SAAD UR REHMAN
19k-0218
SEC: C

LAB TASK 3

TASK 1: Do the same above program using 16b unsigned variable

WITHOUT DATA DECLARATION:

```
TITLE Add (check.asm)
INCLUDE Irvine32.inc
;.data
;var1 DW 04
;var2 DW 03 ; Saad ur Rehman(19k-0218)

;----------WITHOUT DATA DECLARATION-------
.code
main PROC
mov bx,04
add bx,03
call DumpRegs
exit
main ENDP
END main
```

```
C:\Windows\system32\cmd.exe

EAX=0096FA2C  EBX=00630007  ECX=009A1005  EDX=009A1005
ESI=009A1005  EDI=009A1005  EBP=0096F9E0  ESP=0096F9D4
EIP=009A101D  EFL=00000202  CF=0  SF=0  ZF=0  OF=0  AF=0  PF=0

Press any key to continue . . .
```

WITH DATA DECLARATION:

```
check.asm*
TITLE Add (check.asm)
INCLUDE Irvine32.inc
.data
var1 DW 04
var2 DW 03 ; Saad ur Rehman(19k-0218)
.code
main PROC
mov ax,var1
add ax,var2
call DumpRegs
exit
main ENDP
END main
```

```
C:\Windows\system32\cmd.exe

EAX=01360007  EBX=01096000  ECX=00741005  EDX=00741005
ESI=00741005  EDI=00741005  EBP=0136FF48  ESP=0136FF3C
EIP=00741022  EFL=00000202  CF=0  SF=0  ZF=0  OF=0  AF=0  PF=0

Press any key to continue . . .
```

TASK 2: Implement the program using 16bit unsigned variable

WITHOUT DATA DECLARATION:

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check.asm*

```
TITLE My First Program(check.asm)
INCLUDE Irvine32.inc
;.data
;Var1 DW 34h
;Var2 DW 25h;Saad ur Rehman(19k-0218)
;Var3 DW 03h

;--------------WITHOUT DATA DECLARATION-----
.code
main PROC
mov ax,34h
add ax,25h
mov bx,ax
sub bx,03h
call DumpRegs
exit
main ENDP
END main
```

C:\Windows\system32\cmd.exe

```
EAX=00AF0059  EBX=00970056  ECX=00C01005  EDX=00C01005
ESI=00C01005  EDI=00C01005  EBP=00AFFD34  ESP=00AFFD28
EIP=00C01024  EFL=00000206  CF=0  SF=0  ZF=0  OF=0  AF=0  PF=1

Press any key to continue . . .
```

WITH DATA DECLARATION:

check.asm*

```
TITLE My First Program(check.asm)
INCLUDE Irvine32.inc
.data
Var1 DW 34h
Var2 DW 25h;Saad ur Rehman(19k-0218)
Var3 DW 03h
.code
main PROC
mov ax,Var1
add ax,Var2
mov bx,ax
sub bx,Var3
call DumpRegs
exit
main ENDP
END main
```

C:\Windows\system32\cmd.exe

```
EAX=01100059  EBX=01230056  ECX=01001005  EDX=01001005
ESI=01001005  EDI=01001005  EBP=0110F914  ESP=0110F908
EIP=0100102C  EFL=00000206  CF=0  SF=0  ZF=0  OF=0  AF=0  PF=1

Press any key to continue . . .
```

TASK 3: Do the program by using 8bit unsigned variable.

