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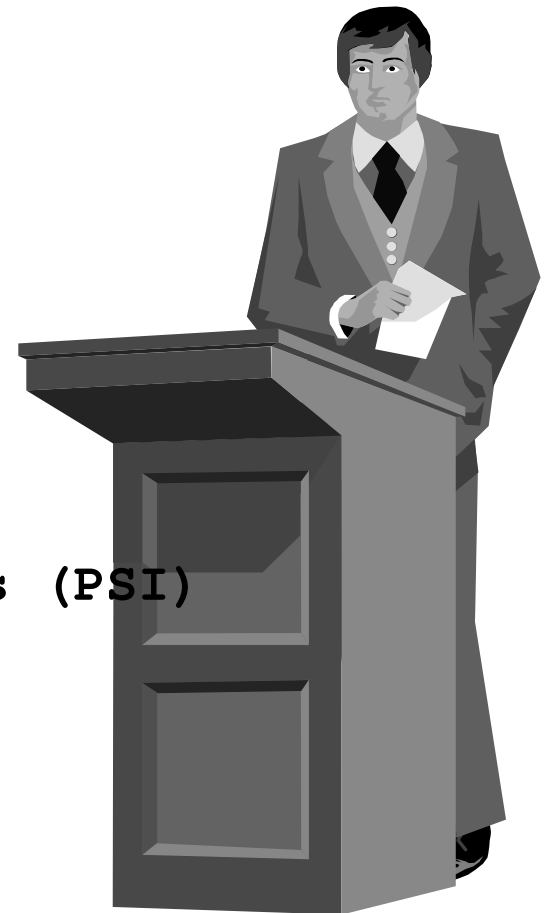
# Exemplo de funcionamento da pilha de execução

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**Escola Politécnica da USP**



# Exemplo de funcionamento da pilha

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```
