



# **Experiment-09**

**Student Name: Branch:** B.E.CSE **Semester:** 4<sup>th</sup> **Subject Name:** MPI Lab UID: Section/Group: Date of Performance:23/04/2022 Subject Code:20CSP253

**1.** Aim/Overview of the practical:

a)Find the smaller out of two numbers.

b) Find the larger out of two numbers.

### 2. Task to be done:

a)Find the smaller out of two numbers.

b) Find the larger out of two numbers.

3. Apparatus/Simulator used (For applied/experimental sciences/materials based labs):

Jubin , Java







## 4. Description/ Code:

#### *a*)*Find the smaller out of two numbers.*

#BEGIN 0000H	
LXI H,3000H	
MOV A,M	
INX H	
MOV B,M	
СМР В	
JC 200BH	
MOV A,B	
INX H	
MOV M,A	
HLT	
#ORG 3000H	

#DB 24H,16H

#### b) Find the larger out of two numbers.

#BEGIN 0000H

LXI H,3000H

MOV A,M







INX H		
MOV B,M		
СМР В		
JNC 200BH		
MOV A,B		
INX H		
MOV M,A		
HLT		
#ORG 3000H #DB		
14H,18H		

# 5. Result/Output/Writing Summary:

a)Find the smaller out of two numbers.







▲ 8085 Simulator <u>F</u> ile Edit Tools Settings Simulation Subroutine View Load Sample Program	Help				-	ĺ	כ	×
Editor Assembler	Registers Memory	Devices						
8085 Assembly Language Editor	Registers :							
Assembler Disassembler #BEGIN 0000H	Register Accumulator	16	7 6 0 0	5 0	4 3 1 0	1	1 0 1 0	
LXI Н,3000Н МОV А,М	Register B Register C	00	0 0 0	0	1 0	0	1 0 0 0	
INX H MOV B,M CMP B	Register D Register E Register H	00	0 0 0 0 0 0	0 0 1	0 0 0 0 1 0	0	0 0 0 0 0 0	
JC 2008Н МОV А,В INX Н	Register L Memory(M)	02	0 0 0	0	0 0	0	1 0 1 0	
MOV M,A HLT	Resister Flag Resister		S Z	*	AC <sup>3</sup>		* CY	
#ORG 3000H #DB 24H,16H	Type Stack Pointer(SP) Memory Pointer (HL) Program Status Word( Program Counter(PC) Clock Cycle Counter Instruction Counter				Val 0000 3002 1600 000D 63 10			
	SOD SID	INTR TRAP		R7.5 0	R6	.5	R5.5	
	For SIM instruction	SOD         SDE         *           0         0         0	111	200		.5 M6.5	5 M5.5 0	
	For RIM instruction	SID 17.5 16.1				.5 M6.4	5 M5.5	
	No. Converter Tool :							
Autocorrect	Hexadecimal 0	Decima	al	0		Binary	0	
Autocorrect Assemble								
Created by : Jubin Mitra						_		







Ê	Assembl	er							Memory Editor Memory Range: 0000 FFFF		
	Address	Label	Mnemonics	Hexcode	Bytes	M-Cycles					
V	0000		LXI H,3000	21	3	3	10		Memory Address	Value	
	0001			00					0000	21	
	0002			30					0002	30	
	0003		MOV A,M	7E	1	2	7		0003	7E	
	0004		INX H	23	1	1	6		0004	23	
	0005		MOV B,M	46	1	2	7		0005	46	
	0006		CMP B	B8	1	1	4		0006	B8	
V	0007		JC 200B	DA	3	3	10		0007	DA	
	0008			OB					0008	0B	
,	0009			20					0009	20 78	
	A000		MOV A,B	78	1	1	4		A000		
	000B		INX H	23	1	1	6		000B	23	
	000C		MOV M,A	77	1	2	7		000C 000D	76	
V	000D		HLT	76	1	2	5		3000	24	
_									3001	16	
									3002	16	
									3002	10	
_											
								-			
T	Simulate							-			
						00000000000000	444444444444	22			
S	tart From –	> 000	0								
H											
	F	Run all At	a Time		Ster	p By Step					
	-				0101	p DJ otop					
									<ul> <li>Show entire memory content</li> <li>Show only loaded memory locatio</li> <li>Store directly to specified memory</li> </ul>		

b) Find the larger out of two numbers.







