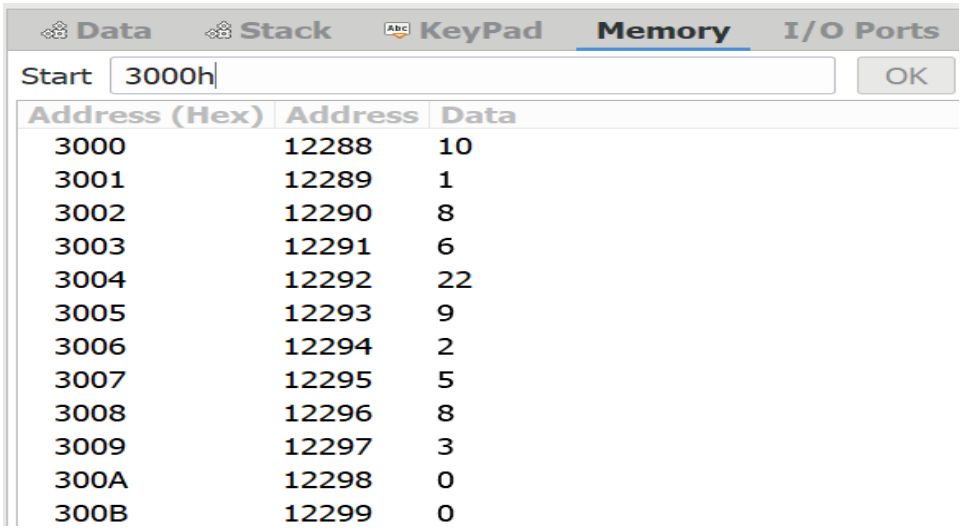
U19CS076 MIT ASSIGNMENT 5

KRITHIKHA BALAMURUGAN

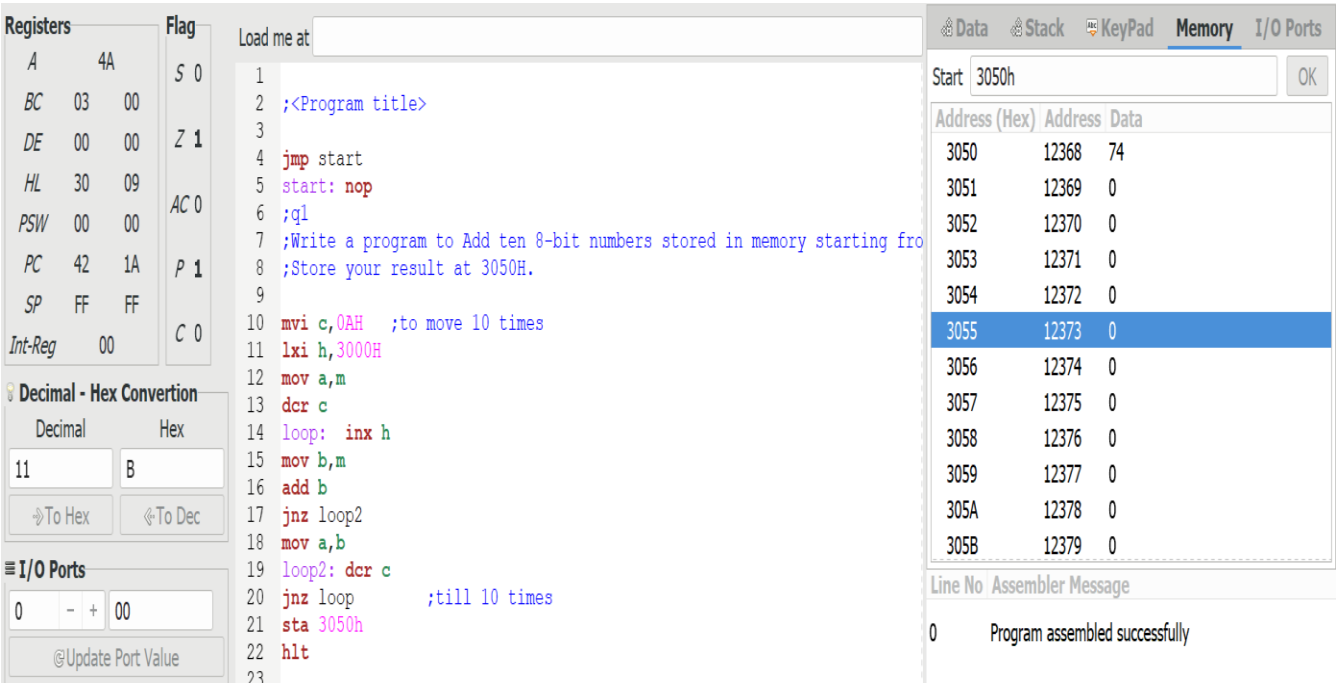
Q1. Write a program to Add ten 8-bit numbers stored in memory starting from 3000H.Store your result at 3050H.

