



University of Central Punjab

(Incorporated by Ordinance No. XXIV of 2002 promulgated by Government of the Punjab)

FACULTY OF INFORMATION TECHNOLOGY

Saturday Session Graded Tasks

Task 1:

(Time:45 Minutes)

Write a subroutine in an assembly language program which divides an array of 20 elements into two halves. It rotates left the first half and rotates right the second half 5 times.

Example:

Here is an Integer Array of 16 elements to illustrate

Array1 : 4,8,5,9,2,24,6,41,11,14,15,18,1,8,7,3

1st Half: 4,8,5,9,2,24,6,41 → after left rotation 24,6,41,4,8,5,9,2

2nd Half: 11,14,15,18,1,8,7,3 → after right rotation 18,1,8,7,3,11,14,15

So the original array will be after the execution of program

Array1: 24,6,41,4,8,5,9,2,18,1,8,7,3,11,14,15

Task 2:

(Time:45 Minutes)

Write a subroutine that takes address of an array of character as parameters through stack, and do the following:

- Convert small characters to capital character and vice versa.
- Count number of vowels present in that string and store in to memory.
- Display Output string and vowel count memory variable on console screen with **magenta** background and **blue** foreground color in middle of screen.

String: db " wE ARE THE bEST"

Output:db "We are the Best"

Vowel: db 5

*****Good Luck*****



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```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
C:\>nasm test.asm -o test.com
C:\>test.com
C:\>_

We are the Best
Vowel_count: 5
```

*****Good Luck*****