OC EXPERIMENT 4

a) Title of the experiment → writing program in emulator8086

b) Your name → YASH GUPTA

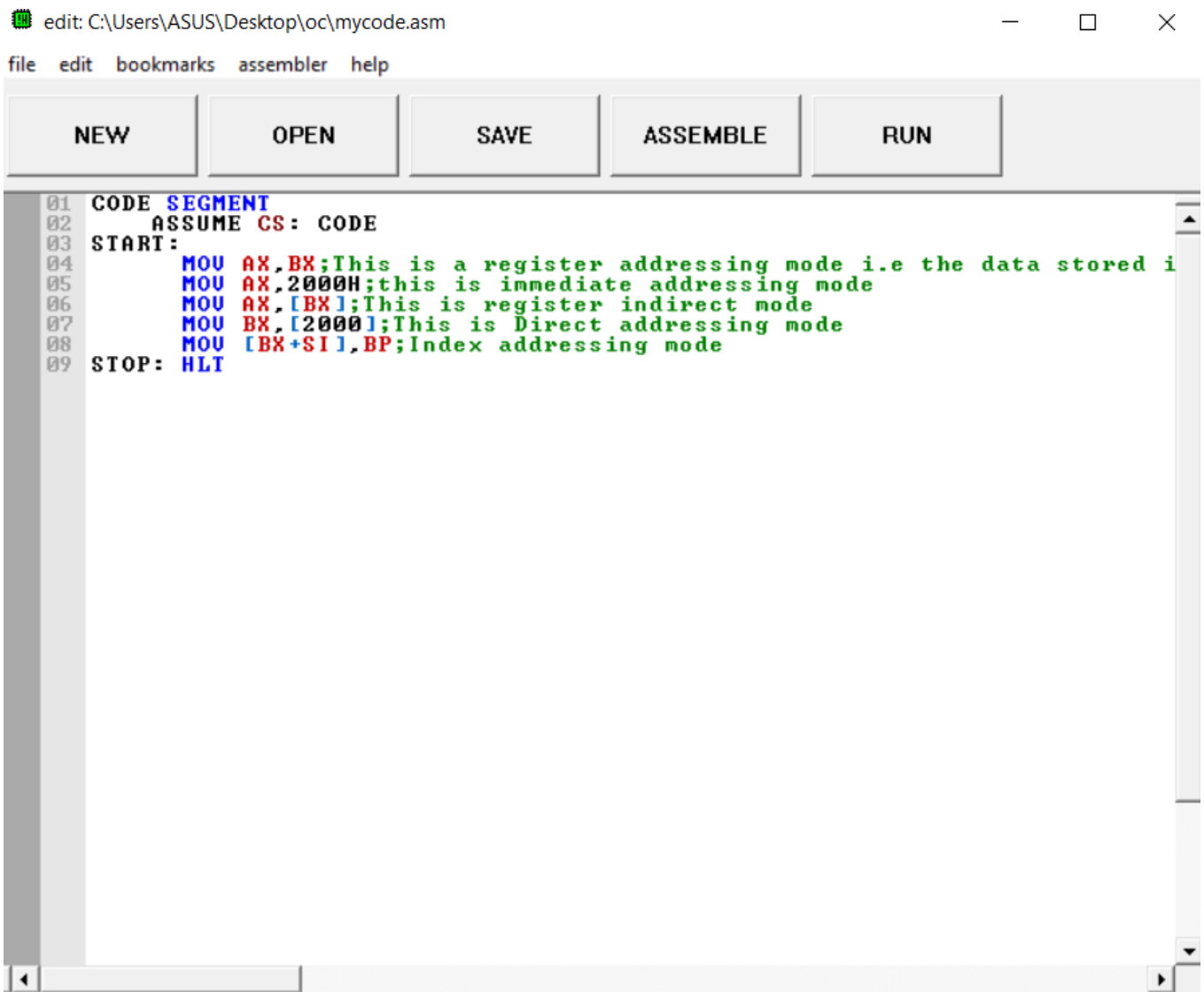
c)Roll no → S20200010234

d) About the experiments →Installing emu8086 , using basic command in emu8086 and making programs.

