**Code :**

import re

def autoEncryption(msg, key):

    alphabet = "ABCDEFGHIJKLMNOPQRSTUVWXYZ"

    len\_msg = len(msg)

    new\_key = key + msg

    new\_key = new\_key[:len(new\_key) - len(key)]

    encrypt\_msg = ""

    for x in range(len\_msg):

        first = alphabet.index(msg[x])

        second = alphabet.index(new\_key[x])

        total = (first + second) % 26

        encrypt\_msg += alphabet[total]

    return encrypt\_msg

def autoDecryption(msg, key):

    alphabet = "ABCDEFGHIJKLMNOPQRSTUVWXYZ"

    current\_key = key

    decrypt\_msg = ""

    for x in range(len(msg)):

        get1 = alphabet.index(msg[x])

        get2 = alphabet.index(current\_key[x])

        total = (get1 - get2) % 26

        total = total if total >= 0 else total + 26

        decrypt\_msg += alphabet[total]

        current\_key += alphabet[total]

    return decrypt\_msg

def main():

    msg = "UTSHAVPAUDEL"

    key = "N"

    if re.match("[-+]?d\*.?d+", key):

        key = alphabet[int(key) % 26]

    enc = autoEncryption(msg, key)

    print("Plaintext:", msg)

    print("Encrypted:", enc)

    print("Decrypted:", autoDecryption(enc, key))

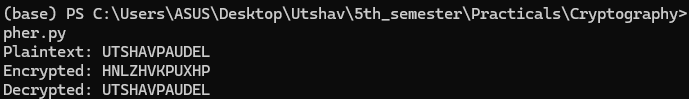
if \_\_name\_\_ == "\_\_main\_\_":

    main()

**Programming Language: Python**

**IDE: VS Code**

**OUTPUT:**

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