#include <stdio.h>
char versao[] = "2.1";
int n;
int resultado;

int fatorial (int x)
{
    int y;

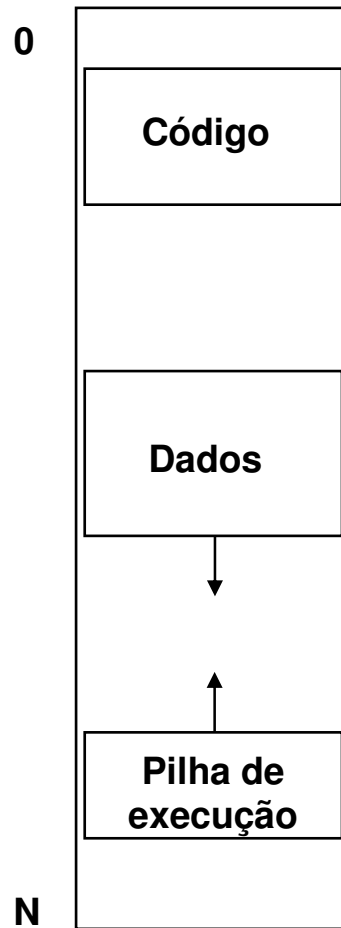
    if (x <= 1)
        y = 1;
    else
        y = x * fatorial(x-1);
    return(y);
}

int main(int argc, char **argv)
{
    printf("Programa fatorial, versao %s \n", versao);