e) Your observation/what you learned →making program with assembly language

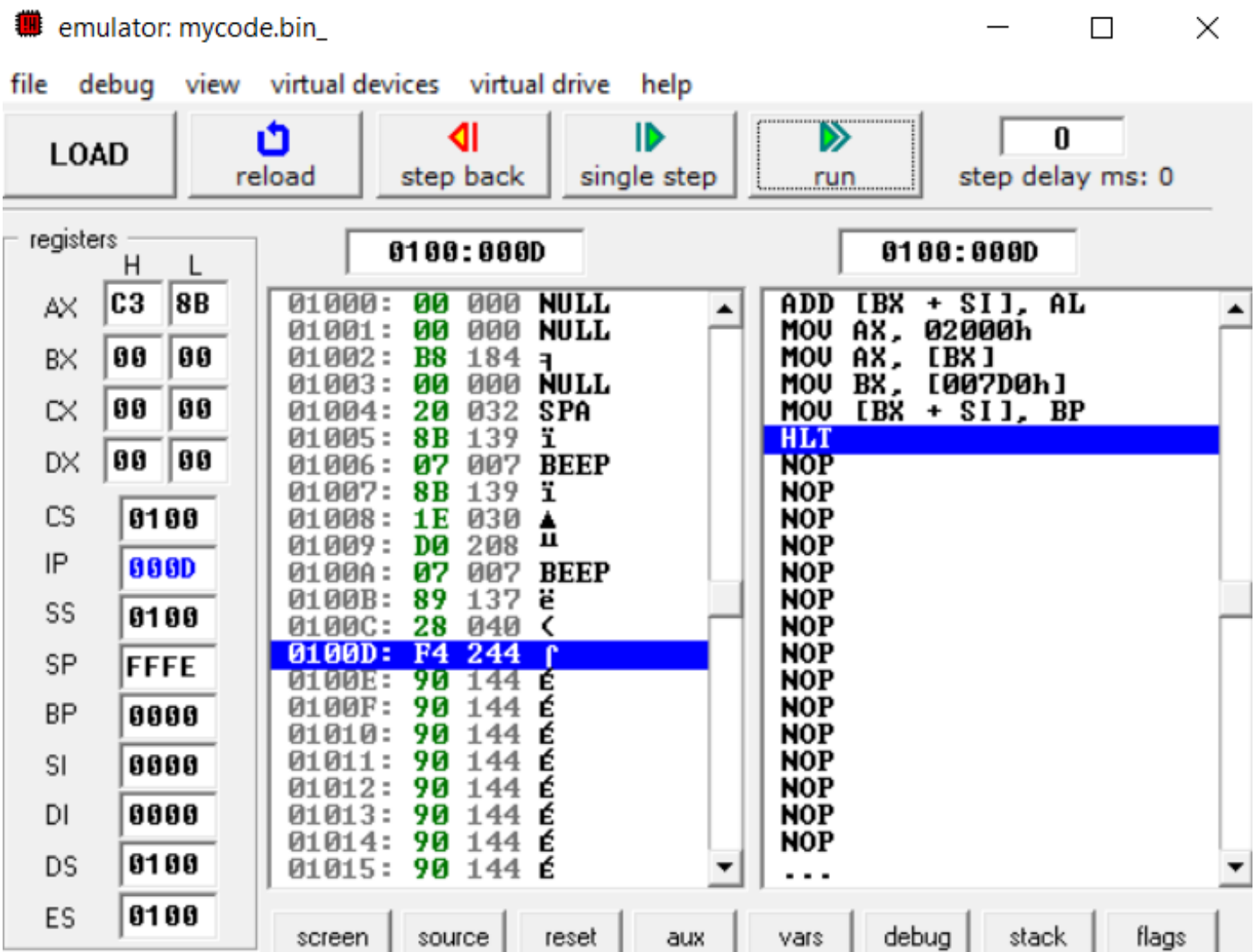
1. Write assembly language program to demonstrate different addressing mode

