Lab #14

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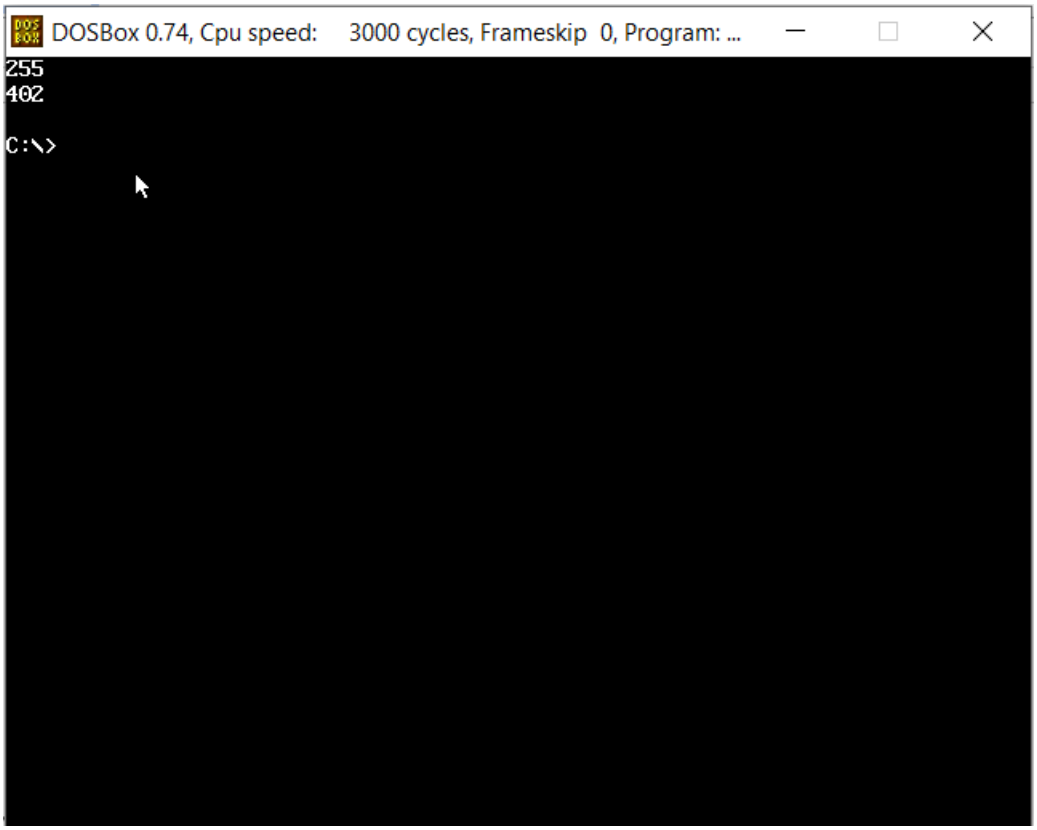
Section B

Task1

```
.model small
.stack 100h
.data
       number dw 0
       regdx dw 0
       count db 0
       newline db 10,13,'$'
.code

displaynumbers proc
 mov cx,0
 mov dx,0
 mov count,0

 l1:
 mov ax,number
 mov bl,10
 div bl
 inc count
 mov dl,ah
 mov dh,0
 push dx
 mov ah,0
 mov number,ax
 cmp number,cx
 jne l1

 diplay:
 pop dx
 add dl,48
 mov ah,02h
 int 21h
 dec count
 cmp count,ch
 jne diplay
 mov dx,offset newline
 mov ah,09h
 int 21h

 ret
displaynumbers endp

main proc
 mov ax,@data
 mov ds,ax
 mov ah,0
 mov al,12h
```

```
 int 10h

 mov ax,1
 int 33h

 mov ax,3
 int 31h

 mov number,cx
 mov regdx,dx

 call displaynumbers

 mov dx,regdx
 mov number,dx

 call displaynumbers

 mov ah,4ch
 int 21h

main endp
end main
```