    printf("Entre com o valor: " );
    scanf("%d",&n);
    resultado = fatorial(n);
    printf("Resultado: %d \n",resultado);
}
```

# Exemplo

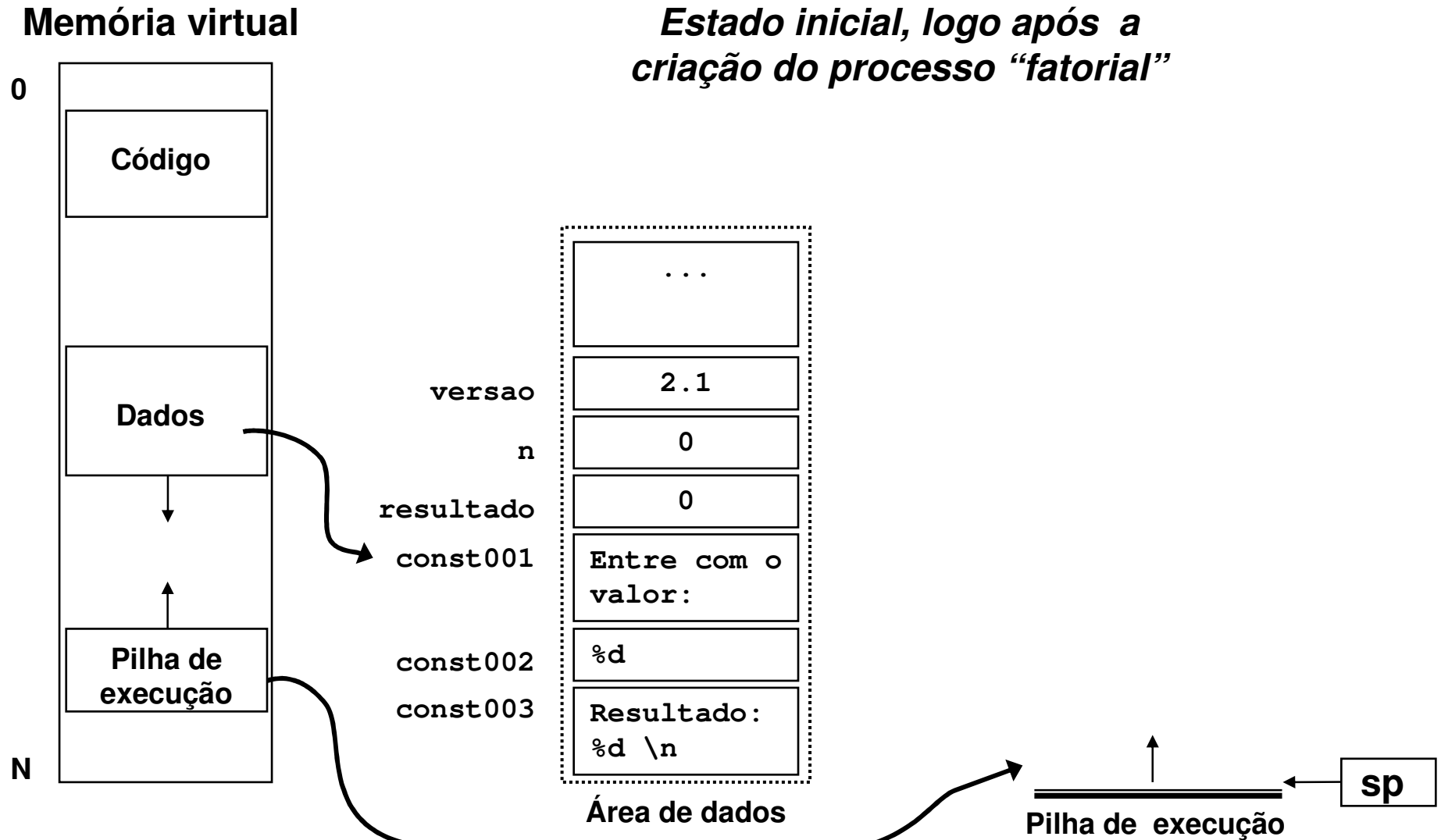
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## Memória virtual



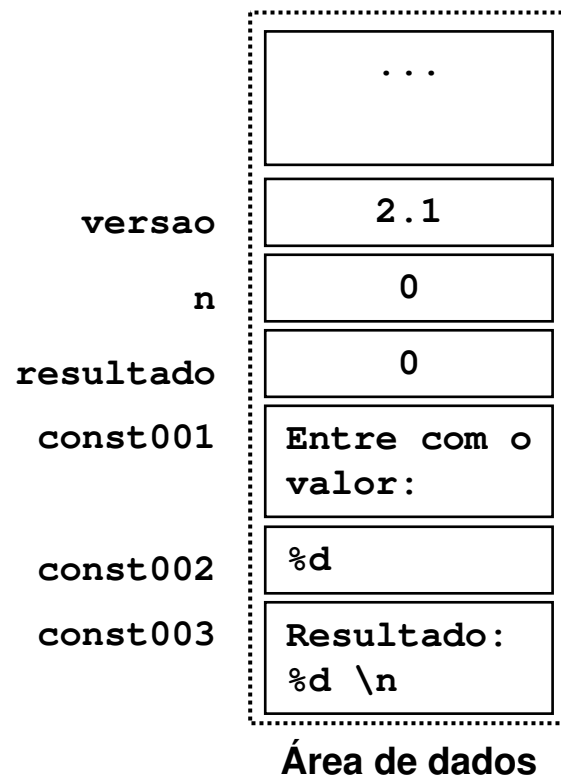
