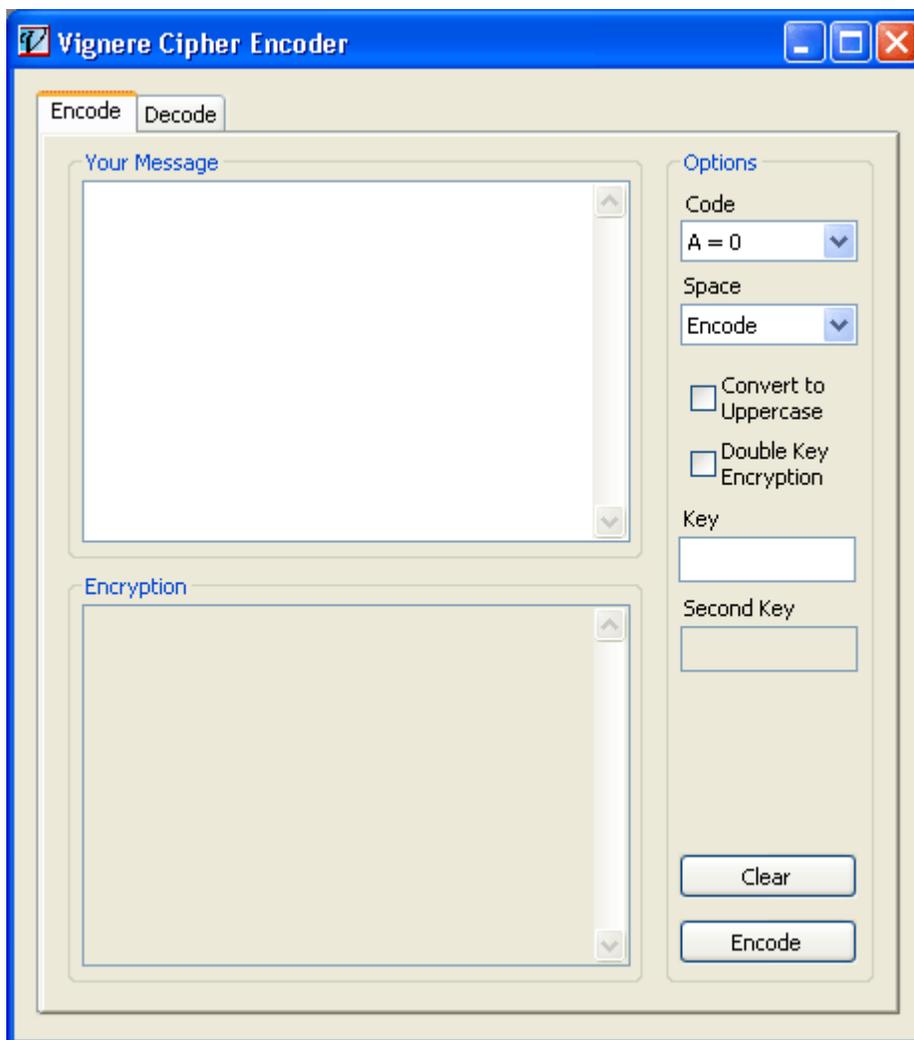


# The Vignere Cipher Encoder & Decoder

## VCE v1.0 User's Guide

by Jason M. Chu, MS

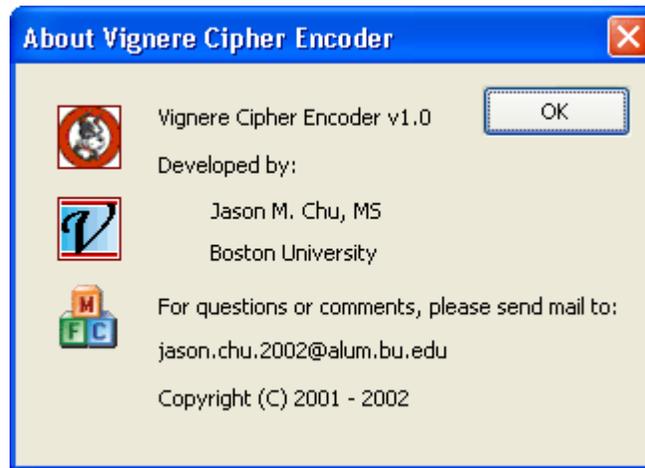
[jason.chu.2002@alum.bu.edu](mailto:jason.chu.2002@alum.bu.edu)



