Magpie Chatbot lab

This page will be used to check off programs and submit your answers to questions. It saves us from printing off the entire 13 page packet. You must read the Student Guide to understand the assignment.

**Activity 1: Getting Acquainted with Chatbots**

Work with another group and have two different chatbots converse with each other.

Can you identify keywords to which your chatbot responds?

It responds to family members, pets, and common jobs.

Think of several keywords and the responses they might cause.

Doctor: “How is your doctor?”

Work: “Tell me about your day”

**Activity 2: Introduction to the Magpie Class**

Demonstrate your program(s) to others to get the programming exercises checked off.

* Responds properly to ‘dog’ or ‘cat’
* Responds favorably to the name Bob Bobson
* Responds properly to blank statements
* Adds two more possible non-committal responses
* Adds three more keyword response pairs.
  + Keyword: Alishaan Response: That is a great programmer.
  + Keyword: Java Response: Great programming language.
  + Keyword: Kummer Response: What a guy.

What happens when a keyword is included in another word? Consider statements like “I know all the state capitals” and “I like vegetables smothered in cheese.” Explain the problem with the responses to these statements.

The responses don’t fit these statements as they respond to the keyword that is accidently found within the statement.

**Activity 3: Better Keyword Detection**

Trace the following method calls: (add more rows if needed.)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| findKeyword("She's my sister", "sister", 0);   |  |  |  |  | | --- | --- | --- | --- | | Iteration | psn | before | after | | 1 | 9 | “” | “” | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | | findKeyword("Brother Tom is helpful", "brother", 0);   |  |  |  |  | | --- | --- | --- | --- | | Iteration | psn | before | after | | 1 | 0 | “” | “” | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |

findKeyword("I can't catch wild cats.", "cat", 0);

|  |  |  |  |
| --- | --- | --- | --- |
| Iteration | psn | before | after |
| 1 | 8 | “” | “C” |
| 2 | 19 | “” | “S” |
| 3 | -1 |  |  |
|  |  |  |  |
|  |  |  |  |

findKeyword("I know nothing about snow plows.", "no", 0);

|  |  |  |  |
| --- | --- | --- | --- |
| Iteration | psn | before | after |
| 1 | 3 | “k” | “w” |
| 2 | 7 | “” | “t” |
| 3 | 22 | “s” | “w” |
| 4 | -1 |  |  |
|  |  |  |  |

Repeat the changes you made to the program in Activity 2, using this new method to detect keywords.

**Activity 4: Responses that Transform Statements**

Look at the code. See how it handles “I want to” and you/me statements.

Have it respond to “I want *something*” statements with “Would you really be happy if you had *something*?” In doing this, you need to be careful about where you place the check. Be sure you understand why. For example:

Statement: I want fried chicken.

Response: Would you really be happy if you had fried chicken?

Have it respond to statements of the form “I *something* you” with the restructuring “Why do you *something* me?” For example:

Statement: I like you.

Response: Why do you like me?

Demonstrate your program(s) to others to get these programming exercises checked off.

Find an example of when this structure does not work well. How can you improve it?

This will not work with compound sentences or stuff like “I like to eat chicken, what about you?”. We should try to add detection for commas and other punctuation that may result in issues with detecting the verbs in each sentence.

*Remember that we are not doing Activity 5 at this time (however you are welcome to look at it if you are interested.)*