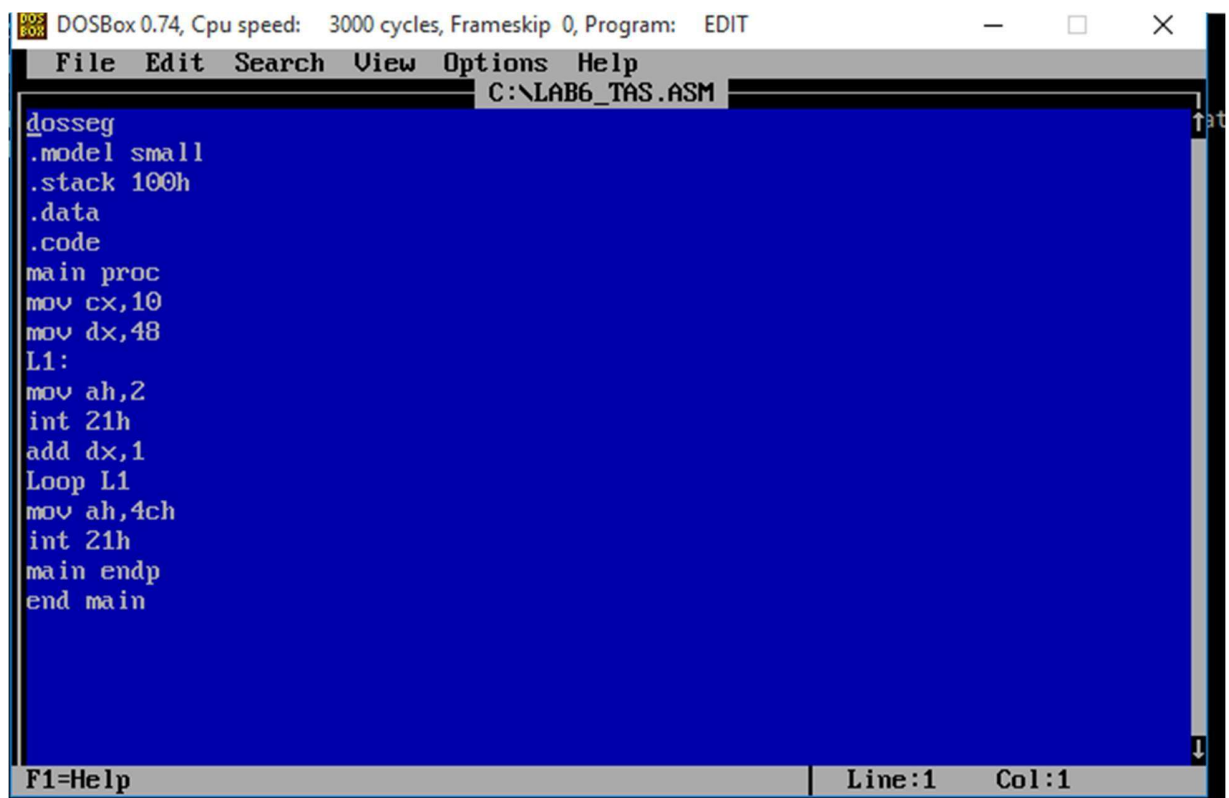


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Task 1



The screenshot shows a DOSBox 0.74 window with a menu bar (File, Edit, Search, View, Options, Help) and a title bar (DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT). The main window displays an assembly program in the EDIT editor, with the file name C:\LAB6_TAS.ASM shown in the title bar. The program code is as follows:

```
dosseg
.model small
.stack 100h
.data
.code
main proc
mov cx,10
mov dx,48
L1:
mov ah,2
int 21h
add dx,1
Loop L1
mov ah,4ch
int 21h
main endp
end main
```

The status bar at the bottom shows "F1=Help" on the left and "Line:1 Col:1" on the right.

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX

Drive C is mounted as local directory c:\mp\

Z:\>c:

C:\>edit lab6_task1.asm

C:\>masm lab6_task1.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 lab6_task1.obj;

Microsoft (R) Overlay Linker Version 3.60

Copyright (C) Microsoft Corp 1983-1987. All rights reserved.