*Estado inicial, logo após a criação do processo “fatorial”*

# Exemplo

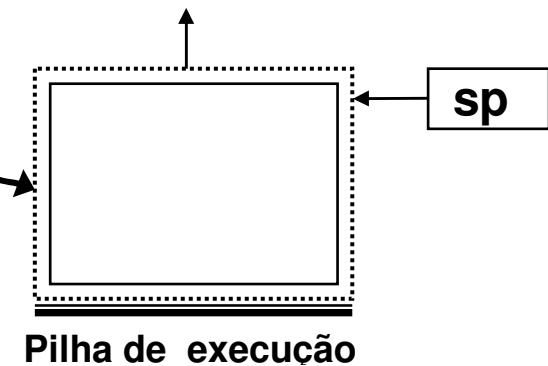


# Exemplo

*Logo após ativar a  
função main()*

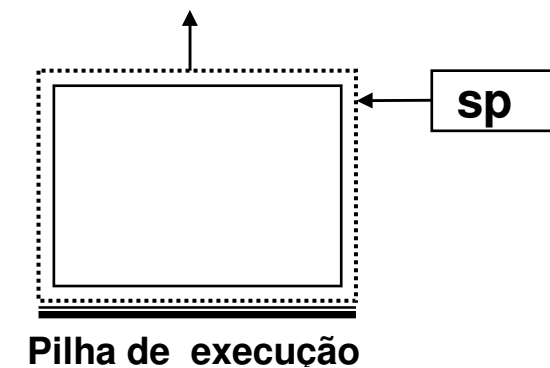
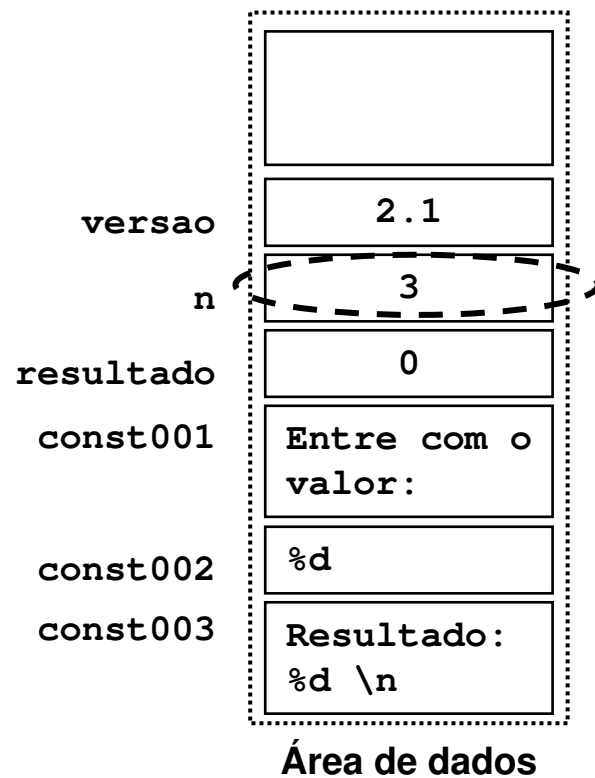


*Quadro da  
função main()*



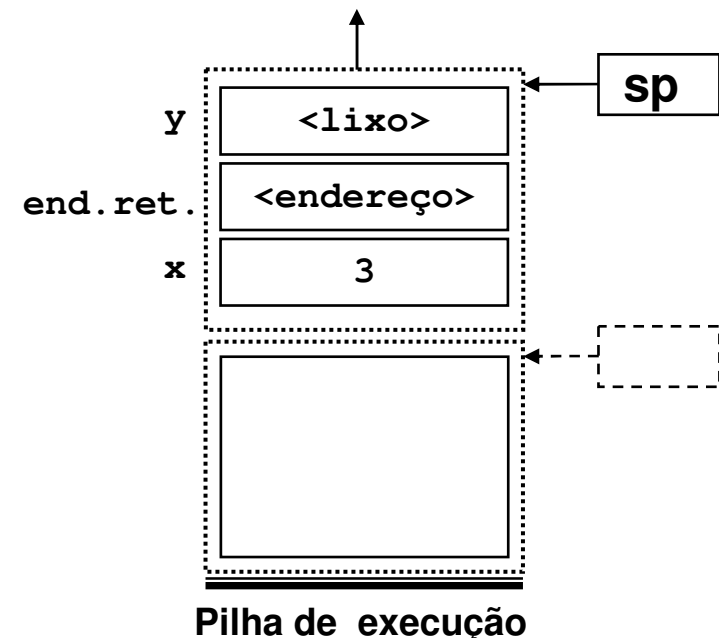
