AP® Computer Science A Magpie Chatbot Lab Student Guide

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Activity 2: Introduction to the `Magpie` Class

In this activity, you will work `Magpie,` with a simple implementation of a chatbot. You will see how it works with some keywords and add keywords of your own.

Prepare

Have available:

- the code for the `Magpie`

- the code for the `MagpieRunner`

- a computer with your Java development tools

Start

Get to know the `Magpie` class. Run it, using the instructions provided by your teacher.

How does it respond to:

- My mother and I talked last night.   Tell me more about your fan

- I said no!   Why so negative?

- The weather is nice.

- Do you know my brother?   Tell me more about your fan

Exploration

Look at the code. See how the `if` statement assigns a value to the response and returns that response. The method `getRandomResponse` picks a response from a group of `String` objects.

Exercises

Alter the code:

- Have it respond "Tell me more about your pets" when the statement contains the word "dog" or "cat." For example, a possible statement and response would be:

  Statement: I like my cat Mittens.

Response: Tell me more about your pets.

- Have it respond favorably when it sees the name of your teacher. Be sure to use appropriate pronouns! For example, a possible statement and response would be:

  Statement: Mr. Finkelstein is telling us about robotics.

  Response: He sounds like a good teacher.

- Have the code check that the statement has at least one character. You can do this by using the `trim` method to remove spaces from the beginning and end, and then checking the length of the trimmed string. If there are no characters, the response should tell the user to enter something. For example, a possible statement and response would be:

  Statement:

  Response: Say something, please.

- Add two more noncommittal responses to the possible random responses.

- Pick three more keywords, such as "no" and "brother" and edit the `getResponse` method to respond to each of these. Enter the three keywords and responses below.

Keyword	Response
memes	It's pronounced 'meemays' you uncultured s
gaben; steam	STEAM SALE ONE DAY ONLY 99% OFF E
cod; call of duty	Please go home and destroy your video gar

- 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.

Question   Select the response that lines up with the highest statement.indexOf

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 to these statements.

   It will still run since indexOf doesn't involve the text surrounding what it's looking for. The responses would be 'Why so negative?' and 'Tell me more about your family.', respectively. The problem is that 'no' and 'mother' are in them.