

# **Estrutura de Dados**

**Prof. Orlando Saraiva Júnior**  
**[orlando.saraiva@unesp.br](mailto:orlando.saraiva@unesp.br)**

“First, solve the problem.  
Then, write the code.”

John Johnson

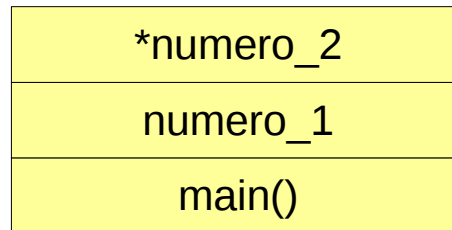
# **Estrutura de Dados**

# Programa 01

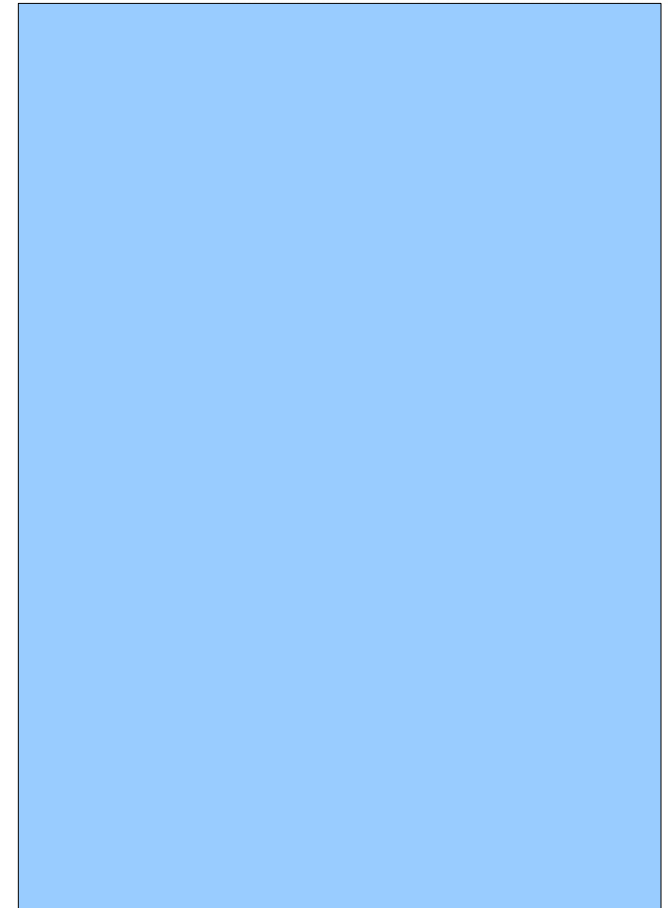
# Programa 01.c

## debugger na linha 9

---



Pilha (stack)