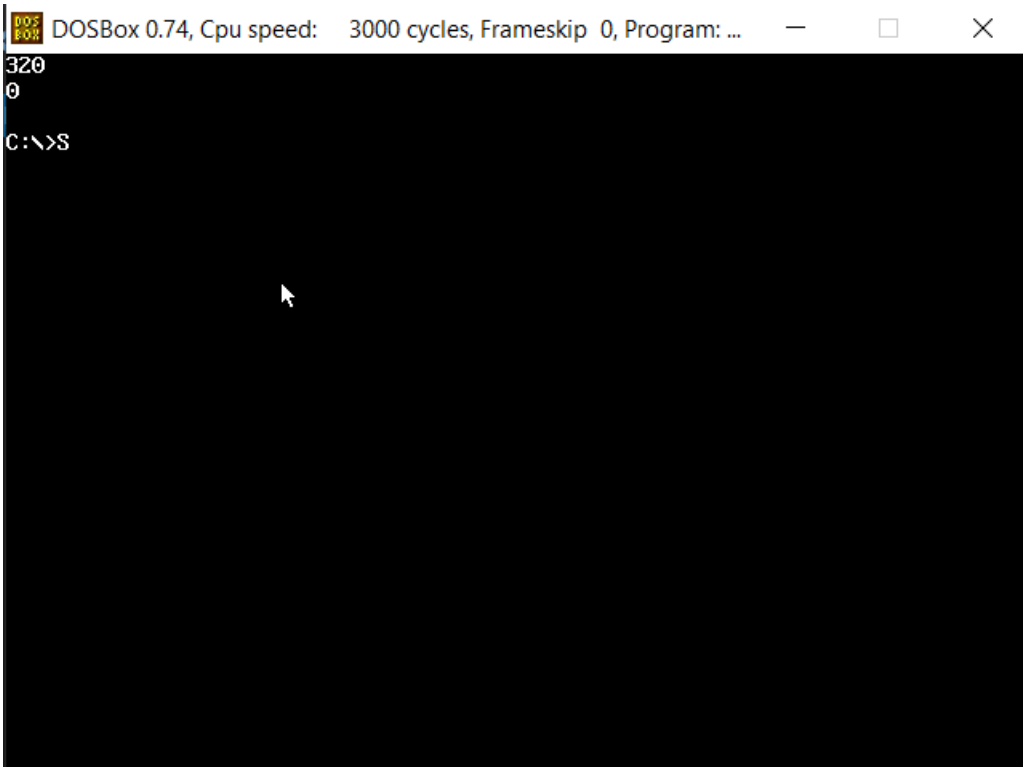


Task2

```
.model small

.stack 100h

.data

number dw 0

regdx dw 0

count db 0

newline db 10,13,'$'


.code

main proc

    mov ax,@data

    mov ds,ax

    mov ah,0

    mov al,12h

    int 10h



    mov ax,1

    int 33h


    mov ax,3 ; read mouse

    int 33h

    mov number, cx ;x-axis

    mov regdx,dx ;y-axis


    call display_number

    mov dx,regdx

    mov ax,3 ; read mouse
```

```
    int 33h
    mov number,bx
    call display_number
    mov ah,4ch
    int 21h
main endp

display_number proc
    mov cx,0
    mov dx,0
    mov count, 0
    L1:
    mov ax,number
    mov bl,10
    div bl
    inc count
    mov dl,ah
    mov dh,0
    push dx
    mov ah,0
    mov number,ax

    cmp number,cx
    jne L1
    display:
    pop dx
    add dl,48
    mov ah,02
    int 21h
```

```
    dec count
    cmp count, 0
    jne display

    mov dx,offset newline
    mov ah,09
    int 21h
    ret
display_number endp

end main
```



