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CLASS : SE IT A

BATCH: A2

ROLL NUMBER : 3164036

TITLE: STRING OPERATIONS USING NEAR PROCEDURE

CODE:

.model small

.data

msg1 db 10,13, "Enter a String :$"

str1 db 20H

db 00H

db 20H DUP(00)

cnt db 00H

cnt2 db 00H

disp macro m1 ;MACRO TO DISPLAY A MESSAGE

lea dx,m1

mov ah,09H

int 21H

endm

msg2 db 10,13, "Options :- "

db 10,13, "1. Length of String"

db 10,13, "2. Reverse"

db 10,13, "3. Palindrome"

db 10,13, "4. Exit $"

msg3 db 10,13, "Length of the string is :$"

msg4 db 10,13, "Reversed string is :$"

msg5 db 10,13, "The string is Palindrome!$"

msg6 db 10,13, "The string is not Palindrome$"

.code

MOV AX,@DATA

MOV DS,AX

DISP msg1

MOV AH,0AH ;ACCEPTING THE STRING

LEA DX,STR1

INT 21H

UP:DISP MSG2

MOV AH,01H

INT 21H

;SWITCH CASE

CMP AL,31H

JE FIRST

CMP AL,32H

JE SECOND

CMP AL,33H

JE THIRD

CMP AL,34H

JE FOURTH

FIRST:CALL LENGTH1

JMP UP

SECOND:CALL REVERSE

JMP UP

THIRD:CALL PALIN

JMP UP

FOURTH:MOV AH,4CH

INT 21H

LENGTH1 PROC NEAR ;NEAR PROCEDURE FOR LENGTH

LEA SI,STR1

INC SI

MOV BL,[SI]

;TWO DIGIT DISPLAY ROUTINE

DISP MSG3

mov CH,02H

mov CL,04H

up1:ROL BL,CL

mov DL,Bl

AND DL,0FH

cmp DL,09H

jbe dw1

add DL,07H

dw1:add DL,30H

mov AH,02H

int 21H

dec CH

jnz up1

ret

ENDP

REVERSE PROC NEAR ;NEAR PROCEDURE FOR REVERSE

DISP MSG4

LEA SI,STR1

INC SI

MOV BL,[SI]

MOV CNT,BL

MOV CNT2,BL

LABEL2:INC SI

DEC CNT

JNZ LABEL2

LABEL3:MOV DL,[SI]

MOV AH,02H

INT 21H

DEC SI

DEC CNT2

JNZ LABEL3

ret

ENDP

PALIN PROC NEAR ;NEAR PROCEDURE FOR PALINDROME

LEA SI,str1+1

MOV BL,[SI]

SHR BL,01

LEA SI,str1+1

MOV DX,[SI]

MOV DH,00H ;mask the upper bit

ADD SI,DX ;to make si go to end of string

MOV DI,SI

LEA SI,str1+2

LABEL4:MOV CL,[SI]

MOV DL,[DI]

CMP CL,DL

JNE NEXT2

INC SI

DEC DI

DEC BL

JNZ LABEL4

NEXT2:CMP BL,00H

JNE NEXT3

DISP MSG5

RET

NEXT3:DISP MSG6

RET

ENDP

End

OUTPUT:







