Guess the animal game: solutions

Take a look at the code below. Read it carefully and explain exactly what might happen when this code is executed. Think about the possible inputs that could be entered and what might happen in each scenario. For example, if the user enters a y, what will happen? If the user enters an n, what will happen?

```
1   print("Pick either Ostrich, Lion or Whale")

2   print("I will attempt to guess your choice")

3   print("Does the animal live in the water? Y/N")

4   answer = input().lower()

5

6   if answer == "n":

7       print("Does the animal have wings? Y/N")

8       answer = input().lower()

9       if answer == "y":

10          print("It must be an Ostrich!")

11      else:

12          print("It must be a Lion!")

13  else:
```

```
14      print("It must be a Whale!")
```

Write your prediction in the space provided below:

Run

Open and **run** the file with this code. Here's a copy of the program (https://replit.com/@awade05/animalstart#main.py) if needed.

Was your prediction correct? Did anything unexpected happen? Write down your thoughts below:

Investigate

Questions/activities	Your answers ▽
Enter a y for the first question. • What is the output?	It must be a Whale!
Run the program again. Enter a 2 for the first question. • What is the output?	It must be a Whale!
• What needs to be the input for the output to be "It must be a Whale!"	The input can be anything apart from an n.
Run the program again. Enter an n for the first question. • What is the output?	Does the animal have wings? Y/N
• Which line of code is executed when the condition on line 6 is True?	7
• Which line of code is executed when the condition on line 6 is False?	13/14
Run the program again. Enter an n for the first questions and an n for the second question. • What is the output?	It must be a Lion!
• What needs to be the input for the output to be "It must be a Lion!"	They must enter an n first and then they can enter anything apart from a y second.

Run the program again. Enter an n for the first question and a y for the second question. ● What is the output?	It must be an Ostrich!
● Which line of code is executed when the condition on line 9 is True?	10
● Which line of code is executed when the condition on line 9 is False?	11/12
● Does a user *have* to enter a **lower case** n or y for the code to execute correctly? Explain your answer.	No, they can enter a capital one and it would still work. The code lower() converts the value entered into lower case.

Modify

Modification	Hint

- At line 14 enter a new line of code that outputs "Is the animal a mammal? Y/N"

- At line 15 enter a new line of code that holds the user input in answer.

See line 8 for help with the code.

The final line of code should now be at line 16.

- Test your code. Check the input/output in the hint to see if it is working correctly.

```
Pick either Ostrich, Lion or Whale

I will attempt to guess your
choice

Does the animal live in the water?
Y/N

y

Is the animal a mammal? Y/N

y

It must be a Whale!
```

- At line 16 enter a new line of code that will check if the answer to "Is it a mammal?" is equal to n

See line 6 for help with the code. Remember your indents.

The program should output "It must be a Fish!" if the condition on line 16 is True and "It must be a Whale!" if the condition is False.

- Enter the necessary lines of code to make this happen.

● Test your code. Check the input/output in the hint to see if it is working correctly.

```
Pick either Ostrich, Lion or Whale

I will attempt to guess your
choice

Does the animal live in the water?
Y/N

y

Is the animal a mammal? Y/N

n

It must be a fish!
```

● Test your code again. Check the input/output in the hint to see if it is working correctly.

```
Pick either Ostrich, Lion or Whale

I will attempt to guess your
choice

Does the animal live in the water?
Y/N

y

Is the animal a mammal? Y/N

y

It must be a Whale!
```

● Edit the instructions at the beginning of the code to reflect the addition of a fish to the animal choices.

Make a **'guess the vegetable'** game. Your game will consist of four vegetables:

- Peas

- Broccoli

- Carrot

- Sweetcorn

The vegetables need to be divided into categories. To help you plan your game, a tree diagram has been created for you below.

Here is some input and output to help your test your code:

Example: The user has chosen carrot as their vegetable (✔ if it was successful)

	✔
Note: Use this example to check your program. This is the output your program should produce for the given input.	

| The user is given instructions and a question prompt. | Pick either Carrot, Broccoli, Peas or Sweetcorn

I will attempt to guess your choice |

	Is the vegetable green? Y/N	
The user enters their reply.	n	
The program checks the response against a condition and displays the following prompt.	Is the vegetable orange? Y/N	
The user enters their reply.	y	
The program checks the response against a condition and displays the message.	It must be a Carrot!	

Example: The user has chosen peas as their vegetable (✔ if it was successful)

Note: Use this example to check your program. This is the output your program should produce for the given input.	✔

The user is given instructions and a question prompt.	Pick either Carrot, Broccoli, Peas or Sweetcorn I will attempt to guess your choice Is the vegetable green? Y/N	
The user enters their reply.	y	

The program checks the response against a condition and displays the following prompt.	Does the vegetable look like a tree? Y/N
The user enters their reply.	n
The program checks the response against a condition and displays the message.	It must be a Peas!

- Join the animal and vegetable games together into one program. It should:

    - Give the user a list of animals and vegetables to choose from at the beginning of the game.

    - Then ask, "Is your choice an animal?"

    - Then continue through the game, asking the same questions.