

In-Class Question 11

Question)

You know when you use `list.index(item)` on a list, it can only return the index of the first occurrence of *item*.

Here is a program demonstrating how to improve `list.index(item)`. It works by looking for all occurrences of a number from a list of numbers.

```
numbers = [ \
    28, 32, 30, 12, 6, \
    6, 7, 9, 10, 17, \
    37, 12, 41, 21, 37, \
    28, 25, 7, 30, 45 \
]

print("The list is:")
print(numbers)

number = int(input("Give me the number: "))

size = len(numbers)
while len(numbers) > 0:
    if numbers[0] == number:
        print(size - len(numbers), end=" ")

    numbers = numbers[ SEE_QUESTION ]
```

As you can see, the content of **SEE_QUESTION** is not shown in the above code.

Here are some examples of using the program. The text in bold and italics (e.g. ***hello***) is the text entered by the user.

Example 1

The list is:

[28, 32, 30, 12, 6, 6, 7, 9, 10, 17, 37, 12, 41, 21, 37, 28,
25, 7, 30, 45]

Give me the number: **6**

4 5

Example 2

The list is:

[28, 32, 30, 12, 6, 6, 7, 9, 10, 17, 37, 12, 41, 21, 37, 28, 25, 7, 30, 45]

Give me the number: **30**

2 18

Example 3

The list is:

[28, 32, 30, 12, 6, 6, 7, 9, 10, 17, 37, 12, 41, 21, 37, 28, 25, 7, 30, 45]

Give me the number: **28**

0 15

What is the missing code that needs to replace **SEE_QUESTION**? You need to enter the missing code.