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Assignment 1

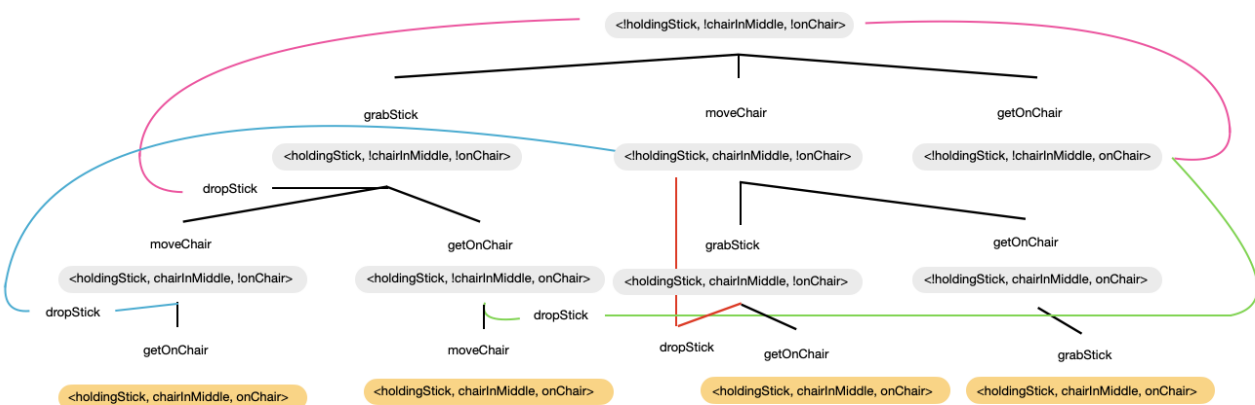
1. Part one - agent environments

- A robotic medical assistant that can assist a doctor or nurse. It communicates with patients, administers bloodwork, and takes vitals.
 - a) Dynamic - the patient may walk in the other room
 - b) Partially observable - the agent has limited perception/mobility
 - c) Sequential - if the vitals are alarming, the agent should act
 - d) Stochastic - bloodwork may not be administered properly
- An agent that plays poker against a human player. Assume that the cards are digital, and that the player interacts with the agent via a touchscreen.
 - a) Static - when it's the agent's turn, no one else will play their cards
 - b) Partially observable - the agent can't see the player's cards
 - c) Sequential - the agent must consider past cards to strategize play
 - d) Stochastic - the player may outplay the agent
- An agent that can select TV shows and movies for a user. It watches the user's choices, asks the user to rate shows, and gives new shows the user is predicted to like.
 - a) Dynamic - the user has a limited attention span
 - b) Fully observable - the agent has access to all of the info it needs
 - c) Sequential - the agent should consider what the user did (not) like
 - d) Stochastic - the agent's suggestions may not appeal to the user
- A digital chatbot for diagnosing mental health issues. It interacts with the user via SMS and makes a prediction about their mental health based on responses.
 - a) Dynamic - the user may double or triple text while agent thinks
 - b) Partially observable - the agent is limited to text
 - c) Sequential - the agent should consider previous messages in text
 - d) Stochastic - the agent's prediction may be wrong
- A robotic submarine for scientific exploration. It's able to autonomously travel to the ocean floor and collect samples.

- a) Dynamic - something may hit the submarine
- b) Partially observable - the submarine can't see under/behind rocks
- c) Sequential - the agent should adjust paths if interrupted
- d) Stochastic - a sample can't be taken or agent gets stuck

2. Part two - monkey and bananas problem

- a) The goal state is <holdingStick, chairInMiddle, onChair>
- b)



3. Part three - Kuki turing test

- Kuki's responses feel artificial when having specific and/or personal conversations. When you ask for her thoughts on a subject you might care about, she outputs objective answers rather than subjective ones. She also has trouble contextualizing conversations over multiple messages. When you continually ask questions based on her answers, the conversation quickly dies. On the other hand, if you allow Kuki to guide the conversation and talk more generally, the discussion feels much more normal.

4. Part four - See <https://github.com/evanmcarlson/CS462Assignment1>

5. Part five - See <https://github.com/evanmcarlson/CS462Assignment1>