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```
TITLE My First Program (check.asm)
INCLUDE Irvine32.inc
;initilaized 16bit unsigned integers
.data
A DB 2
B DB 1
C1 DB 2
D DB 3 ;Saad ur Rehman(19k-0218)
E DB 2
val DB ?
.code
main PROC
;val=a+b*c1+d-e
mov al,A    ;store value 2 in al
add al,B    ; add 1+2=3 in al;
mov bl,C1   ;move 2 in bl;
mul bl      ;multiply 3*2 in al
add al,D    ;add 6+3=9
sub al,E    ;sub 9-2=7
mov val,al
call DumpRegs
exit
main ENDP
```

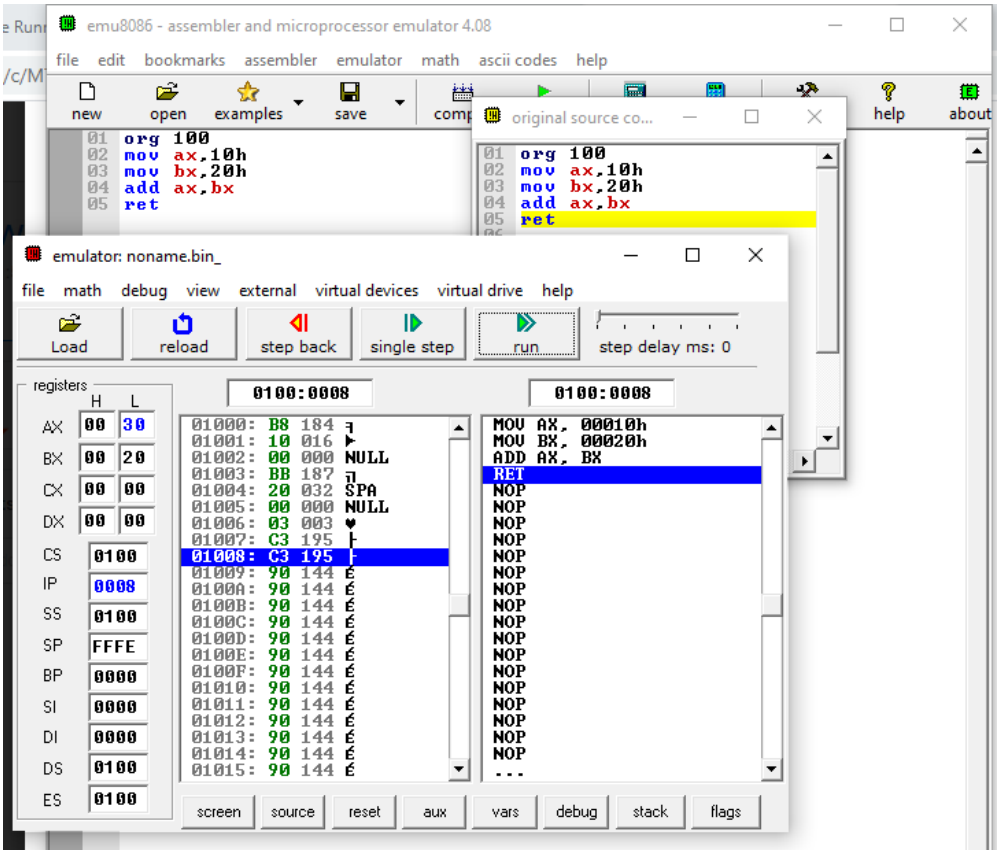
```
C:\Windows\system32\cmd.exe

  EAX=007A0007  EBX=0095A002  ECX=000D1005  EDX=000D1005
  ESI=000D1005  EDI=000D1005  EBP=007AFC04  ESP=007AFBF8
  EIP=000D1039  EFL=00000202  CF=0  SF=0  ZF=0  OF=0  AF=0  PF=0

