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Exercise 4

Finger Exercises due Aug 5, 2020 20:30 -03 *Completo*

Exercise 4

5/5 points (graded)

ESTIMATED TIME TO COMPLETE: 8 minutes

Below are some short Python programs. For each program, answer the associated question.

Try to answer the questions without running the code. Check your answers, then run the code for the ones you get wrong.

This question is going to ask you what some simple loops print out. If you're asked what code like this prints:

```
num = 5
if num > 2:
    print(num)
    num -= 1
print(num)
```

write what it prints out, separating what appears on a new line by a comma and a space. So the answer for the above code would be:

5, 4

If a given loop will not terminate, write the phrase 'infinite loop' (no quotes) in the box. Recall that you can stop an infinite loop in your program by typing CTRL+c in the console.

Note: What does `+=`, `-=`, `*=`, `/=` stand for?



`a += b` is equivalent to `a = a + b`

`a -= b` is equivalent to `a = a - b`

`a *= b` is equivalent to `a = a * b`

`a /= b` is equivalent to `a = a / b`

1.

```
num = 0
while num <= 5:
    print(num)
    num += 1

print("Outside of loop")
print(num)
```

0, 1, 2, 3, 4, 5, Outside of loop, 6



Answer: 0, 1, 2, 3, 4, 5, 'Outside of loop', 6

2.

```
numberOfLoops = 0
numberOfApples = 2
while numberOfLoops < 10:
    numberOfApples *= 2
    numberOfApples += numberOfLoops
    numberOfLoops -= 1
print("Number of apples: " + str(numberOfApples))
```

infinite loop



Answer: infinite loop

3.

```
num = 10
while num > 3:
    num -= 1
    print(num)
```

9, 8, 7, 6, 5, 4, 3



Answer: 9, 8, 7, 6, 5, 4, 3

4.



```
num = 10
while True:
    if num < 7:
        print('Breaking out of loop')
        break
    print(num)
    num -= 1
print('Outside of loop')
```

Note: If the command `break` is executed within a loop, it halts evaluation of the loop at that point and passes control to the next expression. Test some `break` statements inside different loops if you don't understand this concept!

10, 9, 8, 7, Breaking out of loop, Outside of loop



Answer: 10, 9, 8, 7, 'Breaking out of loop', 'Outside of loop'

5.

```
num = 100
while not False:
    if num < 0:
        break
print('num is: ' + str(num))
```

infinite loop



Answer: infinite loop

Explanation:

For the last exercise, the code never breaks. You enter the loop with `num` value of 100 and since the value of `num` never changes, `num < 0` is never `True` so `break` is never executed. Therefore you are stuck in an infinite loop.

Enviar

i Answers are displayed within the problem

Exercise 4

Ocultar discussão

Topic: Lecture 2 / Exercise 4

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| | |
|---|----|
| 💬 Question 3 and 4 | 1 |
| Why does the row of integers starts with "10" in the answer to task #4, but not to task #3? | |
| 💬 [Tutorial] 'Break' Statement: Behind the Scenes | 21 |
| 👤 Community TA | |
| ? Spoiler: Question 4: Regarding the answer | 2 |
| num = 10 while True: if num < 7: print('Breaking out of loop') break print(num) num -= 1 print('Out... | |
| 💬 This course needs to do a better job of introducing the material to students within the lectures, themselves. | 12 |
| Am I wrong? | |
| ? num = 5 if num > 2: print(num) num -= 1 print(num) | 2 |
| num = 5 if num > 2: print(num) num -= 1 print(num) num initially =5 which is >2 then 5 would be p... | |
| 💬 Can anyone explain q4 to me , I don't know | 4 |
| Please explain Question 4 | |
| ✓ Can someone please explain question 4 | 6 |
| why it will be this 10, 9, 8, 7, Breaking out of loop, Outside of loop and not 10, outside of loop | |
| ? Q4 "Breaking out of loop" | 2 |
| I understand every part of this question except "Breaking out of loop" part. Wouldn't this code pri... | |
| ? Question 5 | 8 |
| How is question 5 an infinite loop? Shouldn't num = 100 doesn't meet the criteria (num < 0), then ... | |
| 💬 Exceeded time frame | 5 |
| I took longer than 8 minutes to complete this task after my initial answers were incorrect. How co... | |
| 💬 question 1 | 4 |
| I thought I had it right and then checked it in my program and it appears right... what is wrong wit... | |
| ? The printout of question 1 and 4, included the ' | 2 |
| Hi Lecturers/ Tutors, Why are there " ' " in the answer when the printout should not have the '. Qu... | |
| ? Why is Number 2 an Infinite Loop? | 3 |

