

SWAPPING OF NUMBERS

EXP NO: 15

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:

Address (Hex)	Address	Data
07D1	2001	27
07D2	2002	99

OUTPUT:

The screenshot displays the GNUSim8085 - 8085 Microprocessor Simulator interface. The main window shows assembly code being loaded into memory. The registers and flags are visible on the left, and the memory dump is on the right. The status bar at the bottom indicates the simulator is idle.

Registers and Flags:

Register	Value	Flag	Value
A	7E	S	0
BC	00 00	Z	1
DE	00 00	AC	0
HL	1F 47	P	1
PSW	00 00	C	0
PC	42 19		
SP	FF FF		
Int-Reg	00		

Assembly Code:

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

Memory Dump:

Address (Hex)	Address	Data
07D1	2001	27
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	0
07DB	2011	0
07DC	2012	0

Assembler Message:

```
0 Program assembled successfully
```

RESULT: Thus

the program was executed successfully using 8085 processor simulator.