C:\>lab6_task1.exe

0123456789

C:\>_

Task 2

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT

File Edit Search View Options Help

C:\LAB6_TAS.ASM

```
dosseg
.model small
.stack 100h
.data
.code
main proc
mov cx,10
mov dx,57
L1:
mov ah,2
int 21h
sub dx,1
loop L1
mov ah,4ch
int 21h
main endp
end main
```

F1=Help Line:1 Col:1

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX

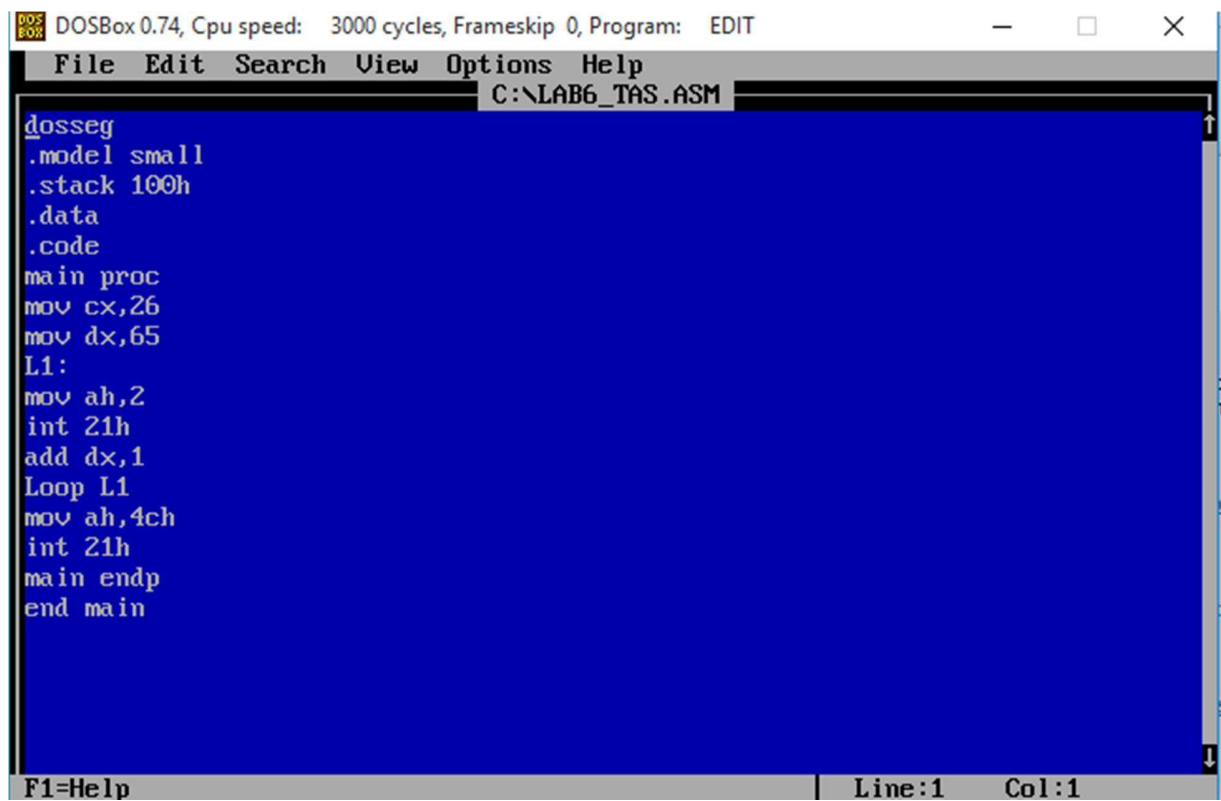
```
C:\>lab6_task1.exe
0123456789
C:\>edit lab6_task1.asm
C:\>edit lab6_task2.asm
C:\>masm lab6_task2.asm;
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

51680 + 464864 Bytes symbol space free

0 Warning Errors
0 Severe Errors
C:\>link lab6_task2.obj;
Microsoft (R) Overlay Linker Version 3.60
Copyright (C) Microsoft Corp 1983-1987. All rights reserved.

C:\> lab6_task2.exe
9876543210
C:\>
```

Task 3



The screenshot shows a DOSBox window with the following details:

- Top status bar: DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT
- Menu bar: File Edit Search View Options Help
- Tab bar: C:\LAB6_TAS.ASM
- Editor area (blue background):

```
dosseg
.model small
.stack 100h
.data
.code
main proc
mov cx,26
mov dx,65
L1:
mov ah,2
int 21h
add dx,1
Loop L1
mov ah,4ch
int 21h
main endp
end main
```
- Bottom status bar: F1=Help | Line:1 Col:1