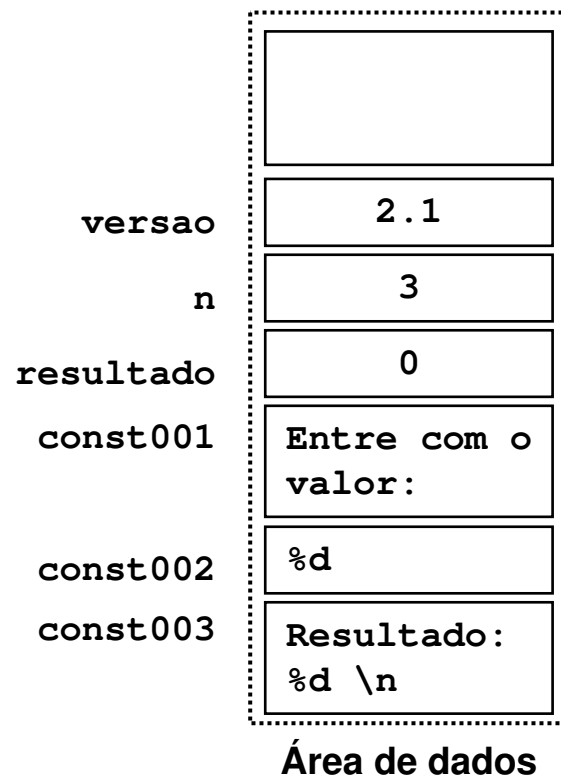
# Exemplo

*Logo após executar  
scanf("%d",&n); na  
função main()*



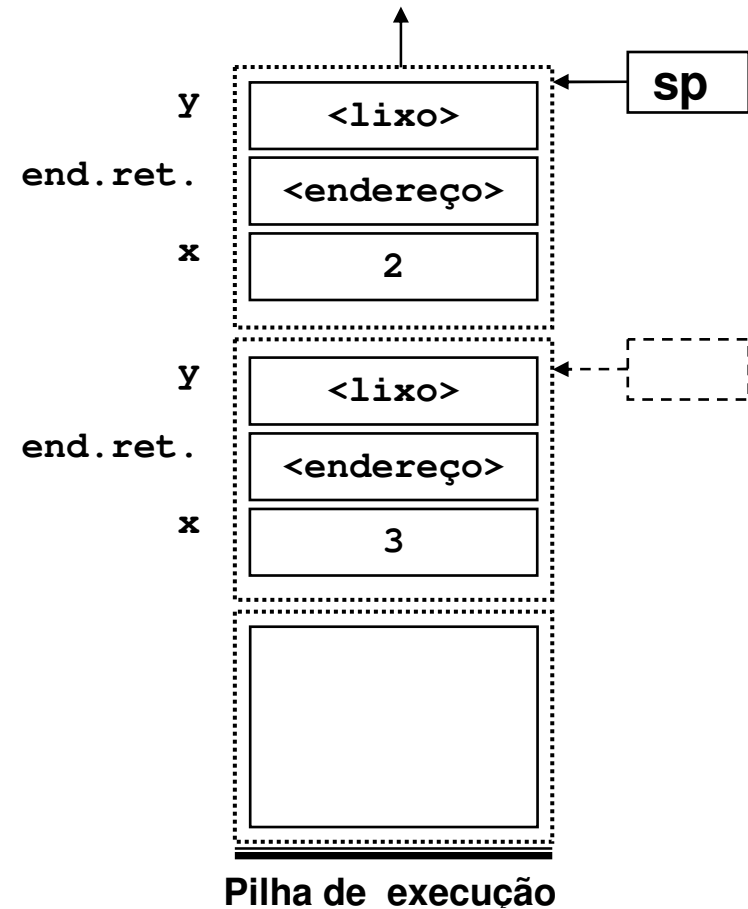
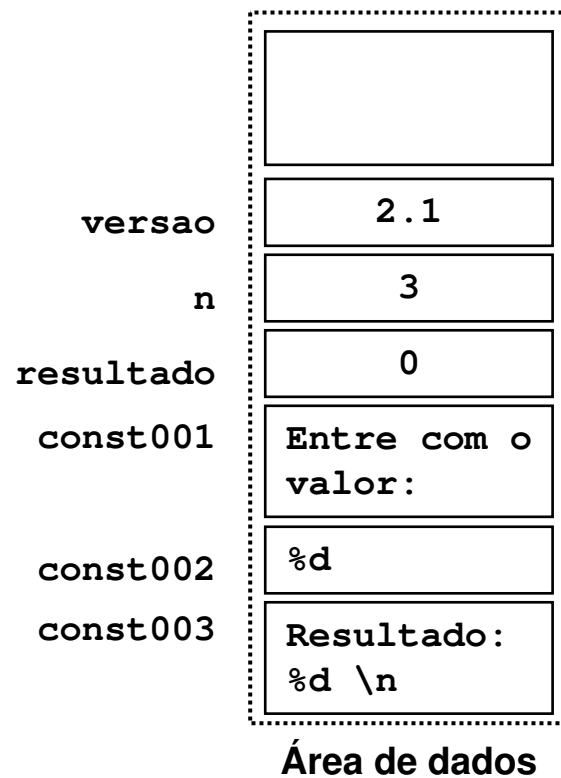
# Exemplo

*Logo após ativar  
fatorial(3)*



# Exemplo

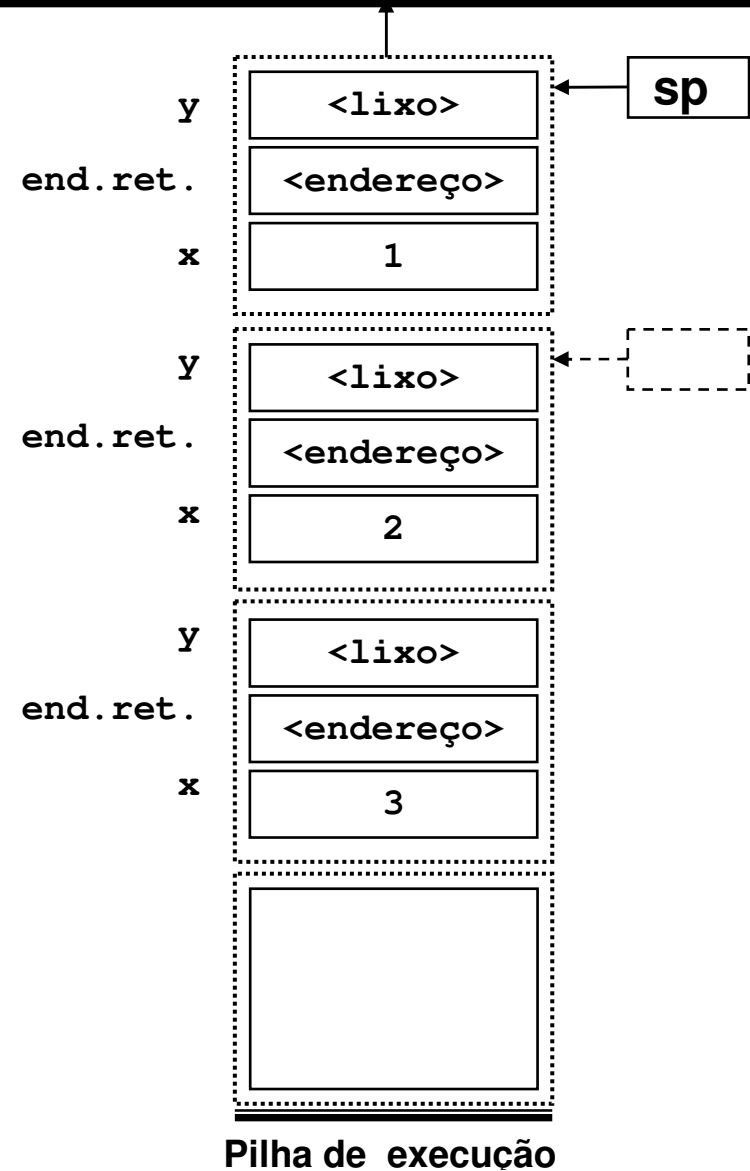