- Register
- Direct
- Immediate
- Register indirect
- Index

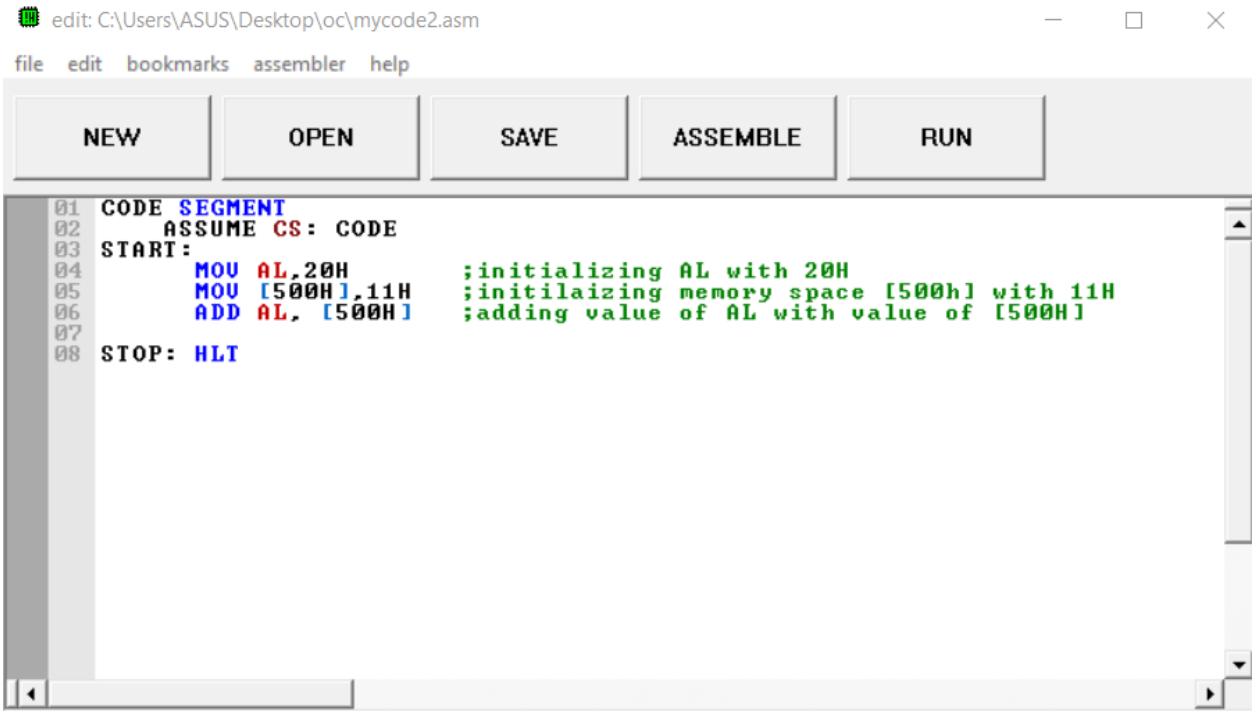


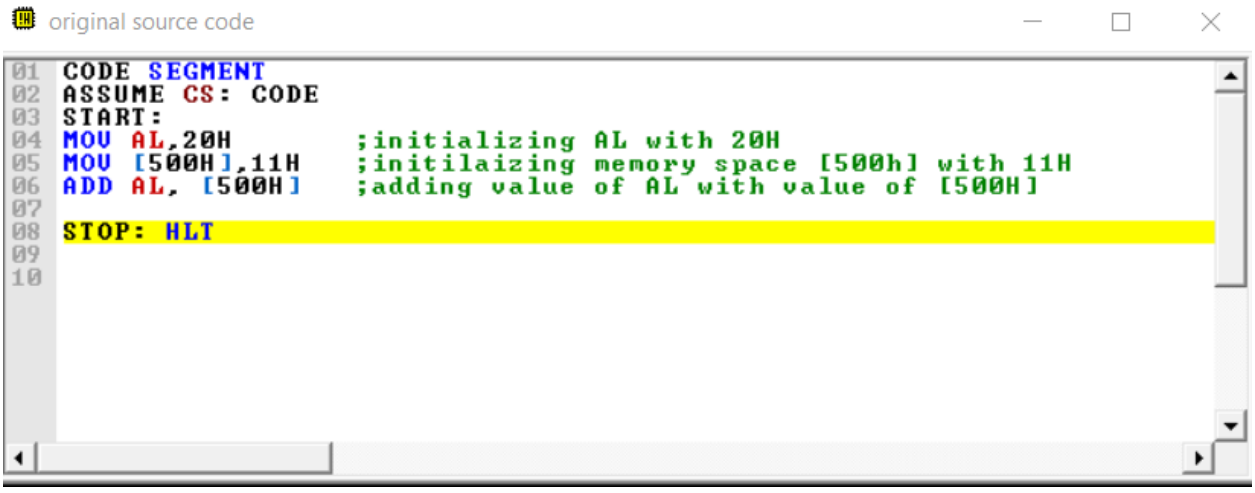
original source code

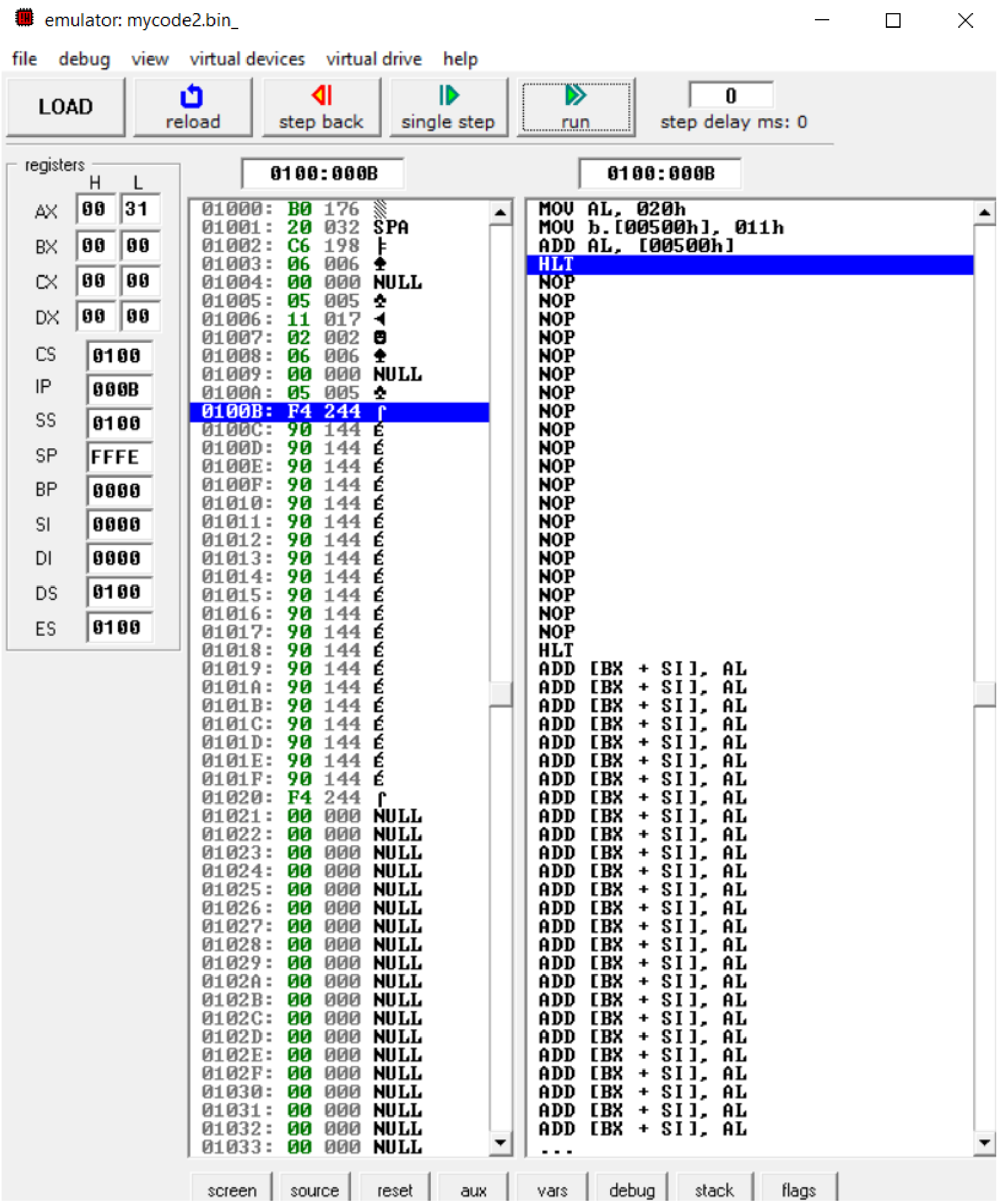
```
01 CODE SEGMENT
02 ASSUME CS: CODE
03 START:
04 MOV AL,20H         ;initializing AL with 20H
05 MOV [500H],11H     ;initilaizing memory space [500h] with 11H
06 ADD AL, [500H]     ;adding value of AL with value of [500H]
07
08 STOP: HLT
09
10
```