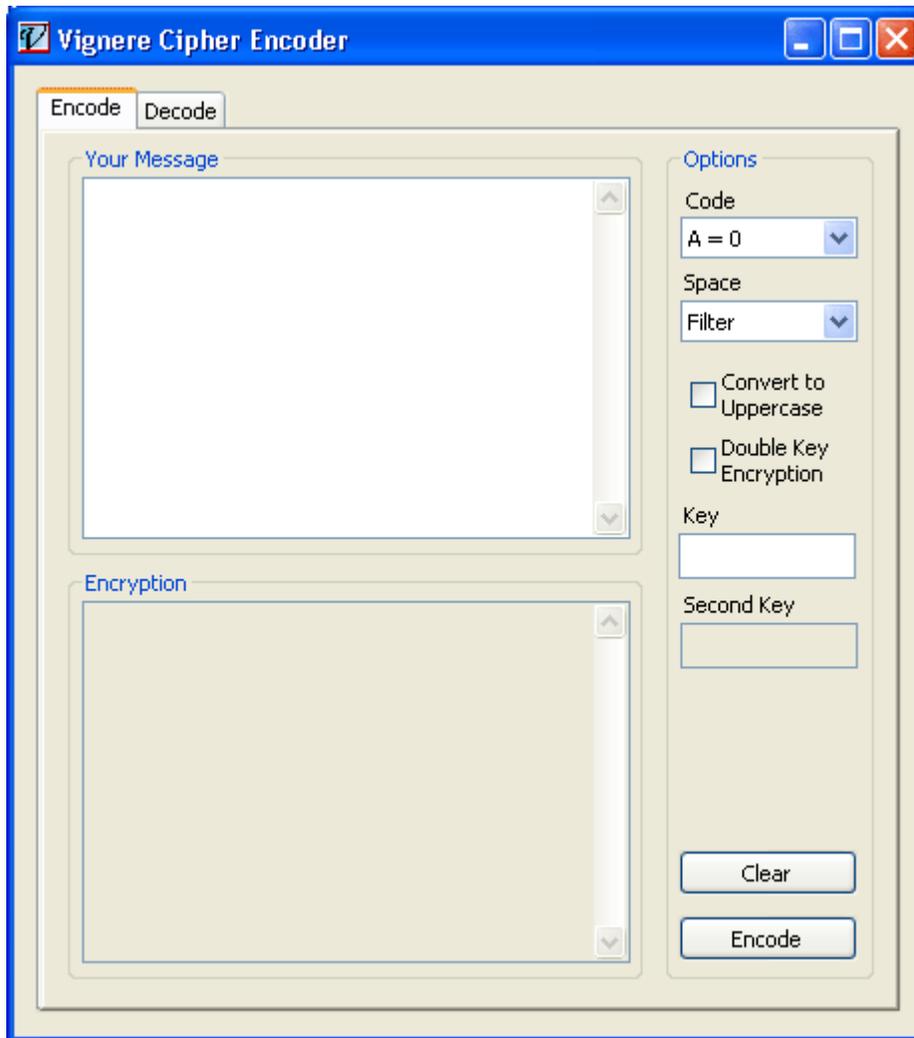
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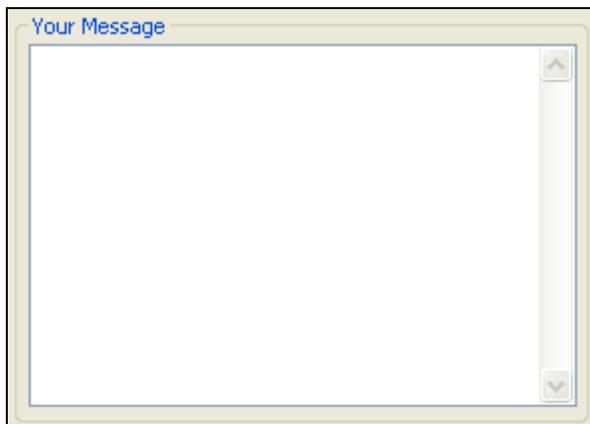
## About VCE:



## User Interface (Encoding):



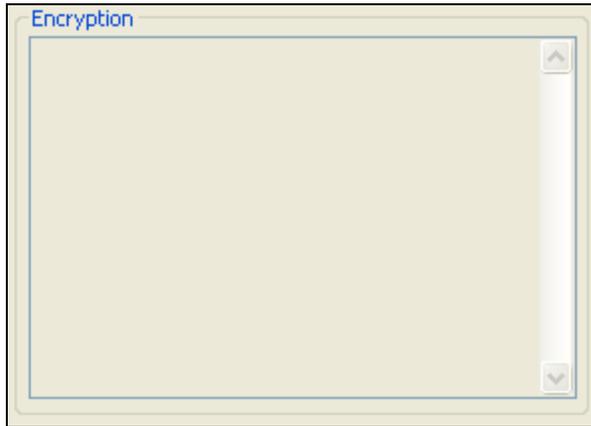
Message Box:



Input for the message for encoding.