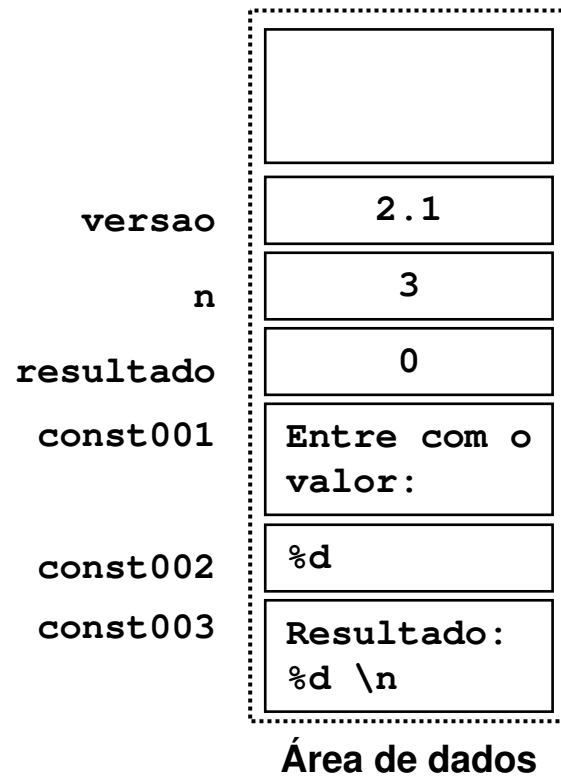
*Logo após ativar  
fatorial(2)*



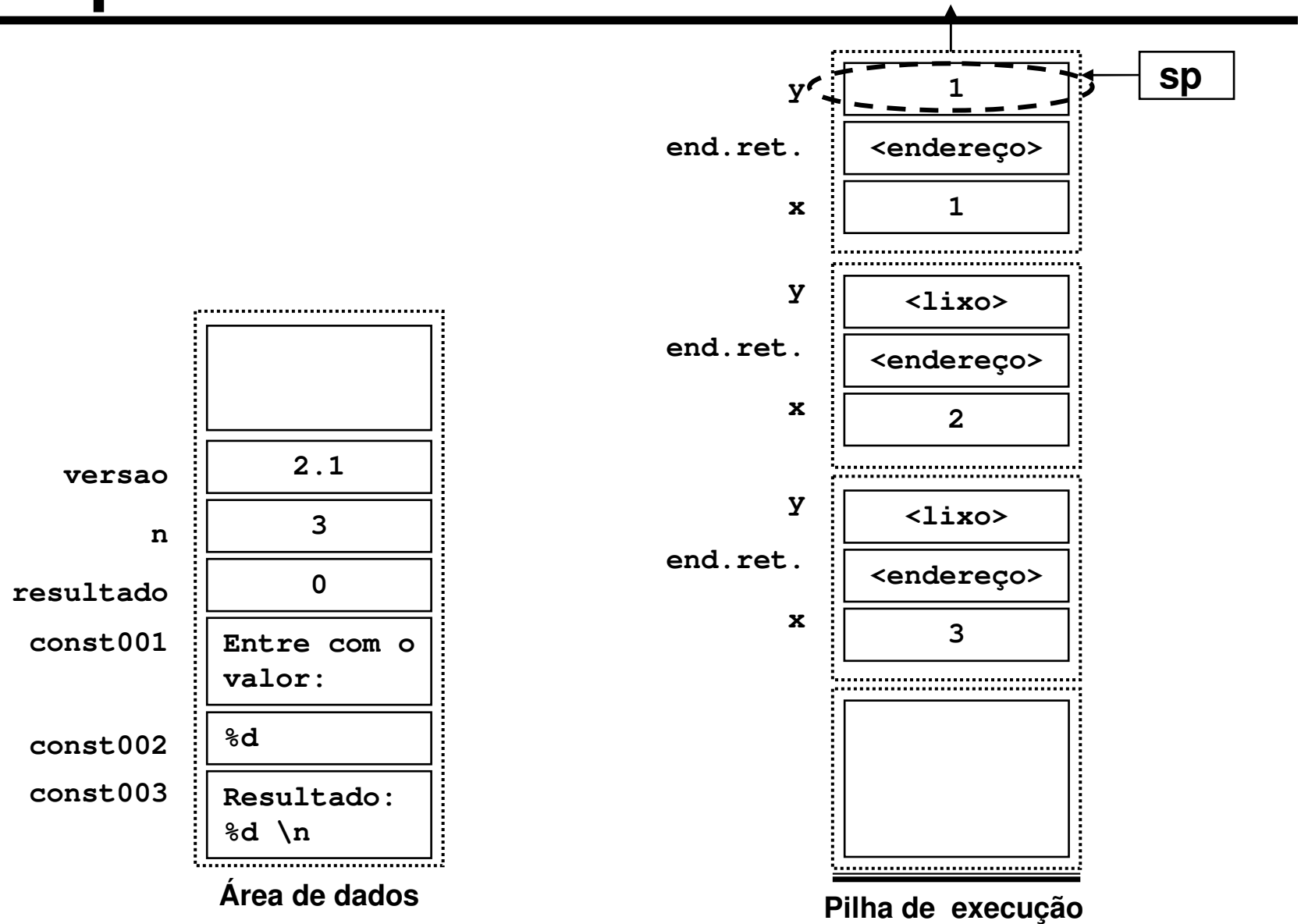


# Exemplo

*Logo após ativar  
fatorial(1)*

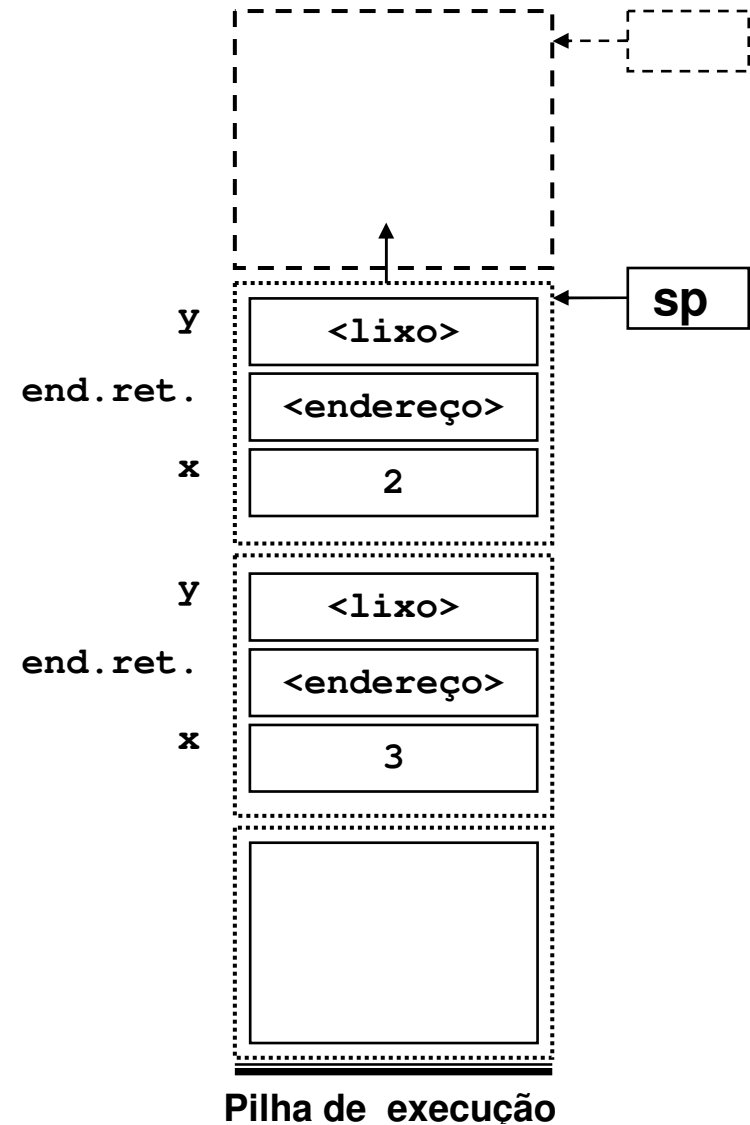
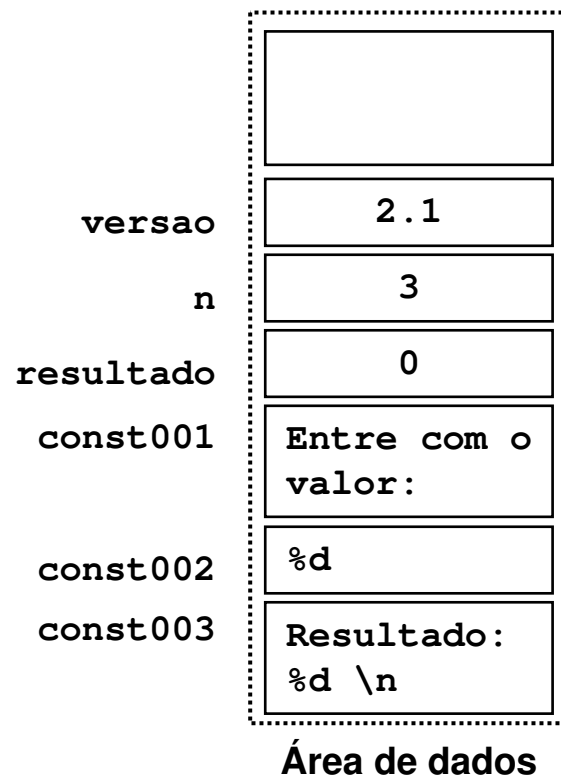


# Exemplo

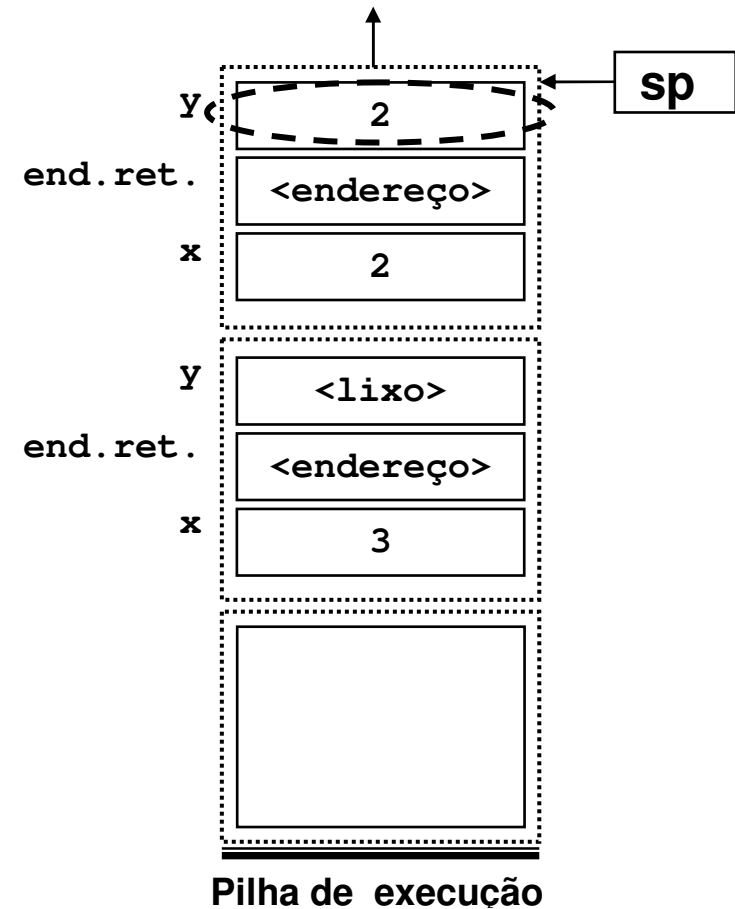
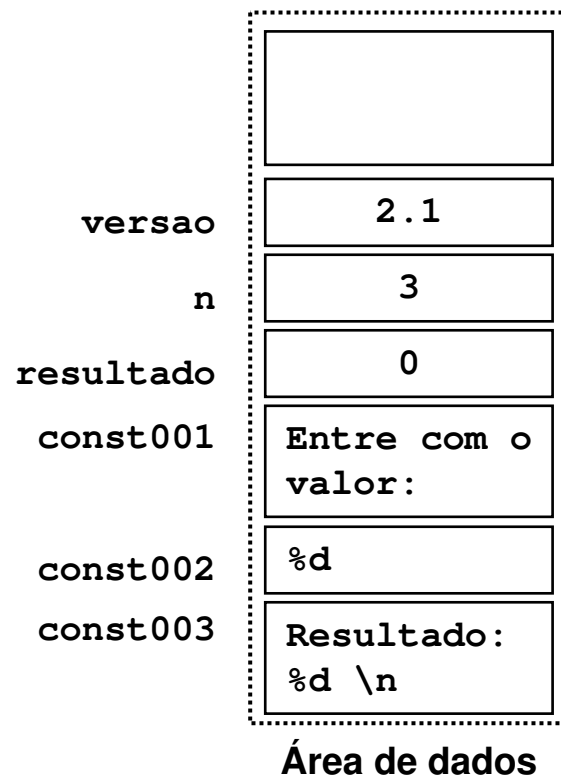


