**EXPERIMENT NO 4**

**OBJECTIVE:** Write a program to implement Vignere Cipher

•Plaintext should be in lowercase.

•Ciphertext should be uppercase.

•Brute force attack.

**SOURCE CODE:**

def generateKey(string, key):

    key = list(key)

    if len(string) == len(key):

        return(key)

    else:

        for i in range(len(string) -

                       len(key)):

            key.append(key[i % len(key)])

    return("" . join(key))

# This function returns the

# encrypted text generated

# with the help of the key

def cipherText(string, key):

    cipher\_text = []

    for i in range(len(string)):

        x = (ord(string[i]) +

             ord(key[i])) % 26

        x += ord('A')

        cipher\_text.append(chr(x))

    return("" . join(cipher\_text))

# This function decrypts the

# encrypted text and returns

# the original text

def originalText(cipher\_text, key):

    orig\_text = []

    for i in range(len(cipher\_text)):

        x = (ord(cipher\_text[i]) -

             ord(key[i]) + 26) % 26

        x += ord('A')

        orig\_text.append(chr(x))

    return("" . join(orig\_text))

# Driver code

if \_\_name\_\_ == "\_\_main\_\_":

    string = " SHE IS LISTENING"

    keyword = " PASCAL "

    key = generateKey(string, keyword)

    cipher\_text = cipherText(string,key)

    print("Ciphertext :", cipher\_text)

    print("Original/Decrypted Text :",

           originalText(cipher\_text, key))

**INPUT:**

SHE IS LISTENING

Key-PASCAL

**OUTPUT**

HHWKSWXSLGNTCG

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