/\***BATCH** : H10

**ROLL** **NO** : 23269

**PROBLEM** **STATEMENT** : Write ALP to perform following operations on string: i. Find and display length ii. Display reverse iii. Check whether string is palindrome or not. Display proper strings to prompt the user while accepting the input and displaying the result. Write near procedures to complete the task.\*/

print macro msg

lea dx, msg

mov ah, 09h

int 21h

endm

.model small

.stack 100h

.data

string db 13, 10, 'Enter a string. $'

string1 db 13, 10, 'Length of string is = $'

string2 db 13, 10, 'The reversed string is = $ '

string3 db 13, 10, 'The string is palindrome $'

string4 db 13, 10, 'The string is not a palindrome$'

arr db 100 dup('$')

arr1 db 100 dup('$')

msg1 db 13, 10, '1. Enter string', 13, 10, '2. Find length', 13, 10, '3. Reverse the string', 13, 10, '4. Check if the string is palindrome ', 13, 10, '5. Exit', 13, 10, 'Enter your choice. $'

.code

MOV ax, @data

MOV ds, ax

main:

print msg1

mov ah, 01h

int 21h

cmp al, '1'

je a

cmp al, '2'

je b

cmp al, '3'

je c

cmp al, '4'

je d

cmp al, '5'

je exit

jmp main

a:

print string

call accept

jmp main

b:

print string1

call length1

jmp main

c:

print string2

call reverse

jmp main

d:

call palin

jmp main

exit:

MOV ah,04Ch

int 21h

accept proc near

lea dx, arr

mov ah, 0ah

int 21h

ret

endp

length1 proc near

lea si, arr+1

mov al, [si]

aam

add ax, 3030h

mov bl, al

mov dl, ah

mov ah, 02h

int 21h

mov dl, bl

mov ah, 02h

int 21h

ret

endp

reverse proc near

lea di, arr1

lea si, arr+1

mov cl, [si]

mov bl, cl

l1:

inc si

dec cl

jnz l1

l2:

mov al, [si]

mov [di], al

inc di

dec si

dec bl

jnz l2

mov al, 24h

mov [di], al

print arr1

ret

endp

palin proc near

lea si, arr+1

lea di, arr+1

mov cl, [si]

mov al, cl

l3:

inc di

dec cl

jnz l3

l4:

inc si

mov al, [di]

cmp [si], al

jne l5

dec di

cmp si, di

jb l4

print string3

jmp r

l5:

print string4

r:

ret

endp

end

**OUTPUT** :