# Exemplo

*Logo após terminar  
fatorial(1)*

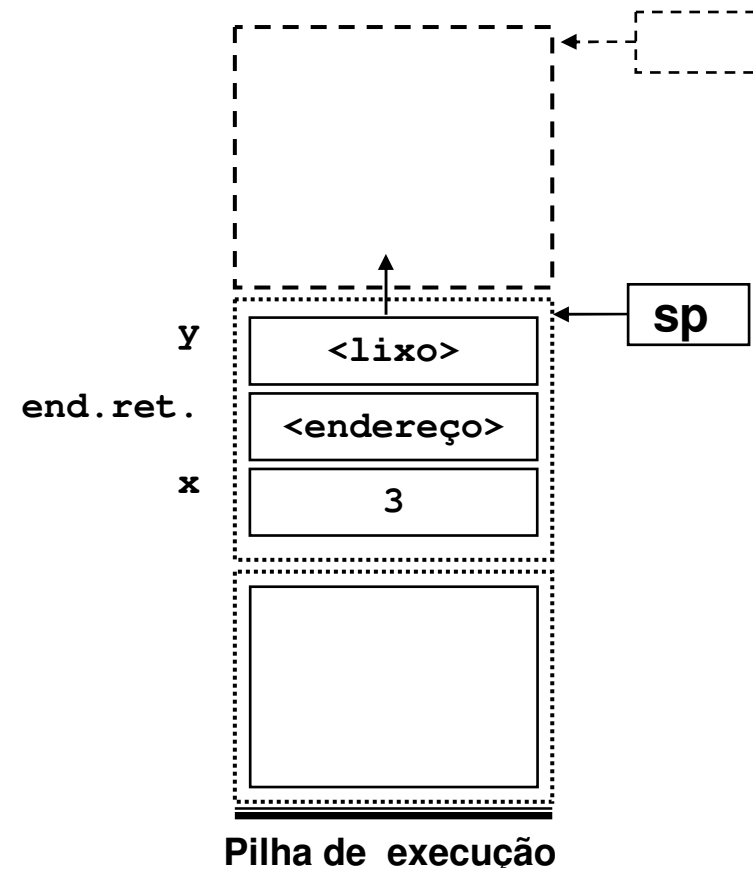
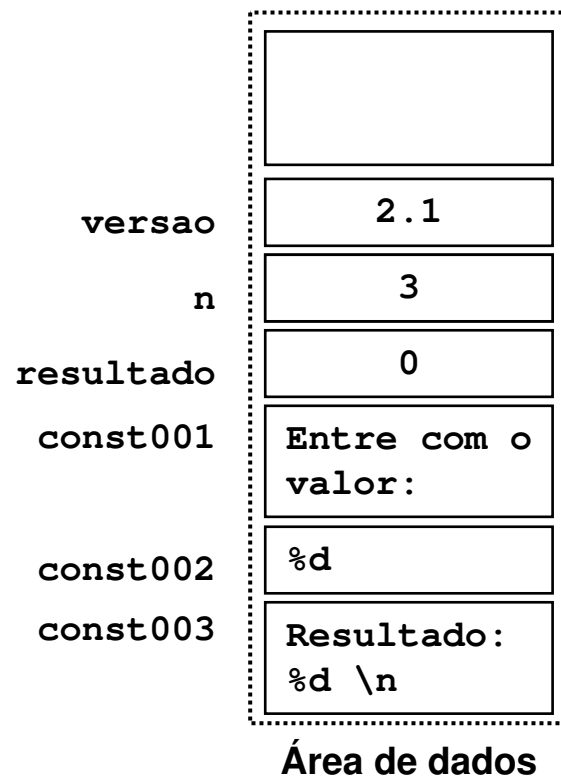


# Exemplo

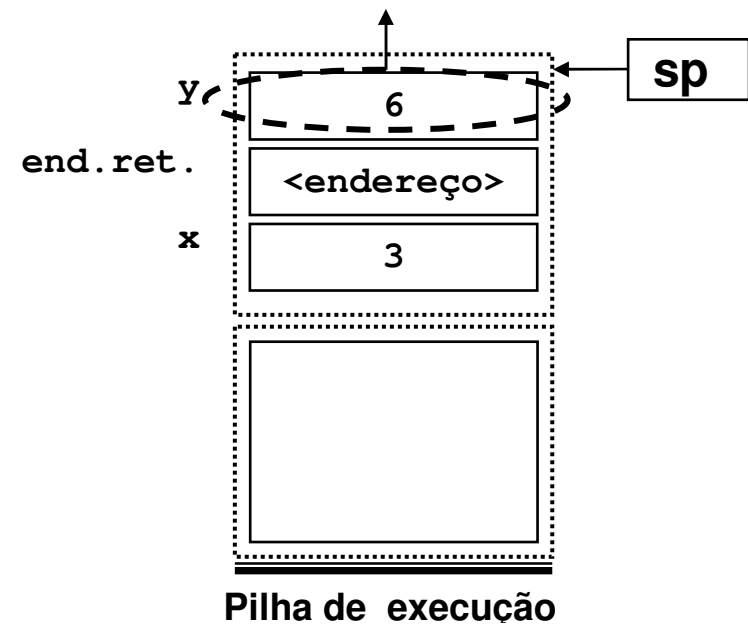
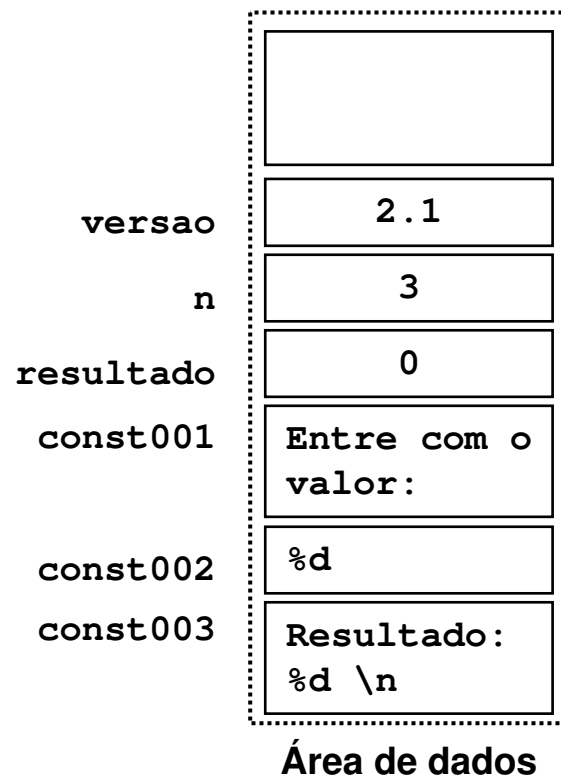


# Exemplo

*Logo após terminar  
fatorial(2)*

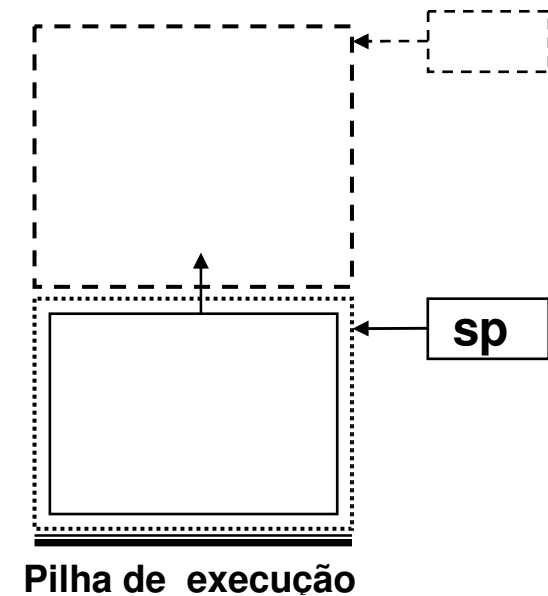