INPUT BEFORE EXECUTION



Address (Hex)	Address	Data
3000	12288	10
3001	12289	1
3002	12290	8
3003	12291	6
3004	12292	22
3005	12293	9
3006	12294	2
3007	12295	5
3008	12296	8
3009	12297	3
300A	12298	0
300B	12299	0

AFTER EXECUTING CODE



Q2. Write a program to find smallest/largest number from the array of 8-bit data. Assume suitable memory location for data and result.

INPUT BEFORE EXECUTION

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

Start 3000h OK

Address (Hex)	Address	Data
3000	12288	10
3001	12289	1
3002	12290	8
3003	12291	6
3004	12292	22
3005	12293	9
3006	12294	2
3007	12295	5
3008	12296	8
3009	12297	3
300A	12298	0
300B	12299	0

AFTER EXECUTION

FNDING LARGEST ELEMENT OF ARRAY

Registers

A	16	
BC	16	00
DE	00	00
HL	30	09
PSW	00	00
PC	42	1B
SP	FF	FF
Int-Reg	00	

Flag: S 0, Z 1, AC 0, P 1, C 1

Decimal - Hex Convertion: Decimal 0, Hex 0, To Hex, To Dec

Load me at

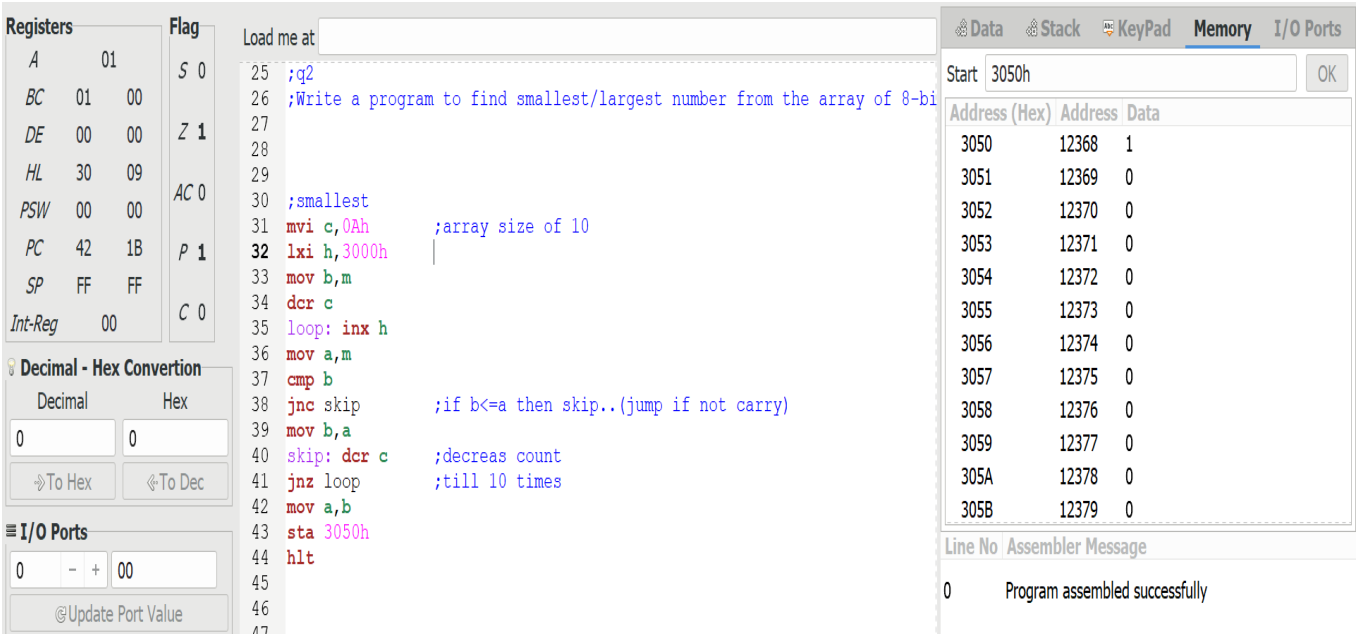
```
;q2
;Write a program to find smallest/largest number from the array of 8-bi
;largest
mvi c,0Ah       ; taking array size of 10
lxi h,3000h     ;data from 3000h to 3009h
mov b,m
dcr c
loop: inx h
mov a,m
cmp b
jc skip         ;if b>a then skip..(jump if carry)
mov b,a
skip: dcr c     ;decrease count
jnz loop        ;till 10 times
mov a,b
sta 3050h
hlt
```

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

Start 3050h OK

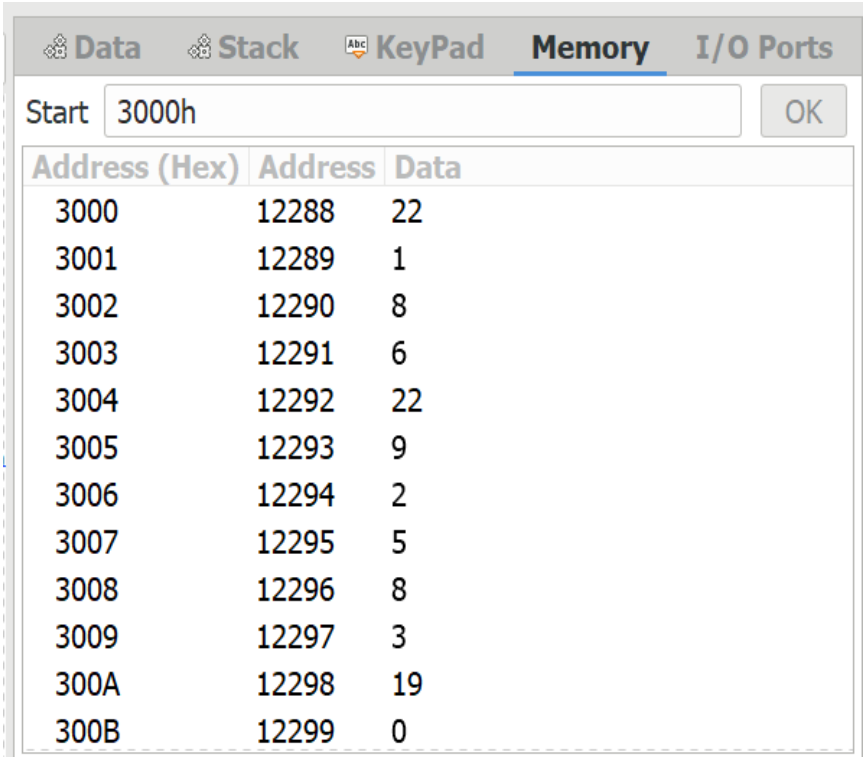
Address (Hex)	Address	Data
3050	12368	22
3051	12369	0
3052	12370	0
3053	12371	0
3054	12372	0
3055	12373	0
3056	12374	0
3057	12375	0
3058	12376	0
3059	12377	0
305A	12378	0
305B	12379	0