## User Interface (Encoding continues):

Encryption Box:



Output for the resulting encryption.

Option Box:

A screenshot of an "Options" dialog box. It features several controls: a "Code" dropdown menu set to "A = 0", a "Space" dropdown menu set to "Filter", two unchecked checkboxes for "Convert to Uppercase" and "Double Key Encryption", a "Key" text input field, a "Second Key" text input field, and two buttons at the bottom labeled "Clear" and "Encode".

Coding key option

-- choose from using "A = 0" or "A = 1" code

Space option

-- choose from filtering, encoding, including, or skipping space

Uppercase output conversion

-- convert the output to all uppercases

Double key encryption

-- enable double key encryption

First key box

-- enter encryption key

Second key box

-- use only for double key encryption

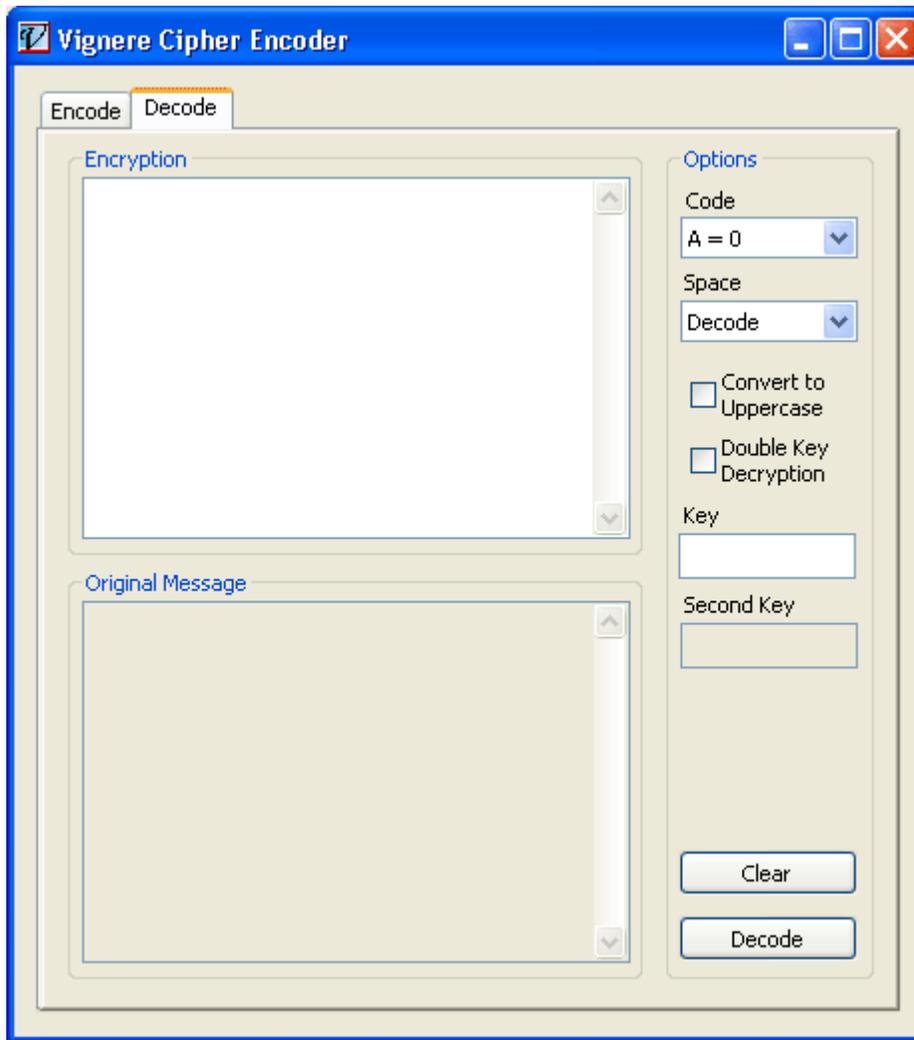
Clear

-- clear all input and output

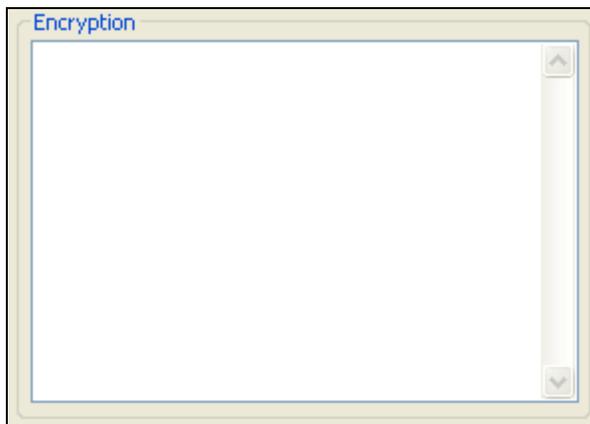
Encode

-- start the encoding session

## User Interface (Decoding):



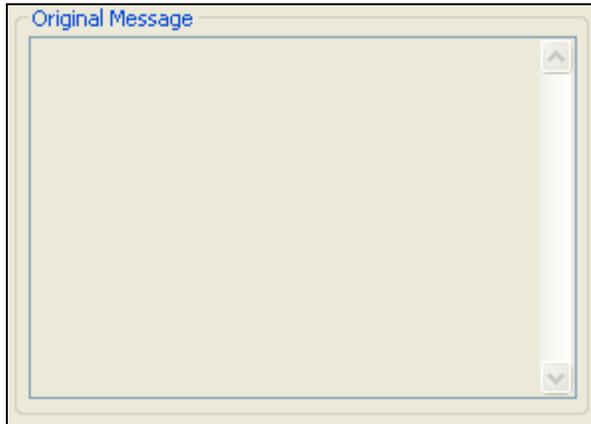
Message Box:



Input for the message for decoding.

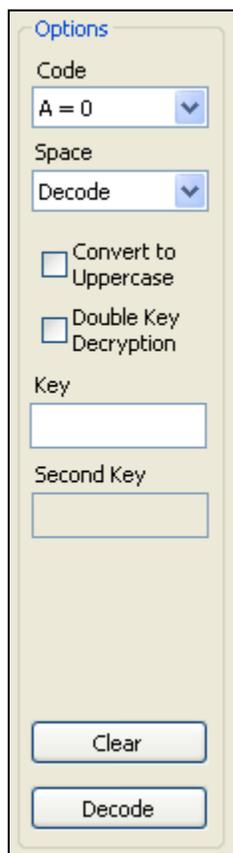
## User Interface (Decoding continues):

Decryption Box:

A screenshot of a text area titled "Original Message" with a scroll bar on the right side. The area is currently empty.

Output for the resulting decryption.

Option Box:

A screenshot of the "Options" panel in the decryption interface. It contains several settings: a "Code" dropdown menu set to "A = 0", a "Space" dropdown menu set to "Decode", two unchecked checkboxes for "Convert to Uppercase" and "Double Key Decryption", a "Key" text input box, a "Second Key" text input box, a "Clear" button, and a "Decode" button.

Coding key option

-- choose from using "A = 0" or "A = 1" code

Space option

-- choose from leaving, decoding, or including space

Uppercase output conversion

