

CSC241-401: Assignment 2

Reading

Read Chapter 3 in **Introduction to Computing using Python: An Application Development Focus** by Ljubomir Perković.

Logistics

Please read the Academic Integrity pledge prior to beginning this assignment. It is crucial that you understand what kind of collaboration is allowed and what kind is disallowed on assignments. The Academic Integrity pledge can be found on [the D2L site](#).

In this class programming assignments may be completed in consultation with up to two other classmates. You must identify the classmates with whom you collaborate in a comment at the top of the assignment, and the number of collaborators on any assignment may not exceed two other people. You must also include a comment in your submission for each assignment that describes in detail how each collaborator contributed to the assignment. If you did not collaborate with anyone on the assignment, you must include a comment that says that. You may not under any circumstances discuss the assignments with classmates other than your identified collaborators. Working so closely with anyone other than your identified collaborators, Dr. Settle, or Ms. Troost, so as to produce identical or near identical code is a violation of the Academic Integrity policy. This policy will be strictly enforced.

Please include the following with your assignment submission:

1. A comment at the top of your file identifying any classmates with whom you discussed or in any other way collaborated on the assignment. You may work (directly or indirectly) with no more than two other people.
2. Add a comment at the top of your file describing for each person what they contributed to the assignment. This must be at least 2-3 sentences and be very specific and detailed.

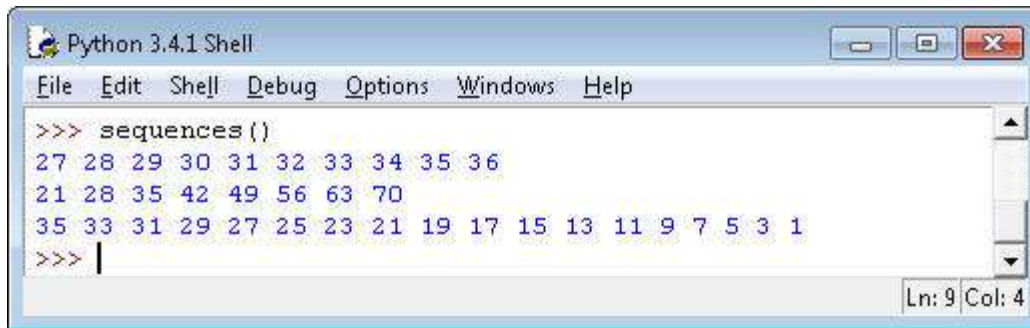
A submission that does not include a list of collaborators and comments indicating how you collaborated with classmates will earn a 0. If you worked alone you must put a comment at the top of your file that indicates that or you will also receive a 0.

Again, you are subject to all the rules specified in the Academic Integrity pledge. Please read it carefully before beginning this assignment.

Assignment

Implement the functions below in the file `csc241hw2.py` which can be found on [the D2L site](#) in the second assignment section. You should save the template file I provided and then modify that file by adding the bodies for the functions. When you do, make sure to remove the placeholder pass statements that are currently there.

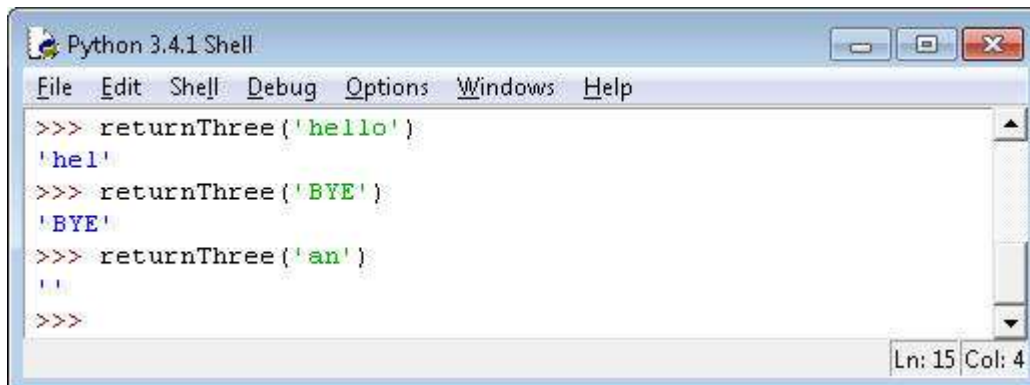
1. Change the implementation of the function **sequences()** found in the `hw2.py` file so that the following three sequences are **printed** by the for loops found in **sequences()**. The information below shows how you would call the function **sequences()** and what it would display as a result:



```
Python 3.4.1 Shell
File Edit Shell Debug Options Windows Help
>>> sequences()
27 28 29 30 31 32 33 34 35 36
21 28 35 42 49 56 63 70
35 33 31 29 27 25 23 21 19 17 15 13 11 9 7 5 3 1
>>> |
```