2. Add two 8 bit numbers (one in register and other one in memory)






emulator: mycode2.bin_
file debug view virtual devices virtual drive help
LOAD
reload
step back
single step
run
0
step delay ms: 0
registers
H L
AX 00 31
BX 00 00
CX 00 00
DX 00 00
CS 0100
IP 000B
SS 0100
SP FFFE
BP 0000
SI 0000
DI 0000
DS 0100
ES 0100
0100:000B
0100:000B
01000: B0 176
01001: 20 032 SPA
01002: C6 198
01003: 06 006
01004: 00 000 NULL
01005: 05 005
01006: 11 017
01007: 02 002
01008: 06 006
01009: 00 000 NULL
0100A: 05 005
0100B: F4 244
0100C: 90 144 É
0100D: 90 144 É
0100E: 90 144 É
0100F: 90 144 É
01010: 90 144 É
01011: 90 144 É
01012: 90 144 É
01013: 90 144 É
01014: 90 144 É
01015: 90 144 É
01016: 90 144 É
01017: 90 144 É
01018: 90 144 É
01019: 90 144 É
0101A: 90 144 É
0101B: 90 144 É
0101C: 90 144 É
0101D: 90 144 É
0101E: 90 144 É
0101F: 90 144 É
01020: F4 244
01021: 00 000 NULL
01022: 00 000 NULL
01023: 00 000 NULL
01024: 00 000 NULL
01025: 00 000 NULL
01026: 00 000 NULL
01027: 00 000 NULL
01028: 00 000 NULL
01029: 00 000 NULL
0102A: 00 000 NULL
0102B: 00 000 NULL
0102C: 00 000 NULL
0102D: 00 000 NULL
0102E: 00 000 NULL
0102F: 00 000 NULL
01030: 00 000 NULL
01031: 00 000 NULL
01032: 00 000 NULL
01033: 00 000 NULL
MOV AL, 020h
MOV b.[00500h], 011h
ADD AL, [00500h]
HLT
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
NOP
HLT
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
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ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
ADD [BX + SI], AL
...
screen
source
reset
aux
vars
debug
stack
flags

THANK YOU