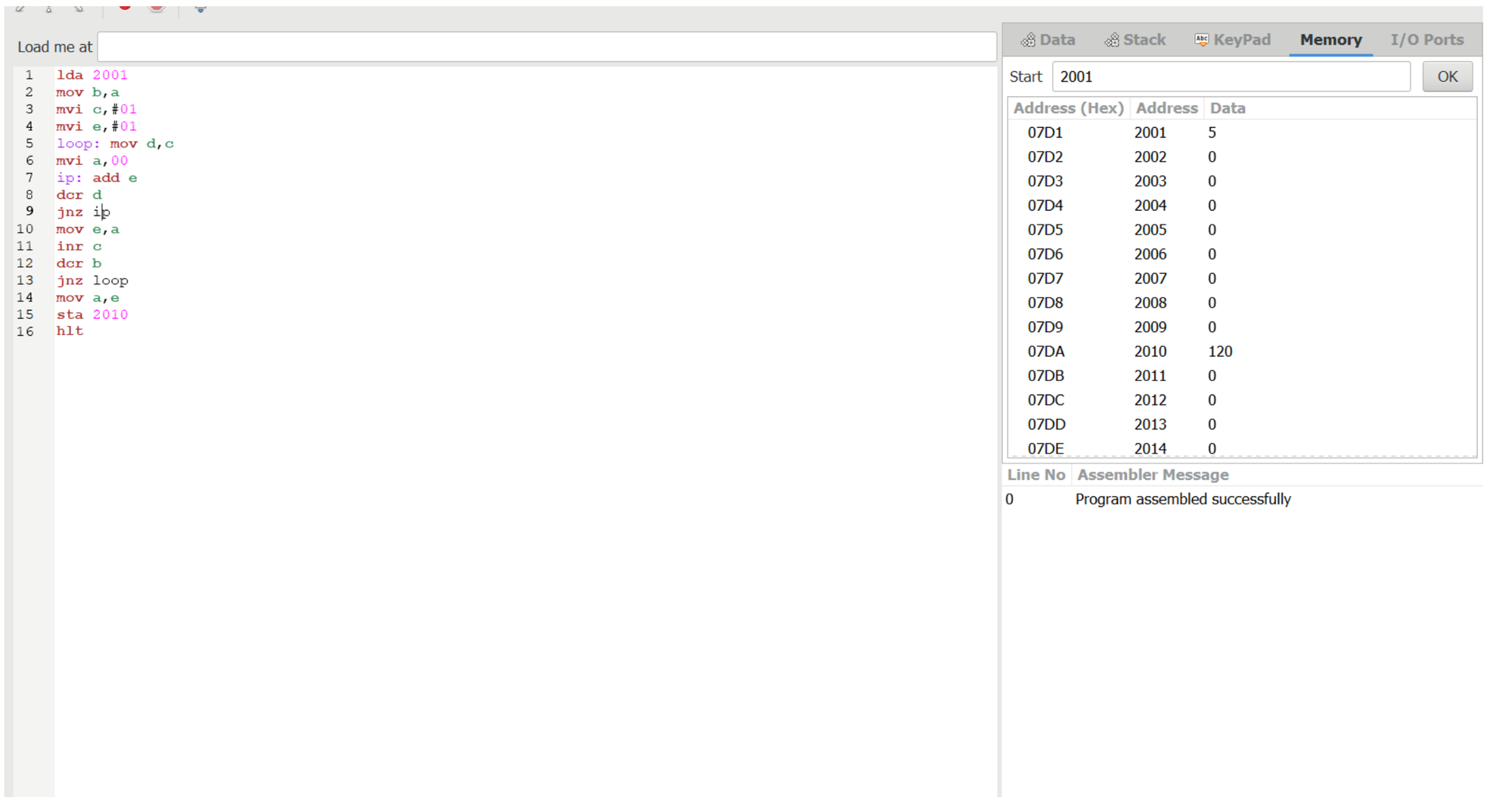
