Experiment No.10

Student Name UID:
Branch: CSE Section/Group:
Semester: 4th
Date of Performance:
Subject Name: Microprocessor and Interfacing Lab
Subject Code: 20CSP-253

1. Aim/Overviewofthepractical:
   - Find the smaller number in andata array.

2. Taskto bedone:
   - Find the smaller number in andata array.

3. Apparatus/Simulatorused(Forapplied/experimentalsciences/materials-basedlabs):

   1. JubinApplication 2. 8085Simulator 3. JDK

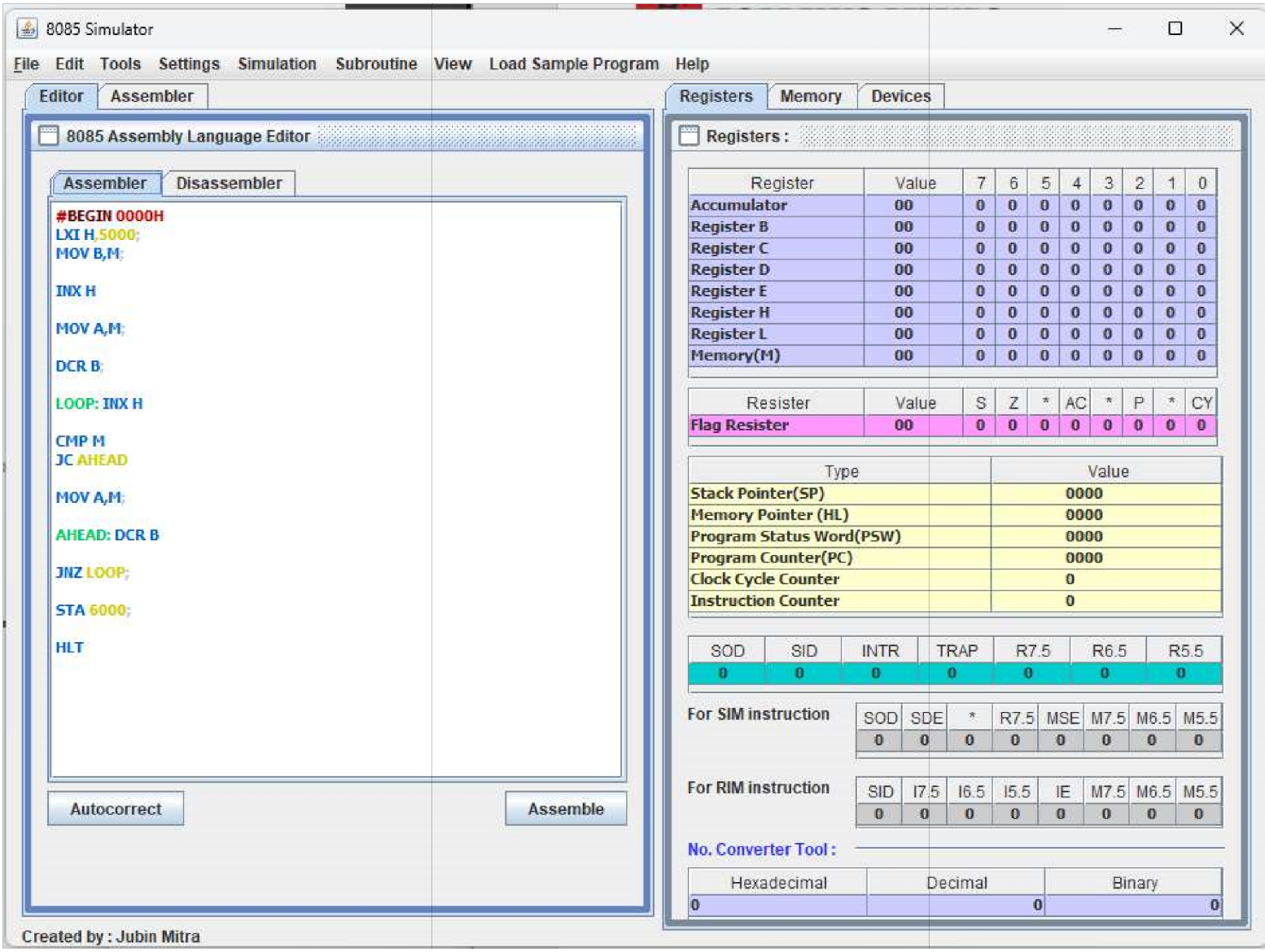
4. Description/Code:

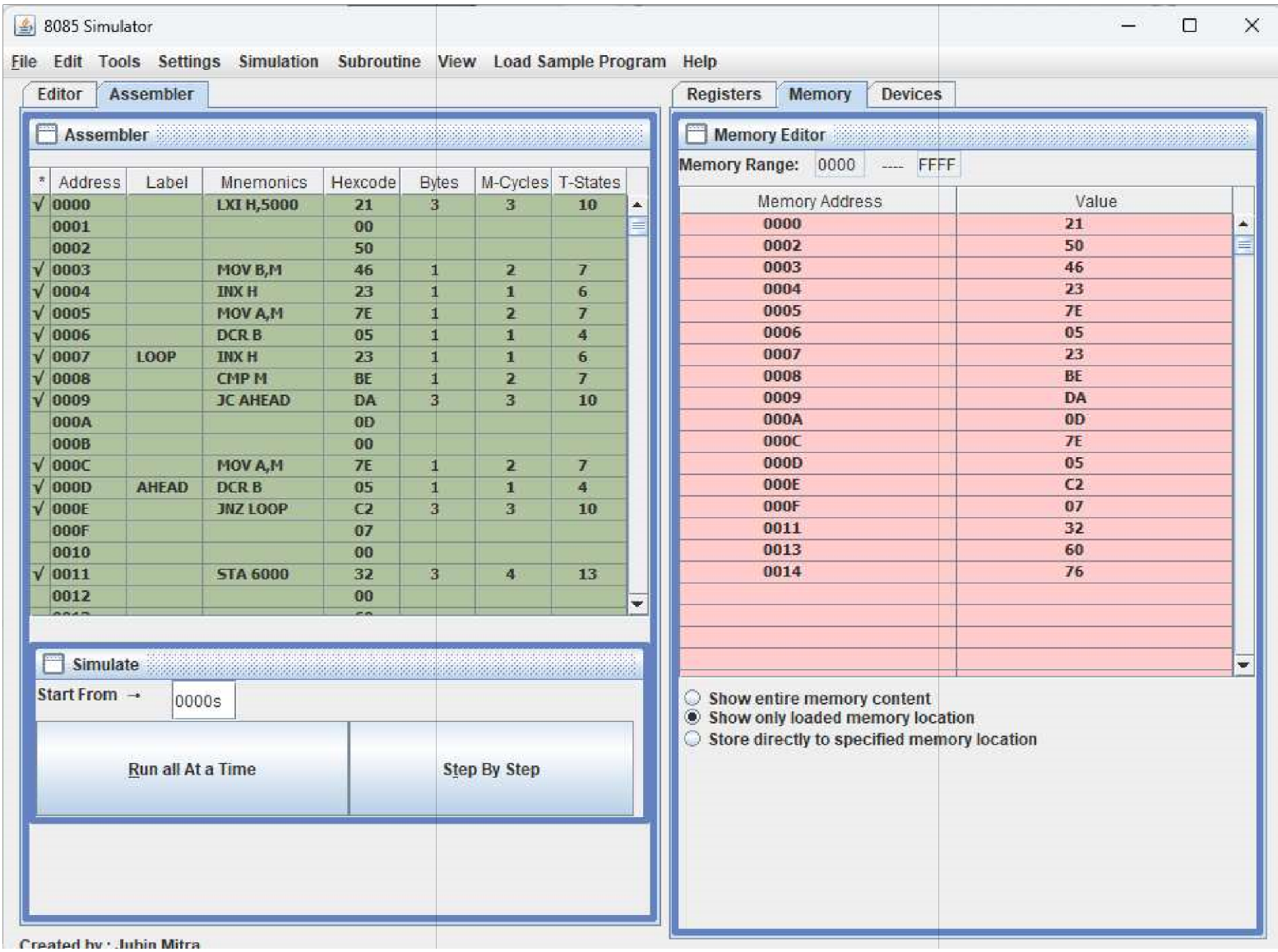
Find the smaller number in an data array.

```
#BEGIN 0000H

LXI H,5000;

MOV B,M;

INX H

MOV A,M;
```

```
DCR B;
LOOP: INX H
CMP M JC AHEAD
        MOV A,M;
AHEAD: DCR B
        JNZ LOOP;
        STA 6000;
        HLT
```