8085 Simulator - X:\Documents\worksheet\MPI\ws9(find smaller n0.) Edit Tools Settings Simulation Subroutine View Load Sample Program									
ditor [ Assembler   ] 8085 Assembly Language Editor	Registers Memory	Devices							
1 0005 Assembly Language Lukor	integratera.			000000	00000		10000000		
Assembler Disassembler	Register	Value	7	6	5	4 3	2	1	0
#BEGIN 0000H	Accumulator	18	0	0	0	1 1	0	0	0
LXI H,3000H	Register B	18	0		0	1 1	-	0	
MOV A,M	Register C	00	0		0	0 0	-	0	0
INX H	Register D	00	0		0	0 0	-	0	0
MOV B,M CMP B	Register E	00	0		0	0 0	-	0	0
JNC 200BH	Register H Register L	30 02	0		1	1 0 0 0	-	0	0
MOV A,B	Memory(M)	18	0		0	1 1	-	0	0
INX H				-	-		v		
MOV M,A HLT	Resister	Value	S	Z	*	AC *	P	*	CY
	Flag Resister	85	1		0	0 0	_	0	_
#ORG 3000H	They resister	05	-		•	0 0	-		-
#DB 14H,18H	Туре					Val			
	Stack Pointer(SP)		-			0000			
	Memory Pointer (HL)		-			3002	<u>.</u>		
	Program Status Word(	PSW)	-			1885			
	Program Counter(PC)					000D			
	Clock Cycle Counter					63			
	Instruction Counter					10			
	SOD SID	INTR TRA	P	R7	.5	R6	.5	R	5.5
	0 0	0 0		0		0			)
	For SIM instruction	SOD SDE	*	R7.5	MS	SE M7	.5 M6	6.5	M5.5
		0 0	0	0	0	0	0	)	0
	For RIM instruction	SID 17.5 10	6.5	15.5	I	E M7	.5 M6	6.5	M5.5
			0	0	0			)	0
			-		-			_	
	No. Converter Tool : -								
	Hexadecimal	Decir	nal				Binar	y	
	0			(	D				0
Autocorrect Assemble								_	
ated by : Jubin Mitra					_				







C	Assemb	ler						Memory Editor		
*	Address	Label	Mnemonics	Hexcode	Bytes	M-Cycles	T-States	Memory Range: 0000 FFFF		
	0000	Labor	LXI H,3000	21	3	3	10	Memory Address	Value	
	0001			00				0000	21	
	0002			30				0002	30	
1	0003		MOV A,M	7E	1	2	7	0003	7E	
1	0004		INX H	23	1	1	6	0004	23	
	0005		MOV B,M	46	1	2	7	0005	46	
	0006		CMP B	B8	1	1	4	0006	B8	
	0007		JNC 200B	D2	3	3	10	0007	D2	
	0008			OB				0008	OB	
	0009			20				0009	20	
	A000		MOV A,B	78	1	1	4	000A	78	
	000B		INX H	23	1	1	6	0008	23	
	000C		MOV M,A	77	1	2	7	000C	77	
/	000D		HLT	76	1	2	5	000D	76	
								3000	14 18	
								3001 3002	18	
								3002	18	
_										
			17				· · · · ·			
F	Simulat	e								
				000000000000000000000000000000000000000	000000000000000000000000000000000000000		***************			
51	art From -	→ 000	00							
		Run all At	a Time		Ste	p By Step				
								Show entire memory content		
								Show only loaded memory location		
								Store directly to specified memory	location	

#### Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			







3.		

