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|--------------------------------|--------------------------------------|----------------------------------|---------------------------------|

LAB TASK # 5

1. Submit program using conditional jump performed in today lab.

Code:

```

;PROGRAM USING CONDITIONAL JUMP_
dosseg
.model small
.stack 100h
.data
msg1 db 'number is less than $'
msg2 db 'number is not less than $'
msg3 db 'number is not greater than $'
msg4 db 'number is greater$'
msg5 db 'number is not equal$'
msg6 db 'number is equal$'
.code
main proc
mov ax, @data
mov ds, ax
mov dl, '7'
mov ah, 1
int 21h
cmp al, dl
jl l1
mov dx, offset msg2
mov ah, 9

int 21h
je l3
mov dx, offset msg5
mov ah, 9
int 21h
jg l2
mov dx, offset msg3
mov ah, 9
int 21h
mov ah, 4ch
int 21h
l3:
mov dx, offset msg6
mov ah, 9
int 21h
mov ah, 4ch
int 21h
l2:
mov dx, offset msg4
mov ah, 9
int 21h
mov ah, 4ch
int 21h
l1:
mov dx, offset msg1
mov ah, 9
int 21h
mov ah, 4ch
int 21h
main endp
end main

```

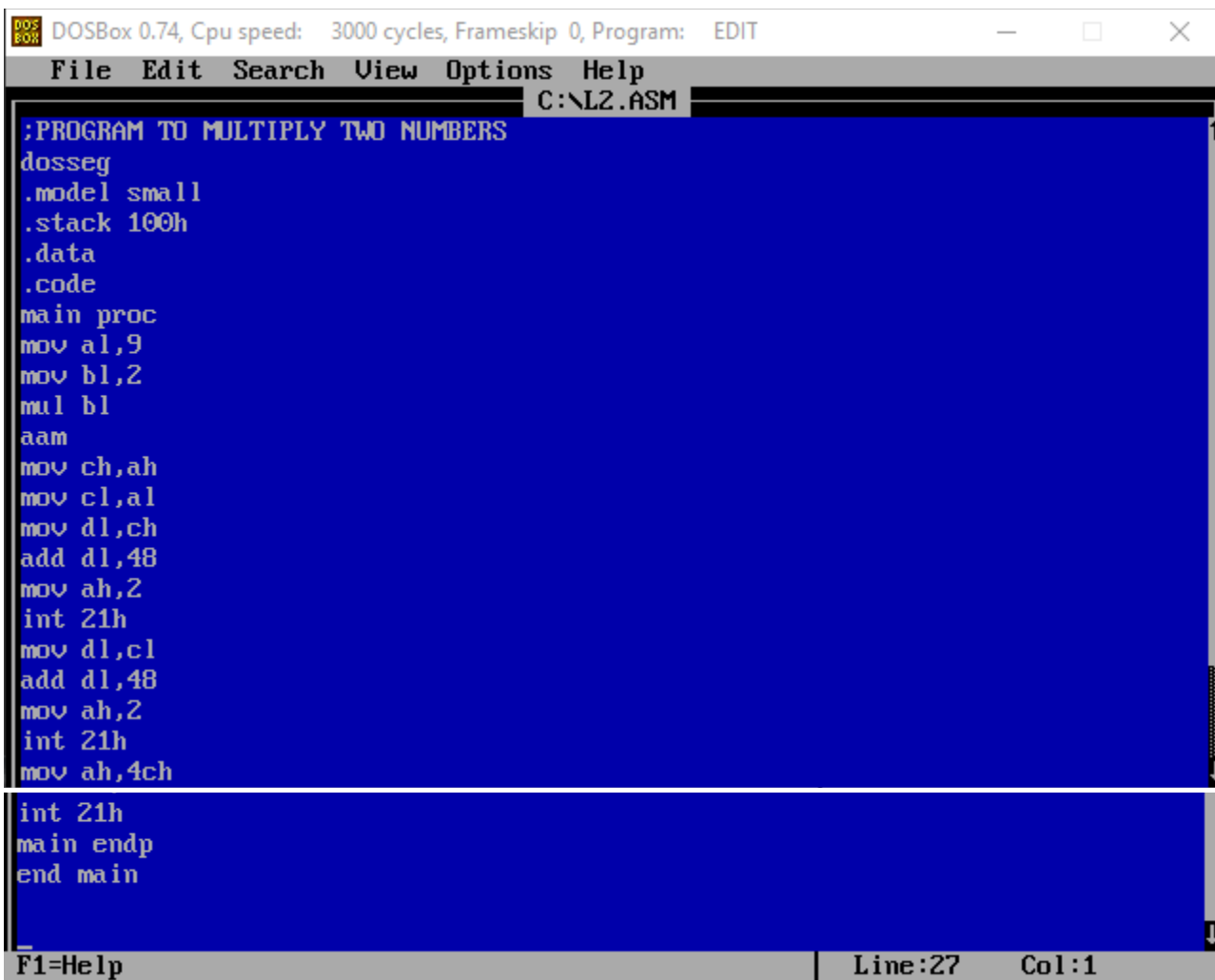
F1=Help | Line:54 Col:32

Output:

```
C:\>l1.exe
7number is not less than number is equal
C:\>l1.exe
4number is less than
C:\>l1.exe
9number is not less than number is not equalnumber is greater
C:\>_
```

2. Submit program using multiply performed in today lab.

Code:



```
;PROGRAM TO MULTIPLY TWO NUMBERS
dosseg
.model small
.stack 100h
.data
.code
main proc
mov al,9
mov bl,2
mul bl
aam
mov ch,ah
mov cl,al
mov dl,ch
add dl,48
mov ah,2
int 21h
mov dl,cl
add dl,48
mov ah,2
int 21h
mov ah,4ch

int 21h
main endp
end main
```

