

Week 5: Object Oriented[Course](#) > [Programming](#)> [Problem Set 5](#) >

Problem 3 - CiphertextMessage

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0.0/15.0 points (graded)

For this problem, the graders will use our implementation of the `Message` and `PlaintextMessage` classes, so don't worry if you did not get the previous parts correct.

Given an encrypted message, if you know the shift used to encode the message, decoding it is trivial. If `message` is the encrypted message, and `s` is the shift used to encrypt the message, then `apply_shift(message, 26-s)` gives you the original plaintext message. Do you see why?

The problem, of course, is that you don't know the shift. But our encryption method only has 26 distinct possible values for the shift! We know English is the main language of these emails, so if we can write a program that tries each shift and maximizes the number of English words in the decoded message, we can decrypt their cipher! A simple indication of whether or not the correct shift has been found is if most of the words obtained after a shift are valid words. Note that this only means that most of the words obtained are actual words. It is possible to have a message that can be decoded by two separate shifts into different sets of words. While there are various strategies for deciding between ambiguous decryptions, for this problem we are only looking for a simple solution.

Fill in the methods in the class `CiphertextMessage` according to the specifications in `ps6.py`. The methods you should fill in are:

- `__init__(self, text)`: Use the parent class constructor to make your code more concise.
- `decrypt_message(self)`: You may find the helper function



`is_word(wordlist, word)` and the string method `split()` useful. Note that `is_word` will ignore punctuation and other special characters when considering whether a word is valid.

Hints

Using `string.split`

You may find the function `string.split` useful for dividing the text up into words.

```
>>> 'Hello world!'.split('o')
['Hell', ' w', 'rld!']
>>> '6.00.1x is pretty fun'.split(' ')
['6.00.1x', 'is', 'pretty', 'fun']
```

Paste your implementation of the entire `CiphertextMessage` class in the box below.

1

Press ESC then TAB or click outside of the code editor to exit

Unanswered

Submit

You have used 0 of 30 attempts



Problem 3 - CiphertextMessage


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[Some work, some not.](#)

3

My code works for some grader as follows. Message is Nonsense words: soup limb even rob ...
- 


[What is the expected return of decrypt_message\(\)](#)

3

I have tried on my Python and successfully decrypt an encrypted message, but when I was try...
- 


[output error](#)

4

The grader showed that my output lost 'Nonsense word:', but I cannot figure out what's goin...
- 


[Problem with best shift](#)

9

I am having trouble getting the correct shift. Even though I am passing all other tests and gett...
- 


[great exercise](#)

1

I did something like this before and I really enjoyed doing this kind of exercise. thanks best
- 


[Confusion regarding shift](#)

2

I managed to craft a convoluted code that provides correct results apart from the shift. Base...
- 


[Loading word list from file...](#)

1

When I execute this on from my code it prints that statement out twice. It's because of the w...
- 


[Program working, grader returns error, Please help!](#)

3

Hi, I have written a couple of codes now, that work perfect in Spyder but fail in the grader. I f...
- 


[This problem is way harder than expected](#)

2

The test in the file asks you to translate back 'jgnnq' into 'hello'. Than can be done with a few...
- 


[How did you decrypt the message?](#)

1

Hi, this is the way I did it. Did anyone achieve it in a more efficient manner, or perhaps using f...
- 

[I need some guidance on what is causing this.](#)

9









Test: 12 decrypt message Testing decrypt_message for message Your output: Message is Klk...
- 

[apply function changed!?](#)

1

In my IDE my code worked perfectly, but not in the edX IDE.In my apply_shift function, self.m...



- | | |
|--|---|
|  <u>usage of dict</u> | 1 |
| <u>Adding a dictionary with a list of its values would be super helpful (value[0] = nums valid wor...</u> | |
|  <u>Error in initialization</u> | 1 |
| <u>Hi, I am getting the following error: Message. init (self,shift) NameError: name 'shift' is not ...</u> | |
|  <u>Different Scores Every Time</u> | 7 |
| <u>The idea of my code is just to create variables to keep tracking of the best number of words a...</u> | |
|  <u>Some of the tests fail</u> | 1 |
| <u>I've noticed that the test cases test the same message twice, for some reason some of my ou...</u> | |
|  <u>Getting "IndexError: tuple index out of range"</u> | 3 |
| <u>Hi , My code works in spyder. Below is what I run in Spyder. Encrypted message cmsg=Ciphe...</u> | |
|  <u>Output in spyder is "Message is "</u> | 3 |
| <u>Hi, When I test my code in spyder, below is the output I get. Based on the output I am not abl...</u> | |
|  <u>There was a problem running your solution (Staff debug: L379)??</u> | 4 |
| <u>We couldn't run your solution (Staff debug: L397). Runs on my ide, but hits me with this error...</u> | |
|  <u>Message is nonsense words</u> | 2 |
| <u>I don't think I'm the only the one having problem with this. I'm not sure what this error mess...</u> | |

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