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**Department:** CS

**Section:** 3E

**Assignment no:** 4

# **Solution**

**.model small**

**.stack 100h**

**.data**

**promptMsg db 'Enter a string (press Enter to finish): $'**

**encLabel db 0Dh,0Ah,'Encrypted string: $'**

**decLabel db 0Dh,0Ah,'Decrypted string: $'**

**buffer db 128 dup('$')**

**encBuffer db 128 dup('$')**

**decBuffer db 128 dup('$')**

**transTable db 256 dup(?)**

**.code**

**main proc**

**mov ax,@data**

**mov ds,ax**

**mov es,ax**

**xor dx,dx**

**lea di,transTable**

**mov cx,256**

**tblLp:**

**mov al,dl**

**xor al,55h**

**stosb**

**inc dl**

**loop tblLp**

**lea dx,promptMsg**

**mov ah,09h**

**int 21h**

**lea di,buffer**

**inLp:**

**mov ah,01h**

**int 21h**

**cmp al,0Dh**

**je encPh**

**mov [di],al**

**inc di**

**jmp inLp**

**encPh:**

**mov al,'$'**

**mov [di],al**

**lea bx,transTable**

**lea si,buffer**

**lea di,encBuffer**

**encLp:**

**lodsb**

**cmp al,'$'**

**je encDone**

**xlat**

**stosb**

**jmp encLp**

**encDone:**

**mov al,'$'**

**mov [di],al**

**lea dx,encLabel**

**mov ah,09h**

**int 21h**

**lea dx,encBuffer**

**mov ah,09h**

**int 21h**

**lea bx,transTable**

**lea si,encBuffer**

**lea di,decBuffer**

**decLp:**

**lodsb**

**cmp al,'$'**

**je decDone**

**xlat**

**stosb**

**jmp decLp**

**decDone:**

**mov al,'$'**

**mov [di],al**

**lea dx,decLabel**

**mov ah,09h**

**int 21h**

**lea dx,decBuffer**

**mov ah,09h**

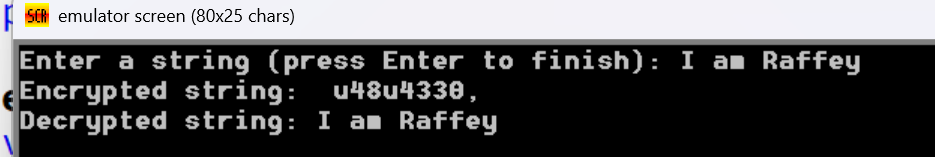
**int 21h**

**mov ah,4Ch**

**int 21h**

**main endp**

**end main**

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