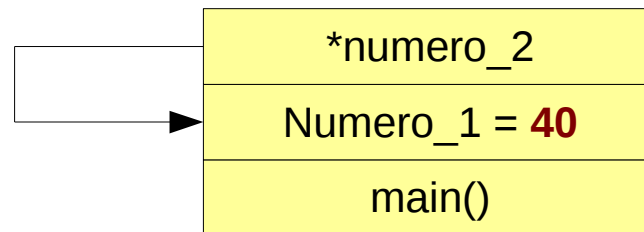


heap

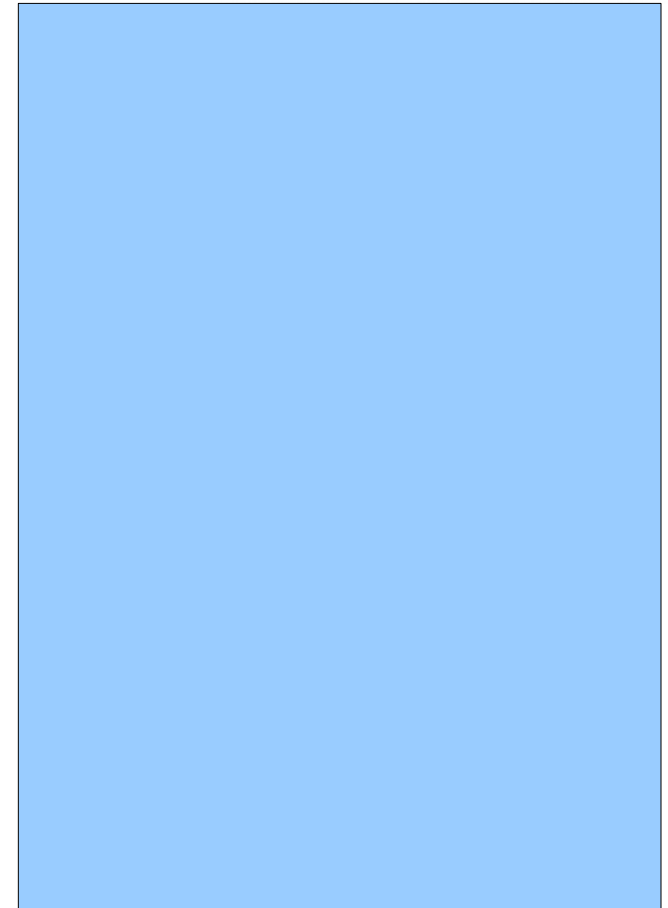
Memória estática

# Programa 01.c

debugger na linha 12



Pilha (stack)

