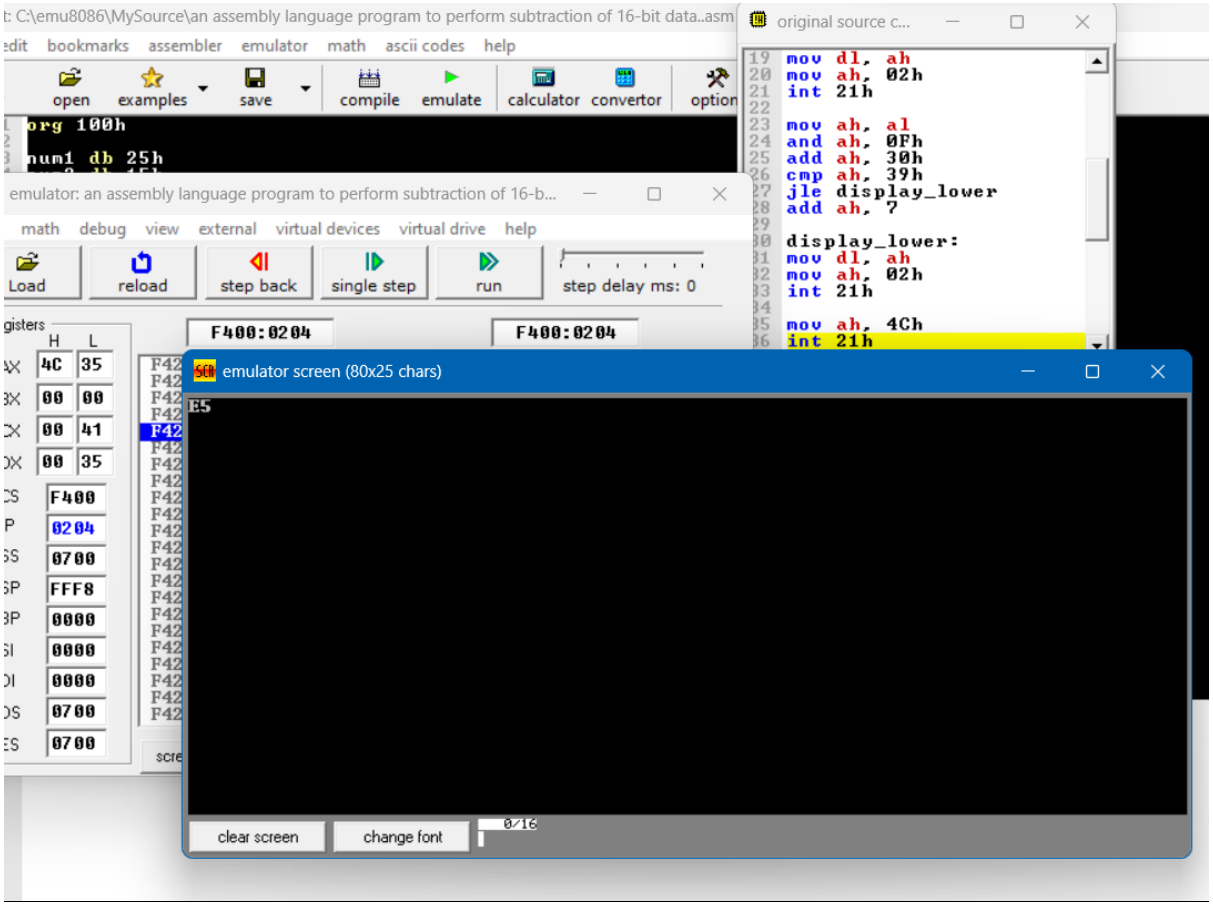
Write a program in assembly language to perform subtraction of 8-bit data.
CODE

```
org 100h

num1 db 25h
num2 db 15h

start:
   mov al, num1
   sub al, num2

   mov ah, al
   and ah, 0F0h
   shr ah, 4
   add ah, 30h
   cmp ah, 39h
   jle display_upper
   add ah, 7

display_upper:
   mov dl, ah
   mov ah, 02h
   int 21h

   mov ah, al
   and ah, 0Fh
   add ah, 30h
   cmp ah, 39h
   jle display_lower
   add ah, 7

display_lower:
   mov dl, ah
   mov ah, 02h
   int 21h

   mov ah, 4Ch
   int 21h
```

