# AdaptBot: Supplementary Material

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# 1 Question asked during Knowledge Expansion

#### 1.1 Question asked for unknown action

Revising action name.

• **Robot:** I do not know how to execute action 'place', am I mistaking it for another action? Please answer in 'Yes' or 'No'.

• Human: Yes

• **Robot:** Please revise the action name

• Human: put\_down\_obj

pick\_up\_obj ("apple", "initial\_state.ttl")
put\_down\_obj ("apple", "sink")
clean ("apple", "updated\_state.ttl")
pick\_up\_obj ("apple", "updated\_state.ttl")
put\_down\_obj ("apple", "countertop")
pick\_up\_tool ("knife", "updated\_state.ttl")
slice ("apple", "knife", "updated\_state.ttl")
put\_down\_tool ("knife", "countertop")
pick\_up\_rec ("plate", "countertop")
put\_down\_rec ("plate", "countertop")
place ("sliced\_apple", "plate")



pick\_up\_obj ("apple", "initial\_state.ttl")
put\_down\_obj ("apple", "sink")
clean ("apple", "updated\_state.ttl")
pick\_up\_obj ("apple", "updated\_state.ttl")
put\_down\_obj ("apple", "countertop")
pick\_up\_tool ("knife", "updated\_state.ttl")
slice ("apple", "knife", "updated\_state.ttl")
put\_down\_tool ("knife", "countertop")
pick\_up\_rec ("plate", "updated\_state.ttl")
put\_down\_rec ("plate", "countertop")
put\_down\_obj ("sliced\_apple", "plate")

# Removing unexecutable action.

• **Robot:** I do not know how to execute action 'squueze', am I mistaking it for another action? Please answer in 'Yes' or 'No'.

• Human: No

pick\_up\_rec ("glass", "initial\_state.ttl")
put\_down\_rec ("glass", "countertop")
pick\_up\_object ("water", "updated\_state.ttl")
put\_down\_object ("water", "glass")
pick\_up\_object ("lemon", "updated\_state.ttl")
squeeze ("lemon", "glass")



pick\_up\_rec ("glass", "initial\_state.ttl")
put\_down\_rec ("glass", "countertop")
pick\_up\_object ("water", "updated\_state.ttl")
put\_down\_object ("water", "glass")
pick\_up\_object ("lemon", "updated\_state.ttl")

#### 1.2 Question asked for unknown item

Adding an item to  $G_s$  and  $G_k$ .

## Example 1

• **Robot:** Item 'mango' is not present in my knowledge base. Is it present in the environment? Please answer in 'Yes' or 'No'. If I am mistaking it for another item, please enter 'correct\_item'.

• Human: Yes.

• Robot: What kind of item is 'mango'? Choose from: 'edible\_object', 'receptacle', 'tool'.

• Human: edible\_object

• **Robot:** What is the location of the object?

• Human: Fridge

• Robot: Is it sliceable? Please answer in 'True' or 'False.

• Human: True

• Robot: Is it boilable? Please answer in 'True' or 'False'.

• Human: False

• Robot: Is it fryable? Please answer in 'True' or 'False'.

• Human: False

• Robot: Does this object needs cleaning? Please answer in 'True' or 'False'.

• Human: True

#### Example 2

• **Robot:** Item 'bowl' is not present in my knowledge base. Is it present in the environment? Please answer in 'Yes' or 'No'. If I am mistaking it for another item, please enter 'correct\_item'.

• Human: Yes.

• Robot: What kind of item is 'bowl'? Choose from: 'edible\_object', 'receptacle', 'tool'.

• **Human:** receptacle

• **Robot:** What is the location of the object?

• Human: Cabinet

• Robot: Is receptacle sensitive? Please answer in 'True' or 'False.

• Human: True

• Robot: Can this receptacle be used for slicing on? Please answer in 'True' or 'False'.

• Human: False

• Robot: Does this receptacle needs cleaning? Please answer in 'True' or 'False'.

• Human: True

#### Example 3

• **Robot:** Item 'fork' is not present in my knowledge base. Is it present in the environment? Please answer in 'Yes' or 'No'. If I am mistaking it for another item, please enter 'correct\_item'.

• Human: Yes.

• Robot: What kind of item is 'fork'? Choose from: 'edible\_object', 'receptacle', 'tool'.

• Human: tool

• **Robot:** What is the location of the object?

• Human: rack

• Robot: Is it a slicing tool? Please answer in 'True' or 'False.

• Human: False

• Robot: Does this tool needs cleaning? Please answer in 'True' or 'False'.

• Human: True

# Revising the item name.

• **Robot:** Item 'sauce' is not present in my knowledge base. Is it present in the environment? Please answer in 'Yes' or 'No'. If I am mistaking it for another item, please enter 'correct\_item'.

• Human: correct\_item.

• Robot: Please revise the object name.

• Human: ketchup

### Item isn't present in the environment.

• **Robot:** Item 'grapes' is not present in my knowledge base. Is it present in the environment? Please answer in 'Yes' or 'No'. If I am mistaking it for another item, please enter 'correct\_item'.

• Human: No.

pick\_up\_rec ("plate", "initial\_state.ttl")
put\_down\_rec ("plate", "countertop")
pick\_up\_obj ("apple", "updated\_state.ttl")
put\_down\_obj ("apple", "plate")
pick\_up\_obj ("banana", "updated\_state.ttl")
put\_down\_obj ("banana", "plate")
pick\_up\_obj ("grapes", "updated\_state.ttl")
put\_down\_obj ("grapes", "plate")



pick\_up\_rec ("plate", "initial\_state.ttl")
put\_down\_rec ("plate", "countertop")
pick\_up\_obj ("apple", "updated\_state.ttl")
put\_down\_obj ("apple", "plate")
pick\_up\_obj ("banana", "updated\_state.ttl")
put\_down\_obj ("banana", "plate")

#### 2 Results for other LLMs

will update very soon..