Def vigenere\_encrypt(plaintext,keyword):

# Calculate the length of the keyword

Keyword\_length = len(keyword)

#Convert each character in the keyword to its ASCII value

Keyword\_as\_int=[ord(i) for i in keyword]

# Convert each character in the plaintext to its ASCII value

plaintext\_int = [ord(i) for i in plaintext]

ciphertext ="

# Loop over each character in the plaintext

for i in range(len(plaintext\_int)):

# Calculate the new character by adding the ASCII value of the plaintext

# character and the corresponding keyword character (modulo 26)

value = (plaintext\_int[i] + keyword\_as\_int[i % keyword\_length]) % 26

# Convert the new character back to a string and append it to the ciphertext

# Adding 65 converts the value to its ASCII representation as an uppercase letter

ciphertext += chr(value + 65)

return ciphertext

def vigenere\_decrypt(ciphertext, keyword):

# Calculate the length of the keyword

keyword\_length = len(keyword)

# Convert each character in the keyword to its ASCII value

keyword\_as\_int = [ord(i) for i in keyword]

# Convert each character in the ciphertext to its ASCII value

ciphertext\_int = [ord(i) for i in ciphertext]

plaintext ="

# Loop over each character in the ciphertext

for i in range(len(ciphertext\_int)):

# Calculate the original character by subtracting the ASCII value of the

# corresponding keyword character from the ciphertext character (modulo 26)

value = (ciphertext\_int[i] - keyword\_as\_int[i % keyword\_length]) % 26

# Convert the original character back to a string and append it to the plaintext

# Adding 65 converts the decrypted value back to its ASCII representation as an uppercase letter

plaintext += chr(value + 65)

return plaintext

encrypted\_message=vigenere\_encrypt ("THERE ARE TWENTY THREE ITEMS IN THE INVENTORY","LEMON")

print(encrypted\_message)

decrypted\_message = vigenere\_decrypt(encrypted\_message, "LEMON")

print(decrypted\_message)