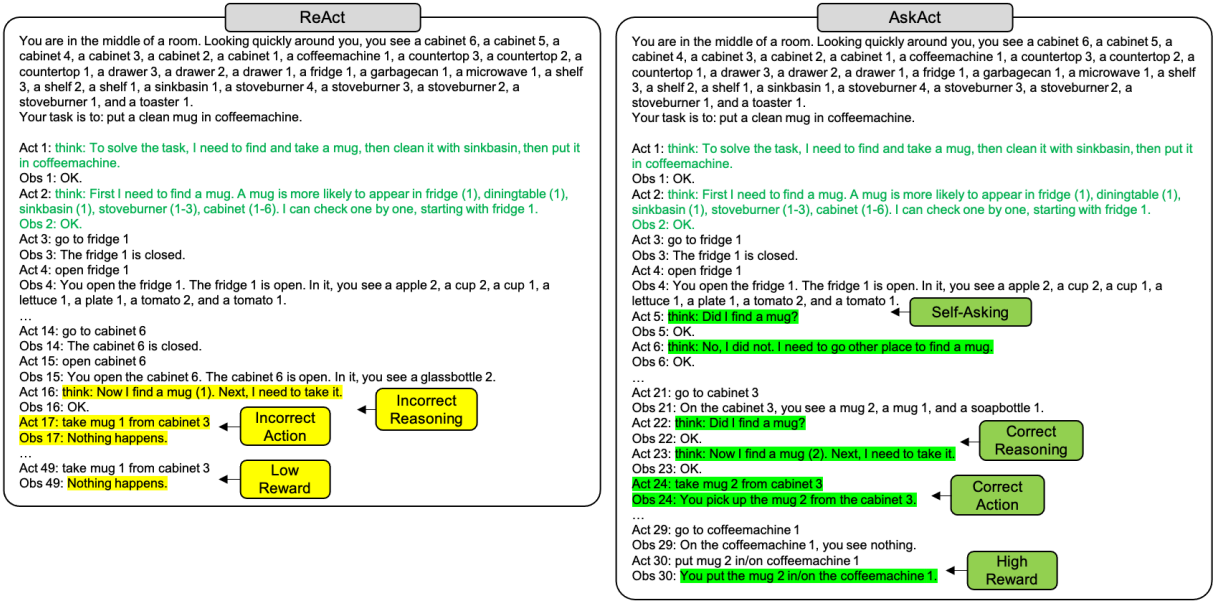

ReAct
You are in the middle of a room. Looking quickly around you, you see a cabinet 6, a cabinet 5, a cabinet 4, a cabinet 3, a cabinet 2, a cabinet 1, a coffeemachine 1, a countertop 3, a countertop 2, a countertop 1, a drawer 3, a drawer 2, a drawer 1, a fridge 1, a garbagecan 1, a microwave 1, a shelf 3, a shelf 2, a shelf 1, a sinkbasin 1, a stoveburner 4, a stoveburner 3, a stoveburner 2, a stoveburner 1, and a toaster 1.
Your task is to: put a clean mug in coffeemachine.
Act 1: think: To solve the task, I need to find and take a mug, then clean it with sinkbasin, then put it in coffeemachine.
Obs 1: OK.
Act 2: think: First I need to find a mug. A mug is more likely to appear in fridge (1), diningtable (1), sinkbasin (1), stoveburner (1-3), cabinet (1-6). I can check one by one, starting with fridge 1.
Obs 2: OK.
Act 3: go to fridge 1
Obs 3: The fridge 1 is closed.
Act 4: open fridge 1
Obs 4: You open the fridge 1. The fridge 1 is open. In it, you see a apple 2, a cup 2, a cup 1, a lettuce 1, a plate 1, a tomato 2, and a tomato 1.
…
Act 14: go to cabinet 6
Obs 14: The cabinet 6 is closed.
Act 15: open cabinet 6
Obs 15: You open the cabinet 6. The cabinet 6 is open. In it, you see a glassbottle 2.
Act 16: think: Now I find a mug (1). Next, I need to take it.
Obs 16: OK.
Act 17: take mug 1 from cabinet 3
Obs 17: Nothing happens.
…
Act 49: take mug 1 from cabinet 3
Obs 49: Nothing happens.
Incorrect Reasoning
Incorrect Action
Low Reward
AskAct
You are in the middle of a room. Looking quickly around you, you see a cabinet 6, a cabinet 5, a cabinet 4, a cabinet 3, a cabinet 2, a cabinet 1, a coffeemachine 1, a countertop 3, a countertop 2, a countertop 1, a drawer 3, a drawer 2, a drawer 1, a fridge 1, a garbagecan 1, a microwave 1, a shelf 3, a shelf 2, a shelf 1, a sinkbasin 1, a stoveburner 4, a stoveburner 3, a stoveburner 2, a stoveburner 1, and a toaster 1.
Your task is to: put a clean mug in coffeemachine.
Act 1: think: To solve the task, I need to find and take a mug, then clean it with sinkbasin, then put it in coffeemachine.
Obs 1: OK.
Act 2: think: First I need to find a mug. A mug is more likely to appear in fridge (1), diningtable (1), sinkbasin (1), stoveburner (1-3), cabinet (1-6). I can check one by one, starting with fridge 1.
Obs 2: OK.
Act 3: go to fridge 1
Obs 3: The fridge 1 is closed.
Act 4: open fridge 1
Obs 4: You open the fridge 1. The fridge 1 is open. In it, you see a apple 2, a cup 2, a cup 1, a lettuce 1, a plate 1, a tomato 2, and a tomato 1.
Act 5: think: Did I find a mug?
Obs 5: OK.
Act 6: think: No, I did not. I need to go other place to find a mug.
Obs 6: OK.
…
Act 21: go to cabinet 3
Obs 21: On the cabinet 3, you see a mug 2, a mug 1, and a soapbottle 1.
Act 22: think: Did I find a mug?
Obs 22: OK.
Act 23: think: Now I find a mug (2). Next, I need to take it.
Obs 23: OK.
Act 24: take mug 2 from cabinet 3
Obs 24: You pick up the mug 2 from the cabinet 3.
…
Act 29: go to coffeemachine 1
Obs 29: On the coffeemachine 1, you see nothing.
Act 30: put mug 2 in/on coffeemachine 1
Obs 30: You put the mug 2 in/on the coffeemachine 1.
Self-Asking
Correct Reasoning
Correct Action
High Reward

(a) ALFWorld