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Thread: [Basic tutorial of Factorial in assembly M68000](#)

drrrrrr - November 6, 2017, 3:46 pm

I everyone, i post this simply code written by myself. It contains some comments.

I wish someone can appreciate it.

P.S. : sorry for my bad english ?

Code START:

```
main:      sub.l #8, a7      #we must reserve some space in the stack for the recursive
call;we'll reserve 32 bit
           move.l num, d0    #we move the num from the memory to register d0
           move.l #1, d2     #we copy 1 in d2

           bra Fatt         #branch to the label Fatt

Fatt_recursive:  sub.l #4, a7    #reserving 32 bit in the stack(a7)
                move.l d0, (a7)  #we move d0 in the stack zone pointed by register a7
                sub.l #1, d0     #we decrease d0
                bsr fatt        #branch subroutine

                move.l (a7)+,d1   #this two lines are the most important we move the content of
the stack in position a7 (with post increase) and we
                mulu d1, d2      #put it in d1 and we mul (unsigned) d1 and d2, the result at last
we'll be written in d1 register

                rts

Fatt:         cmp #1, d0       #we compare d0 with 1 if d0 become 1 we'll start with the
recursive call
                bgt Fatt_recursive #d0 is greater than 1 so we branch to the label fatt_recursive

                rts

SIMHALT      ; halt simulator

num: dc.l 6
ris: dc.l 0

END  START   ; last line of source
```