October 31, 2022

**BCS203193**

MUHAMMAD HARRIS – SECTION 4

Computer Organization & Assembly Language LAB

LAB 05 QUIZ

Practice Task

# Task 01

Read 3 values from user and check if any of them is divisible by 5.

.model small

.data

msg0 db 'enter a number: ', '$'

msg1 db 0ah, 0dh, 'number is divisible by 5', '$'

msg2 db 0ah, 0dh, 'number is not divisible by 5', '$'

endline db 0ah, 0dh, ' ', '$'

.code

;initialize data segment

mov ax,@data

mov ds,ax

;print input string

lea dx,msg0

mov ah,9

int 21h

;taking input

mov ah,1

sub al,30h

int 21h

;divide input by 5

mov bl,5

div bl

;moving modulus to al

mov al,ah

;comparing modulus to 0

cmp al,0

;if modulus greater than 0 jump to is1

jg not1

;else run not1

is1:

;print that number is divisible by 5

lea dx,msg2

mov ah,9

int 21h

;jump to exit after printing

jmp next

;code block for

not1:

;print that number is not divisible by 5

lea dx,msg1

mov ah,9

int 21h

;code block for next number

next:

;SECOND NUMBER

;endline

mov ah,09

mov dx,offset endline

int 21h

;endline

mov ah,09

mov dx, offset endline

int 21h

;print input string

lea dx,msg0

mov ah,9

int 21h

;taking input

mov ah,1

sub al,30h

int 21h

;divide input by 5

mov bl,5

div bl

;moving modulus to al

mov al,ah

;comparing modulus to 0

cmp al,0

;if modulus greater than 0 jump to is1

jg not2

;else run not1

is2:

;print that number is divisible by 5

lea dx,msg2

mov ah,9

int 21h

;jump to exit after printing

jmp next2

;code block for

not2:

;print that number is not divisible by 5

lea dx,msg1

mov ah,9

int 21h

;code block for next number

next2:

;THIRD NUMBER

;endline

mov ah,09

mov dx,offset endline

int 21h

;endline

mov ah,09

mov dx,offset endline

int 21h

;print input string

lea dx,msg0

mov ah,9

int 21h

;taking input

mov ah,1

sub al,30h

int 21h

;divide input by 5

mov bl,5

div bl

;moving modulus to al

mov al,ah

;comparing modulus to 0

cmp al,0

;if modulus greater than 0 jump to is1

jg not3

;else run not1

is3:

;print that number is divisible by 5

lea dx,msg2

mov ah,9

int 21h

;jump to exit after printing

jmp next3

;code block for

not3:

;print that number is not divisible by 5

lea dx,msg1

mov ah,9

int 21h

;code block for next number

next3:

