

# Animal

Unlike other computer games in which the computer picks a number or letter and you must guess what it is, in this game *you* think of an animal and the *computer* asks you questions and tries to guess the name of your animal. If the computer guesses incorrectly, it will ask you for a question that differentiates the animal it guessed from the one you were thinking of. In this way the computer "learns" new animals. Questions to differentiate new animals should be input without a question mark.

This version of the game does not have a SAVE feature. If your system allows, you may modify the program to save array A\$, then reload the array when you want to play the game again. This way you can save what the computer learns over a series of games.

At any time if you reply "LIST" to the question "ARE YOU THINKING OF AN ANIMAL," the computer will tell you all the animals it knows so far.

The program starts originally by knowing only FISH and BIRD. As you build up a file of animals you should use broad, general questions first and then narrow down to more specific ones with later animals. For example, if an elephant was to be your first animal, the computer would ask for a question to distinguish an elephant from a bird. Naturally there are hundreds of possibilities, however, if you plan to build a large file of animals a good question would be "IS IT A MAMMAL."

This program can be easily modified to deal with categories of things other than animals by simply modifying the initial data in Line 530 and the dialogue references to animal in Lines 10, 40, 50, 130, 230, 240, and 600. In an educational environment, this would be a valuable program to teach the distinguishing characteristics of many classes of objects — rock formations, geography, marine life, cell structures, etc.

Originally developed by Arthur Luehrmann at Dartmouth College, Animal was subsequently shortened and modified by Nathan Teichholtz at DEC and Steve North at Creative Computing.

ANIMAL  
CREATIVE COMPUTING MORRISTOWN, NEW JERSEY

PLAY 'GUESS THE ANIMAL'  
THINK OF AN ANIMAL AND THE COMPUTER WILL TRY TO GUESS IT.

ARE YOU THINKING OF AN ANIMAL? Y  
DOES IT SWIM? NO  
IS IT A BIRD? NO  
THE ANIMAL YOU WERE THINKING OF WAS A ? ELEPHANT  
PLEASE TYPE IN A QUESTION THAT WOULD DISTINGUISH A  
ELEPHANT FROM A BIRD  
? DOES IT LIKE PEANUTS  
FOR A ELEPHANT THE ANSWER WOULD BE ? YES  
ARE YOU THINKING OF AN ANIMAL? YES  
DOES IT SWIM? YES  
IS IT A FISH? NO  
THE ANIMAL YOU WERE THINKING OF WAS A ? SEAL  
PLEASE TYPE IN A QUESTION THAT WOULD DISTINGUISH A  
SEAL FROM A FISH  
? DOES IT HAVE SCALES  
FOR A SEAL THE ANSWER WOULD BE ? NO  
ARE YOU THINKING OF AN ANIMAL? YES  
DOES IT SWIM? NO  
DOES IT LIKE PEANUTS? NO  
IS IT A BIRD? NO  
THE ANIMAL YOU WERE THINKING OF WAS A ? LION  
PLEASE TYPE IN A QUESTION THAT WOULD DISTINGUISH A  
LION FROM A BIRD  
? DOES IT ROAR  
FOR A LION THE ANSWER WOULD BE ? YES  
ARE YOU THINKING OF AN ANIMAL? YES  
DOES IT SWIM? YES  
DOES IT HAVE SCALES? NO  
IS IT A SEAL? NO  
THE ANIMAL YOU WERE THINKING OF WAS A ? OCTOPUS  
PLEASE TYPE IN A QUESTION THAT WOULD DISTINGUISH A  
OCTOPUS FROM A SEAL  
? DOES IT HAVE EIGHT TENTACLES  
FOR A OCTOPUS THE ANSWER WOULD BE ? YES  
ARE YOU THINKING OF AN ANIMAL? YES  
DOES IT SWIM? NO  
DOES IT LIKE PEANUTS? YES  
IS IT A ELEPHANT? YES  
WHY NOT TRY ANOTHER ANIMAL?  
ARE YOU THINKING OF AN ANIMAL? YES  
DOES IT SWIM? NO  
DOES IT LIKE PEANUTS? NO  
DOES IT ROAR? NO  
IS IT A BIRD? NO  
THE ANIMAL YOU WERE THINKING OF WAS A ? WUMPUS  
PLEASE TYPE IN A QUESTION THAT WOULD DISTINGUISH A  
WUMPUS FROM A BIRD  
? IS ITS LAST NAME YOB  
FOR A WUMPUS THE ANSWER WOULD BE ? YES  
ARE YOU THINKING OF AN ANIMAL? LIST

ANIMALS I ALREADY KNOW ARE:  
ELEPHANT    FISH    LION    SEAL    OCTOPUS    BIRD  
WUMPUS

ARE YOU THINKING OF AN ANIMAL? NO  
ARE YOU THINKING OF AN ANIMAL?