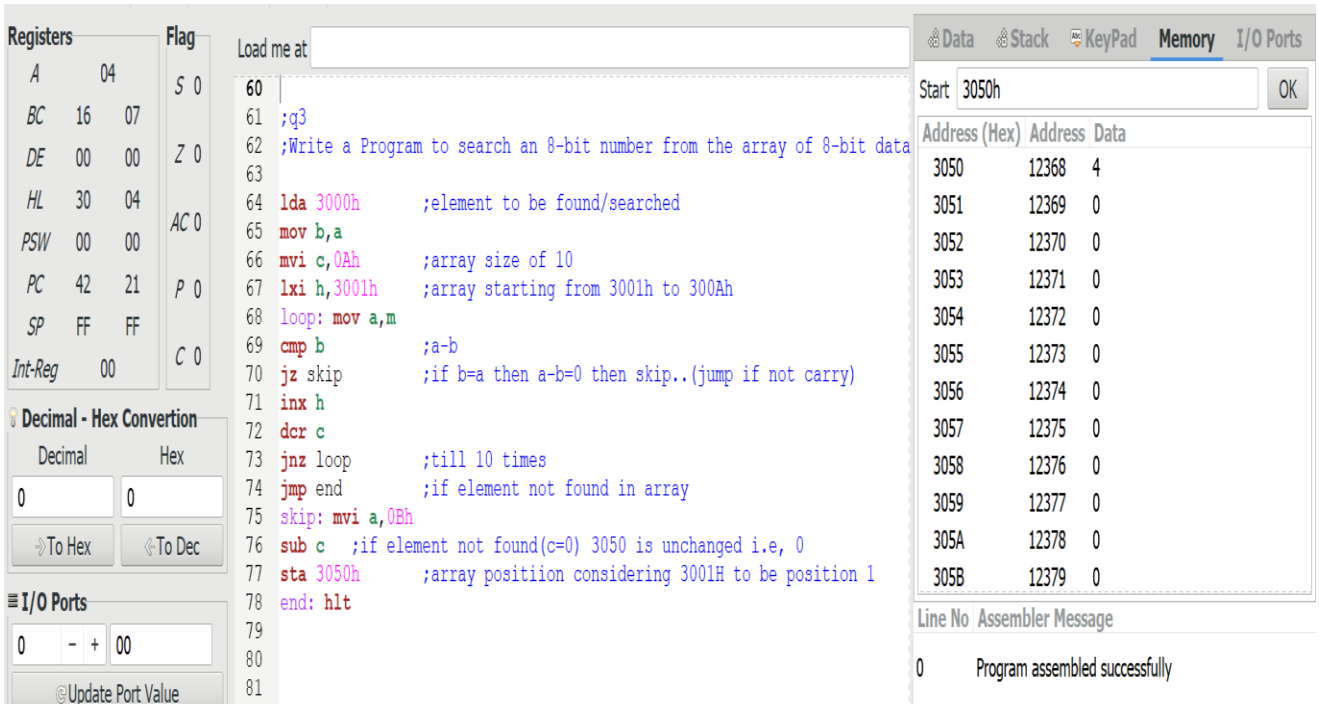
FINDING SMALLEST ELEMENT OF ARRAY



Q3. Write a Program to search an 8-bit number from the array of 8-bit data.