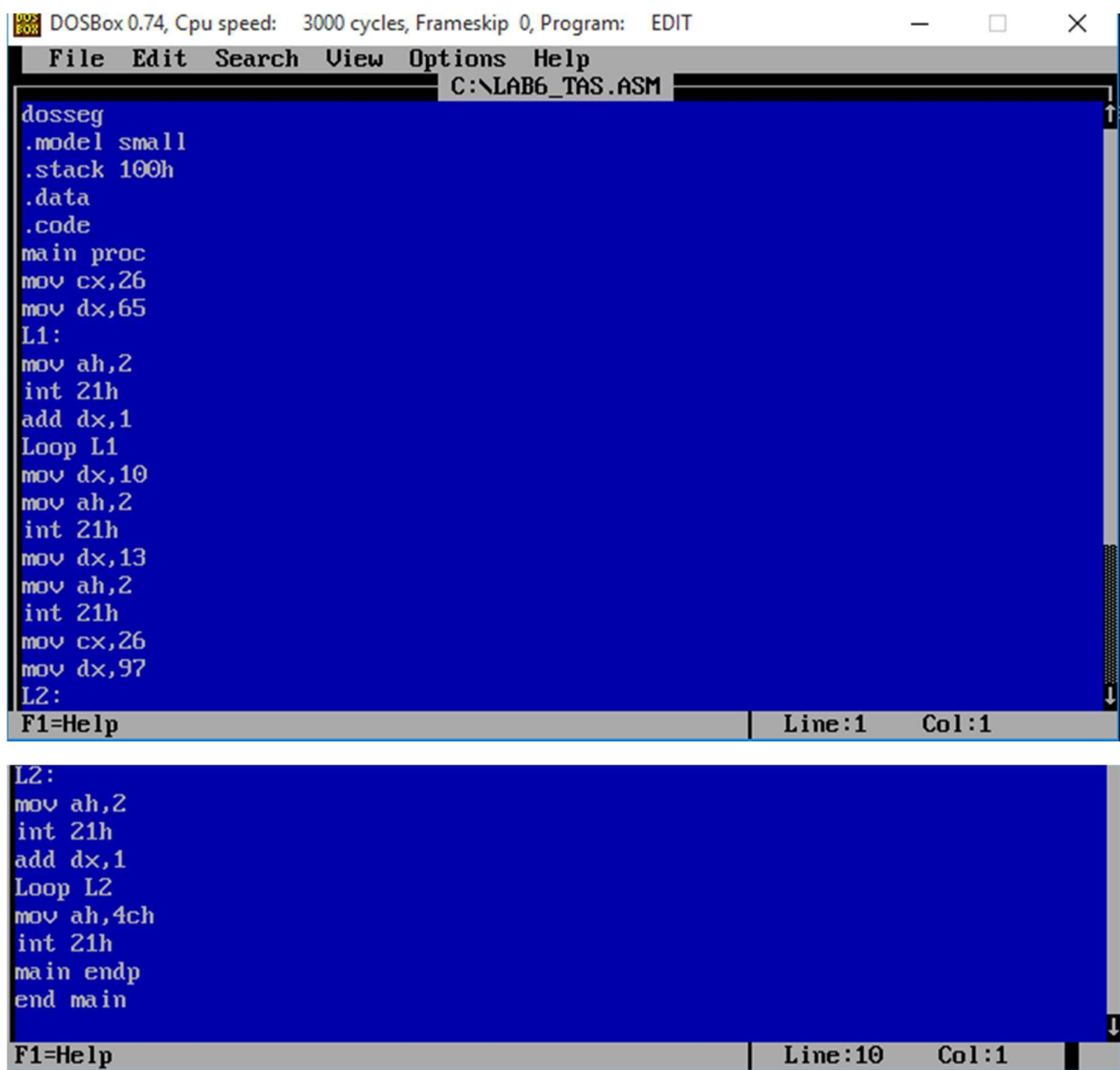
```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
C:\> lab6_task2.exe
9876543210
C:\>edit lab6_task2.asm
C:\>edit lab6_task3.asm
C:\>masm lab6_task3.asm;
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

51680 + 464864 Bytes symbol space free

0 Warning Errors
0 Severe Errors
C:\>link lab6_task3.obj;
Microsoft (R) Overlay Linker Version 3.60
Copyright (C) Microsoft Corp 1983-1987. All rights reserved.

C:\>lab6_task3.exe
ABCDEFGHIJKLMNOPQRSTUVWXYZ
C:\>_
```

