

Loac

Problema – 01

```
main:
    li a0, N          # ADD AQUI "N" O VALOR QUE DESEJA CALCULAR O FATORIAL
    li a1, 1

factorial_loop:
    beqz a0, factorial_end
    mul a1, a1, a0
    addi a0, a0, -1
    j factorial_loop

factorial_end:
    nop
```

EXECUÇÃO DO FATORIAL DE 3

Run Step Prev Reset Dump

Machine Code	Basic Code	Original Code
0x00300513	addi x10 x0 3	li a0, 3 # ADD AQUI "N" O VALOR QUE DESEJA CALCULAR O FATORIAL
0x00100593	addi x11 x0 1	li a1, 1
0x00050863	beq x10 x0 16	beqz a0, factorial_end
0x02a585b3	mul x11 x11 x10	mul a1, a1, a0
0xffff50513	addi x10 x10 -1	addi a0, a0, -1
0xfff5ff06f	jai x0 -12	j factorial_loop
0x00000013	addi x0 x0 0	nop

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console output

Registers Memory

zero	0
ra (x1)	0
sp (x2)	2147483632
gp (x3)	268435456
tp (x4)	0
t0 (x5)	0
t1 (x6)	0
t2 (x7)	0
s0 (x8)	0
s1 (x9)	0
a0 (x10)	0
a1 (x11)	0
a2 (x12)	0
a3 (x13)	0
a4 (x14)	0
a5 (x15)	0
a6 (x16)	0

Registers Memory

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gp (x3)	268435456
tp (x4)	0
t0 (x5)	0
t1 (x6)	0
t2 (x7)	0
s0 (x8)	0
s1 (x9)	0
a0 (x10)	3
a1 (x11)	0
a2 (x12)	0
a3 (x13)	0
a4 (x14)	0
a5 (x15)	0
a6 (x16)	0

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t2 (x7)	0
s0 (x8)	0
s1 (x9)	0
a0 (x10)	3
a1 (x11)	1
a2 (x12)	0
a3 (x13)	0
a4 (x14)	0
a5 (x15)	0
a6 (x16)	0

RegistersMemory

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tp (x4)	0
t0 (x5)	0
t1 (x6)	0
t2 (x7)	0
s0 (x8)	0
s1 (x9)	0
a0 (x10)	3
a1 (x11)	1
a2 (x12)	0
a3 (x13)	0
a4 (x14)	0
a5 (x15)	0
a6 (x16)	0

RegistersMemory

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ra (x1)	0
sp (x2)	2147483632
gp (x3)	268435456
tp (x4)	0
t0 (x5)	0
t1 (x6)	0
t2 (x7)	0
s0 (x8)	0
s1 (x9)	0
a0 (x10)	3
a1 (x11)	1
a2 (x12)	0
a3 (x13)	0
a4 (x14)	0
a5 (x15)	0
a6 (x16)	0

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s0 (x8)	0
s1 (x9)	0
a0 (x10)	3
a1 (x11)	3
a2 (x12)	0
a3 (x13)	0
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tp (x4)	0
t0 (x5)	0
t1 (x6)	0
t2 (x7)	0
s0 (x8)	0
s1 (x9)	0
a0 (x10)	2
a1 (x11)	3
a2 (x12)	0
a3 (x13)	0
a4 (x14)	0
a5 (x15)	0
a6 (x16)	0

RegistersMemory

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tp (x4)	0
t0 (x5)	0
t1 (x6)	0
t2 (x7)	0
s0 (x8)	0
s1 (x9)	0
a0 (x10)	2
a1 (x11)	3
a2 (x12)	0
a3 (x13)	0
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s0 (x8)	0
s1 (x9)	0
a0 (x10)	3
a1 (x11)	1
a2 (x12)	0
a3 (x13)	0
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t2 (x7)	0
s0 (x8)	0
s1 (x9)	0
a0 (x10)	1
a1 (x11)	6
a2 (x12)	0
a3 (x13)	0
a4 (x14)	0
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ra (x1)	0
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