BREAK IN 130  
OK

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10 PRINT TAB(32);"ANIMAL"
20 PRINT TAB(15);"CREATIVE COMPUTING MORRISTOWN, NEW JERSEY"
30 PRINT: PRINT: PRINT
40 PRINT "PLAY 'GUESS THE ANIMAL'"
50 PRINT "THINK OF AN ANIMAL AND THE COMPUTER WILL TRY TO GUESS IT."
60 PRINT
70 DIM A$(200)
80 FOR I=0 TO 3
90 READ A$(I)
100 NEXT I
110 N=VAL(A$(0))
120 REM MAIN CONTROL SECTION
130 INPUT "ARE YOU THINKING OF AN ANIMAL";A$
140 IF A$="LIST" THEN 600
150 IF LEFT$(A$,1)<>"Y" THEN 120
160 K=1
170 GOSUB 390
180 IF LEN(A$(K))=0 THEN 999
190 IF LEFT$(A$(K),2)="AQ" THEN 170
200 PRINT "IS IT A ";RIGHT$(A$(K),LEN(A$(K))-2);
210 INPUT A$
220 A$=LEFT$(A$,1)
230 IF A$="Y" THEN PRINT "WHY NOT TRY ANOTHER ANIMAL?": GOTO 120
240 INPUT "THE ANIMAL YOU WERE THINKING OF WAS A ";V$
250 PRINT "PLEASE TYPE IN A QUESTION THAT WOULD DISTINGUISH A"
260 PRINT V$;" FROM A ";RIGHT$(A$(K),LEN(A$(K))-2)
270 INPUT X$
280 PRINT "FOR A ";V$;" THE ANSWER WOULD BE ";
290 INPUT A$
300 A$=LEFT$(A$,1): IF A$<>"Y" AND A$<>"N" THEN 280
310 IF A$="Y" THEN B$="N"
320 IF A$="N" THEN B$="Y"
330 Z1=VAL(A$(0))
340 A$(0)=STR$(Z1+2)
350 A$(Z1)=A$(K)

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360 A$(Z1+1)="A"+V$
370 A$(K)="Q"+X$+" "+A$+STR$(Z1+1)+" "+B$+STR$(Z1)+" "
380 GOTO 120
390 REM SUBROUTINE TO PRINT QUESTIONS
400 Q$=A$(K)
410 FOR Z=3 TO LEN(Q$)
415 IF MID$(Q$,Z,1)<>"\ " THEN PRINT MID$(Q$,Z,1);: NEXT Z
420 INPUT C$
430 C$=LEFT$(C$,1)
440 IF C$<>"Y" AND C$<>"N" THEN 410
450 T$=" "+C$
455 FOR X=3 TO LEN(Q$)-1
460 IF MID$(Q$,X,2)=T$ THEN 480
470 NEXT X
475 STOP
480 FOR Y=X+1 TO LEN(Q$)
490 IF MID$(Q$,Y,1)="\" THEN 510
500 NEXT Y
505 STOP
510 K=VAL(MID$(Q$,X+2,Y-X-2))
520 RETURN
530 DATA "4","QDOES IT SWIM\Y2\N3\","AFISH","ABIRD"
600 PRINT: PRINT "ANIMALS I ALREADY KNOW ARE:"
605 X=0
610 FOR I=1 TO 200
620 IF LEFT$(A$(I),2)<>"A" THEN 650
624 PRINT TAB(12*X);
630 FOR Z=3 TO LEN(A$(I))
640 IF MID$(A$(I),Z,1)<>"\ " THEN PRINT MID$(A$(I),Z,1);: NEXT Z
645 X=X+1: IF X>5 THEN X=0: PRINT
650 NEXT I
660 PRINT
670 PRINT
680 GOTO 120
999 END

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