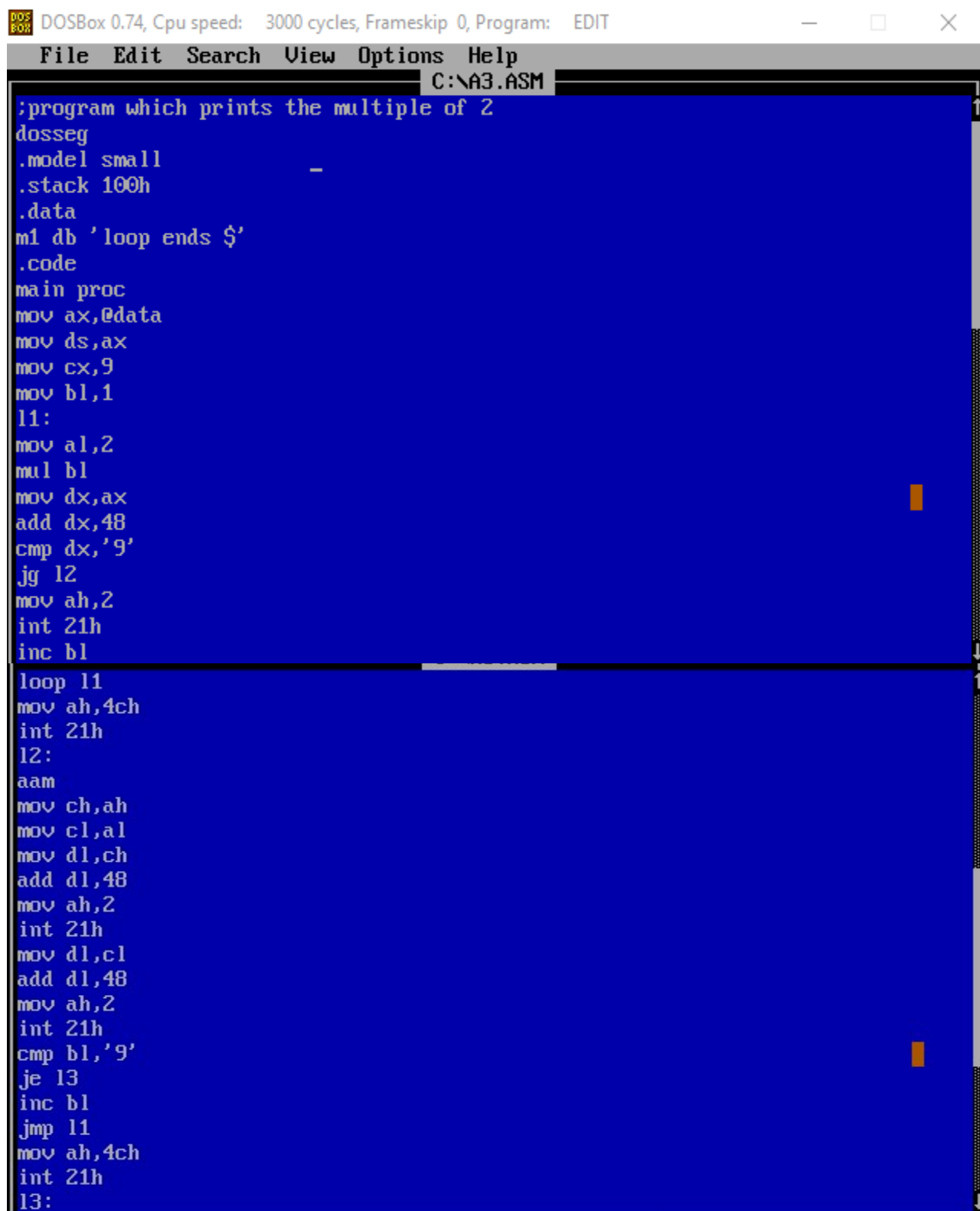
F1=Help | Line:27 Col:1

Output:

```
C:\>l2.exe
18
C:\>_
```

3. Your code using Conditional jump & multiply as discussed in class.

Code:



```
;program which prints the multiple of 2
dosseg
.model small
.stack 100h
.data
m1 db 'loop ends $'
.code
main proc
mov ax,@data
mov ds,ax
mov cx,9
mov bl,1
l1:
mov al,2
mul bl
mov dx,ax
add dx,48
cmp dx,'9'
jg l2
mov ah,2
int 21h
inc bl
loop l1
mov ah,4ch
int 21h
l2:
aam
mov ch,ah
mov cl,al
mov dl,ch
add dl,48
mov ah,2
int 21h
mov dl,cl
add dl,48
mov ah,2
int 21h
cmp bl,'9'
je l3
inc bl
jmp l1
mov ah,4ch
int 21h
l3:
```

```

cmp bl,'9'
je l3
inc bl
jmp l1
mov ah,4ch
int 21h
l3:
mov dx,10
mov ah,2
int 21h
mov dx,13
mov ah,2
int 21h
mov dx,offset m1
mov ah,9
int 21h
mov ah,4ch
int 21h

main endp
end main

