23/11/2020

Lab -program 6

Compute nC_r using recursive procedure

- model small
- data

  n db 05h
  r db 02h
  ncr val dw 01h dup(?)

- code

Start : mov ax, @data
              mov ds, ax

                 mov cl, r   ; cl=02h →value of r
                 mov ch, n   ; ch=05 →value of n
                 xor ax, ax   ; clear contents of ax
                 call ncr   register →mov ax,00h
                 mov [ncr val], ax
                 mov ah, 4ch
                 int 21h

ncr proc near
        cmp ch, cl
        je equal.   ; n==r →set 1
        jc finish   ; n<r then set zero
        cmp cl, 01h   ; r==1 then set n
        je next
cmp cl, 00h je equal   ; r=20 then set 1
        dec ch   ; ch±04 = n-1
        push cx   ; cx =04 cl=02
        call ncr
        pop cx
        dec cl
        call ncr
        ret

```
next: xor bx,bx
        mov bl,ch        ; bl=05 → Value of n
        add ax,bx        ; (00+05=05 stored as
  ret                      result which is the value
                                                    of n)
  equal: add ax,01h ; ax=01h
  finish: ret
  ncr endp
  end start
```