Press any key to continue . . .
```

SCREENSHOT OF EMU8086 PROGRAMS

PROGRAM 1:



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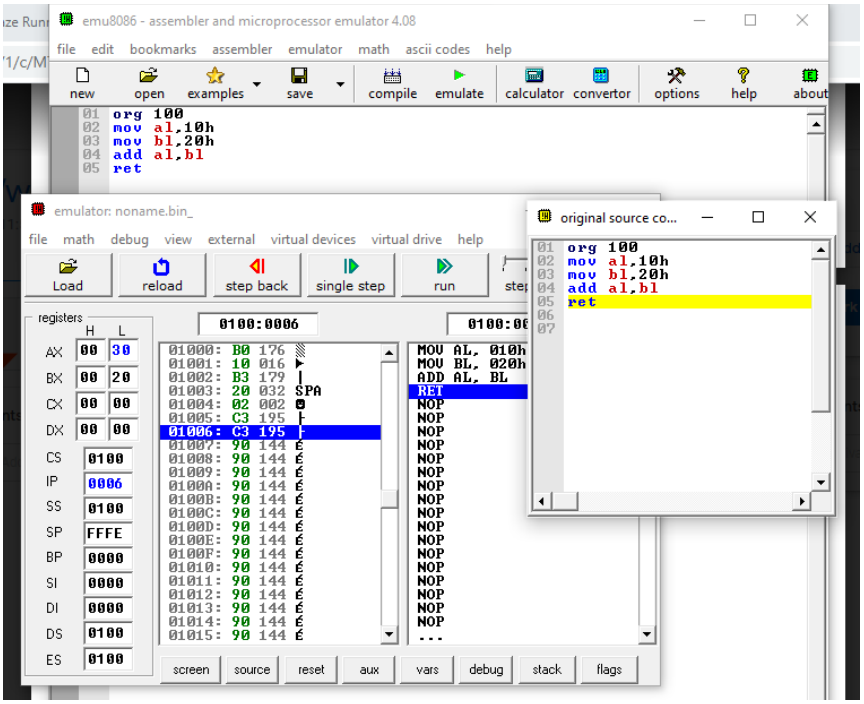
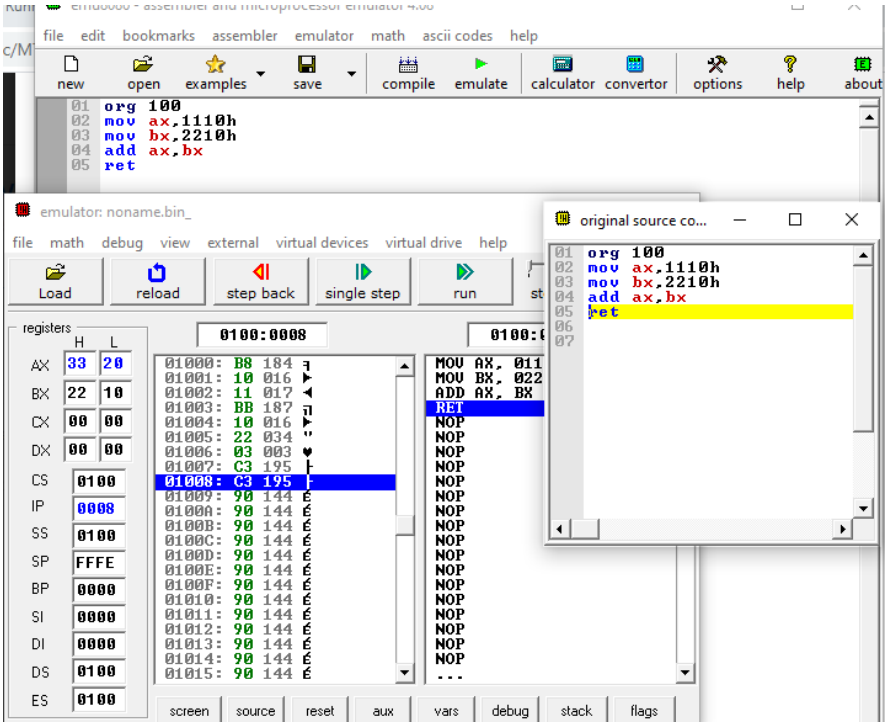
