

Breaking the Vigenère Cipher

Quiz, 7 questions

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point

1.

What is the language of **secretmessage3.txt**?

- ☐ Danish
 - ☐ Dutch
 - ☐ English
 - ☐ French
 - ☐ German
 - ☐ Italian
 - ☐ Portuguese
 - ☐ Spanish
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2.

What is the first line of the message you decrypted from **secretmessage3.txt**?

La chambre à coucher de Juliette.

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3.

What is the language of **secretmessage4.txt**?

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- ☐ Dutch
- ☐ English
- ☐ French
- ☐ German
- ☐ Italian
- ☐ Portuguese
- ☐ Spanish

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4.

What is the first line of the message you decrypted from **secretmessage4.txt**?

Drei Hexen treten auf.

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5.

Recall that the choice to test key lengths 1–100 was arbitrary, and that the longer a key is with respect to an encrypted message, the less likely this Vigenère decryption algorithm is to work.

How long would a key have to be, so that you could gain no information about an original message by analyzing the encrypted message?

- ☐ 1/26 the message length
- ☐ Half the message length
- ☐ Exactly the message length

- ☐ There is no key length that ensures an unbreakable Vigenère implementation.

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6.

The Vigenère decryption algorithm used in this lesson has limitations.

In which of the following scenarios could the program return incorrect results? (Select all that are correct.)

- ☐ The language of the original message has multiple letters of comparable high frequency.
 - ☐ The language of the original message has an unusual letter that is highest in frequency (not 'e' or 'a').
 - ☐ The language of the original message is not included in the dictionaries.
 - ☐ The language of the original message has many characters not in the English alphabet.
 - ☐ The language of the original message when written in sentences has different letter frequencies than the sum of individual words in the dictionary.
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7.

Consider the Vigenère decryption algorithm described in this lesson.

Which one of the following could be a problem?

- ☐ The key length is long compared with the message.
 - ☐ The message is long compared with the key length.
 - ☐ Neither—the key length compared with the message is unimportant.
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