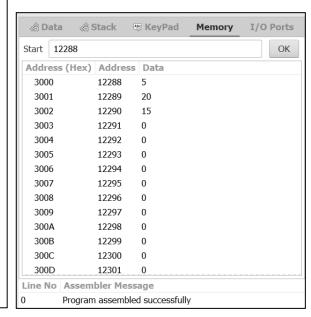## Practical-8

Aim: Write a Program Using 8085 & Verify for:
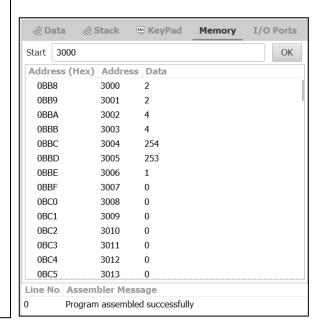
1. Subtraction of Two 8-Bit Numbers. (Display Of Borrow)

```
1
2   ;<Program title>
3
4   jmp start
5
6   ;data
7
8
9   ;code
10  start: nop
11
12  lxi h, 3000H
13  mov b, m
14  inx h
15  mov a, m
16  sub b
17  mvi b, 00H
18  jnc loop
19  inr b
20  loop: sta 3002H
21  mov a, b
22  sta 3003H
23
24  hlt
```

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

Start 12288   OK

Address (Hex)	Address	Data
3000	12288	5
3001	12289	20
3002	12290	15
3003	12291	0
3004	12292	0
3005	12293	0
3006	12294	0
3007	12295	0
3008	12296	0
3009	12297	0
300A	12298	0
300B	12299	0
300C	12300	0
300D	12301	0

Line No	Assembler Message
0	Program assembled successfully

2. Subtraction of Two 16-Bit Numbers. (Display Of Borrow)

```
1
2   ;<Program title>
3
4   jmp start
5
6   ;data
7
8
9   ;code
10  start: nop
11
12  lhld  3000
13  xchg
14  lhld  3002
15  mvi  b, 00
16  mvi  c, 00
17  mov  a, e
18  sub  l
19  jnc  LOOP
20  inr  c
21  LOOP: mov  e, a
22  mov  a, d
23  sub  c
24  sub  h
25  jnc  LOOP2
26  inr  b
27  LOOP2: mov  d, a
28  xchg
29  shld 3004
30  mov  a, b
31  sta  3006
32
33  hlt
```

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

Start 3000   OK

Address (Hex)	Address	Data
0BB8	3000	2
0BB9	3001	2
0BBA	3002	4
0BBB	3003	4
0BBC	3004	254
0BBD	3005	253
0BBE	3006	1
0BBF	3007	0
0BC0	3008	0
0BC1	3009	0
0BC2	3010	0
0BC3	3011	0
0BC4	3012	0
0BC5	3013	0

Line No	Assembler Message
0	Program assembled successfully

Student Name: Kanzariya Dhavanik
Enrollment No: 21012022022