OUTPUT:


8085 Simulator
File Edit Tools Settings Simulation Subroutine View Load Sample Program Help
Editor Assembler
8085 Assembly Language Editor
Assembler Disassembler
#BEGIN 0000H
LXI H,5000;
MOV B,M;
INX H
MOV A,M;
DCR B;
LOOP: INX H
CMP M
JC AHEAD
MOV A,M;
AHEAD: DCR B
JNZ LOOP;
STA 6000;
HLT
Autocorrect
Assemble
Created by : Jubin Mitra
Registers Memory Devices
Registers :
Register Value 7 6 5 4 3 2 1 0
Accumulator 00 0 0 0 0 0 0 0 0
Register B 00 0 0 0 0 0 0 0 0
Register C 00 0 0 0 0 0 0 0 0
Register D 00 0 0 0 0 0 0 0 0
Register E 00 0 0 0 0 0 0 0 0
Register H 00 0 0 0 0 0 0 0 0
Register L 00 0 0 0 0 0 0 0 0
Memory(M) 00 0 0 0 0 0 0 0 0
Resister Value S Z * AC * P * CY
Flag Resister 00 0 0 0 0 0 0 0 0
Type Value
Stack Pointer(SP) 0000
Memory Pointer (HL) 0000
Program Status Word(PSW) 0000
Program Counter(PC) 0000
Clock Cycle Counter 0
Instruction Counter 0
SOD SID INTR TRAP R7.5 R6.5 R5.5
0 0 0 0 0 0 0
For SIM instruction
SOD SDE * R7.5 MSE M7.5 M6.5 M5.5
0 0 0 0 0 0 0 0
For RIM instruction
SID I7.5 I6.5 I5.5 IE M7.5 M6.5 M5.5
0 0 0 0 0 0 0 0
No. Converter Tool :
Hexadecimal Decimal Binary
0 0 0


8085 Simulator
File Edit Tools Settings Simulation Subroutine View Load Sample Program Help
Editor Assembler
Assembler
* Address Label Mnemonics Hexcode Bytes M-Cycles T-States
√ 0000 LXI H,5000 21 3 3 10
0001 00
0002 50
√ 0003 MOV B,M 46 1 2 7
√ 0004 INX H 23 1 1 6
√ 0005 MOV A,M 7E 1 2 7
√ 0006 DCR B 05 1 1 4
√ 0007 LOOP INX H 23 1 1 6
√ 0008 CMP M BE 1 2 7
√ 0009 JC AHEAD DA 3 3 10
000A 0D
000B 00
√ 000C MOV A,M 7E 1 2 7
√ 000D AHEAD DCR B 05 1 1 4
√ 000E JNZ LOOP C2 3 3 10
000F 07
0010 00
√ 0011 STA 6000 32 3 4 13
0012 00
Simulate
Start From → 0000s
Run all At a Time
Step By Step
Created by : Jubin Mitra
Registers Memory Devices
Memory Editor
Memory Range: 0000 ---- FFFF
Memory Address Value
0000 21
0002 50
0003 46
0004 23
0005 7E
0006 05
0007 23
0008 BE
0009 DA
000A 0D
000C 7E
000D 05
000E C2
000F 07
0011 32
0013 60
0014 76
Show entire memory content
Show only loaded memory location
Store directly to specified memory location

Learningoutcomes(WhatI havelearnt):

1. Workingofmicroprocessors.
2. Learnhowtocomplementdatainmicroprocessors.
3. Learnabout8085simulator.
4. Operationsof16-bit numbers.
5. Learn aboutthedifferentinstructionsthat areneededtobegiven tothememorytoperform sometasks

EvaluationGrid(TobecreatedaspertheSOP andAssessmentguidelinesbythefaculty):

Sr.No.	Parameters	MarksObtained	MaximumMarks
1.			
2.			
3.			