

ONEs AND TWOs COMPLEMENT

EXP NO: 17

AIM:

To compute one's and two's complement using 8085 processor.

ALGORITHM:

- 1) Load the base address of the array in a register pair.
- 2) Move the data from memory location into accumulator.
- 3) Convert all ones into zeros and zeros into ones.

- 4) Add 01 to the accumulator content.
- 5) Store the results of one's and two's complement.

PROGRAM:

LDA 3000

CMA

STA 3001

ADI 01

STA 3002

HLT

INPUT:

Start 3000

Address (Hex)	Address	Data
0BB8	3000	4

OUTPUT:

The screenshot displays the GNUSim8085 - 8085 Microprocessor Simulator interface. The main window is divided into several sections:

- Registers:** A table showing the current values of the 8085 registers. The PC register is 42, and the SP register is FF.
- Flag:** A table showing the status of the flags. The S flag is 1, and the Z flag is 0.
- Assembly Code:** A list of assembly instructions with line numbers. The code includes a jump to start, a data segment, and a code segment.
- Memory:** A table showing the memory contents. The memory is organized into segments: 0BB8 to 0BC5, each 16 bytes long.
- I/O Ports:** A section for monitoring and controlling I/O ports.
- Assembler Message:** A log of messages from the assembler, showing the successful completion of the assembly process.

The status bar at the bottom indicates the simulator is idle and shows the system clock as 10:59 AM on 17-10-2023.

RESULT:

Thus the program was executed successfully

using 8085 processor simulator.