S.R.POOJA
IBM19CS135

```
. model   small
. data
n  dw  4
r  dw  2
ncr  dw  0
. code
mov  ax, @data
mov  ds,  ax
mov  ax, n
mov  bx, r
call  ncrpro
call  disp
jmp  final
ncrpro       proc  near
          cmp  ax, bx      ; r=n
          je  res1
          cmp  bx, 0       ; r=0
          je  res1
          cmp  bx, 1       ; r=1
          je  resn
          dec  ax          ; r=n-1
          cmp  bx, ax
          je  incr
          push  ax
          push  bx
          call  ncrpro
pop  bx
pop  ax
dec  bx
push  ax
push  bx
call  ncrpro
pop  bx
pop  ax
```

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```
ret

incr : inc ncr
regn : add ncr, ax
ret

ncrpro endp
disp proc near
mov bx, ncr
add bx, 3030h
mov dl, bh
mov ah, 02h
int 21h
mov dl, bl
mov ah, 02h
int 21h
ret

disp endp
final:    mov ah, 4ch
          int 21h
          end
```

```
.model small
.data
n dw 4
r dw 2
ncr dw 0

.code
mov ax,@data
mov ds,ax

mov ax,n
mov bx,r
call ncrpro
call disp
jmp final

ncrpro   proc near
         cmp ax,bx  ;r=n
         je res1
         cmp bx,0   ;r=0
         je res1
         cmp bx,1   ;r=1
```

C:\MASM\NCR.ASM

```
        cmp bx,1      ;r=1
        je resn
        dec ax        ;r=n-1
        cmp bx,ax
        je incr
        push ax
        push bx
        call ncrpro
pop bx
pop ax
dec bx
push ax
push bx
call ncrpro
pop bx
pop ax
ret

res1:inc ncr
ret

incr:inc ncr
```

```
incr:inc ncr
resn:add ncr,ax
ret
ncrpro endp

disp proc near
  mov bx,ncr
  add bx,3030h
  mov  dl,bh
  mov ah,02h
  int 21h
  mov dl,bl
  mov ah,02h
  int 21h
  ret
  disp endp

final: mov ah,4ch
       int 21h
       end
```

```
C:\>CD MASM

C:\MASM>EDIT NCR.ASM

C:\MASM>MASM NCR ;;
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987.  All rights reserved.


  51758 + 464786 Bytes symbol space free

      0 Warning Errors
      0 Severe  Errors

C:\MASM>LINK NCR ;;

Microsoft (R) Overlay Linker  Version 3.60
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LINK : warning L4021: no stack segment

C:\MASM>NCR
06
C:\MASM>_
```