**CSSE 413: Artificial Intelligence**

Dialog NLP Lab Manual

Name: \_\_\_Joseph Peters\_\_\_\_\_\_\_\_\_\_

1. **Parsing**.
   1. [8 pts] The ability to tell the robot to repeat a command, such as: "again," "do that again," "more left," "further left."
   2. [8 pts] The ability to tell the robot to undo the prior move command, such as: "undo," "go back."
   3. [10 pts] The ability to deal with negation. If the user inputs "not left," or "do not go left," etc. the robot should not go left. Explain how you implemented this feature.

It looks for the word not, acknowledges that negation was implied, and does nothing.

* 1. [30 pts] Your software should be able to parse any sentence in which the VB is "clean" or "move", but only those sentences that make sense. Please explain how you implemented this feature.

It looks for either of those words and then checks for any modifiers before deciding on an action.

1. [20 pts] **Keyword Search**. List the *five* variations that your system uses in case of a successful keyword search.

"I think you want me to ",  
"You might want me to ",  
"You're probably telling me to ",  
"That means I should probably ",  
"By that, I think I should "

1. [10 pts] **Random Responses**. List the *ten* phrases that your system uses to request clarification.

"I didn't quite understand that...",  
"Maybe say that a different way...",  
"Either my English is bad your yours is because that made no sense...",  
"Try that again please...",  
"Maybe try simpler words, I'm new to this...",  
"I haven't fully learned English, try different words...",  
"Only you understood that, try again...",  
"What did that even mean? How about a different phrase...",  
"New to English, try that differently...",  
"Can you say that any other way?"

1. [14 pts] **Human-robot Interaction (HRI).** 
   1. Does your robot have a name and can they report it? \_yes\_\_
   2. Can your system name the robot and can the robot remember it? \_yes\_\_
   3. Please list the (at least three) different praise phrases.

good job, nice job, good work

* 1. Please list the (at least five) different acknowledgement phrases:

"Sure thing",  
"I can do that",  
"Understood",  
"Right away",  
"I got it"

1. [10 pts] **Extra credit**: Add a speech-to-text component.

Did you implement this component? \_no\_\_

1. [10 pts] **Extra credit:** Add a text-to-speech component.

Did you implement this component? \_ no\_\_

Paste an annotated sample dialog here. It should demonstrate your systems capabilities as specified above. Ensure that the dialog covers at least one phrase from each of the items (1) – (4). Please use a different font (or bold face or color) to explain which of the features a dialog item demonstrates. Feel free to err on the side of plenty.

> move right

You might want me to move right (2)

Right away (4d)

> again (1a)

I can do that (4d)

> undo (1b)

I got it (4d)

> goodmorning

I haven't fully learned English, try different words... (3)

> What is your name

I don't have one yet. Enter one now to give me a name! (4b)

> Thomas

Alright, my name is now Thomas (4b)

> What is your name

My name is Thomas (4a)

> go right

That means I should probably move right (2)

I got it (4d)

> good job (4c)

Why thank you

> do not go right

By that, I think I should move right (2)

Never mind, I won't do that (1c)