13.Write an assembly language program to find the largest number in an array.

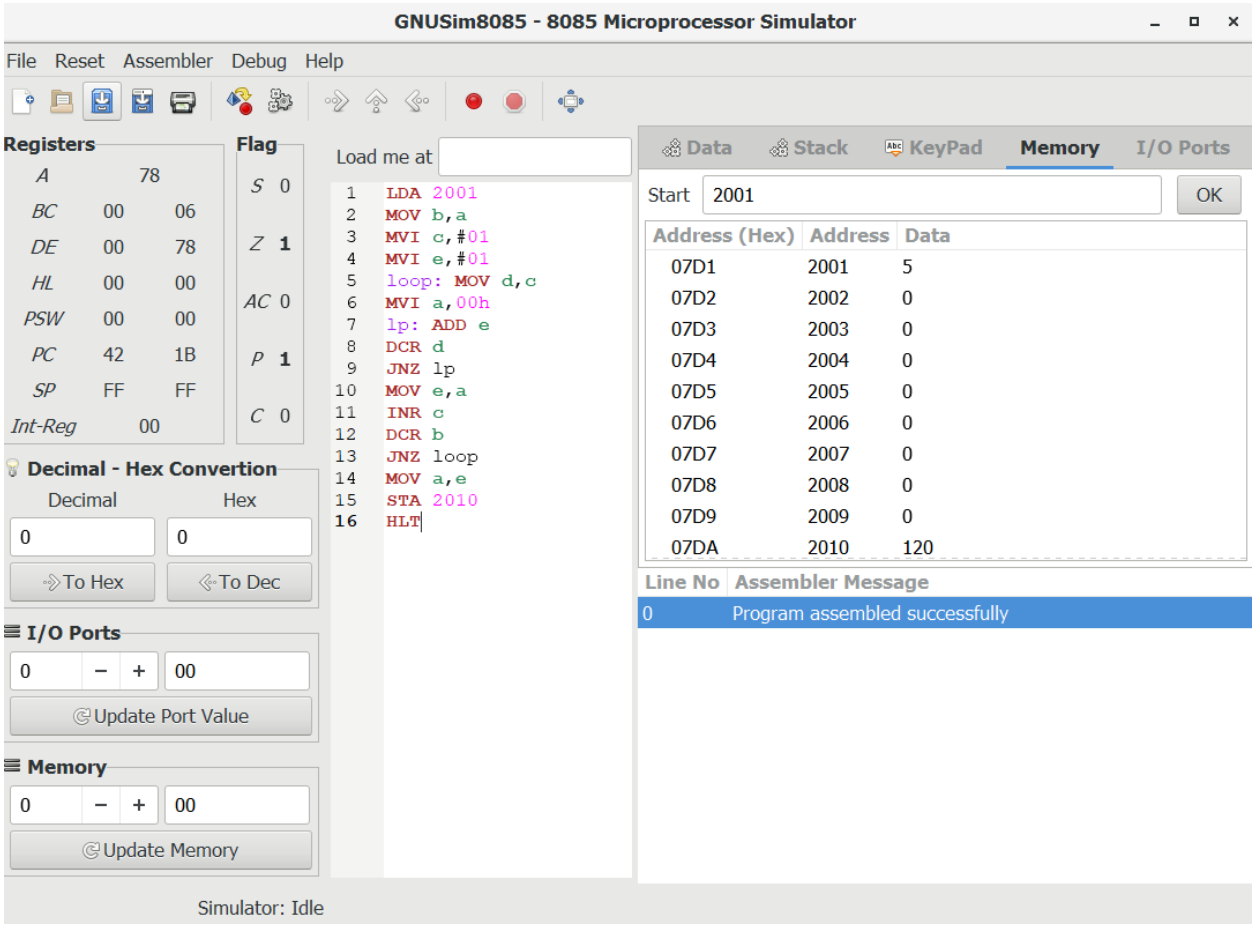
AIM: To find the largest number in an array of data using 8085 instruction set

ALGORITHM:

1) Load the address of the first element of the array in HL pair
2) Move the count to B – reg.
3) Increment the pointer
4) Get the first data in A – reg.
5) Decrement the count.
6) Increment the pointer
7) Compare the content of memory addressed by HL pair with that of A - reg.
8) If Carry = 0, go to step 10 or if Carry = 1 go to step 9
9) Move the content of memory addressed by HL to A – reg.
10) Decrement the count
11) Check for Zero of the count. If ZF = 0, go to step 6, or if ZF = 1 go to next step.
12) Store the largest data in memory.
13) Terminate the program

PROGRAM:

```
LDA 2001
MOV b,a
MVI c,#01
MVI e,#01
loop: MOV d,c
MVI a,00h
lp: ADD e
DCR d
JNZ lp
MOV e,a
INR c
DCR b
JNZ loop
MOV a,e
STA 2010
HLT
```



OBSERVATION:

INPUT: 05(2001)

OUTPUT: 120(2010)

RESULT: Thus the program to find the largest number in an array of data was executed