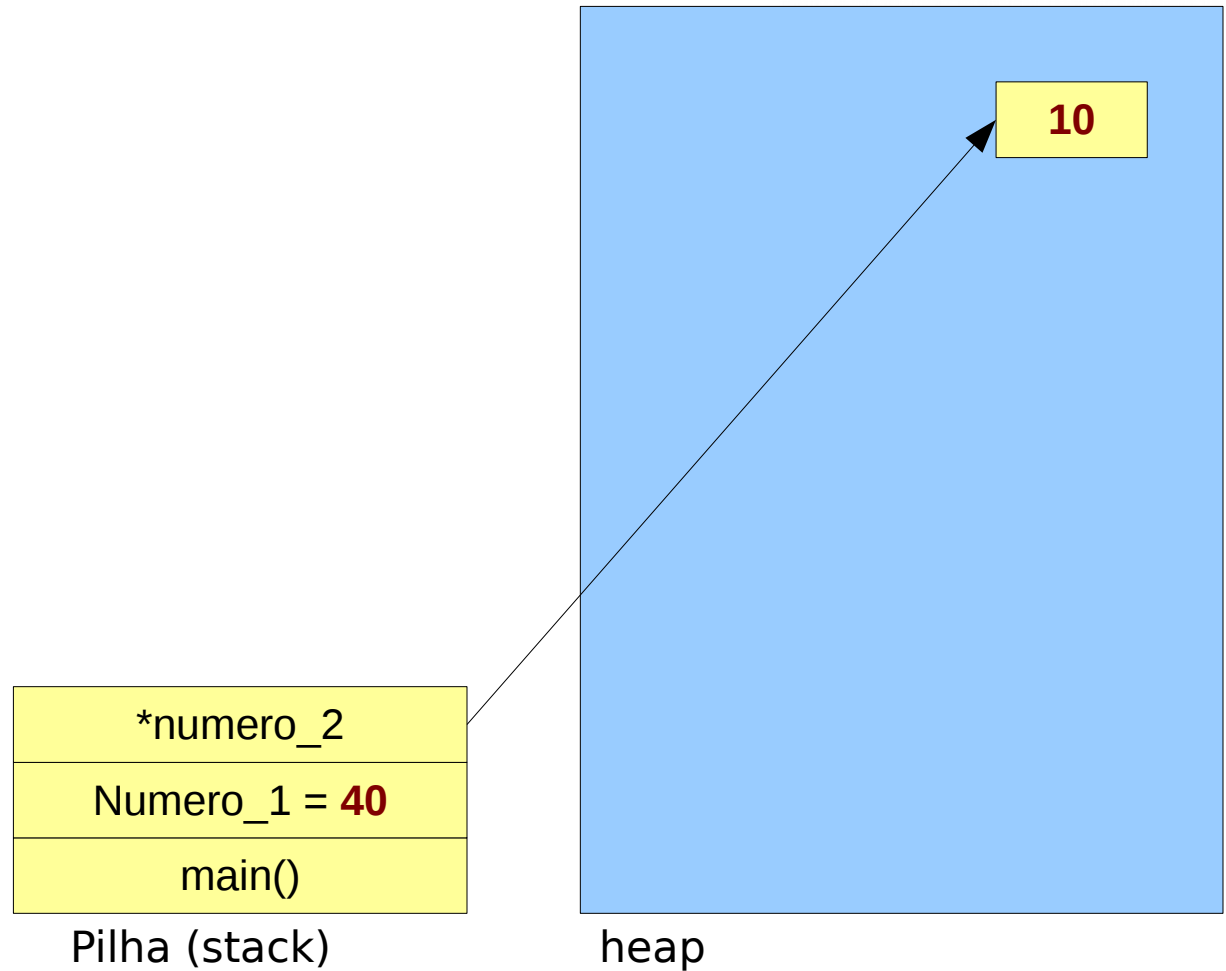


heap

Memória estática

# Programa 01.c

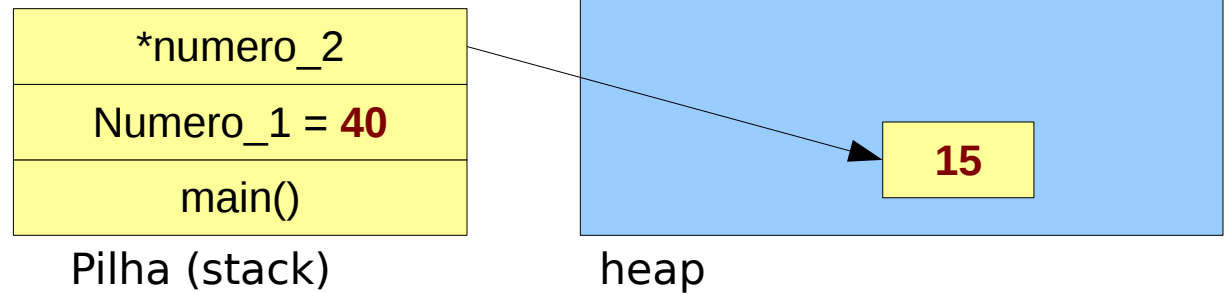
debugger na linha 16



Memória estática

# Programa 01.c

debugger na linha 21



Memória estática

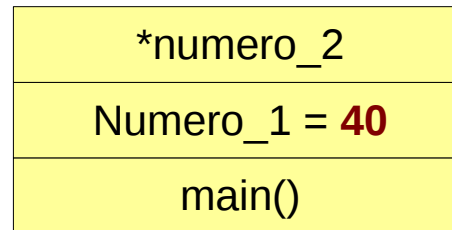


# Programa 01.c

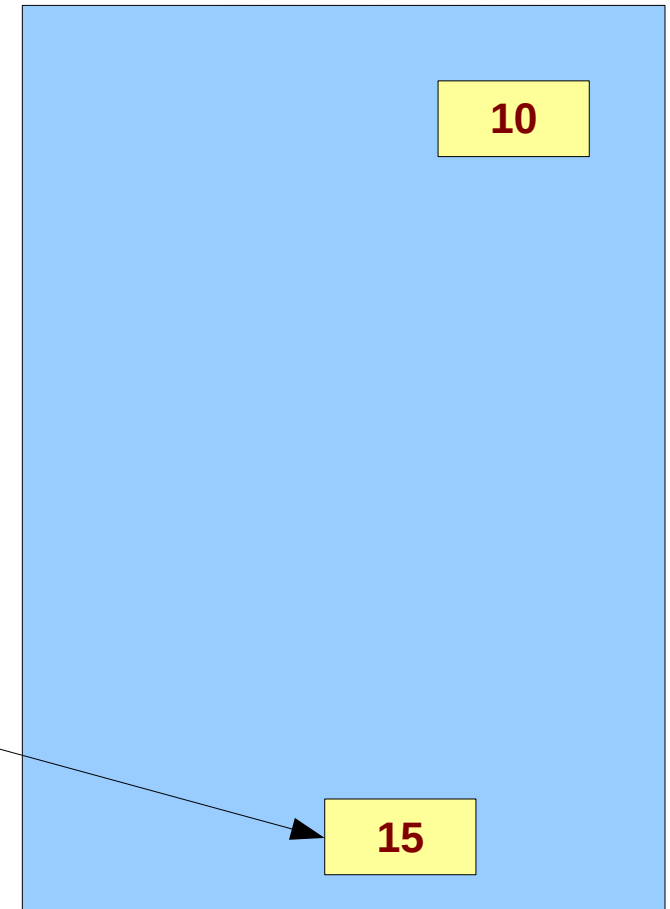
