EXP NO: 1

AIM:

To write an assembly language program to implement 8-bit addition 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)   Add the two register contents.

5)   Check for carry.

6)   Store the value of sum and carry in the memory location.

7)   Halt.

PROGRAM:

LDA 8500

MOV B, A

LDA 8501

ADD B

        STA 8502

RST 1

INPUT:

Address (Hex)	Address	Data
2134	8500	10
2135	8501	3

OUTPUT:

File   Reset   Assembler   Debug   Help

Registers

A		0D
BC	0A	00
DE	00	00
HL	00	00
PSW	00	00
PC	42	10
SP	FF	FF
Int-Reg		00

Flag

S	0
Z	0
AC	0
P	0
C	0

⇅ Decimal - Hex Convertion

Decimal	Hex
0	0

⇨ To Hex   ⇦ To Dec

≡ I/O Ports

| 0 | − | + | 00 |

⟳ Update Port Value

≡ Memory

| 0 | − | + | 00 |

⟳ Update Memory

Load me at [   ]

```
1
2   ;<Program title>
3
4   jmp start
5
6   ;data
7
8
9   ;code
10  start: nop
11  LDA 8500
12  MOV B,A
13  LDA 8501
14  ADD B
15  STA 8502
16  RST 1
17  hlt
```

Data   Stack   KeyPad   Memo

Start [8500]

Address (Hex)	Address	Data
2134	8500	10
2135	8501	3
2136	8502	13
2137	8503	0
2138	8504	0
2139	8505	0
213A	8506	0
213B	8507	0
213C	8508	0
213D	8509	0
213E	8510	0
213F	8511	0

Line No	Assembler Message
0	Program assembled successfully

Simulator: Idle

85°F
Partly sunny

ENG
IN