```

F1=Help

Line:59

Col:25

Output:

```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
C:\>edit a3.asm\
C:\>edit a3.asm\
C:\>masm a3.asm:
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

51680 + 464864 Bytes symbol space free

0 Warning Errors
0 Severe Errors

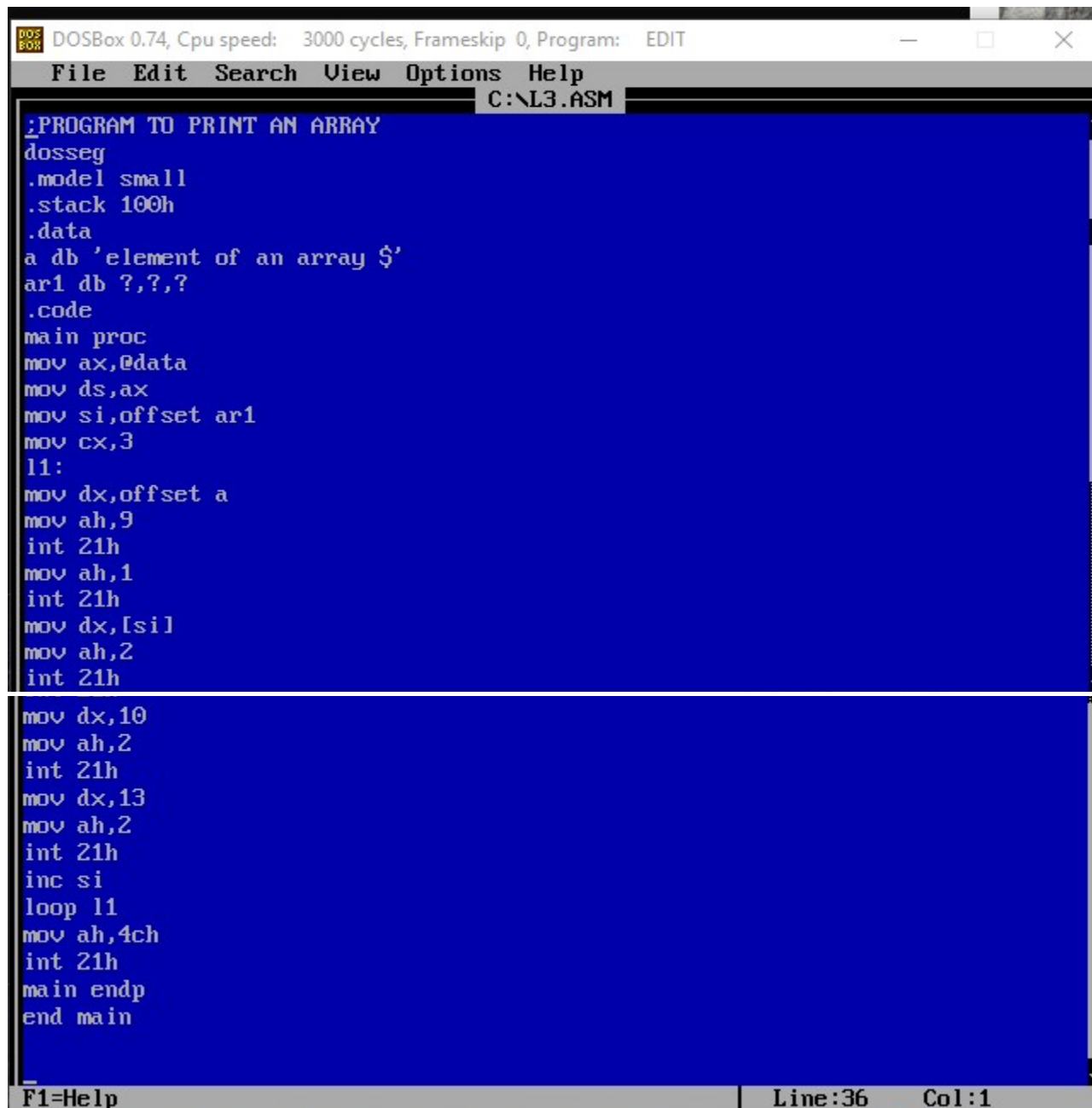
C:\>link a3.obj:
Microsoft (R) Overlay Linker Version 3.60
Copyright (C) Microsoft Corp 1983-1987. All rights reserved.

C:\>a3.exe
24681012141618202224262830323436384042444648505254565860626466687072747678808284
86889092949698:0:2:4:6:8:0:2:4
loop ends
C:\>