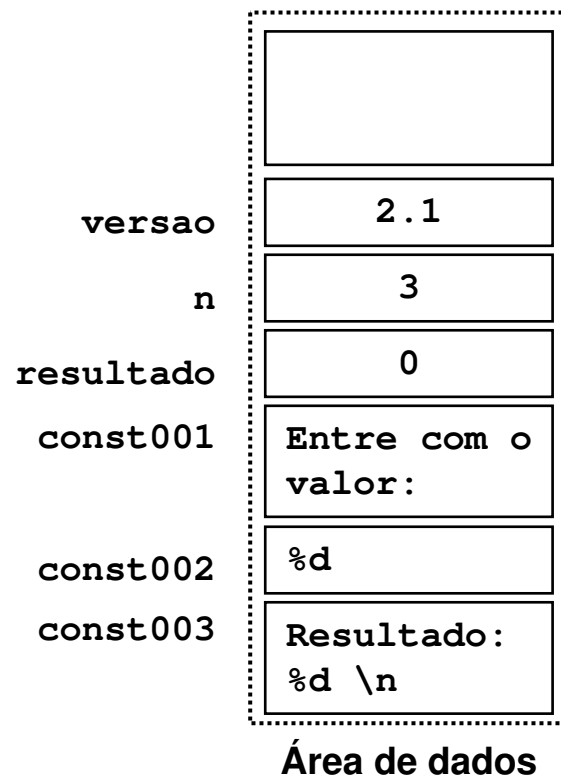


# Exemplo



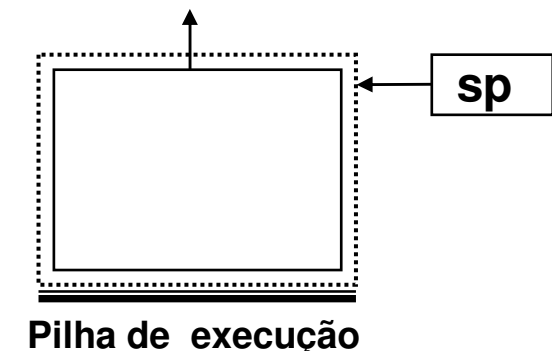
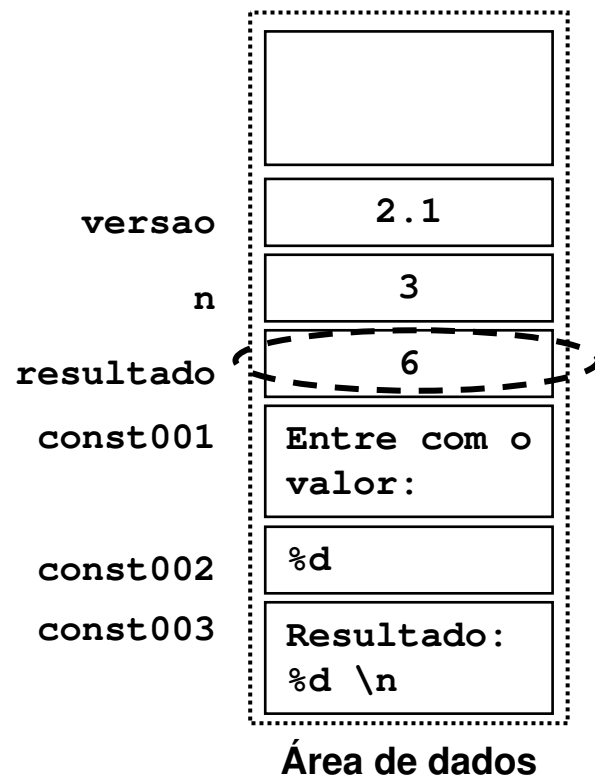
# Exemplo

*Logo após terminar  
fatorial(3)*



# Exemplo

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# Exemplo

*Logo após terminar  
a função main()*