Task 4



DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT

File Edit Search View Options Help

C:\LAB6_TAS.ASM

```
dosseg
.model small
.stack 100h
.data
.code
main proc
mov cx,26
mov dx,65
L1:
mov ah,2
int 21h
add dx,1
Loop L1
mov dx,10
mov ah,2
int 21h
mov dx,13
mov ah,2
int 21h
mov cx,26
mov dx,97
L2:
```

F1=Help | Line:1 Col:1

```
L2:
mov ah,2
int 21h
add dx,1
Loop L2
mov ah,4ch
int 21h
main endp
end main
```

F1=Help | Line:10 Col:1

Task 5

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT

File Edit Search View Options Help

C:\LAB6_TAS.ASM

```
dosseg
.model small
.stack 100h
.data
msg1 db 'Number is even$'
msg2 db 'Number is odd$'
.code
main proc
mov ax,@data
mov ds,ax
mov ah,1
int 21h
sub al,48
mov ah,0
mov bl,2
div bl
cmp ah,0
je is_even
is_odd:
mov dx,offset msg2
mov ah,9
int 21h
F1=Help | Line:1 Col:1
```

```
mov ah,4ch
int 21h
is_even:
mov dx,offset msg1
mov ah,9
int 21h
mov ah,4ch
int 21h

main endp
end main
F1=Help | Line:14 Col:1
```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX

51640 + 464904 Bytes symbol space free

0 Warning Errors

0 Severe Errors

C:\>link lab6_task5.obj:

Microsoft (R) Overlay Linker Version 3.60

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C:\>lab6_task5.exe

2Number is even

C:\>lab6_task5.exe

1Number is odd

C:\>

C:\>lab6_task5.exe

0Number is even

C:\>lab6_task5.exe

4Number is even

C:\>lab6_task5.exe

3Number is odd

C:\>

Task 6

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT

File Edit Search View Options Help

C:\LAB6_TAS.ASM

```
dosseg
.model small
.stack 100h
.data
.code
main proc
mov cx,10
mov dx,48
L1:
mov ah,2
int 21h
add dx,1
Loop L1
mov dx,10
mov ah,2
int 21h
mov dx,13
mov ah,2
int 21h
mov cx,5
mov dx,48
L2:
```

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT

File Edit Search View Options Help

C:\LAB6_TAS.ASM

```
mov dx,48
L2:
mov ah,2
int 21h
add dx,2
Loop L2
mov dx,10
mov ah,2
int 21h
mov dx,13
mov ah,2
int 21h
mov cx,5
mov dx,49
L3:
mov ah,2
int 21h
add dx,2
Loop L3
mov ah,4ch
int 21h
main endp
```

F1=Help | Line:21 Col:1

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
13
C:\>edit lab6_task6.asm

C:\>masm lab6_task6.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 lab6_task6.obj;

Microsoft (R) Overlay Linker Version 3.60
Copyright (C) Microsoft Corp 1983-1987. All rights reserved.

C:\>lab6_task6.exe
0123456789
02468
13579
C:\>
```

Task 7

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Progra...
File Edit Search View Options Help
C:\LAB6_TAS.ASM
dosseg
.model small
.stack 100h
.data
msg1 db 'we find even and odd numbers$'
msg_even db 'Even$'
msg_odd db 'odd$'
.code
main proc
mov ax,@data
mov ds,ax
mov dx,offset msg1
mov ah,9
int 21h
mov dx,10
mov ah,2
int 21h
mov dx,13
mov ah,2
int 21h
mov ah,1
int 21h
F1=Help
Line:1 Col:1
```

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Progra...
File Edit Search View Options Help
C:\LAB6_TASK.ASM
int 21h
mov ah,1
int 21h
sub al,'0'
mov bl,2
div bl
cmp ah,0
jne oddcase
evencase:
mov ah,9
lea dx,msg_even
int 21h
jmp done
oddcase:
mov ah,9
lea dx,msg_odd
int 21h
done:
mov ah,4ch
int 21h
main endp
end main
F1=Help | Line:27 Col:78
```

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Progra...
C:\>edit lab6_task7.asm
C:\>masm lab6_task7.asm:
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

51640 + 464904 Bytes symbol space free

0 Warning Errors
0 Severe Errors
C:\>link lab6_task7.obj:
Microsoft (R) Overlay Linker Version 3.60
Copyright (C) Microsoft Corp 1983-1987. All rights reserved.

C:\>lab6_task7.exe
we find even and odd numbers
2Even
C:\>lab6_task7.exe
we find even and odd numbers
3odd
C:\>
```