```

4. Program to print an Array using Loop.

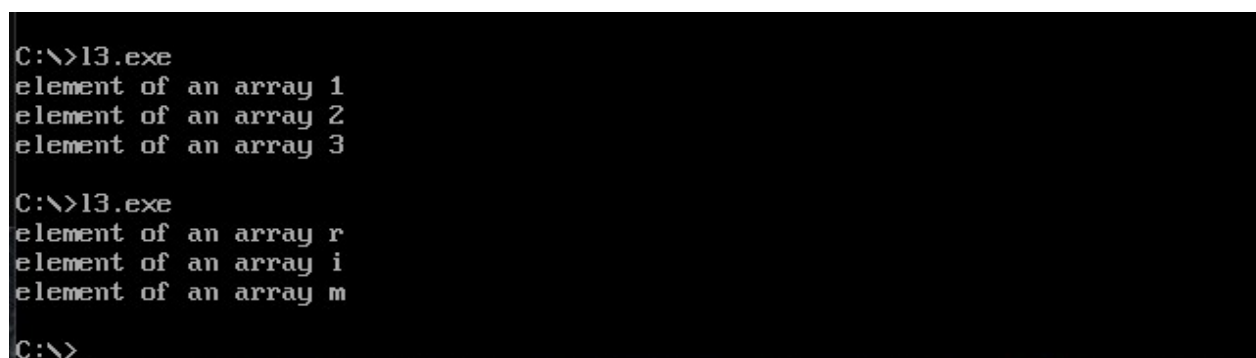
Code:



```
;PROGRAM TO PRINT AN ARRAY
dosseg
.model small
.stack 100h
.data
a db 'element of an array $'
ar1 db ?,?,?
.code
main proc
mov ax,@data
mov ds,ax
mov si,offset ar1
mov cx,3
l1:
mov dx,offset a
mov ah,9
int 21h
mov ah,1
int 21h
mov dx,[si]
mov ah,2
