ADDITION OF TWO 16-BIT NUMBERS

AIM

To develop an assembly language program to add two 16-bit numbers.

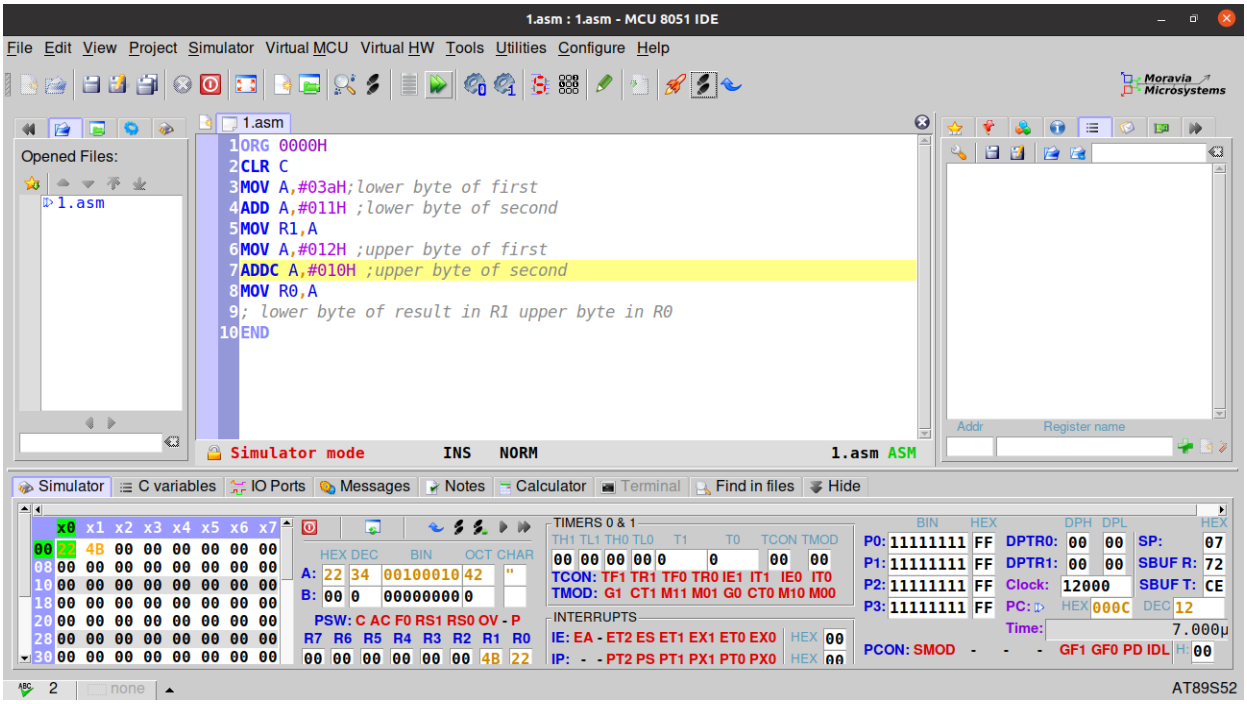
ALGORITHM

Algorithm 1 Addition of two 16-bit numbers
1: Start
2: Read the two numbers (n1,n2).
3: Add the LSB of n1 and n2 and store the result in l ower .
4: Add the MSB of n1 and n2 and store the result in upper .
5: upper = upper + c arry
6: The LSB of sum is lower and the MSB of sum is upper .
7: Print the result (sum).
8: Stop

SOURCE CODE

```
ORG 0000H
CLR C
MOV A,#03aH;lower byte of first
ADD A,#011H ;lower byte of second
MOV R1,A
MOV A,#012H ;upper byte of first
ADDC A,#010H ;upper byte of second
MOV R0,A; lower byte of result in R1 upper byte in R0
END
```

OUTPUT:



RESULT:

Executed program to ADDITION OF TWO 16-BIT NUMBERS in emu8086 and obtained the required outputs.

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