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**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?

* The Professor

1. Paste your conversation with the chatbot below.

| You: What is your name?  The Professor: I am known as The Professor, but you can call me anything you like.  You: Where do you live?  The Professor: I live in Cambridge in England.  You:asdfghjkl;  The Professor:That doesn't make sense!  You: What do you teach?  The Professor: I teach environmental science and global warming.  You: What's the largest class you've ever had?  The Professor: It is called "The Big One".  You: Tell me about "The Big One"  The Professor: How big? |
| --- |

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

* Probably the last one. It seems like the professor doesn’t have any memory and can’t remember the last thing I asked him.

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

* Name, Where, Live, What, Teach, Largest, Big

1. Suggest several key words and the possible corresponding responses?

* Time, now = tells me current time

# **Activity 2**

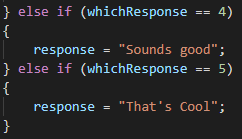
1. What happens when a keyword is included in another word? Consider statements like "I know all the state capitals'' and "I like vegetables smothered in cheese." Explain the problem with the responses.

* For these questions, it looks like the professor is only paying attention to part of the questions/statements.

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.

* It “trims” the whitespace off the beginning and end of a String. Ex. “ Hello “.trim() = “Hello”

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



\*Also changed final int NUMBER\_OF\_RESPONSES to 6. this could be better accomplished with a list of noncommittal responses then looping through said list.

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

| Keyword | Response |
| --- | --- |
| yes | Keep up the positivity! |
| why | Because I said so |
| time | time to get a watch |

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?

* Because it is a chain of “else if”s it will use the response that comes first. So since, “no” comes first on our chain of else if statements, the response would be “Why so negative?”

# **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 | 10 | “ “ | “” |

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 | 9 | “ “ | “c” |
| 2 | 20 | “ “ | “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( "Tomorrow we are to tow Tom’s Toyoda", "to", );

| Iteration | position | before | after |
| --- | --- | --- | --- |
| 1 | 0 | “” | “m” |
| 2 | 17 | “ ” | “ ” |
| 3 | 20 | “ “ | “w” |
| 4 | 24 | “ “ | “m” |
| 5 | 30 | “ “ | “y |