Paradigms Project 1

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Description
This game is called "Animal Master." Think of a type of animal–any animal–and the program will try to guess what it is. If the game guesses the correct answer, it’s game over for you. Otherwise, if the guess is incorrect, YOU WIN! However, watch out: the game learns from your responses, and the more times you play, the harder it gets!

Instructions

• Start by thinking of an breed of animal. Both real animals (dogs, hippos, sharks) and mythical creatures (dragons, unicorns, Tribbles) are allowed.
   As an example, let’s pretend we’re thinking of a rabbit

• When you are ready to play, type ”Y” and hit enter.
   Y

• The game will ask a question about your animal. Type either ”Y” for yes or ”N” for no and hit enter. There are no other choices (”sometimes” is not an acceptable answer).
   Program: Is it a mammal?
   User: Y

• When the game makes a guess at your animal, either answer ”Y” if the guess is correct, or ”N” if the guess is incorrect.
   Program: Is it a cat?
   User: N
• If the guess is incorrect, please enter the name of your animal. Then enter a **yes** or **no** question that can differentiate between the program’s guess and the animal you were picturing. The format will should follow one of the listed guidelines:

  - Does [it/the animal] ... ?
  - Is [it/the animal] ... ?
  - Can [it/the animal] ... ?

**Program:** What animal were you thinking about?
**User:** rabbit
**Program:** Please enter a yes or no question that can differentiate a rabbit from a cat.
**User:** Does it like carrots?

• Once that has been inputted, answer the question correctly with a ”Y” or ”N” as is fitting.

**Program:** The animal you chose is a rabbit. Your question was ”Does it like carrots?” Please enter the correct answer to this question.
**User:** Y

• Now that the game is over and the program has learned from your answer, feel free to play again!

**How It Works**
The interface asks the user a series of **yes** or **no** questions in an attempt to guess the animal the user is picturing in his or her brain (let’s call this animal X). The user, in return, must provide honest answers. After a number of questions, the program will try to guess the animal.

If the guess is correct and the program thinks of animal X, the program wins and the game is over. If the program guesses incorrectly (let’s call this incorrect guess animal Y), it will ask the user what animal he or she was thinking of. The program will then prompt the user to provide a question that can differentiate the new animal (animal X) from the program’s original guess (animal Y), and have the user enter either YES or NO as applicable.

The new animal and the corresponding question & answer will be integrated
into the game. The program will present the question when it narrows down
the possibilities to a choice between animal X and animal Y.

Following the example from the instructions, the next round might look
something like this, if the user were to choose rabbit again:

*Program*: Are you ready to begin?

*User*: Y

*Program*: Please think of an animal and press Y when you are ready to begin.

*User*: Y

*Program*: Is it a mammal?

*User*: Y

*Program*: Does it like carrots?

*User*: Y

*Program*: Is it a rabbit?

*User*: Y

*Program*: I win! **Game over.**

This process allows the program to expand its knowledge base and guess
more accurately in the future.