debugger na linha 21

E se o free(), linha 18 não existisse ???

LEAK de memória



Pilha (stack)



heap

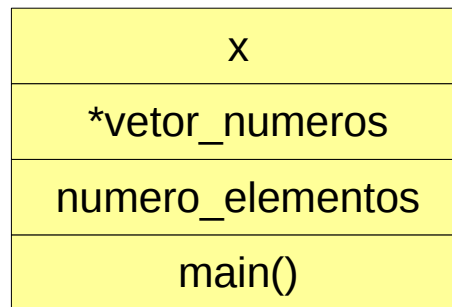
Memória estática

# Programa 02

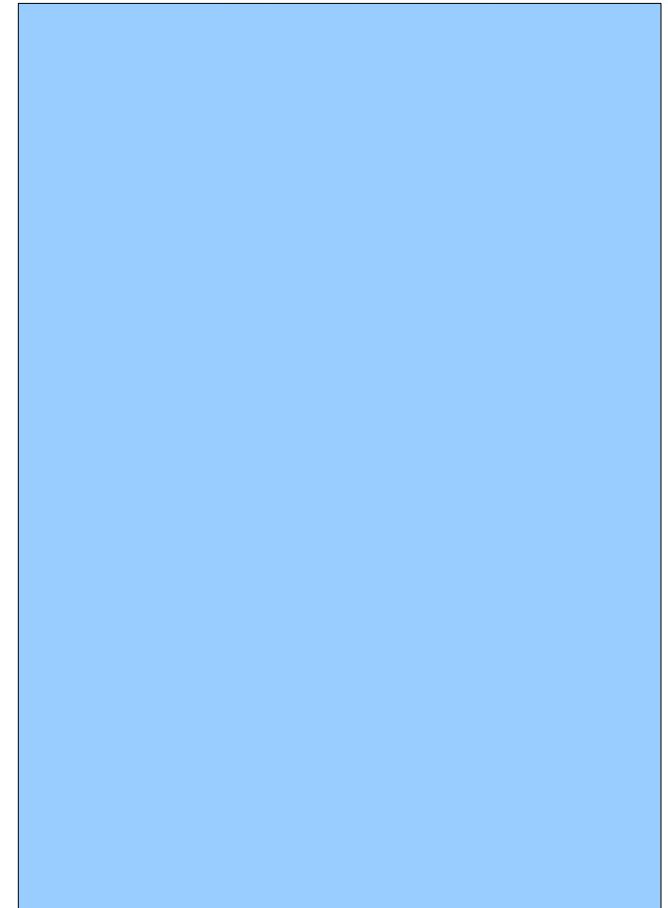
# Programa 02.c

## debugger na linha 11

---



Pilha (stack)