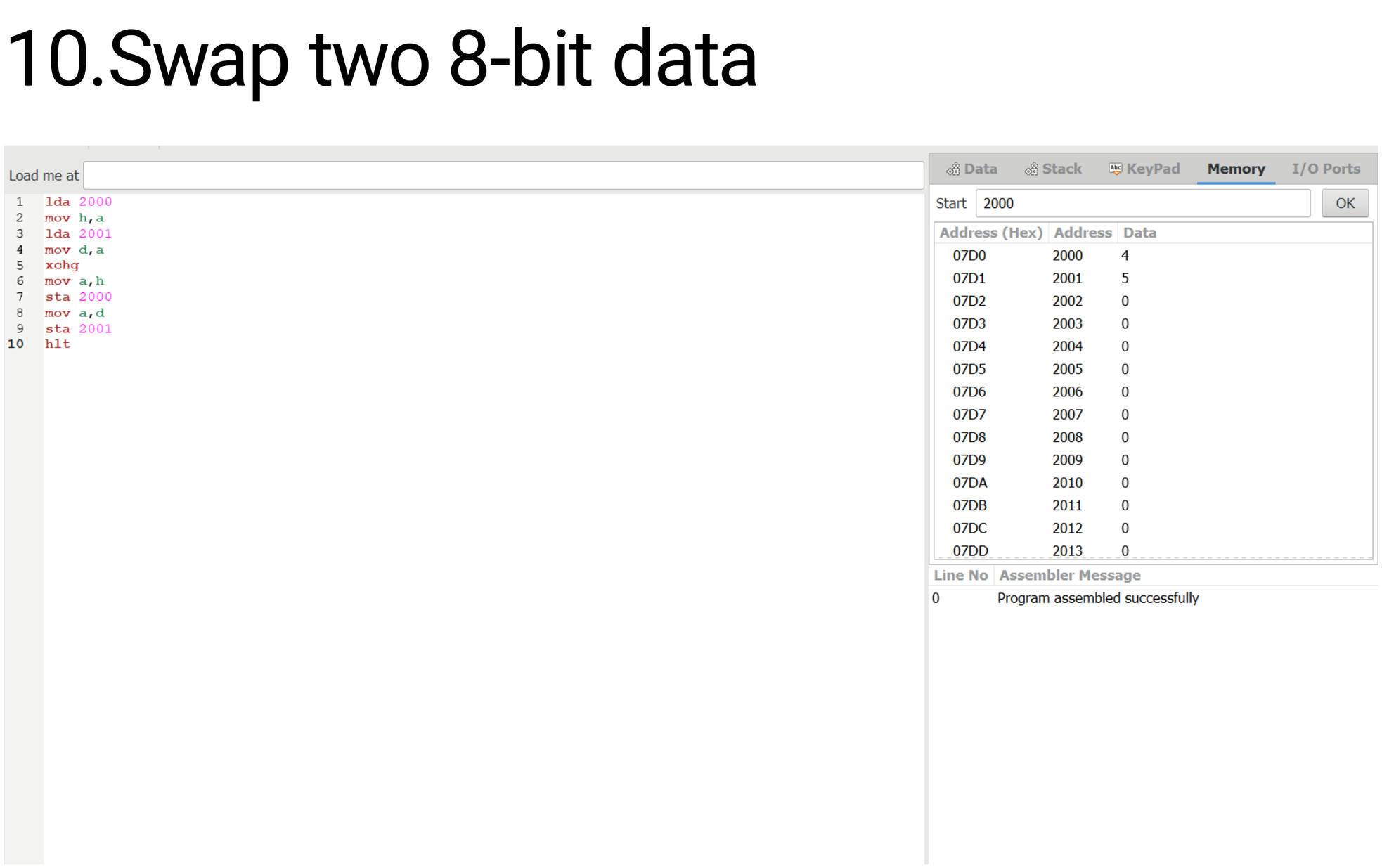
Computer Architecture

