1. Write an assembly program that takes a single character as input from the user. If the character is a lower case letter (a-z), convert it to upper case letter (A-Z). If the character is an upper case letter (A-Z), convert it to lower case letter (a-z).

Sample Input:

Enter a letter from the English Alphabet: A

In small it is: a

Enter a letter from the English Alphabet: a

In Capital it is: A

Ans:

.model small

.stack 100h

.data

msg1 db "Enter a letter from the English Alphabet: $"

msg2 db 10, 13, "In small it is: $"

msg3 db 10, 13, "In Capital it is: $"

alp db ?

.code

main proc

mov ax,@data

mov ds,ax

mov ah,9

lea dx,msg1

int 21h

mov ah,1

int 21h

mov alp,al

cmp alp,'A'

cmp alp,'Z'

jge check\_sml

add alp,32

mov ah, 9

lea dx, msg2

int 21h

jmp print

check\_sml:

cmp alp,'a'

cmp alp,'z'

sub alp,32

mov ah, 9

lea dx, msg3

int 21h

print:

mov ah,2

mov dl,alp

int 21h

jmp END

END:

mov ah,4CH

int 21h

main endp

end main

1. Write an assembly program that takes a single character as input from the user. If the input is 2 or 4 then it will display “Even”. If the input is 1 or 3 then it will display “ODD”. Otherwise it will display “Unknown”

Sample:

Enter a Number: 1

ODD

Enter a Number: 4

EVEN

Enter a Number: 7

UNKNOWN

Ans:

.model small

.stack 100h

.data

msg1 db "Enter a number: $"

msg2 db 10,13,"ODD$"

msg3 db 10,13,"EVEN$"

msg4 db 10,13,"UNKNOWN$"

num db ?

.code

main proc

mov ax,@data

mov ds,ax

mov ah,9

lea dx,msg1

int 21h

mov ah,1

int 21h

mov num,al

cmp num,'1'

je print\_odd

cmp num,'3'

je print\_odd

cmp num,'2'

je print\_even

cmp num,'4'

je print\_even

mov ah,9

lea dx,msg4

int 21h

jmp END

print\_odd:

mov ah,9

lea dx,msg2

int 21h

jmp END

print\_even:

mov ah,9

lea dx,msg3

int 21h

jmp END

END:

mov ah,4ch

int 21h

main endp

end main