

DAY 1-EXPERIMENTS 1-10

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

Register	Value	Flag
A	FD	S 1
BC	05 00	Z 0
DE	00 00	AC 0
HL	00 00	P 0
PSW	00 00	C 1
PC	42 0C	
SP	FF FF	
Int-Reg	00	

Decimal - Hex Conversion

Decimal: 0 Hex: 0

To Hex To Dec

I/O Ports

0 - + 00

Update Port Value

Memory

8001 - + 02

Update Memory

Load me at

```
1 LDA 8000
2 MOV B, A
3 LDA 8001
4 SUB B
5 STA 8002
6 RST 1
```

Start 8000

Address (Hex)	Address	Data
1F40	8000	5
1F41	8001	2
1F42	8002	253
1F43	8003	0
1F44	8004	0
1F45	8005	0
1F46	8006	0
1F47	8007	0
1F48	8008	0
1F49	8009	0
1F4A	8010	0
1F4B	8011	0

Line No Assembler Message

0 Program assembled successfully

Simulator: Idle

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9:41 PM 01-Mar-24

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

Register	Value	Flag
A	32	S 0
BC	05 00	Z 1
DE	00 78	AC 0
HL	00 00	P 1
PSW	00 00	C 0
PC	42 1A	
SP	FF FF	
Int-Reg	00	

Decimal - Hex Conversion

Decimal: 0 Hex: 0

To Hex To Dec

I/O Ports

0 - + 00

Update Port Value

Memory

8001 - + 0A

Update Memory

Load me at

```
1 LDA 8000
2 MOV B, A
3 LDA 8001
4 MOV C, A
5 CPI 00
6 JZ LOOP
7 XRA A
8 LOOP1: ADD B
9 DCR C
10 JZ LOOP
11 JMP LOOP1
12 LOOP: STA 8002
13 RST 1
```

Start 8000

Address (Hex)	Address	Data
1F40	8000	5
1F41	8001	10
1F42	8002	50
1F43	8003	0
1F44	8004	0
1F45	8005	0
1F46	8006	0
1F47	8007	0
1F48	8008	0
1F49	8009	0
1F4A	8010	0
1F4B	8011	0

Line No Assembler Message

0 Program assembled successfully

Simulator: Idle

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2:50 PM 01-Mar-24

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

Register	Value
A	00
BC	05 02
DE	00 00
HL	00 00
PSW	00 00
PC	42 18
SP	FF FF
Int-Reg	00

Flag

Flag	Value
S	1
Z	0
AC	0
P	0
C	1

Decimal - Hex Conversion

Decimal: 0 Hex: 0

To Hex To Dec

I/O Ports

0 - + 00

Update Port Value

Memory

8501 - + 05

Update Memory

Load me at

```
1  
2 LDA 8501  
3 MOV B,A  
4 LDA 8500  
5 MVI C,00  
6 LOOP: CMP B  
7 JC LOOP1  
8 SUB B  
9 INR C  
10 JNB LOOP  
11 STA 8503  
12 DCR C  
13 MOV A,C  
14 LOOP1: STA 8502  
15 RST 1
```

Start 8500

Address (Hex)	Address	Data
2134	8500	10
2135	8501	5
2136	8502	0
2137	8503	0
2138	8504	0
2139	8505	0
213A	8506	0
213B	8507	0
213C	8508	0
213D	8509	0
213E	8510	0
213F	8511	0

Line No Assembler Message

0 Program assembled successfully

Simulator: Idle

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GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

Register	Value
A	00
BC	00 02
DE	00 00
HL	00 00
PSW	00 00
PC	42 17
SP	FF FF
Int-Reg	00

Flag

Flag	Value
S	0
Z	1
AC	0
P	1
C	0

Decimal - Hex Conversion

Decimal: 0 Hex: 0

To Hex To Dec

I/O Ports

0 - + 00

Update Port Value

Memory

3051 - + 0C

Update Memory

Load me at

```
1  
2 LDA 3050  
3 MOV B,A  
4 LDA 3051  
5 ADD B  
6 STA 3052  
7 LDA 3053  
8 MOV B,A  
9 LDA 3054  
10 ADC B  
11 STA 3055  
12 HLT
```

Start 3050

Address (Hex)	Address	Data
0BEA	3050	11
0BEB	3051	12
0BEC	3052	23
0BED	3053	0
0BEE	3054	0
0BEF	3055	0
0BF0	3056	0
0BF1	3057	0
0BF2	3058	0
0BF3	3059	0
0BF4	3060	0
0BF5	3061	0

Line No Assembler Message

0 Program assembled successfully

Simulator: Idle

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GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