Ln: 9 Col: 4

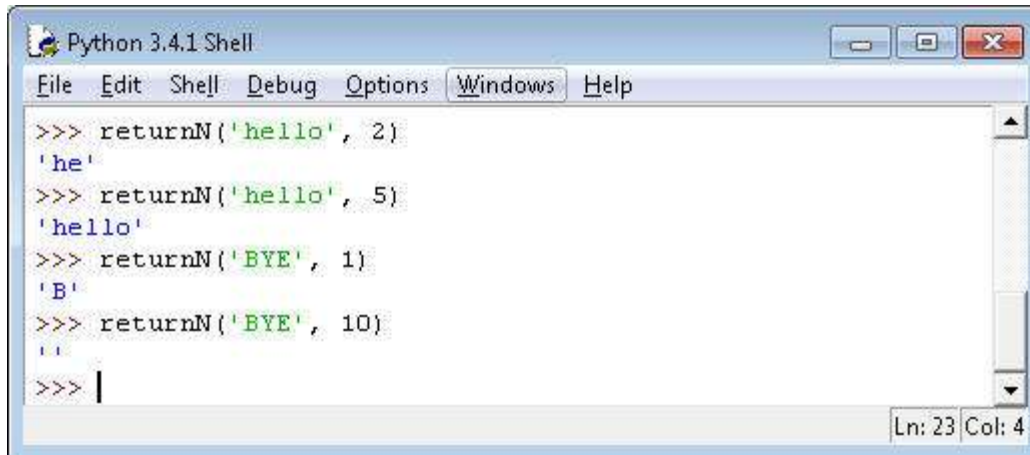
2. Implement the function **returnThree()** that takes a string as a parameter and **returns** the first three characters of the string. If the string has length less than 3, then an empty string should be returned. The information below shows how you would call the function **returnThree()** and what it would display for several sample parameters:



```
Python 3.4.1 Shell
File Edit Shell Debug Options Windows Help
>>> returnThree('hello')
'hel'
>>> returnThree('BYE')
'BYE'
>>> returnThree('an')
''
>>>
```

Ln: 15 Col: 4

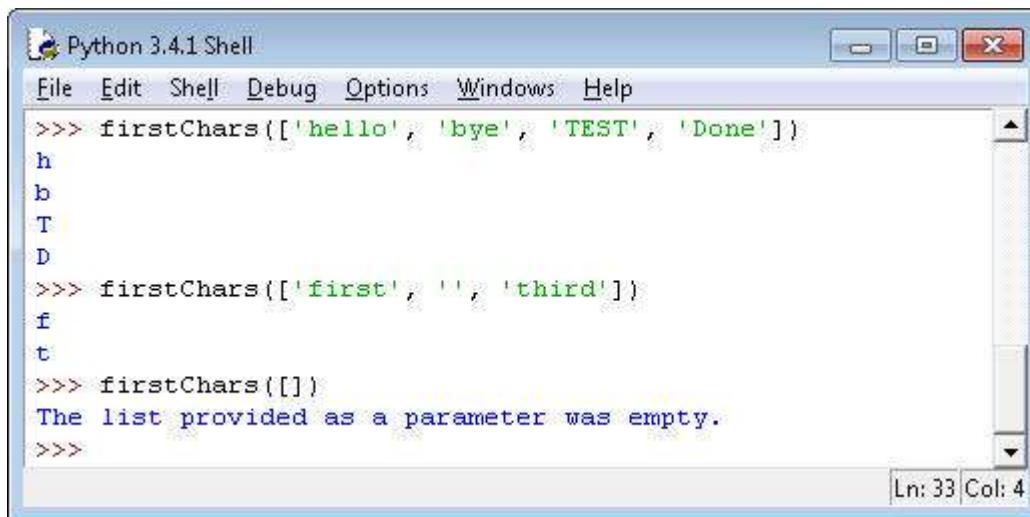
3. Implement the function **returnN()** that takes a string `s` and an integer `n` as parameters and **returns** the first `n` characters of the string `s`. If the string has length less than `n`, then an empty string should be returned. The information below shows how you would call the function **returnN()** and what it would display for a few different parameters:



```
Python 3.4.1 Shell
File Edit Shell Debug Options Windows Help
>>> returnN('hello', 2)
'he'
>>> returnN('hello', 5)
'hello'
>>> returnN('BYE', 1)
'B'
>>> returnN('BYE', 10)
''
>>> |
```