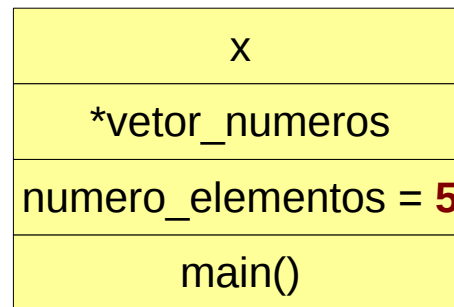


heap

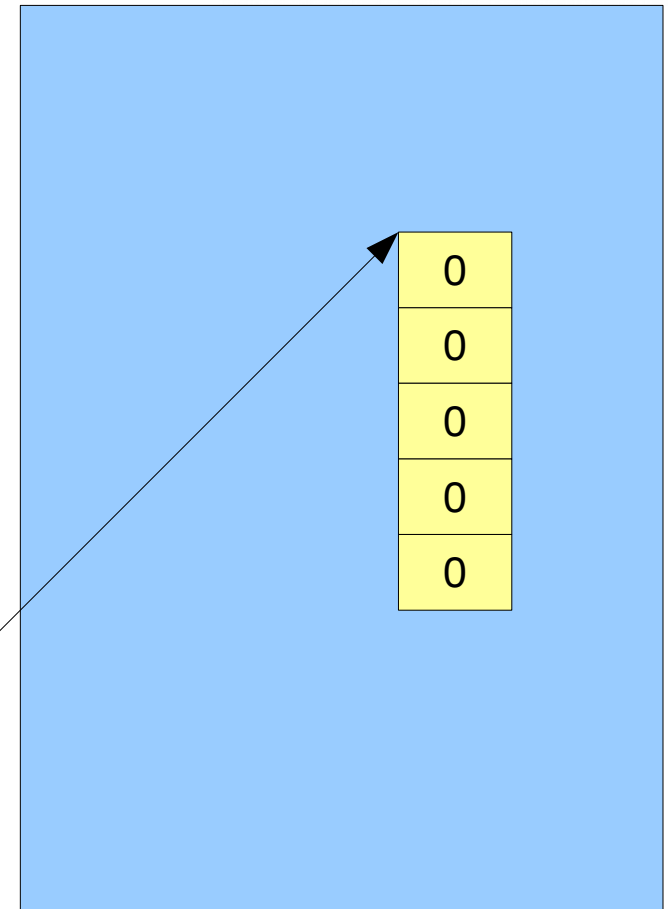
Memória estática

# Programa 02.c

debugger na linha 14



Pilha (stack)

