alphabets = "abcdefghijklmnopqrstuvwxyz" # this are the english letters

def encrypt(p, k):

c = ""

i = 0

j = 0

kpos = [] # return the index of characters ex: if k='d' then kpos= 3

for x in k:

# kpos += alphabets.find(x) #change the int value to string

kpos.append(alphabets.find(x))

for x in p:

if i >= len(kpos):

pos = alphabets.find(x.lower()) + alphabets.find(p[j])

j += 1

else:

pos = alphabets.find(x.lower()) + kpos[i]

if pos > 25:

pos = pos-26 # check you exceed the limit

c += alphabets[pos].capitalize() #because the cipher text always has capital letters

i +=1

return c

def decrypt(c, k):

p = ""

kpos = []

for x in k:

kpos.append(alphabets.find(x))

i = 0

j = 0

for x in c:

if i >= len(kpos):

pos = alphabets.find(x.lower()) - alphabets.find(p[j])

j += 1

else:

pos = alphabets.find(x.lower()) - kpos[i]

if pos < 0:

pos = pos + 26

p += alphabets[pos].lower()

i +=1

return p

try:

print("Welcome to auto-key cipher.\n\n"

"The text message should contain only characters and the key should be one character word \n"

"Press 1 to Enrypt a message \npress 2 to Decrypt a message")

choose = input("Choice: ")

if choose == '1':

p = input("enter the plain text: ")

p = p.replace(" ", "") # this will make sure that there is no space in the message

if p.isalpha():

k = input("Enter the key: ")

k = k.strip() # remove the white spaces from both sides

if k.isalpha():

c = encrypt(p, k)

print("The cipher text is: ", c)

else:

print(k)

print("Enter valid key, key is only one character word!")

else:

print("only letters are allowed !!")

elif choose == '2':

c = input("enter the cipher text: ")

c = c.replace(" ", "")

if c.isalpha():

k = input("Enter the key: ")

if not k.isalpha():

print("Enter valid key, key is only one character word!")

else:

p = decrypt(c, k)

print("The plain text is: ", p)

else:

print("only letters are allowed!")

else:

print("Please enter a valid choice!")

except Exception as e:

print(e)

exit("Enter a valid text please! ")