Object Oriented Caesar Cipher

Practice Quiz, 4 questions

✔ Congratulations! You passed!

Next Item

✔ 1 / 1 point

1.
Which of the following options is the best choice for adding an additional private field to the **CaesarCipher** class to make it easier to call the **decrypt** method on a string that was encrypted using an object of this class?

- The String **input** which is a parameter to the **encrypt** method.
- The character variable that reads one character at a time from the input String parameter in the **encrypt** method.
- The integer **key** which is a parameter to the constructor.

Correct

- The for loop variable in the for loop in the **encrypt** method.

✔ 1 / 1 point

2.
Which one of the following best describes the approach for the **decrypt** method that has one String parameter **encrypted**?

Assume **decrypt** can also access the **key** parameter that was used in the constructor, and that value is stored in an instance variable named **mainKey** in the constructor.

- Two lines are needed:

```
1  CaesarCipher cc = new CaesarCipher(mainKey);
2  return cc.encrypt(encrypted);
```

Two lines are needed:

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```
1  CaesarCipher cc = new CaesarCipher(26);
2  return encrypt(cc.encrypted);
```

Two lines are needed:

```
1  CaesarCipher cc = new CaesarCipher(26-mainKey);
2  return encrypt(cc.encrypted);
```

Two lines are needed:

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1  CaesarCipher cc = new CaesarCipher(mainKey);
2  return encrypt(cc.encrypted);
```

Two lines are needed:

```
1  CaesarCipher cc = new CaesarCipher(26-mainKey);
2  return cc.encrypt(encrypted);
```

Correct

Two lines are needed:

```
1  CaesarCipher cc = new CaesarCipher(26);
2  return cc.encrypt(encrypted);
```

0 / 1 point

3.

Which one of the following is the best idea for the method **breakCaesarCipher**?

Compute a **CaesarCipher** object for every possible key. Then for each one, decrypt and then calculate the frequency of all the letters using **countLetters**. Compute the index of the largest frequency over all of them. Return the decrypted string that goes with **maxIndex**.

Compute a **CaesarCipher** object, and then call **encrypt**.

This should not be selected

You don't know which key to use to create the **CaesarCipher**.

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- Create a **CaesarCipher**. Then calculate the frequency of all the letters in the encrypted string, using **countLetters** and compute the index of the largest frequency using **maxIndex**. Then call **decrypt** on the encrypted string.
- Calculate the frequency of all the letters using **countLetters** and compute the index of the largest frequency using **maxIndex**. Use those values to determine the key, then create a **CaesarCipher** with that key and call **decrypt** on the encrypted string.

✔ 1 / 1 point

4.

In the class **TestCaesarCipher**, should the method **countLetters** be public or private?

- public
- private

Correct
