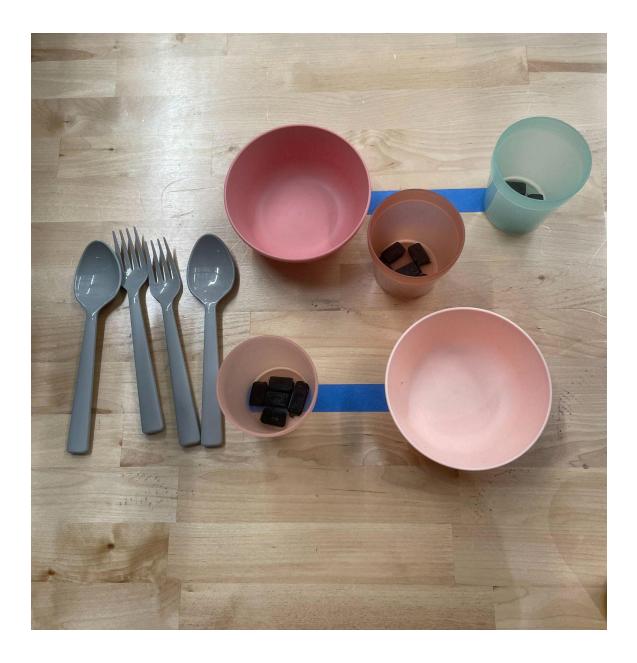
You can first place the bowls around the two pieces of tape.



Next place the cups around the bowls, use an approximately random ordering and placement.



Finally, place the utensils in a pile around the other objects:



Step by Step Instructions

1. Begin the episode by closing the input device grippers



2. First stack the **bowls** on each other.



3. Next stack the **cups** on each other .



4. Stack the **cups** on the **bowls**.



5. Place the **utensils** in the top **cup** (orientation is unimportant. It is probably easier to hand off from one robot to the other but not necessary)



- 6. Push everything with two grippers forward (away from you)
- 7. End the episode by pressing the right footpedal. Arms will reset to their starting positions
- 8. <u>Reset</u> the scene
- 9. Repeat.
- 10. When finished collecting data, shut down the robots with Ctrl+C in the last window.

Failure Modes / FAQ

- How to reset in case of failure?
  - Reset the episode by pressing the left footpedal. Arms will reset to their starting positions at which time you can manually reset the scene with your hands.
- What if an item drops, but stays in the scene?
  - Pick it up and continue the episode if the drop is minor.
  - Unless you continuously fail, in which case reset.
- What if an item drops and rolls/bounces out of reach?
  - Reset the episode
- What if the cup gets knocked over and the utensils scatter to the tabletop?
  - If still in reach, pick up and continue the episode