**AHSANULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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**Department of Computer Science and Engineering**

Program: BSc in Computer Science and Engineering

Course Code: CSE 2214

Assignment No: 02

Date of Submission: 21.07.2025

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Lab Section: B1

**1. Write a program that will prompt the user to enter a hex digit**

**character(0-F), display it on the next line in decimal and ask the user if**

**he or she wants to do it again. If the user types “Y”, the program repeats.**

**If the user types “N” the program terminates. If the user enters an illegal**

**character, prompt the user to try again.**

**Answer:**

**.model small**

**.stack 100h**

**.data**

**a db 'Enter a hex digit character(0-F) : $'**

**b db 'if you want to do it again?(Y/N) $'**

**c db 'Try Again$'**

**.code**

**main proc**

**mov ax,@data**

**mov ds,ax**

**Repeat:**

**mov ah,9**

**lea dx,a**

**int 21h**

**mov ah,1**

**int 21h**

**cmp al,'0'**

**jl Invalid**

**cmp al,'9'**

**jle valid**

**cmp al,'A'**

**jl Invalid**

**cmp al,'F'**

**jle Valid**

**Invalid:**

**mov ah,2**

**mov dl,13**

**int 21h**

**mov dl,10**

**int 21h**

**mov ah,9**

**lea dx,c**

**int 21h**

**mov ah,2**

**mov dl,13**

**int 21h**

**mov dl,10**

**int 21h**

**jmp Repeat**

**Valid:**

**mov bl,al**

**cmp bl,57**

**jg L2**

**L1:**

**mov ah,2**

**mov dl,13**

**int 21h**

**mov dl,10**

**int 21h**

**mov dl,bl**

**int 21h**

**jmp Goto**

**L2:**

**mov ah,2**

**mov dl,13**

**int 21h**

**mov dl,10**

**int 21h**

**mov dl,'1'**

**int 21h**

**sub bl,17**

**mov dl,bl**

**int 21h**

**Goto:**

**mov ah,2**

**mov dl,13**

**int 21h**

**mov dl,10**

**int 21h**

**mov ah,9**

**lea dx,b**

**int 21h**

**mov ah,1**

**int 21h**

**cmp al,'Y'**

**mov ah,2**

**mov dl,13**

**int 21h**

**mov dl,10**

**int 21h**

**je Repeat**

**cmp al,'N'**

**je exit**

**exit:**

**mov ah,4ch**

**int 21h**

**main endp**

**end main**

**2. Write a program to read two capital letters and display them on the next line in alphabetical order.**

**Answer:**

**.model small**

**.stack 100h**

**.data**

**a db 'Enter 1st Capital Alphabet : $'**

**b db 'Enter 2nd Capital Alphabet : $'**

**c db 'Alphabetical Order : $'**

**.code**

**main proc**

**mov ax,@data**

**mov ds,ax**

**mov ah,9**

**lea dx,a**

**int 21h**

**mov ah,1**

**int 21h**

**mov bl,al**

**mov ah,2**

**mov dl,13**

**int 21h**

**mov dl,10**

**int 21h**

**mov ah,9**

**lea dx,b**

**int 21h**

**mov ah,1**

**int 21h**

**mov bh,al**

**cmp bl,bh**

**jg L1**

**L2:**

**mov ah,2**

**mov dl,13**

**int 21h**

**mov dl,10**

**int 21h**

**mov ah,9**

**lea dx,c**

**int 21h**

**mov ah,2**

**mov dl,bl**

**int 21h**

**mov dl,bh**

**int 21h**

**jmp exit**

**L1:**

**mov ah,2**

**mov dl,13**

**int 21h**

**mov dl,10**

**int 21h**

**mov ah,9**

**lea dx,c**

**int 21h**

**mov ah,2**

**mov dl,bh**

**int 21h**

**mov dl,bl**

**int 21h**

**exit:**

**mov ah,4ch**

**int 21h**

**main endp**

**end main**