

Abasullah University of Science & Technology

Department of
Computer Science and Engineering

Course No : CSE 2214

Course Title : Assembly Language Programming
Sessional

Assignment no : 11

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Question no:1

Write a ~~py~~ program that lets the user input a string, prints it forward and backward without punctuation and blanks on successive lines, and decides whether it is a palindrome and prints the conclusion

Answer:

- MODEL SMALL
- STACK 100H
- DATA

FIRST DB 13,10, "ENTER A STRING : \$"

STR1 DB 100 DUP (?)

STR2 DB 100 DUP (?)

FORWARD DB 13,19, "THE STRING IS : \$"

PAL DB 13,10, "IT IS A
PALINDROME . \$"

NONPAL DB 13,10, "IT IS NOT A
PALINDROME . \$"

ERROR DB 13,10, "ERR OR : EMPTY
INPUT | \$"

.CODE

MAIN PROC

MOV AX, @DATA

MOV DS, AX

MOV ES, AX

CLD

MOV AH, 9

LEA DX, FIRST

INT 21H

XOR CX, CX

MOV AH, 1

LEA SI, STR1

INPUT :

INT 21H

CMP AL, 0DH

JE ENTER-PRESSED

CMP AL, 5BH

JE INPUT

CMP AL, 7DH

JE INPUT

CMP AL, 28H

JE INPUT

CMP AL, 22H

JE INPUT

CMP AL, 27H

JE INPUT

CMP AL, ' '

JE INPUT

CMP AL, 2DH

JE INPUT

CMP AL, 2EH

JE INPUT

CMP AL, 3AH

JE INPUT

CMP AL, 3BH

JE INPUT

CMP AL, 5F

JE INPUT

CMP AL, 60H

JE INPUT

PUSH AX

INC CX

MOV [SI], AL

INC SI

JMP INPUT

ENTER_PRESSED:

CMP CX, 6

JE ERROR

LEA DI, STR2

MOV BX, CX

REVERSE:

POP DX

MOV [DI], DL

INC DI

LOOP REVERSE

MOV AH, 9

LEA DX, STR1

INT 21H

LEA SI, STR1

LEA DI, STR2

MOV CX, BX

REPE CMPSW

JZ PALINDROME

MOV AH, 9

LEA DX, NONPAL

INT 21H

JMP EXIT

PALINDROME:

MOV AH, 9

LEA DX, PAL

INT 21H

EXIT:

MOV AH, 4CH

INT 2H

MAIN ENDP

END MAIN