9.Factorial of a number



10.Swap two 8-bit data



11.Find the largest number in an array

Load me at

```
1  lxi h,4200
2  mov b,m
3  inx h
4  mov a,m
5  dcr b
6  loop: inx h
7  cmp m
8  jnc ahead
9  mov a,m
10 ahead: dcr b
11 jnz loop
12 sta 4300
13 hlt
```

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

Start 4200 OK

Address (Hex)	Address	Data
1068	4200	2
1069	4201	3
106A	4202	5
106B	4203	1
106C	4204	0
106D	4205	0
106E	4206	0
106F	4207	0
1070	4208	0
1071	4209	0
1072	4210	0
1073	4211	0
1074	4212	0
1075	4213	0

Line No	Assembler Message
0	Program assembled successfully

12.1’s and 2’s complement of 8 bit number

Load me at

```
1 LDA 2000
2 CMA
3 STA 2001
4 INR A
5 STA 2002
6 HLT
```

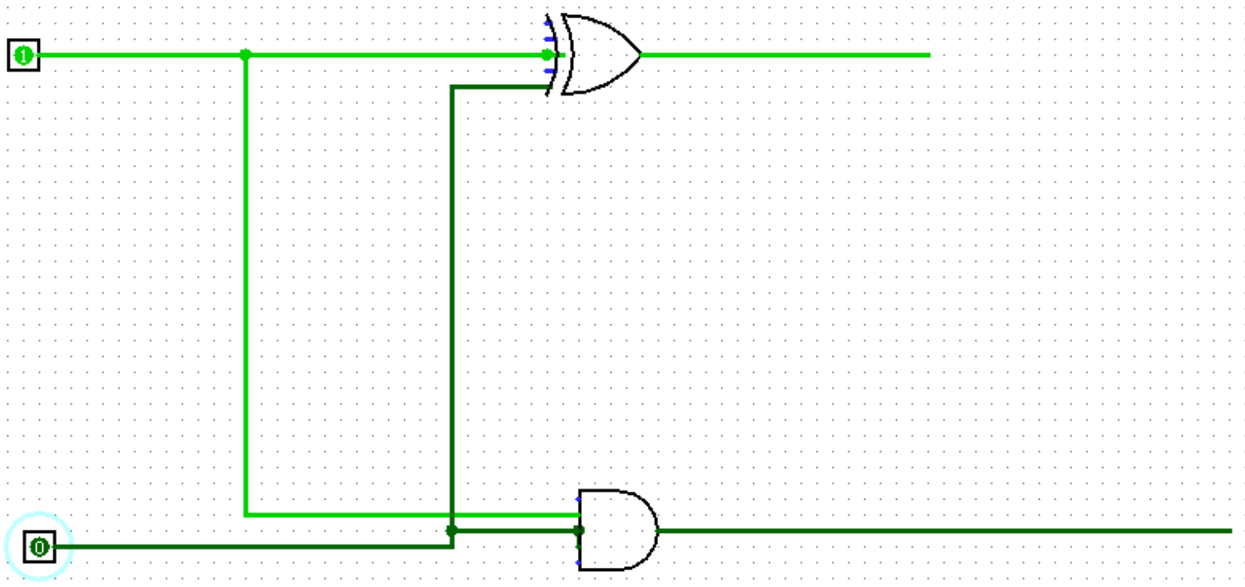
Data | Stack | KeyPad | **Memory** | I/O Ports

Start 2000 OK

Address (Hex)	Address	Data
07D0	2000	23
07D1	2001	232
07D2	2002	233
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	0
07DB	2011	0
07DC	2012	0
07DD	2013	0

Line No	Assembler Message
0	Program assembled successfully

13.Half adder in Logisim



14.Full adder in Logisim