EXPERIMENT 7

Aim :

Write a Program to Find the Greatest Number in a String of Numbers in 8086 Microprocessor.

Requirements :

8086 Emulator Software.

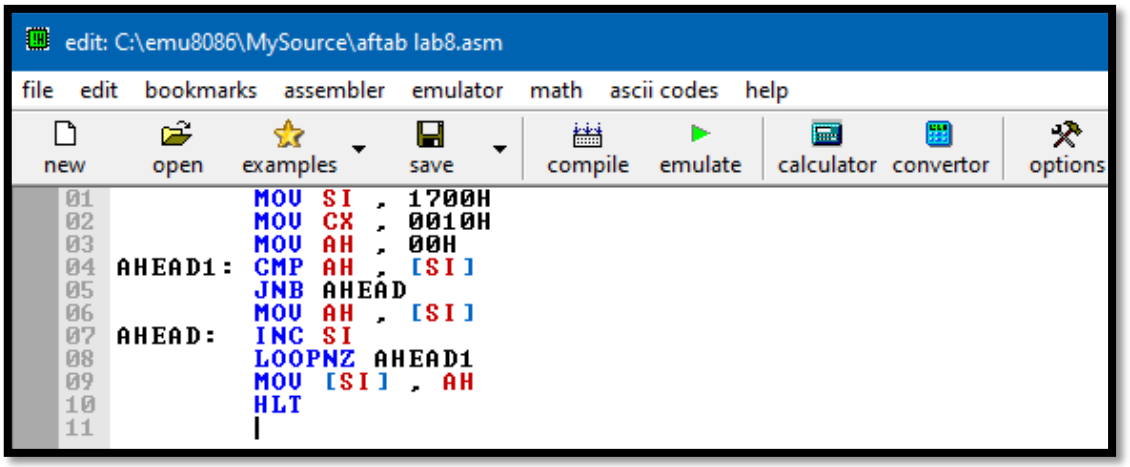
Procedure :

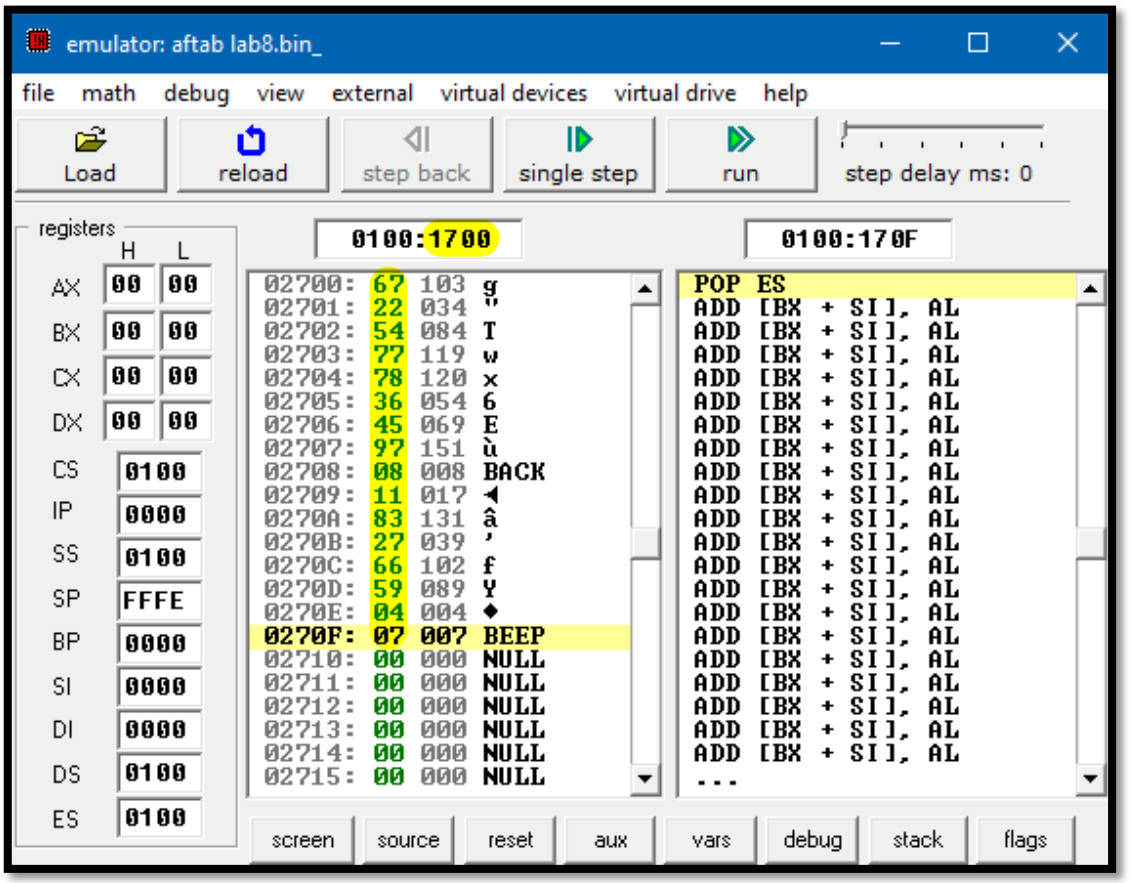
1. Open 8086 Emulator, click on new and select BIN template.
2. Write the code in assembler window.
3. After writing the code in window, click on the emulate button.
4. Check for errors and fix them.
5. If the code is correct, emulator window will popup where we have to input values at defined locations.
6. Input the values using extended value viewer and click on the run button.
7. Observe the result that is the greatest number at defined location.