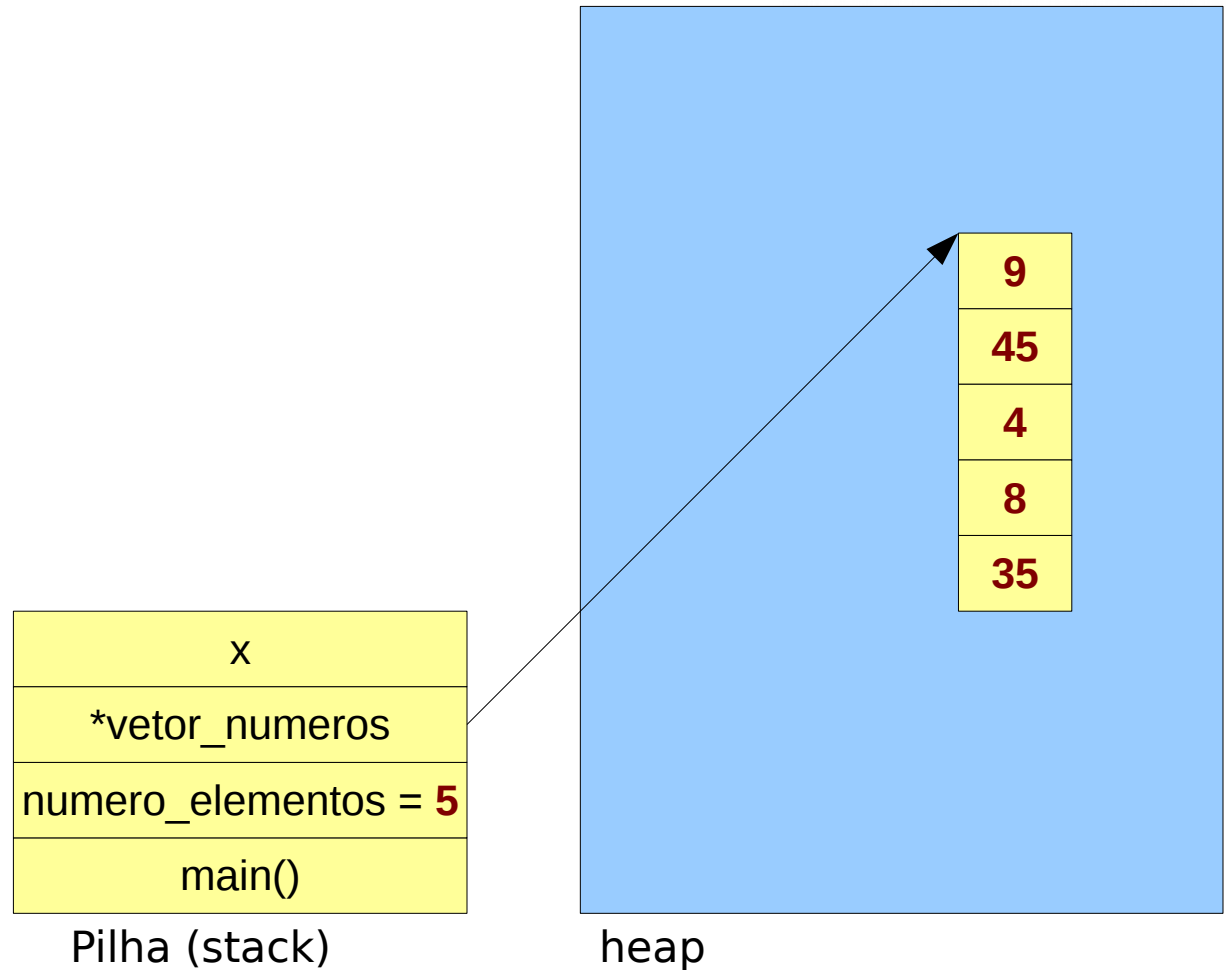


heap

Memória estática

# Programa 02.c

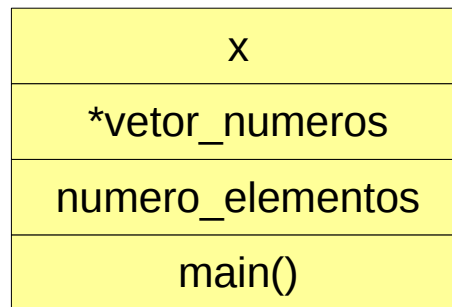
## debugger na linha 20



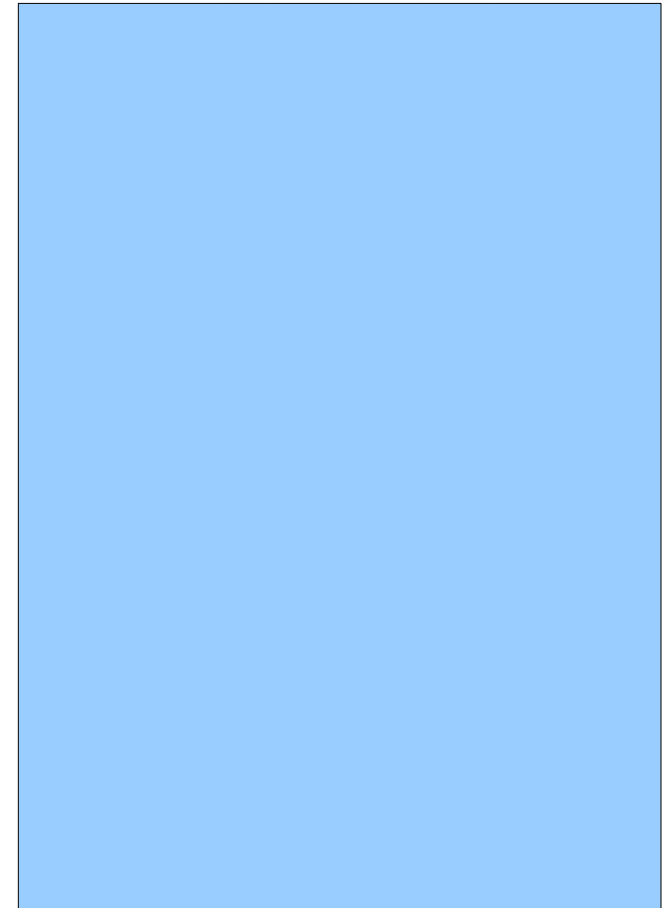