PROGRAM 2:



PROGRAM 3:



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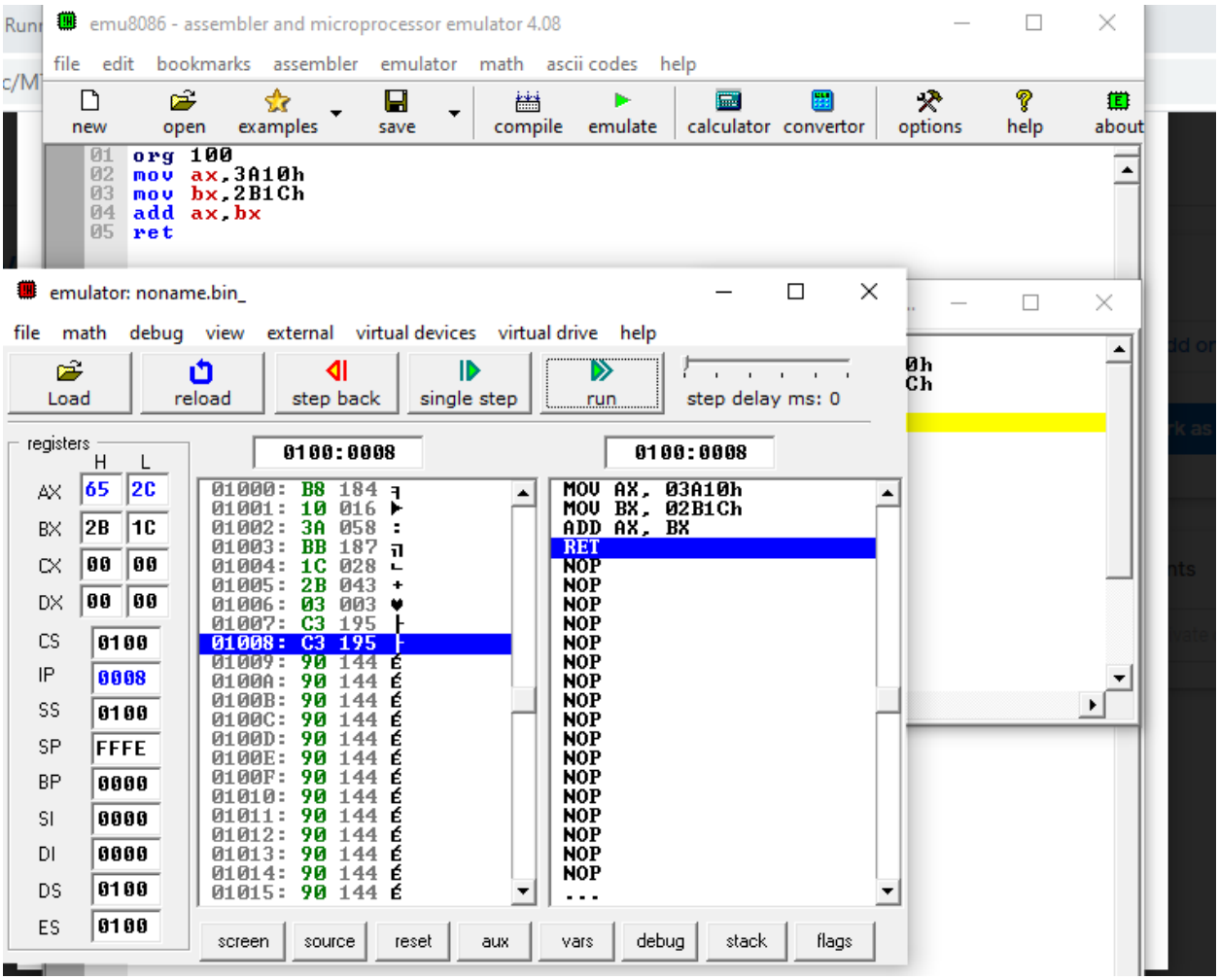
PROGRAM 4:



PROGRAM 5:

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