

AIM:

To compute swapping of numbers using 8085 processor.

ALGORITHM:

- 1)
Load a 8-bit number from memory location into accumulator.
- 2)
Move value of accumulator into register H.
- 3)
Load a 8-bit number from next memory location into accumulator.
- 4)
Move value of accumulator into register D.
- 5)
Exchange both the registers pairs.
- 6)
Halt

PROGRAM:

LDA 2001

MOV B,A

LDA 2002

STA 2001

MOV A,B

STA 2002

HLT

INPUT:

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

Register	Value
A	00
BC	00 00
DE	00 00
HL	00 00
PSW	00 00
PC	00 00
SP	00 00
Int-Reg	00

Flag

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

Decimal - Hex Conversion

Decimal: 0 Hex: 0

To Hex To Dec

I/O Ports

0 - + 0

Update Port Value

Memory

0 - + 0

Update Memory

Load me at

```
1
2 ;<Program title>
3
4 jmp start
5
6 ;data
7
8 ;code
9 start: nop
10 LDA 2001
11
12
13 MOV B,A
14
15
16 LDA 2002
17
18
19 STA 2001
20
21
22 MOV A,B
23
24
25 STA 2002
26
27
28 HLT
```

Start 2001 OK

Address (Hex)	Address	Data
07D1	2001	55
07D2	2002	23
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	0
07DB	2011	0
07DC	2012	0
07DD	2013	0
07DE	2014	0

Line No Assembler Message

Simulator: Idle

OUTPUT:

The screenshot displays the GNUSim8085 - 8085 Microprocessor Simulator interface. The main window is titled "GNUSim8085 - 8085 Microprocessor Simulator". The interface includes a menu bar (File, Reset, Assembler, Debug, Help) and a toolbar with various icons. The central area shows the assembly code being executed, with line numbers 1 through 28. The code includes instructions like `jmp start`, `start: nop`, `LDA 2001`, `MOV B,A`, `LDA 2002`, `STA 2001`, `MOV A,B`, `STA 2002`, and `HLT`. The left panel shows the state of the registers (A, BC, DE, HL, PSW, PC, SP, Int-Reg) and flags (S, Z, AC, P, C). The right panel shows the memory dump, with addresses ranging from 07D1 to 07DE. The bottom status bar indicates "Simulator: Idle".

Registers:

Register	Value
A	37
BC	37 00
DE	00 00
HL	00 00
PSW	00 00
PC	42 13
SP	FF FF
Int-Reg	00

Flags:

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

Assembly Code:

```
1  
2 ;<Program title>  
3  
4 jmp start  
5  
6 ;data  
7  
8 ;code  
9 start: nop  
10 LDA 2001  
11  
12  
13 MOV B,A  
14  
15  
16 LDA 2002  
17  
18  
19 STA 2001  
20  
21  
22 MOV A,B  
23  
24  
25 STA 2002  
26  
27  
28 HLT
```

Memory Dump:

Address (Hex)	Address	Data
07D1	2001	23
07D2	2002	55
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	0
07DB	2011	0
07DC	2012	0
07DD	2013	0
07DE	2014	0

Assembler Message:

Line No	Assembler Message
0	Program assembled successfully

RESULT: Thus

the program was executed successfully using 8085 processor simulator.