-- convert the output to all uppercases

Double key decryption

-- enable double key decryption

First key box

-- enter decryption key

Second key box

-- use only for double key decryption

Clear

-- clear all input and output

Decode

-- start the decoding session

## Key & Space Options:

### Coding Key:

There are two common key types, one is that the alphabets start at zero (i.e. 'A' is numbered as 0) and the other is that the alphabets start at one (i.e. 'A' is numbered as 1). Basically, an "A = 1" encryption is the "A = 0" encryption shifted forward by 1.

### Space Option:

The space ( ' ') is not exactly part of the alphabet and therefore it must be handled separately. In VCE, the following space options are available:

Let's use the message: "THIS IS ONLY A TEST" and the key "CRYPT"

### For Encoding:

1. Filter Space - all the space are filtered before the actual encoding. "THIS IS ONLY A TEST" becomes "THISISONLYATEST":

Message:	THISISONLYATEST
Key:	CRYPTCRYPTCRYPT
Encryption:	VYGHBUFLARCKCHM

2. Encode Space - the space will be numbered as the 27th alphabet and will be included in the encoding:

Message:	THIS IS ONLY A TEST
Key:	CRYPTCRYPTCRYPTCRYP
Encryption:	VYFGSKIIXCFNOXPSVVP

3. Include Space - the space will be included in the encoding but will not be encoded:

Message:	THIS IS ONLY A TEST
Key:	CRYPTCRYPTCRYPTCRYP
Encryption:	VYGH KJ DGNP P VVQI

4. Skip Space - the space will be included in the encoding but will be skipped:

Message:	THIS IS ONLY A TEST
Key:	CRYP TC RPYT C RYPT
Encryption:	VYGH BU FLAR C KCHM

## **Key & Space Options (continues):**

For Decoding:

1. Leave Space - leave the space as it is; for decoding messages with skipped or filtered space.
2. Decode Space - the space will be numbered as the 27th alphabet and will be included in the decoding.
3. Include Space - the space will be included in the decoding but will not be decoded.