int 21h

mov dx,10
mov ah,2
int 21h
mov dx,13
mov ah,2
int 21h
inc si
loop l1
mov ah,4ch
int 21h
main endp
end main
```

Output:



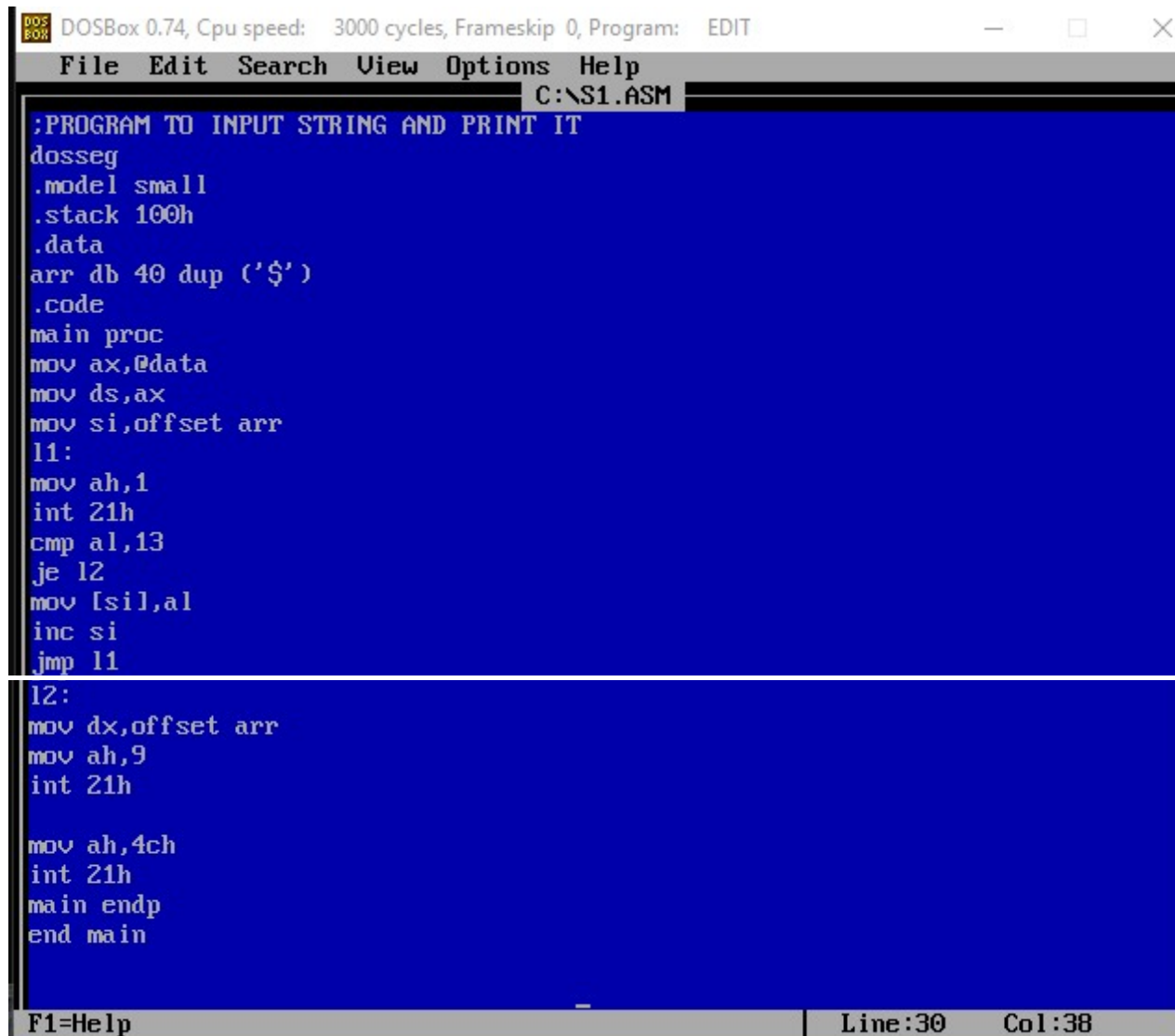
```
C:\>l3.exe
element of an array 1
element of an array 2
element of an array 3

C:\>l3.exe
element of an array r
element of an array i
element of an array m

C:\>_
```