Ln: 23 Col: 4

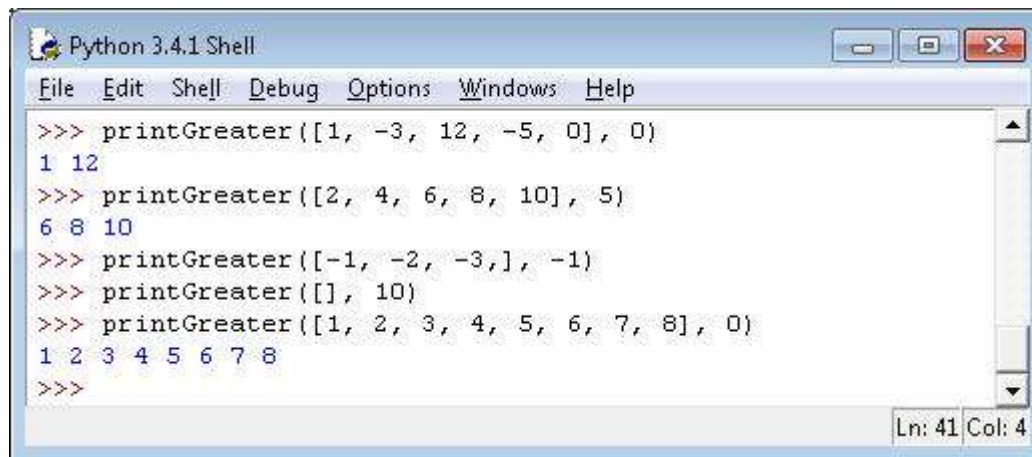
4. Implement the function **firstChars()** that takes a list of strings as a parameter and **prints** to the screen the first character of each string, one per line. If the list provided as a parameter is empty, the function prints a message to that effect. If any of the strings are empty, they are skipped in the display. The information below shows how you would call the function **firstChars()** and what it would display for a couple of parameters:



```
Python 3.4.1 Shell
File Edit Shell Debug Options Windows Help
>>> firstChars(['hello', 'bye', 'TEST', 'Done'])
h
b
T
D
>>> firstChars(['first', '', 'third'])
f
t
>>> firstChars([])
The list provided as a parameter was empty.
>>>
```

Ln: 33 Col: 4

5. Implement a function **printGreater()** that takes as parameters a list of numbers and a numeric value. It **prints** the numbers in the list that are greater than the value, all on one line with a space between them. If an empty list is provided as the first parameter, the function doesn't print anything. The information below shows how you would call the function **printGreater()** and what it would display for some example parameters:



```
Python 3.4.1 Shell
File Edit Shell Debug Options Windows Help
>>> printGreater([1, -3, 12, -5, 0], 0)
1 12
>>> printGreater([2, 4, 6, 8, 10], 5)
6 8 10
>>> printGreater([-1, -2, -3, ], -1)
>>> printGreater([], 10)
>>> printGreater([1, 2, 3, 4, 5, 6, 7, 8], 0)
1 2 3 4 5 6 7 8
>>>
```

Ln: 41 Col: 4

Submitting the assignment

You must submit the file holding all of the function definitions using the assignment 2 dropbox on [the D2L site](#). Submit only a single Python file (csc241hw2.py) with all of your function definitions inside of it. Submissions after the deadline listed above will be automatically rejected by the system. See the syllabus for the grading policy.

Grading

The assignment is worth 100 points. Each problem is worth 20 points.