OUTPUT



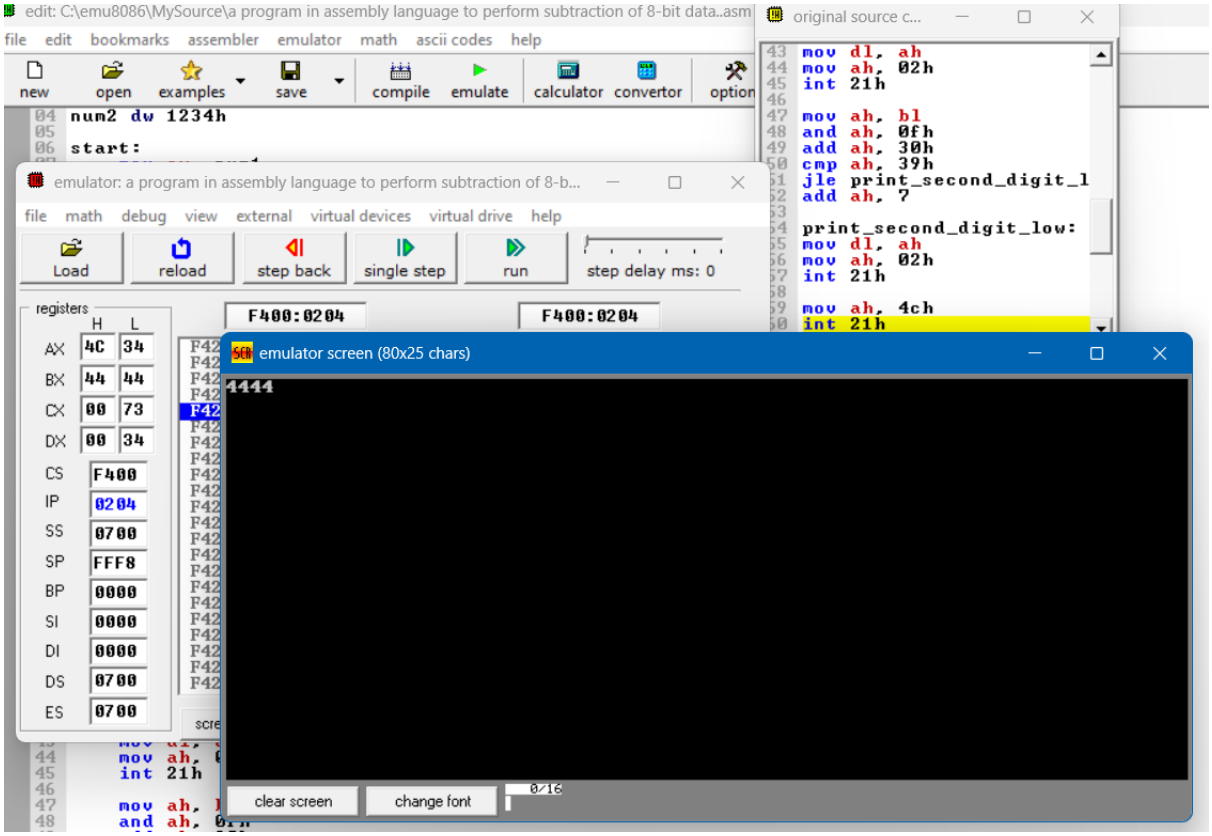
2. Write an assembly language program to perform subtraction of 16-bit data.

CODE

```
org 100h

num1 dw 5678h
num2 dw 1234h

start:
   mov ax, num1
   sub ax, num2
   mov bx, ax

   mov ah, bh
   shr ah, 4
   add ah, 30h
   cmp ah, 39h
   jle print_first_digit_high
   add ah, 7

print_first_digit_high:
   mov dl, ah
   mov ah, 02h
```

```
    int 21h

    mov ah, bh
    and ah, 0fh
    add ah, 30h
    cmp ah, 39h
    jle print_second_digit_high
    add ah, 7

print_second_digit_high:
    mov dl, ah
    mov ah, 02h
    int 21h

    mov ah, bl
    shr ah, 4
    add ah, 30h
    cmp ah, 39h
    jle print_first_digit_low
    add ah, 7

print_first_digit_low:
    mov dl, ah
    mov ah, 02h
    int 21h

    mov ah, bl
    and ah, 0fh
    add ah, 30h
    cmp ah, 39h
    jle print_second_digit_low
    add ah, 7

print_second_digit_low:
    mov dl, ah
    mov ah, 02h
    int 21h

    mov ah, 4ch
    int 21h
```

OUTPUT


edit: C:\emu8086\MySource\a program in assembly language to perform subtraction of 8-bit data..asm
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num2 dw 1234h
start:
original source c...
mov dl, ah
mov ah, 02h
int 21h
mov ah, bl
and ah, 0fh
add ah, 30h
cmp ah, 39h
jle print_second_digit_l
add ah, 7
print_second_digit_low:
mov dl, ah
mov ah, 02h
int 21h
mov ah, 4ch
int 21h
emulator: a program in assembly language to perform subtraction of 8-b...
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Load reload step back single step run step delay ms: 0
registers
H L
AX 4C 34
BX 44 44
CX 00 73
DX 00 34
CS F400
IP 0204
SS 0700
SP FFF8
BP 0000
SI 0000
DI 0000
DS 0700
ES 0700
F400:0204
F400:0204
emulator screen (80x25 chars)
4444
clear screen
change font