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NCYTE CENTER

VIGENÈRE CIPHER LESSON

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This material is based upon work supported by
the **National Science Foundation** under Grant No.1548315.

Additional materials may be found at www.ncyte.net

VIGENÈRE CIPHER

IN CLASS COMPUTATIONAL EXERCISE

Students visualize as many of the computational elements of an algorithm which generates a Vigenère Cipher key.

PART 1

This key should be exactly the same length as the following sample string value: cleartext <- ” WHENINTHECOURSEOFHUMANEVENTS” . Students should assume that they have access to a variable called cleartext with holds the cleartext for this encryption/decryption exercise.

ALPHABET

Create a variable holding the English alphabet called **ALPHABET**

keyString

Create an empty string variable called **keyString**

cleartext

Create a loop that iterates the same number of times as the letters in **cleartext**

for

Return the **keyString** that has been built in the **for** loop above

PART 2

Students will visualize as many of the computational elements of an algorithm which Encrypts a sample of cleartext using a Vigenère Cipher key. Students should feel free to use the following sample string value for this exercise: cleartext <- ” WHENINTHECOURSEOFHUMANEVENTS” .

ALPHABET

Create a variable holding the English alphabet called **ALPHABET**

keyString

Create an empty string variable called **keyString**

cleartext

Create a loop that iterates the same number of times as the letters in **cleartext**

for

Return the **keyString** that has been built in the **for** loop above

PART 3

Students will visualize as many of the computational elements of an algorithm which Encrypts a sample of cleartext using a Vigenère Cipher key. Students should feel free to use the following sample string value for this exercise: ciphertext<- ” WFDORRQHUBQPONWNGIHTTDJZIMRU” .

ALPHABET

Create a variable holding the English alphabet called **ALPHABET**

keyString

Create an empty string variable called **keyString**

cleartext

Create a loop that iterates the same number of times as the letters in **cleartext**

for

Return the **keyString** that has been built in the **for** loop above