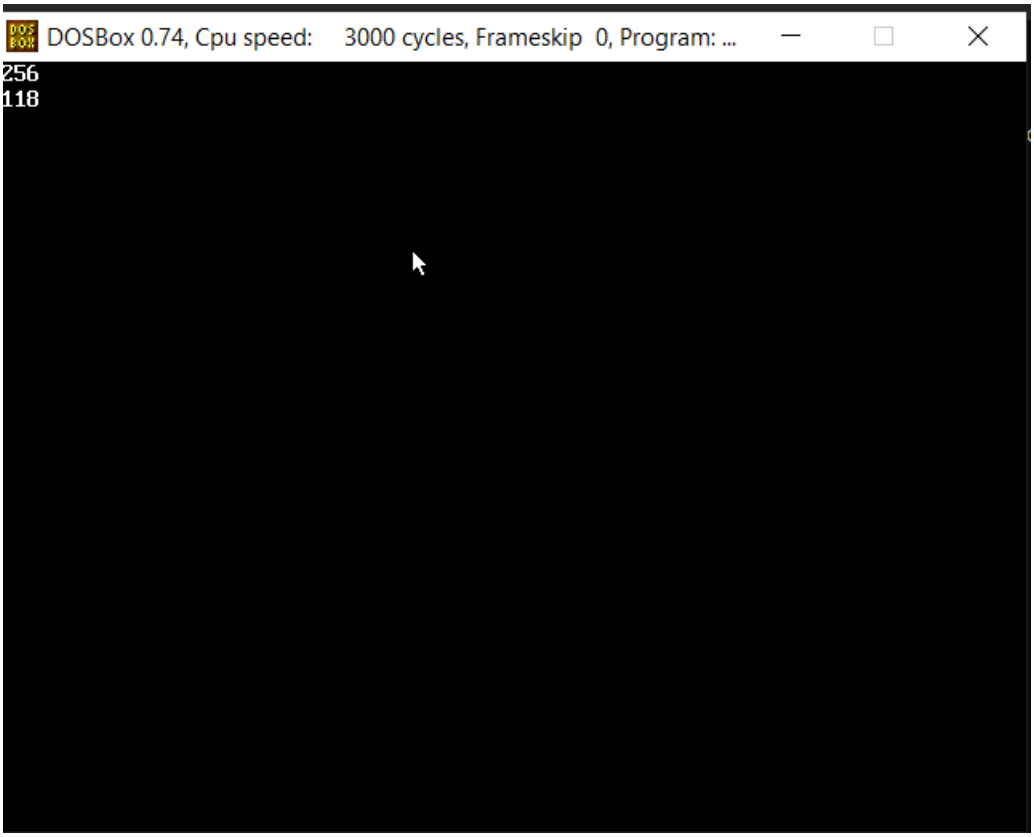
Task3

```
.model small
.stack 100h
```

```
.data
    number dw 0
    regdx dw 0
    count db 0
    newline db 10,13,'$'
    blreg db 0

.code
    main proc
    mov ax,@data
    mov ds,ax
    mov ah,0
    mov al,12h
    int 10h
    mov ax,1
    int 33h

    again:

    mov ax,3 ; mouse reading
    int 33h
    mov number, cx ;x-axis
    mov regdx,dx ;y-axis

    call display_number
    mov dx,regdx
    mov ax,3 ; read mouse
    int 33h
    mov number,dx
```

```
    call display_number

    mov cx, 0h
    mov dx, 0fffh
    mov ah,86h
    int 15h

    mov ah,0
    mov al,12h
    int 10h
    mov ax,1
    int 33h
    cmp blreg,1
    jne again


    mov ah,4ch
    int 21h
main endp

display_number proc
    mov cx,0
    mov dx,0
    mov count, 0
    L1:
    mov ax,number
    mov bl,10
    div bl
    inc count
```

```
    mov dl,ah

    mov dh,0

    push dx

    mov ah,0

    mov number,ax



    cmp number,cx

    jne L1

    display:

    pop dx

    add dl,48

    mov ah,02

    int 21h

    dec count
    cmp count, 0
    jne display


    mov dx,offset newline
    mov ah,09
    int 21h

    ret

display_number endp
end main
```



Task4

```
.model small
.stack 100h
.data

.code
main proc
mov ax,@data
mov ds,ax

mov ah,00h
mov al,13
int 10h

again:

mov ax,1
int 33h
mov ax,3
int 33h


mov ah,0ch
mov al,0fh
mov bh, 0h
int 10h
```

```
mov ax,04
int 33h
mov ax,5
mov bx,0
cmp ax,1
jne again


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