/\*BATCH : H10

ROLL NO : 23269

PROBLEM STATEMENT : Write menu driven ALP to perform string manipulations. The strings to be accepted from the user is to be stored in code segment Module\_1 and write FAR PROCEDURES in code segment Module\_2 to perform any two of the following string operations:

i) Concatenation of two strings

ii) Comparison of two strings

iii) Finding Number of occurrences of a sub-string in the given string

iv) Finding number of alphabets, digits, special characters, lower & upper case alphabets, word and number of lines from the text.

Note: Use PUBLIC and EXTERN directives. Create .OBJ files of both the modules and link them to create an .EXE file. \*/

print macro msg

lea dx, msg

mov ah, 09h

int 21h

endm

accept macro str

lea dx, str

mov ah, 0ah

int 21h

endm

.model small

.stack 100h

.data

menu db 13, 10, 13, 10, 'MENU :', 13, 10, '1. Concatenate two strings', 13, 10, '2. Compare two strings', 13, 10, '3.To find substring', 13, 10, '4. Exit', 13, 10, 'Enter your choice. $'

.code

extrn compare : far

extrn concatenate : far

extrn substring : far

mov ax, @data

mov ds, ax

main:

print menu

mov ah, 01h

int 21h

cmp al, '1'

je a

cmp al, '2'

je b

cmp al, '3'

je c

cmp al, '4'

je exit

a:

call concatenate

jmp main

b:

call compare

jmp main

c:

call substring

jmp main

exit:

mov ah, 4ch

int 21h

end

print macro msg

lea dx, msg

mov ah, 09h

int 21h

endm

accept macro str

lea dx, str

mov ah, 0ah

int 21h

endm

.model small

.stack 100h

.data

str1 db 30,?,30 dup('$')

str2 db 30,?,30 dup('$')

str3 db 30 dup('$')

msg1 db 13, 10, 'Enter string 1 = $'

msg2 db 13, 10, 'Enter string 2 = $'

msg3 db 13, 10, 'Concatenated string is = $'

msg4 db 13, 10, 'Enter a string = $'

msg5 db 13, 10, 'Enter the sub-string to find = $'

msg6 db 13, 10, 'The two strings are not equal and string1 is greater than string2$'

msg7 db 13, 10, 'The two strings are not equal and string2 is greater than string1$'

msg8 db 13, 10, 'The two strings are equal$'

msg9 db 13, 10, 'Sub-string not found $'

msg10 db 13, 10, 'Number of occurences of sub-string = $'

.code

public concatenate, substring, compare

concatenate proc

print msg1

accept str1

print msg2

accept str2

print msg3

lea si, str1

lea di, str3

inc si

mov cl, [si]

l1: inc si

mov al, [si]

mov [di], al

inc di

dec cl

jnz l1

lea si, str2

inc si

mov cl, [si]

l2: inc si

mov al, [si]

mov [di], al

inc di

dec cl

jnz l2

mov al, 24h

mov [di], al

print str3

ret

endp

compare proc near

print msg1

accept str1

print msg2

accept str2

lea si, str1+1

mov cl, [si]

lea di, str2+1

mov bl, [di]

cmp cl, bl

ja c2

jb c3

c1:

inc si

inc di

mov al, [di]

cmp al, [si]

ja c3

jb c2

dec cl

jnz c1

print msg8

jmp r

c2:

print msg6

jmp r

c3:

print msg7

jmp r

r: ret

endp

substring proc

print msg4

accept str1

print msg5

accept str2

lea si, str1+2

lea di, str2+2

mov cl, str1+1

mov bl, str2+1

dec bl

mov bh, 0h

ll2:

mov al, [di]

cmp al, [si]

je ll1

inc si

dec cl

jnz ll2

jz ll4

ll1:

cmp bl, 0h

je cc1

inc si

dec cl

inc di

mov al, [di]

cmp al, [si]

jne ll4

dec bl

jnz ll1

cc1:

inc bh

lea di, str2+2

mov bl, str2+1

dec bl

inc si

dec cl

cmp cl, 0h

jne ll2

cc2:

print msg10

mov dl, bh

add dl, 30h

mov ah, 02h

int 21h

jmp r1

ll4:

cmp cl, 0h

lea di, str2+2

ja ll2

cmp bh, 0h

jg cc2

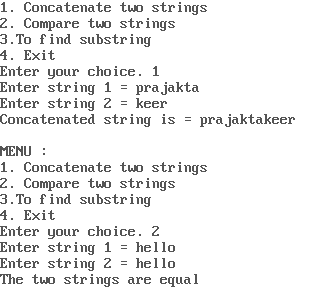
print msg9

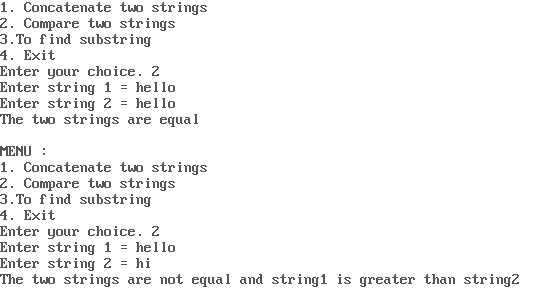
r1: ret

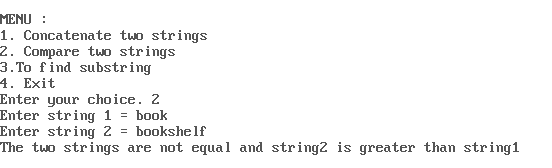
endp

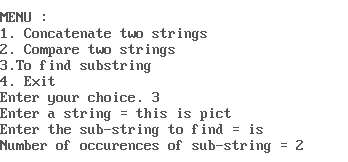
end

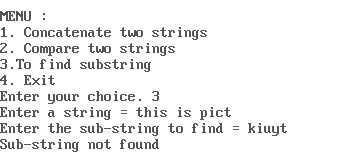
**OUTPUT:**

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