Lab Report

Course Code: CSE 314

Course Title: Microprocessors and Microcontrollers Lab

Experiment No: 02

Experiment Name : Write a program in assembly code to convert a number from Fahrenheit scale to Celsius scale.

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Theory: An Assembly language program to convert a temperature value given in Fahrenheit Celsius. The Formula to be implemented is C= (F-32) *5/9. The Stack is to be used for passing the Fahrenheit value to the subroutine and for returning the calculated Celsius value back to the main program. Dynamic stack allocation is to be implemented for this both the Fahrenheit and the calculated Celsius values are to be stored in the allocated memory locations defined in the data segment.

Implementation Code:

```
INCLUDE 'EMU8086.INC'

. MODEL SMALL

. STACK 100H

.DATA

C DW ?

. CODE

ADD AL, CL

MOV BH, AL

JMP INPUT

EXIT:

MAIN PROC

MOV AX,0

MOV AL, BH
```

```
MOV CX,32

SUB AX, CX

MOV CX,9

DIV CX

MOV CX,5

MUL CX

MOV C, AX

ADD C,48

PRINTN"

PRINT"OUTPUT IS = "

MOV AH,2

MOV DX, C

INT 21H

MOV AH,4CH

INT 21H

MAIN ENDP

ENDP
```

Comments: Comments: I understand the procedure of the code. Then I Implement it. And I write
the code in emu8086. I run the code successfully. I got the result and then check
output and the output is right.