Instructions: The following questions focus on material from Chapter 8 of the textbook, as well as the accompanying lecture on strings as sequences (Week 5).

1   Definitions

Question 1. (5 points) In a few sentences, describe one important difference between functions and methods. Be as specific as possible.

2   Indexing and Slicing

Question 2. (10 points) The second line of Python code below isolates the second half of the string in the variable 'cheers'. In the space below, list **at least 5** different lines of code that would do the same thing. (2 pts each)

```
>>> cheer = "GO BEARS"
>>> cheer[4:8]
'EARS'
```

3   Understanding String Indexing, Slicing, and Methods

Questions 3-6 refer to the following code:

```
1 def yell(sentence):
2   if sentence.find(' ') == -1:
3       print(sentence + "!")
4   else:
5       next_space = sentence.find(' ')
6       my_slice = sentence[:next_space]
7       print(my_slice + "!")
8       yell(sentence[next_space:].strip())
9
10 user_sentence = input("Enter a sentence: ")
11 yell(user_sentence)
```

Question 3. (15 points) Draw a memory diagram for the program above if the user inputs the sentence "How are you?" as input.

Question 4. (10 points) What would be a more descriptive variable name for the variable my_slice defined in line 6?

Question 5. (10 points) Explain in plain English: What condition is the Boolean expression in the if statement in line 2 checking for?

Question 6. (10 points) Why do we need to use the strip() built-in method in line 8? What would happen if we didn't use it, and just passed sentence[next_space:] as the argument?