INPUT BEFORE EXECUTION

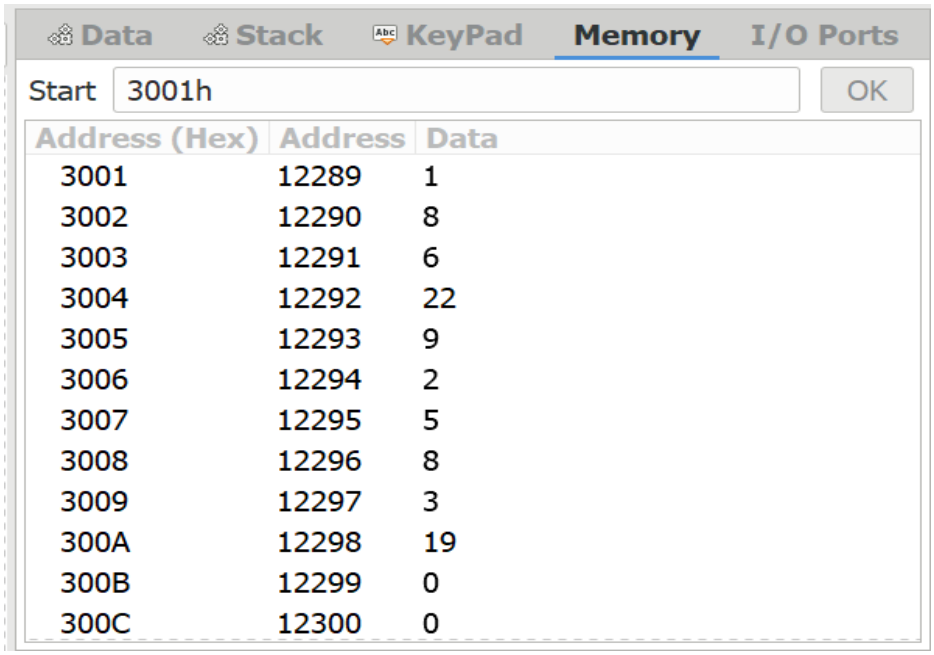




PRINTS THE LOCATION OF ELEMENT IN ARRAY. CONSIDERING 3001 AS 1ST POSITION OF ARRAY.

