Q-1

s = input("Enter a string: ")

vowels = "aeiouAEIOU"

count = sum(1 for char in s if char in vowels)

print("Number of vowels in the string:", count)

OUTPUT:

Enter a string: aehjbjh

Number of vowels in the string: 2

Q-2

def to\_lower(char):

    if 'A' <= char <= 'Z':

        return chr(ord(char) + 32)

    return char

def to\_upper(char):

    if 'a' <= char <= 'z':

        return chr(ord(char) - 32)

    return char

def toggle\_case(char):

    if 'a' <= char <= 'z':

        return chr(ord(char) - 32)

    elif 'A' <= char <= 'Z':

        return chr(ord(char) + 32)

    return char

def to\_lower\_string(string):

    result = ""

    for char in string:

        result += to\_lower(char)

    return result

def to\_upper\_string(string):

    result = ""

    for char in string:

        result += to\_upper(char)

    return result

def toggle\_case\_string(string):

    result = ""

    for char in string:

        result += toggle\_case(char)

    return result

string = input("Enter a string: ")

print("Lowercase:", to\_lower\_string(string))

print("Uppercase:", to\_upper\_string(string))

print("Toggle Case:", toggle\_case\_string(string))

OUTPUT:

Enter a string: TUSHAR

Lowercase: tushar

Uppercase: TUSHAR

Toggle Case: tushar

Q-3

def is\_substring(str1, str2):

    len1, len2 = len(str1), len(str2)

    if len2 > len1:

        return False

    for i in range(len1 - len2 + 1):

        match = True

        for j in range(len2):

            if str1[i + j] != str2[j]:

                match = False

                break

        if match:

            return True

        return False

str1 = input("Enter the main string: ")

str2 = input("Enter the substring: ")

if is\_substring(str1, str2):

    print("Yes, the substring is present.")

else:

    print("No, the substring is not present.")

OUTPUT:

Enter the main string: tushar

Enter the substring: tushar

Yes, the substring is present.

Q-4

def remove\_substring(onestring, removestring):

    len1, len2 = len(onestring), len(removestring)

    if len2 > len1:

        return onestring

    i = 0

    while i <= len1 - len2:

        match = True

        for j in range(len2):

            if onestring[i + j] != removestring[j]:

                match = False

                break

        if match:

            onestring = onestring[:i] + onestring[i + len2:]

            len1 = len(onestring)

            i -= 1

        i += 1

    return onestring

onestring = input("Enter the main string: ")

removestring = input("Enter the substring to remove: ")

finalstring = remove\_substring(onestring, removestring)

print("Final string:", finalstring)

output:

Enter the main string: tuhuirb

Enter the substring to remove: hui

Final string: turb