

Grading Assignment: Assignment 2

No changes have been made

Save All Changes

Marking Status: Complete

encryption.py

File Body File Comments

```

1 def shift_message(s, shift):
2     '''s is a string and shift is an integer between -25 and 25 inclusive
3     Return a new string which contains all the characters in s, but with
4     each alphabetic character shifted "shift" letters in the alphabet.
5     If "shift" is positive, move each letter forwards through the alphabe
6     if it is negative, move each letter backwards. In either case, wrap
7     around if needed. Case is preserved. I.e., lowercase letters remain
8     lowercase, and uppercase letters remain uppercase. Non-alphabetic
9     characters appear in the result string unchanged.'''
10
11     lower_alphabet = 'abcdefghijklmnopqrstuvwxyz'
12     upper_alphabet = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ'
13     new_letter = ''
14     new_string = ''
15
16     k = 0
17     while k < len(s):
18         letter = s[k]
19         #this is the case if the letter in lowercase
20         if letter in lower_alphabet:
21             shifted_index = lower_alphabet.index(letter) + shift
22             #we next decide if wrap around is needed
23             #1st case: if index after shifting is between 0 and 2
24             #inclusive
25             if (shifted_index < 26) and (shifted_index >= 0):
26                 new_letter = lower_alphabet[shifted_index]
27             #2nd case: if index after shifting is negative
28             elif shifted_index < 0:
29                 new_letter = lower_alphabet[ \
30                     shifted_index + 26]
31             #last case: if index after shifting is positive
32             else:
33                 new_letter = lower_alphabet[ \
34                     shifted_index - 26]
35         #this is the case if the letter in uppercase
36         elif letter in upper_alphabet:
37             shifted_index = upper_alphabet.index(letter) + shift
38             #The 3 cases are as in lowercase
39             if (shifted_index < 26) and (shifted_index >= 0):
40                 new_letter = upper_alphabet[shifted_index]
41             elif shifted_index < 0:
42                 new_letter = upper_alphabet[ \
43                     shifted_index + 26]
44             else:
45                 new_letter = upper_alphabet[ \
46                     shifted_index - 26]
47         else:
48             new_letter = letter
49         new_string += new_letter

```

Rubric Marks

Expand all

Collapse all

Expand Unmarked

Part 1: shift_message

8 Excellent Function passes all tests, fully meets specification.

Part 1: flip

8 Excellent Function passes all tests, fully meets specification.

Part 1: keyphrase_encrypt

8 Excellent Function passes all tests, fully meets specification.

Part 1: keyphrase_decrypt

8 Excellent Function passes all tests, fully meets specification.

8 Excellent Function passes all tests, fully meets specification.

6 Good Function passes nearly all tests but does not fully meet specification.

4 Adequate Function passes most tests but does not fully meet specification.

2 Marginal Function passes only the easiest test cases.

0 Inadequate function can't be called OR fails most tests.

Part 1: programming style

2 Adequate Code is reasonable, but could have been simpler. Variable names are sometimes unclear.

Part 1: reuse

4 Excellent Helper functions used well to avoid repetition and/or break code into meaningful pieces

Part 1: comments

4 Excellent Clear and helpful docstrings exist for all functions. Complicate sections of code are always clearly explained. Excellent grammar and spelling

Part 1: formatting style

2 Adequate Code is readable, but has several formatting issues.

Part 2: vocabulary

4 Adequate Function passes most tests but does not fully meet specification.

Part 2: print-stats

6 Good Function passes nearly all tests but does not fully meet specification.