Program to Find Greatest Number in a String :

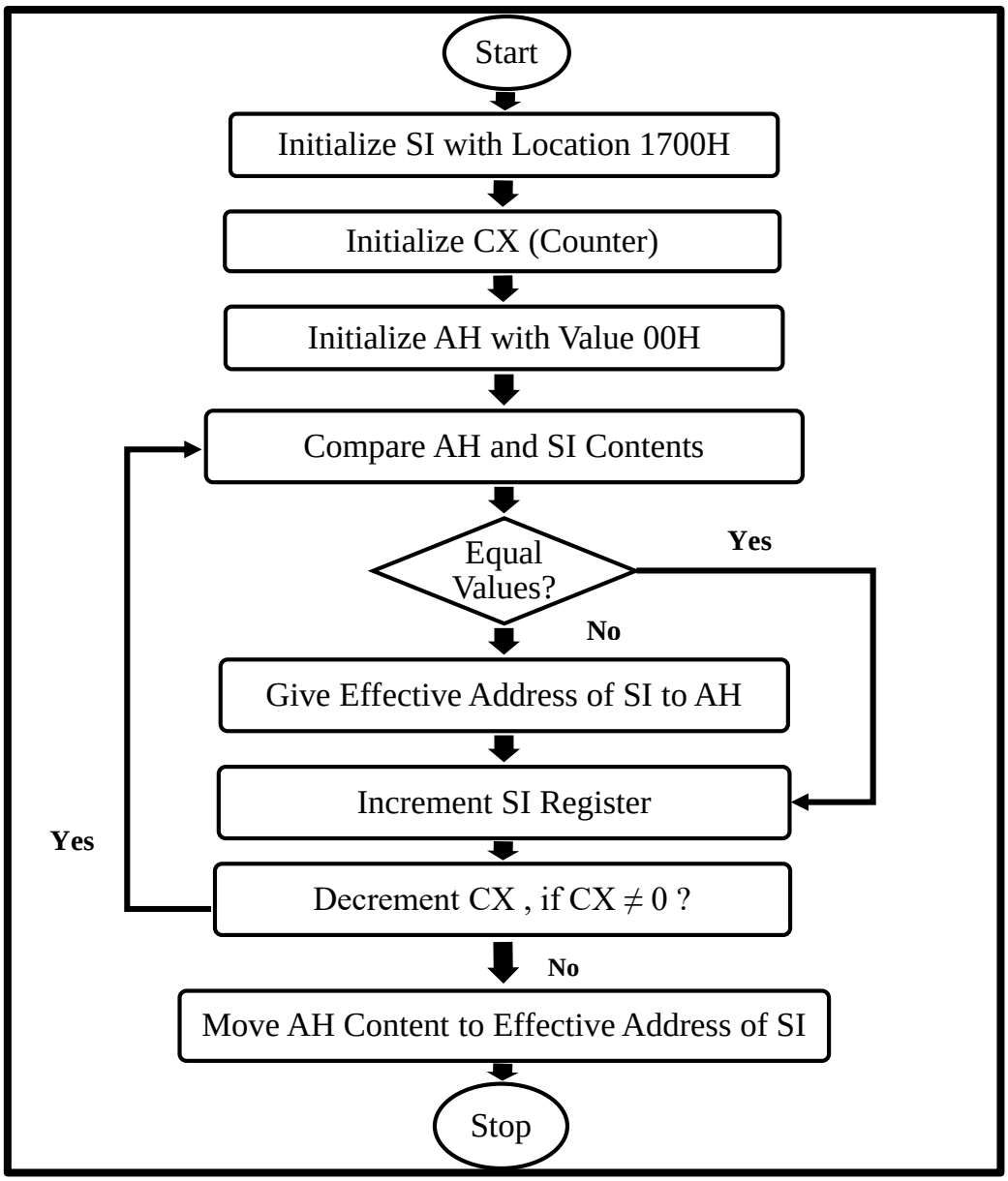
Address	Mnemonics	Operands	Comments
0000H	MOV SI	1700H	Initialize SI with location 1700H
0003H	MOV CX	0010H	Initialize CX (Counter)
0006H	MOV AH	00H	Initialize register AH with 00H
0008H	AHEAD1 | CMP AH , [SI]		Compare the contents of AH and SI
000AH	JNB AHEAD		Jump to AHEAD (000EH) if values are equal
000CH	MOV AH , [SI]		Give effective address of SI to AH
000EH	AHEAD | INC SI		Increment SI register by 1
000FH	LOOPNZ AHEAD1		Decrement CX & Jump to AHEAD1(0008H) if CX ≠ 0
0011H	MOV [SI] , AH		Move AH content to effective address of SI
0013H	HLT		End of program