Register	Value	Flag	Value
A	00	S	0
BC	00 00	Z	1
DE	00 0A	AC	0
HL	00 04	P	1
PSW	00 00	C	0
PC	42 14		
SP	FF FF		
Int-Reg	00		

Decimal - Hex Conversion

Decimal: 0 Hex: 0

To Hex To Dec

I/O Ports

0 - + 00

Update Port Value

Memory

2052 - + 04

Update Memory

Load me at

```

1
2 LHL D 2050
3 XCHG
4 LHL D 2052
5 MVI C, 00
6 MOV A, E
7 SUB L
8 STA 2054
9 MOV A, D
10 SUB H
11 STA 2055
12 HLT

```

Start 2050 OK

Address (Hex)	Address	Data
0802	2050	10
0803	2051	0
0804	2052	4
0805	2053	0
0806	2054	6
0807	2055	0
0808	2056	0
0809	2057	0
080A	2058	0
080B	2059	0
080C	2060	0
080D	2061	0

Line No Assembler Message

0 Program assembled successfully

Simulator: Idle

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GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

Register	Value	Flag	Value
A	00	S	0
BC	00 00	Z	1
DE	00 00	AC	0
HL	00 00	P	1
PSW	00 00	C	0
PC	42 22		
SP	00 15		
Int-Reg	00		

Decimal - Hex Conversion

Decimal: 0 Hex: 0

To Hex To Dec

I/O Ports

0 - + 00

Update Port Value

Memory

2050 - + 15

Update Memory

Load me at

```

1
2 LHL D 2050
3 SPHL
4 LHL D 2052
5 XCHG
6 LXI H, 0000H
7 LXI B, 0000H
8 AGAIN: DAD SP
9 JNC START
10 INX B
11 START: DCX D
12 MOV A, E
13 ORA D
14 JNZ AGAIN
15 SHLD 2054
16 MOV L, C
17 MOV H, B
18 SHLD 2055
19 HLT

```

Start 2050 OK

Address (Hex)	Address	Data
0802	2050	21
0803	2051	0
0804	2052	19
0805	2053	0
0806	2054	143
0807	2055	0
0808	2056	0
0809	2057	0
080A	2058	0
080B	2059	0
080C	2060	0
080D	2061	0

Line No Assembler Message

0 Program assembled successfully

Simulator: Idle

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GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

Register	Value
A	04
BC	15 03
DE	00 00
HL	00 00
PSW	00 00
PC	42 18
SP	FF FF
Int-Reg	00

Flag

Flag	Value
S	1
Z	0
AC	0
P	0
C	1

Decimal - Hex Conversion

Decimal: 0 Hex: 0

To Hex To Dec

I/O Ports

0 - + 00

Update Port Value

Memory

8503 - + 00

Update Memory

Load me at

```
1 LDA 8502
2 MOV B,A
3 LDA 8500
4 MVI C,00
5 LOOP: CMP B
6 JC LOOP1
7 SUB B
8 INR C
9 JMP LOOP
10 STA 8503
11 DCR C
12 MOV A,C
13 LOOP1: STA 8502
14 RST 1
```

Start 8500

Address (Hex)	Address	Data
2134	8500	67
2135	8501	21
2136	8502	4
2137	8503	0
2138	8504	0
2139	8505	0
213A	8506	0
213B	8507	0
213C	8508	0
213D	8509	0
213E	8510	0
213F	8511	0

Line No Assembler Message

0 Program assembled successfully

Simulator: Idle

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GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

Register	Value
A	78
BC	00 06
DE	00 78
HL	00 00
PSW	00 00
PC	42 18
SP	FF FF
Int-Reg	00

Flag

Flag	Value
S	0
Z	1
AC	0
P	1
C	0

Decimal - Hex Conversion

Decimal: 0 Hex: 0

To Hex To Dec

I/O Ports

0 - + 00

Update Port Value

Memory

2001 - + 05

Update Memory

Load me at

```
1 LDA 2001
2 MOV B,A
3 MOV B,A
4 MVI C,#01
5 MVI E,#01
6 LOOP: MOV D,C
7 MVI A,00H
8 LP: ADD E
9 DCR D
10 JNZ LP
11 MOV E,A
12 INR C
13 DCR B
14 JNZ LOOP
15 MOV A,E
16 STA 2010
17 HLT
```

Start 2001

Address (Hex)	Address	Data
07D1	2001	5
07D2	2002	0
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	120
07DB	2011	0
07DC	2012	0

Line No Assembler Message

0 Program assembled successfully

Simulator: Idle

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