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#Rutvik Parmar

#H-41

#Date - 2nd Feb 2016

#Assignement No:2 - Vigenere Cipher implementation for alphanumeric input

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def getMode():

while True:

print('Do you wish to encrypt or decrypt a message?')

mode = raw\_input().lower() #raw\_input() is used to take users input from the terminal

if mode in 'encrypt e decrypt d'.split():

return mode

else:

print('Enter either "encrypt" or "e" or "decrypt" or "d".')

#This fynction gets the message from the terminal from the user

def getMessage():

print('Enter your message:')

return raw\_input()

#This function helps to generate the key from the datetime library

def getKey():

print('Enter your Key:')

return raw\_input()

def translateMessage(key, message, mode):

translated = [] # stores the encrypted/decrypted message string

keyIndex = 0

key = key.upper()

for symbol in message: # loop through each character in message

num = ord(symbol)

if num != -1: # -1 means symbol.upper() was not found in input

if mode == 'encrypt':

num += ord(key[keyIndex])%26 # add if encrypting

elif mode == 'decrypt':

num -= ord(key[keyIndex])%26 # subtract if decrypting

#Following lines of code is used to handle wrap around

if symbol.isupper():

if num > ord('Z'):

num -= 26

elif num < ord('A'):

num += 26

elif symbol.islower():

if num > ord('z'):

num -= 26

elif num < ord('a'):

num += 26

elif symbol.isdigit():

if num > ord('9'):

num -= 9

elif num < ord('0'):

num += 9

translated += chr(num)

keyIndex += 1 # move to the next letter in the key

if keyIndex == len(key):

keyIndex = 0

else:

# The symbol was not in input, so add it to translated as is.

translated.append(symbol)

return ''.join(translated)

myMessage = getMessage() #Get message

myKey = getKey() #Get key

myMode = getMode() #Get mode encrypt or decrypt

encrypted = translateMessage(myKey, myMessage, 'encrypt')

decrypted = translateMessage(myKey, encrypted, 'decrypt')

print("Encrypted message:")

print(encrypted)

print("Decrypted message:")

print(decrypted)

'''

Output -

Enter your message:

RUTV1234SHSKAD

Enter your Key:

PARMAR

Do you wish to encrypt or decrypt a message?

encrypt

Encrypted message:

THXU5658WGFOCQ

Decrypted message

RUTV1234SHSKAD

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