Worksheet Answers by Robert Myers

Worksheet Week 5, 02 - Chatterbox

Predict

Take a look at the code below. Read it carefully and try to make a prediction about what might happen when this code is executed. Think about what might happen based on different user inputs e.g. anakin / bob

```
1    print("What is your name?")

2    name = input().lower()

3    if name == "anakin":

4      print("How do you do Anakin!")

5    else:

6      print(f"Nice name, {name}")

7    print(f"So {name}, is it hot or cold where you are today?")

8    weather = input().upper()

9    if weather == "COLD":

10     print("You must be freezing!")

11   elif weather == "HOT":

12     print("Drink plenty of water")

13   else:

14     print("I can't advise you on that type of weather.")

15   print("Do you like the colour blue?")

16   likes_blue = input()

17   if likes_blue == "Yes":

18     print("I like blue too")

19   print("Have a good day! Bye!")
```

Enter your prediction below:

> If the user inputs Anakin in line 2, line 3 will print how do you do anakin, if the user types Bob, it will print line 6 instead. Line 7 then asks the user what the weather is like, line 8 asks them for their input, and requires upper case, line 9 defines COLD to print the code on line 10, line 11 defines HOT and prints line 12, otherwise the else on line 13 will allow line 14 to print. Line 15 asks the user whether they like the colour blue and line 16 asks to input, line 17 defines the answer as True if the user responds with Yes and will print line 18 followed by line 19. If the user inputs any other response it will skip line 18 and print line 19.

Run

Open and run the file with this code. [Here's a copy of the code](#) if needed.

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

> It was correct

Investigate

Questions/activities	Your answers

Execute the code and type ANAKIN in upper case when asked what is your name.

What text is immediately output on the screen?

> Anakin

Execute the code again and type anakin in lower case when asked what is your name.

What text is immediately output on the screen?

> Anakin

Go to line 2 and delete .lower() from the end of the line of code. Execute the code again and type ANAKIN in upper case.

What text is immediately output on the screen?

> Nice name, ANAKIN - this is because the string is not entered as ANAKIN but anakin in lower case is

Execute the code again and type anakin in lower case when asked what is your name.

What text is immediately output on the screen?

> How do you do Anakin!

Add the .lower() code back to the end of line 2.

What function do you think .lower() performs?
Hint: If you are unsure, enter this code print(name) at line 3 to print what has been held in the variable name. Remember to delete it after testing.

> it registers lower case

Line 8 has .upper() at the end of the input.

What function do you think it performs?
Hint: Use the same investigation techniques as above if you are unsure.

> registers upper case

Why do you think .lower() and .upper() might be important when you are checking if conditions are True or False?

> Because they might give an incorrect result if they are inputted in different cases as the program will not be able to differentiate without the definition.

Line 5 and 6 contain an else: and a print statement.

Does the condition name == "anakin": need to be True or False for these lines of code to execute?

> False

Lines 9 to 12 contain this code:

```
1    if weather == "COLD":

2      print("You must be freezing!")

3    elif weather == "HOT":

4      print("Drink plenty of water")
```

If the user enters cold to the weather question, what will be output on the screen directly after?

> You must be freezing!

If the user enters hot to the weather question, what will be output on the screen directly after?

> Drink plenty of water

Lines 13 to 14 contain this code:

```
1    else:
```

2   print("I can't advise you on that type of weather.")

What does the user need to enter for it to output "I can't advise you on that type of weather"?	any string other than hot or cold

Lines 17 and 18 contain this code:

1   if likes_blue == "Yes":

2   print("I like blue too")

What does the user need to enter for "I like blue too" to be output?	Yes

What is displayed on the screen if the user types yes, YES or anything else?	Have a good day! Bye!

Modify

Modification	Hint
Adapt the code on lines 16 and 17 so that the input is converted to upper case and this is checked in the condition.	Take a look at line 8 and 9 to see how it has been achieved there. Remember to test your code.
At line 7, introduce an elif branch that checks if the name is Leia.	Look at the elif used for when the weather is hot to see how to structure the code.
If the name is Leia, then the message should display "The force is with you".	Remember to test your code.
	Common errors
	• The elif has been indented (make sure that it is in line with the if above)

- leia not written in lowercase inside the condition
- A colon : is missing from the end of the condition.
- The print statement is not indented under the elif

Remember that else: doesn't need a condition.

Remember to test your code.

Common errors

- else has been spelt with a capital E
- The colon : is missing after the else
- The print statement underneath isn't indented

Use an else with the final if statement.

if likes_blue == "YES":

If the user doesn't enter Yes when asked if they like blue, then the program should output "That's a shame because I really like blue".

Copy down the code below!

```
1    print("What is your name?")

2    name = input().lower()

3    if name == "anakin":

4        print("How do you do Anakin!")

5    elif name == "leia":

6        print("The force is with you")

7    else:

8        print(f"Nice name, {name}")

9    print(f"So {name}, is it hot or cold where you are today?")

10   weather = input().upper()

11   if weather == "COLD":

12       print("You must be freezing!")

13   elif weather == "HOT":

14       print("Drink plenty of water")
```

```
15   else:

16       print("I can't advise you on that type of weather.")

17   print("Do you like the colour blue?")

18   likes_blue = input()

19   if likes_blue == "Yes":

20       print("I like blue too")

21   else:

22       print("That's a shame, I really like blue")

23   print("Have a good day! Bye!")
```

Explorer task

- Modify the program further by adding in another question at the end. Use if, elif, else to provide tailored responses.
- Rephrase the questions and responses to the questions to something different. For example, what is your favourite breed of dog?

Copy down the code below!

```
1    print("What is your name?")

2    name = input().lower()

3    if name == "anakin":

4        print("How do you do Anakin!")

5    elif name == "leia":

6        print("The force is with you")

7    else:

8        print(f"Nice name, {name}")

9    print(f"So {name}, is it hot or cold where you are today?")

10   weather = input().upper()

11   if weather == "COLD":
```

```python
12      print("You must be freezing!")
13   elif weather == "HOT":
14      print("Drink plenty of water")
15   else:
16      print("I can't advise you on that type of weather.")
17   print("Do you like the colour blue?")
18   likes_blue = input().strip().lower()
19   if likes_blue == "yes":
20      print("I like blue too")
21   else:
22      print("That's a shame, I really like blue")
23   print("What's your favourite breed of dog?")
24   breed_of_dog=input()
25   if breed_of_dog=="dalmatian":
26      print("That's one spotty dog!")
27   else:
28      print("Wow there really are lots of dog breeds")
29   print(f"Do you have a {breed_of_dog}?")
30   dog_owner=input().strip().lower()
31   if dog_owner=="yes":
32      print("Great, how long have you had them?")
33      years=int(input())
34      print(f"Wow, really? {years} years old??")
35   else:
36      print(f"Maybe one day!")
37   print("Have a good day! Bye")
```