5. Program to input string and print it.

Code:



The screenshot shows a DOSBox window titled "DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT". The window has a menu bar with "File", "Edit", "Search", "View", "Options", and "Help". The title bar indicates the file is "C:\S1.ASM". The assembly code is as follows:

```
;PROGRAM TO INPUT STRING AND PRINT IT
dosseg
.model small
.stack 100h
.data
arr db 40 dup ('$')
.code
main proc
mov ax,@data
mov ds,ax
mov si,offset arr
l1:
mov ah,1
int 21h
cmp al,13
je l2
mov [si],al
inc si
jmp l1
l2:
mov dx,offset arr
mov ah,9
int 21h

mov ah,4ch
int 21h
main endp
end main
```

The status bar at the bottom shows "F1=Help" on the left and "Line:30 Col:38" on the right.

Output:



The screenshot shows a command prompt window with the following text:

```
C:\>s1.exe
Rimsha Laraib
Rimsha Laraib
C:\>
```

6. Your code using Array & String as discussed in class.

Code:

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT
File Edit Search View Options Help
C:\A2.ASM

dosseg
.model small
.stack 100h
.data
arr1 db 100 dup('$')
msg1 db 'input is:$'
msg2 db 'output is:$'
.code
main proc
mov ax,@data
mov ds,ax
mov si,offset arr1
mov cx,4
l1:
;mov dx,offset msg1
;mov ah,9
;int 21h
mov ah,1
int 21h
cmp al,13
je pend1
mov [si],al

inc si
jmp l1
pend1:
mov dx,offset msg2
mov ah,9
int 21h
mov dx,offset arr1
mov ah,9
int 21h
mov dx,10
mov ah,2
int 21h
mov dx,13
mov ah,2
int 21h
loop l1
mov ah,4ch
int 21h
main endp
end main

F1=Help | Line:22 Col:1
```

Output:

```
C:\>a2.exe
RIMSHA LARAIB
output is:RIMSHA LARAIB
D/O M.SHARF-UZ-ZAMAN
output is:RIMSHA LARAIB D/O M.SHARF-UZ-ZAMAN
PLACE TO LIVE IS KARACHI
output is:RIMSHA LARAIB D/O M.SHARF-UZ-ZAMAN PLACE TO LIVE IS KARACHI

output is:RIMSHA LARAIB D/O M.SHARF-UZ-ZAMAN PLACE TO LIVE IS KARACHI
C:\>
```