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**Lab task 5**

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**Question 1**

.model small

.stack 100h

.data

original\_string db 'AGHA$', 0

reversed\_string db 4 dup('$')

.code

main proc

mov ax, @data

mov ds, ax

mov ah, 09h

lea dx, original\_string

int 21h

lea si, original\_string

push\_string:

lodsb

cmp al, '$'

je reverse\_string

push ax

jmp push\_string

reverse\_string:

lea di, reversed\_string

pop\_string:

pop ax

stosb

cmp di, offset reversed\_string + 7

jne pop\_string

mov ah, 02h

mov dl, 0Dh

int 21h

mov dl, 0Ah

int 21h

mov ah, 09h

lea dx, reversed\_string

int 21h

mov byte ptr original\_string, 'A'

mov byte ptr original\_string+1, 'G'

mov byte ptr original\_string+2, 'H'

mov byte ptr original\_string+3, 'A'

mov byte ptr original\_string+4, '$'

mov ah, 02h

mov dl, 0Dh

int 21h

mov dl, 0Ah

int 21h

mov ah, 09h

lea dx, original\_string

int 21h

lea si, original\_string

mov cx, 0

push\_new\_string:

lodsb

cmp al, '$'

je reverse\_new\_string

push ax

inc cx

jmp push\_new\_string

reverse\_new\_string:

lea di, reversed\_string

pop\_new\_string:

pop ax

stosb

loop pop\_new\_string

mov ah, 02h

mov dl, 0Dh

int 21h

mov dl, 0Ah

int 21h

mov ah, 09h

lea dx, reversed\_string

int 21h

mov ah, 4Ch

int 21h

main endp

end main

**Question 2**

**.**model small

.stack 100h

.data

result dw 0

.code

main proc

mov ax, 3

mov bx, 5

mov cx, 7

mov ax, @data

mov ds, ax

push ax

push bx

push cx

mov bp, sp

pop ax

pop bx

pop cx

add ax, bx

add ax, cx

push ax

pop ax

mov result, ax

mov ah, 4Ch

int 21h

main endp

end main