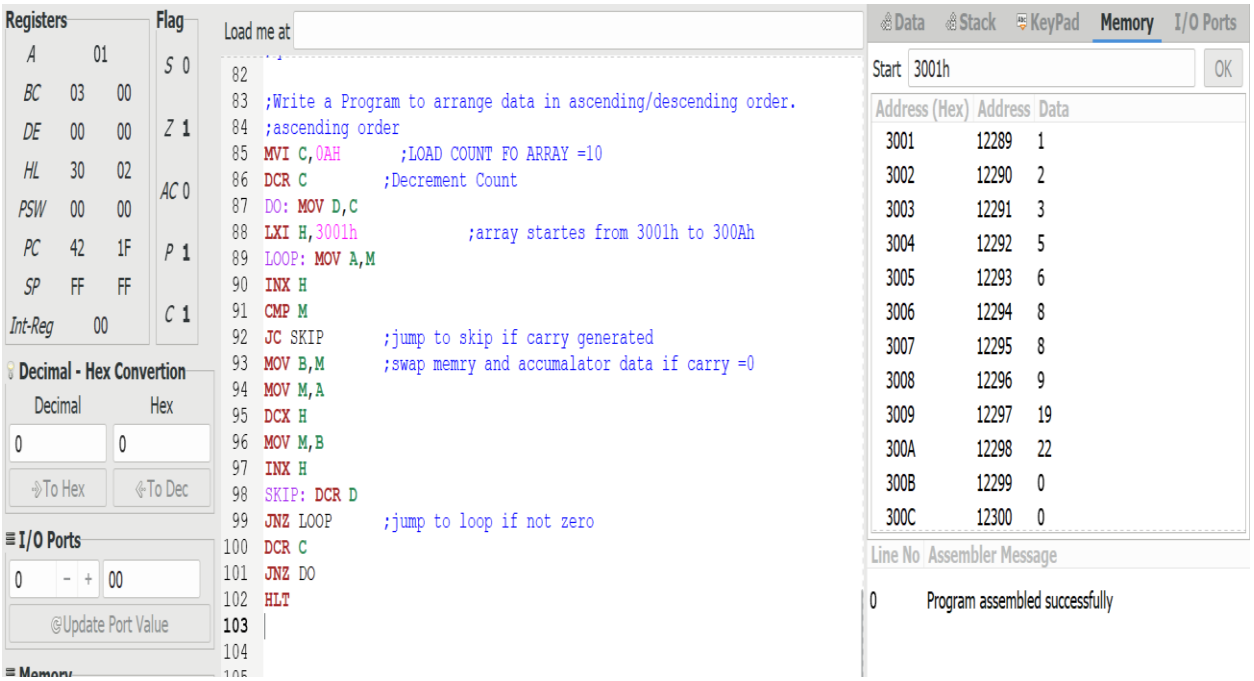
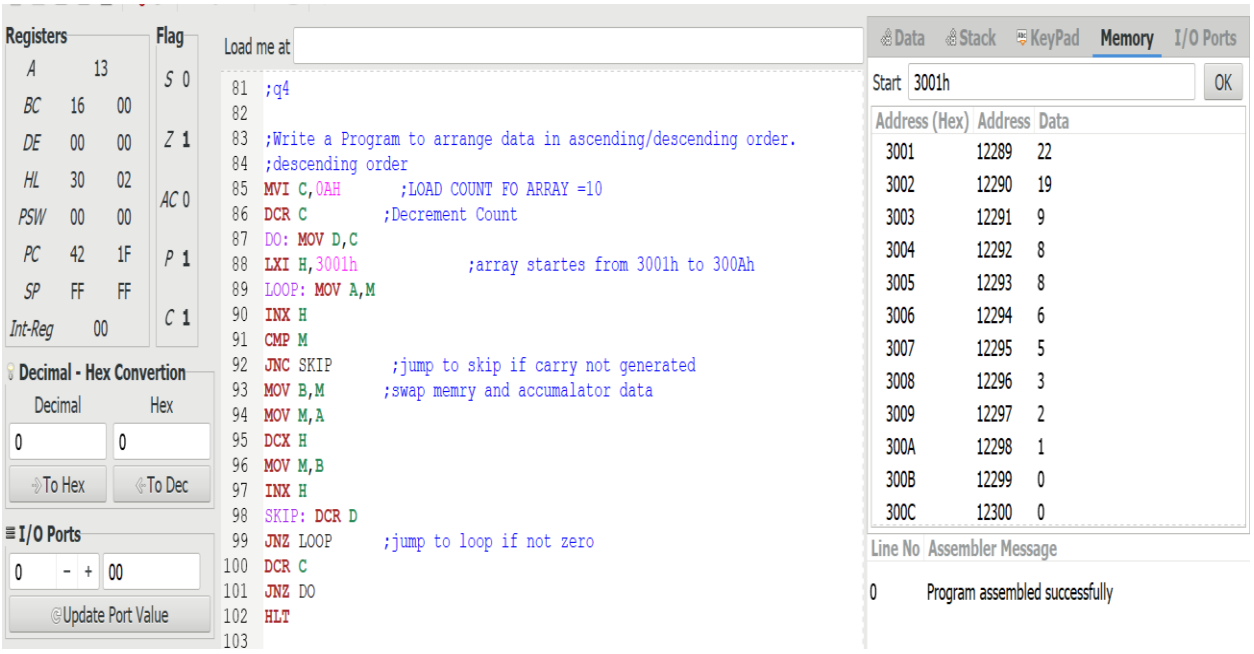
Q4. Write a Program to arrange data in ascending/descending order. Assume suitable memory location for data and result.

INITIAL VALUE BEFORE EXECUTION



AFTER EXECUTION

ASCENDING ORDER



DESCENDING ORDER