# Programa 02.c

## debugger na linha 25

---



Pilha (stack)



heap

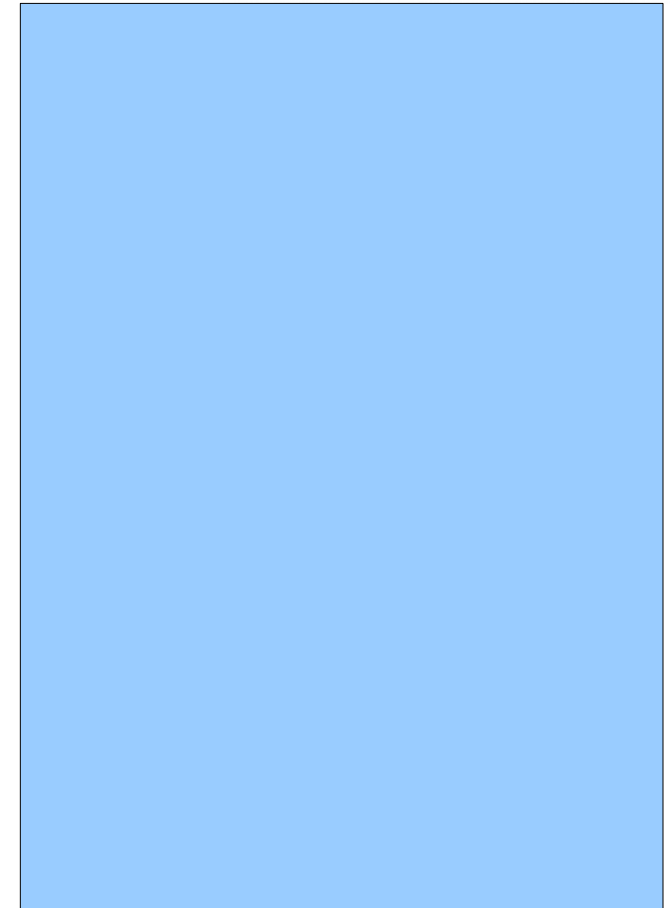
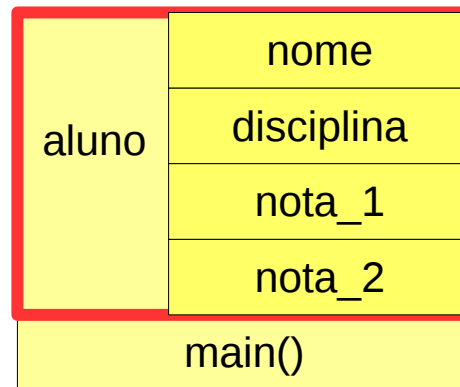
Memória estática

