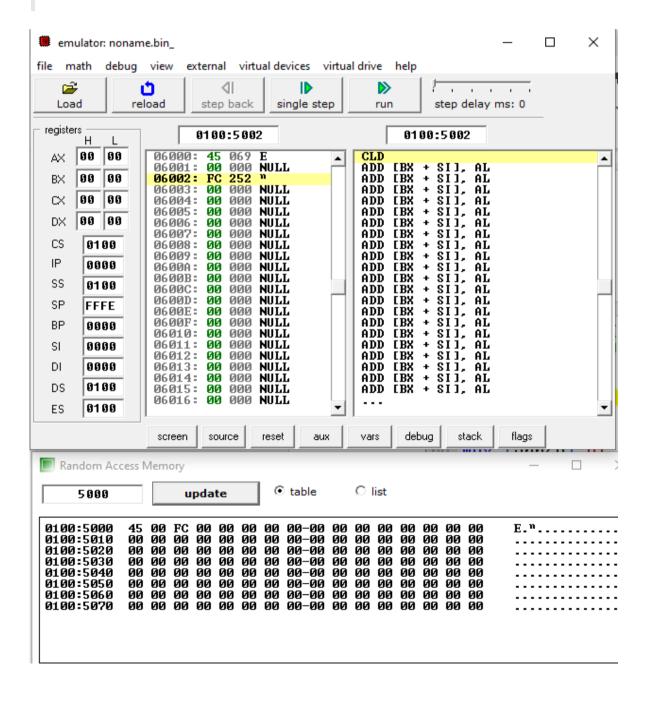
```
NAME = YASH KUMAR MISHRA
REG_NO = 2341013142
SECTION = 23412F1
       OBJECTIVE 1
; Addition of two 16-bit numbers
mov cx, 4322h
mov ax,cx
add ax, 1234h
mov [5000h] ,ax
:Substraction of two 16-bit numbers
mov ax , cx
sub ax , 1234h
mov [5002h] ,ax
;Multiplication of two 16-bit numbers
mov ax ,cx
mov bx , 1234h
mul bx
mov [5004h], ax
mov [5006h], dx
;Division of two 16-bit numbers
mov ax ,cx
mov bx,1234h
div bx
mov [5008h],ax
mov
      [50Ah] ,bx
hlt
 emulator: mycode.bin_
                                                                              X
 file math debug view external virtual devices virtual drive help
      <u>~~</u>
                                                               >
                    ů
                                                 ID
     Load
                   reload
                               step back
                                             single step
                                                                         step delay ms: 0
   registers
                                                                    0100:5000
                                 5000
          Н
                                                            PUSH SI
PUSH BP
OUT DX, AL
XOR AL, CH
PUSH ES
MOU b.[SI], 025h
INC BX
ADD [BX + SI], AI
        43 25
                                56 Ø86 V
                       06000:
    ΑX
                                                                                        ٠
                       06001:
                                    085 U
        12 34
                       06002:
                                    238
                       06003:
                                30
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    CX
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                                E8
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        |05 |9E
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                       06006:
                                C6
                                    198
                                                                       + SI], AL
                       06007:
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    CS
         0100
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                                    000 NULL
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          0100
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+ SII, AL
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                                                            ADD
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    SP
          FFFE
                                                                      + SII, AL
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ADD EBX
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    DS
          0100
          0100
                       screen
                                source
                                          reset
                                                            vars
                                                                    debug
                                                                              stack
                                                                                        flags
    ES
                                                    aux
  Random Access Memory
                                                                               table
                                                           O list
        5000
                            update
  0100:5000
0100:5010
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                 0100:5050
0100:5060
  0100:5070
```

```
NAME = YASH KUMAR MISHRA
REG_NO = 2341013142
SECTION = 23412F1
     OBJECTIVE 3
;Gray code of an 8 bit binary number
mov al ,[5000h]
mov bl,al
shr bl,01h
xor al,bl
mov [5001h],al
hlt
                                                                              ×
 memulator: noname.bin_
file math debug view external virtual devices virtual drive help
    ů
                                                    >
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               reload
                         step back
                                     single step
                                                             step delay ms: 0
   Load
                                                    run
  registers
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       Н
                  06000:
                          58 Ø88
74 116
      00
          74
                                                  MOV AL, [05000h]
   ΑX
                                                  MOU BL, AL
SHR BL, 1
                  06001:
       00
           2C
                  06002:
                          ØØ
                              000
                                  NULL
   RX
                  06003:
                              000
                                  NULL
                                                           BL
           99
                                                  MOV [05001h], AL
       ពព
   CX
                  06004:
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                  06005 :
06006 :
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06015:
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                  06016:
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   FS
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                                                                         flags
                   screen
                          source
                                  reset
                                                                stack
                                                  vars
                                          aux
 Random Access Memory

    table

                                                 ○ list
      5000
                      update
 0100:5000
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 0100:5070
              ดด
```

```
; NAME = YASH KUMAR MISHRA
; REG_NO = 2341013142
; SECTION = 23412F1
; OBJECTIVE 4
;2'S complement of an 8 bit integer
mov al,[5000h]
not al
add al,01h
mov [5002h],al
hlt
```



```
; NAME = YASH KUMAR MISHRA
; REG_NO = 2341013142
; SECTION = 23412F1
; OBJECTIVE 2

;(i)Swapping of nibble of data1
mov al , [5000h]
mov al,45h
mov bl,al
shl al,04h
shr bl,04h
add al,bl
mov [5001h] ,al

;(ii)Y = (data1 and data2) or (data1 xor data2)
mov al,[5004h]
mov bl,[5005h]
mov bl,[5005h]
mov dl,bl
xor al,bl
and dl,cl
or al,dl
mov [5006h],al

hlt
```