Screenshots :





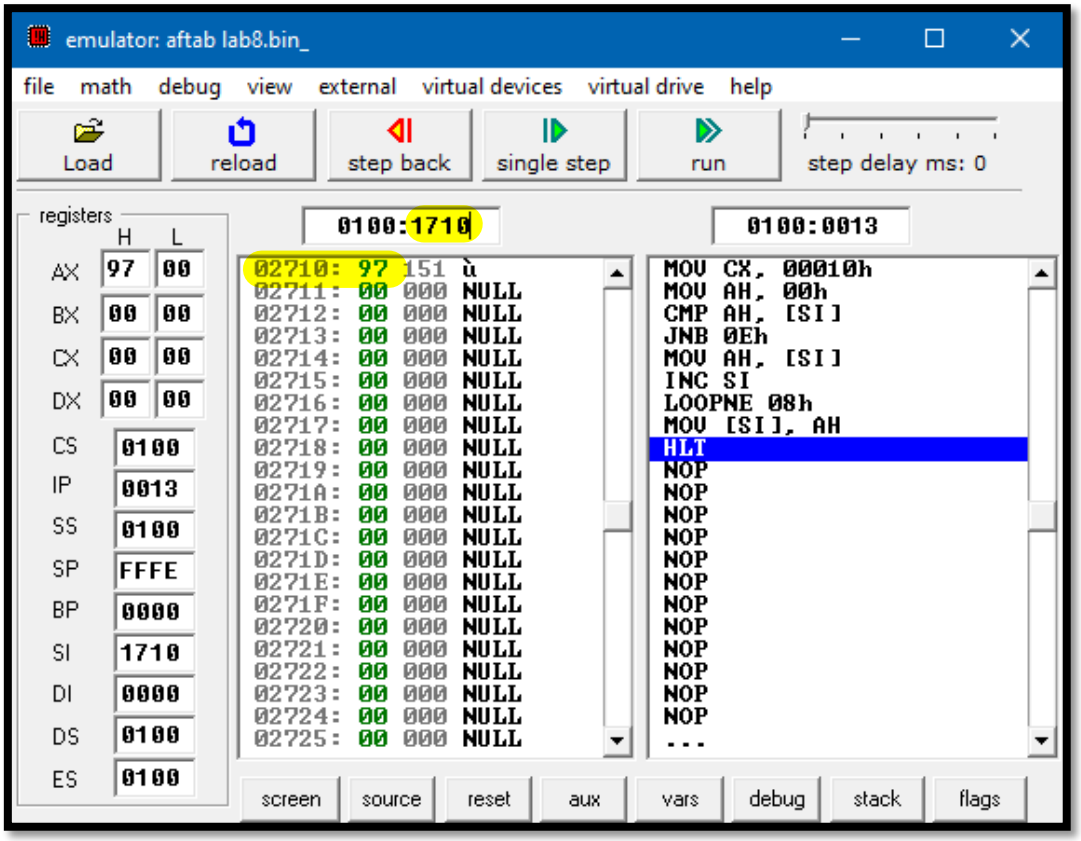
Flow Chart :


Start
Initialize SI with Location 1700H
Initialize CX (Counter)
Initialize AH with Value 00H
Compare AH and SI Contents
Equal Values?
Yes
No
Give Effective Address of SI to AH
Increment SI Register
Yes
Decrement CX , if CX ≠ 0 ?
No
Move AH Content to Effective Address of SI
Stop

Output :

Input Values															
1700 H	1701 H	1702 H	1703 H	1704 H	1705 H	1706 H	1707 H	1708 H	1709 H	170A H	170B H	170C H	170D H	170E H	170F H
67	22	54	77	78	36	45	97	08	11	83	27	66	59	04	07

Output Value (Result)	
1710H	97



Result :

Program to Find the Greatest Number in a String of Numbers was implemented successfully.