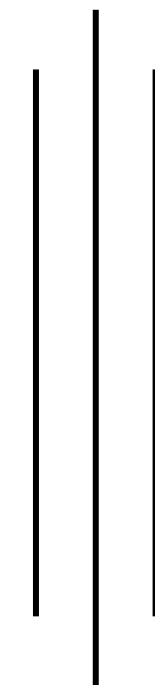


# SAGARMATHA ENGINEERING COLLEGE

(TU Affiliated)

Sanepa, Lalitpur



LAB NO: 12

A LAB REPORT ON

MISCELLANEOUS PROBLEMS FROM PAST IOE EXAMS IN 8086 PROGRAMMING.

**Submitted By**

Name: .....

Faculty/Year: .....

Roll No.: .....

Date: .....

**Submitted To**

Department of Electronics and Computer Engineering

Signature: .....

Date: .....



## MICROPROCESSOR LAB-12

### TITLE

MISCELLANEOUS PROBLEMS FROM PAST IOE EXAMS IN 8086 PROGRAMMING.

### Objective

- ✓ To be able to develop logic related to numeric calculation and display it.

### Hardware/Software Required

- Emu8086 emulator

### Decimal Print Template

#### Eg. Addition of 100 natural even numbers

```
1.      .model small
2.      .stack
3.
4.      .data
5.
6.      .code
7.      main proc far
8.      mov ax, @data
9.      mov ds, ax
10.     mov ax, 0
11.     mov bx, 02
12.     mov cx, 100
13.     again: add ax, bx
14.     inc bx
15.     inc bx
16.     loop again
17.
18.     call print_num
19.
20.     mov ah, 4ch
21.     int 21h
22.     main endp
```

```
print_num proc
mov cx, 0
mov dx, 0
label1: cmp ax, 0
je print1
mov bx, 10
div bx      ;extract the last digit
push dx     ;push it in the stack
inc cx      ;increment the count
xor dx, dx  ;set dx to 0
jmp label1
print1: cmp cx, 0 ;check if count is
                        ;greater than zero
je exit
pop dx      ;pop the top of stack
add dx, 48   ;for ascii

mov ah, 02h
int 21h
dec cx
jmp print1
exit: ret
end
```



**MICROPROCESSOR LAB-12**

**Problems**

**Q1.** Display a number in hexadecimal (let FFH) into decimal format in 8086.

**Q2.** Write an assembly program to calculate the addition of 100 natural even numbers and display the result in screen, in decimal format. [2074 Bhadra]

**Q3.** Write a program to find the largest and smallest numbers of an array having 10 numbers. Display the found numbers in the cleared screen. [2073 Bhadra]

**Q4.** Write a program to the smallest value from a list of ten 16-bit data and store the result in minval variable and print also.

**Result**

Hence, All the given instructions are executed, and the results are verified.