Artificial Intelligence Project

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Background

The group decided to work with an agile workflow and to use git for versioning. With this kind of workflow will the work be focused on the take utterance.

As of now the assumptions the group have made about the problems that could occur are only two problems so far. Firstly an utterance asking to pick up the floor would evaluate to an empty list of goals since the floor has a fixed position.

Secondly the utterance requesting to take (pick up) multiple objects without some secondary objective (such as putting them all in boxes) will be impossible since we cannot hold more than a single object at a time.

Parser

The parser is currently unchanged. We intend to extend it with the negation command as mentioned below.

Interpreter

The interpreter will be working with the world to find objects that match the criteria such that the planner only works with the objects id and not the objects description.

Ambiguity resolver

The current ambiguity resolver i very simple. It just checks the number of possible interpretations. If we only have one it passes it through, otherwise it simply rejects the command.

Planner

The planner is basically untouched as of yet. We have been working mostly on the interpreter and ambiguity resolver. It can currently only partially execute the take command. It can find the correct column where the requested object lies but only picks up the top object in that column.

Extensions

- Ambiguity resolution by asking follow-up questions, eg. ' Did you mean the blue or the red ball¿

- A 'switch' utterance, to let the user switch place of two objects while the rest of the world remains the same

- Find the shortest/best solution by some measure

- Implement negation for objects, eg. 'The non-white ball', and for relations, eg. 'A ball which is not on the floor'.

- Support for the different quantifiers, 'a', 'any', 'the', 'all'.