

## 8-BIT SUBTRACTION

EXP NO: 2

### AIM:

To write an assembly language program to implement 8-bit subtraction using 8085 processor.

### ALGORITHM:

- 1) Start  
the program by loading the first data into the accumulator.
- 2) Move  
the data to a register.
- 3) Get  
the second data and load it into the accumulator.
- 4) Subtract  
the two register contents.
- 5) Check  
for borrow.
- 6) Store  
the difference and borrow in the memory location.
- 7) Halt.

### PROGRAM:

```
LDA 8000
```






```
MOV B, A
```

```
LDA 8001
```

```
SUB B
```

```
STA 8002
```

```
RST 1
```

 Data
 Stack
 KeyPad
 **Memory**
 I/O Ports

Start

Address (Hex)	Address	Data
2134	8500	3
2135	8501	6

The screenshot shows the 8086 Assembler v1.0.0 interface. The top menu bar includes File, Reset, Assembler, Debug, and Help. The main window is divided into several panels:

- Registers:** A table showing the current state of 8086 registers and their flags. For example, A=03, BC=03, DE=00, HL=00, PSW=00, PC=42, SP=FF, Int-Reg=00. Flags include S=0, Z=0, AC=0, P=1, C=0.
- Decimal-Hex Conversion:** A panel with input fields for Decimal and Hex values, and buttons to convert between them.
- I/O Ports:** A panel with input fields for port addresses and buttons to update port values.
- Memory:** A panel with input fields for memory addresses and buttons to update memory.
- Assembly Window:** The central area where the assembly code is written. It shows a program with labels 'start' and 'data', and instructions like 'LDA 8500', 'MOV B, A', 'STA 8500', 'RST 1', and 'hlt'.
- Right Panel:** A panel showing the current state of memory, with a table of addresses and data. The table has columns for Address (Hex), Address, and Data.

Thus the program was executed successfully using 8085 processor simulator.