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Date: 2020-02-26

# Magpie Chatbot Lab

**Directions**: Make note of your responses to the following questions as you work through activities 1, 2, and 3 of the AP Computer Science Lab: Magpie.

# Activity 1

1. Which chatbot did you use?

iEinstein

1. Paste your conversation with the chatbot below.

Me: Hi

Bot: Hello, Whats your name?

Me: Filip  
Bot: It's good to meet you, Filip. What brings you to see me?  
Me: I’m bored

Bot: Maybe you could exercise.  
Me: I’m too lazy to do that

Bot: Have you always been lazy to do that?

Me: No

Bot: Why not?

Me: Because I'm depressed and don't have the motivation to do anything  
Bot: Are you taking any medication?  
Me: No

Bot: Why not?  
Me: Because I don’t want to, I can handle it by myself

Bot: Why is that?

Me: Because I go to therapy

Bot: Do you like therapy?  
Me: Mostly

Bot: I’m sorry I didn’t understand you

Me: I mostly like it  
Bot: Well I’m glad you like it  
Me: Thanks

Bot: You’re very welcome  
Me: Bye  
Bot: Bye bye Filip

1. What was the most interesting or peculiar response? Why?

“Have you always been lazy to do that?”

1. Think about your conversation with a chatbot. Identify key words to which you think the chatbot responds.

This one doesn’t seem to respond to keywords too much but interprets sentences. I’d guess it finds keywords such as “like” or others and finds words around them to add more context.

1. Suggest several key words and the possible corresponding responses.  
   Thanks: You’re very welcome  
   Bye: Bye bye <name>  
   I go to <place>: Do you like <place>?  
   Hi: Hello, what’s your name?

# Activity 2

1. What happens when a key word 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.

It finds the word but it doesn’t realize it’s not actually a word. You’d have to find the index of   
“ no “ a space on each side which would make sure its a single word

1. The lab suggests using the trim method from the String class. How does it work? Show an example of a String value before and after the trim method is invoked.

Trim removes spaces before and after a string  
System.out.println(" why did I put so many spaces ".trim());

Prints  
“why did I put so many spaces”

1. Paste the code below showing the additional two noncommittal responses added to getRandomResponse.

} else if (whichResponse == 4) {

response = "Really?";

} else if (whichResponse == 5) {

response = "No way!";

}

1. Complete the table below. List the additional keywords and responses you added to the getResponse method.

| Keyword | Response |
| --- | --- |
| My computer | What kind of computer do you have? |
| School | Tell me more about school. |
| Football, soccer, tennis, baseball, hockey, basketball | Tell me more about your favorite sports. |

1. What happens when more than one keyword appears in a string? Consider the string "My mother has a dog but no cat." Explain how to prioritize responses in the reply method. Did this impact any changes you made to the getResponse method?

It uses the first one that appears in the if else chain, so I put no at the bottom as lowest priority.

# Activity 3

Trace through the following method calls. Write the value of the variables position, before, and after each time the program control reaches the point in the method indicated by the comment.

1. findKeyword( "She’s my sister", "sister", 0);

| Iteration | position | before | after |
| --- | --- | --- | --- |
| 1 | 9 | ‘ ‘ | ‘’ |

1. findKeyword( "Brother Tom is helpful", "brother", 0);

| Iteration | position | before | after |
| --- | --- | --- | --- |
| 1 | 0 | ‘’ | ‘ ‘ |

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

| Iteration | position | before | after |
| --- | --- | --- | --- |
| 1 | 8 | ‘ ‘ | ‘c’ |
| 2 | 19 | ‘ ‘ | ‘s’ |

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

| Iteration | position | before | after |
| --- | --- | --- | --- |
| 1 | 3 | ‘k’ | ‘w’ |
| 2 | 7 | ‘ ‘ | ‘t’ |
| 3 | 22 | ‘s’ | ‘w’ |

1. Your choice. Fill in the parameters and then trace the method call.  
   findKeyword( "How much wood would a woodchuck chuck if a woodchuck could chuck wood?", "chuck", 0);

| Iteration | position | before | after |
| --- | --- | --- | --- |
| 1 | 26 | ‘d’ | ‘ ‘ |
| 2 | 32 | ‘ ’ | ‘ ‘ |