

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 & OUTPUT

The screenshot displays the 8085 Microprocessor Simulator interface. The main window shows the assembly code being executed:

```
1 LDA 2001
2 MOV B,A
3 LDA 2002
4 STA 2001
5 MOV A,B
6 STA 2002
7 HLT
8
```

The Registers window on the left shows the state of the processor registers:

Register	Value
A	0C
BC	0C 00
DE	00 00
HL	1F 45
PSW	00 00
PC	42 0F
SP	FF FF
Int-Reg	00

The Flags window shows the status of the flags:

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

The Memory window on the right shows the memory contents:

Address (Hex)	Address	Data
07D1	2001	15
07D2	2002	12
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

The I/O Ports window shows the current port value as 0.

The Assembler Message window at the bottom shows the message: "Program assembled successfully".

RESULT: Thus the program was executed successfully using 8085 processor simulator.