# Programa 03

# Programa 03.c

## debugger na linha 15

---



Memória estática

Pilha (stack)

heap

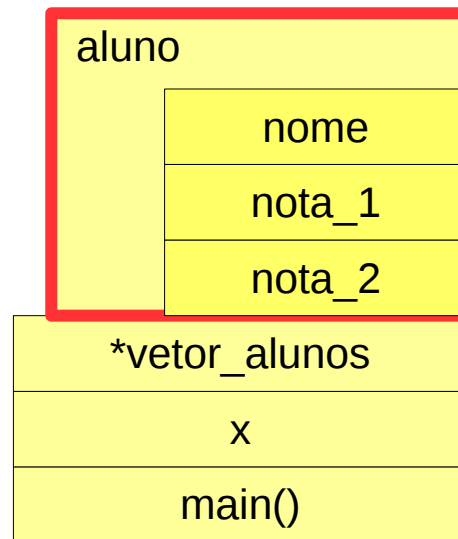


# Programa 04

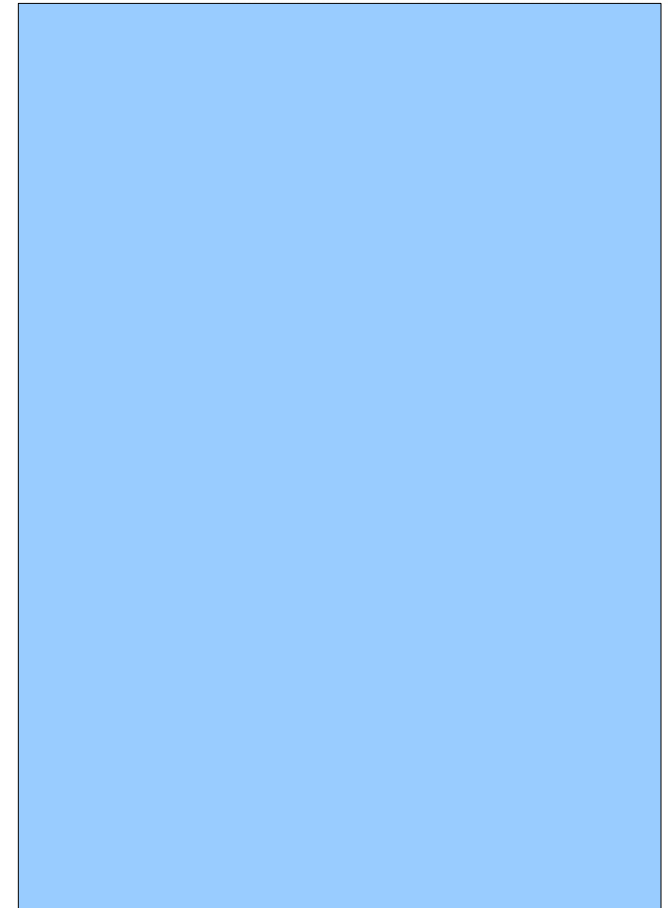
# Programa 04.c

## debugger na linha 19

contador = 0



Pilha (stack)



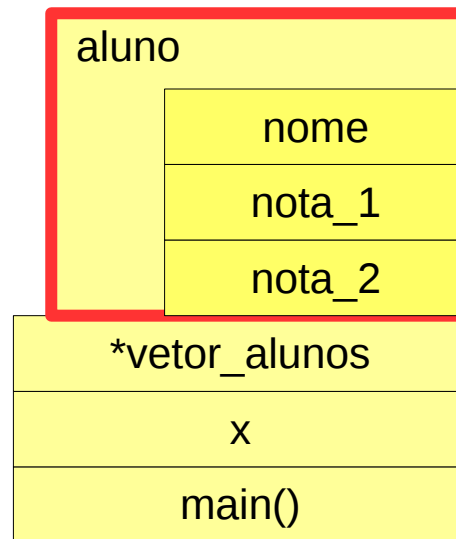
heap

# Programa 06.c

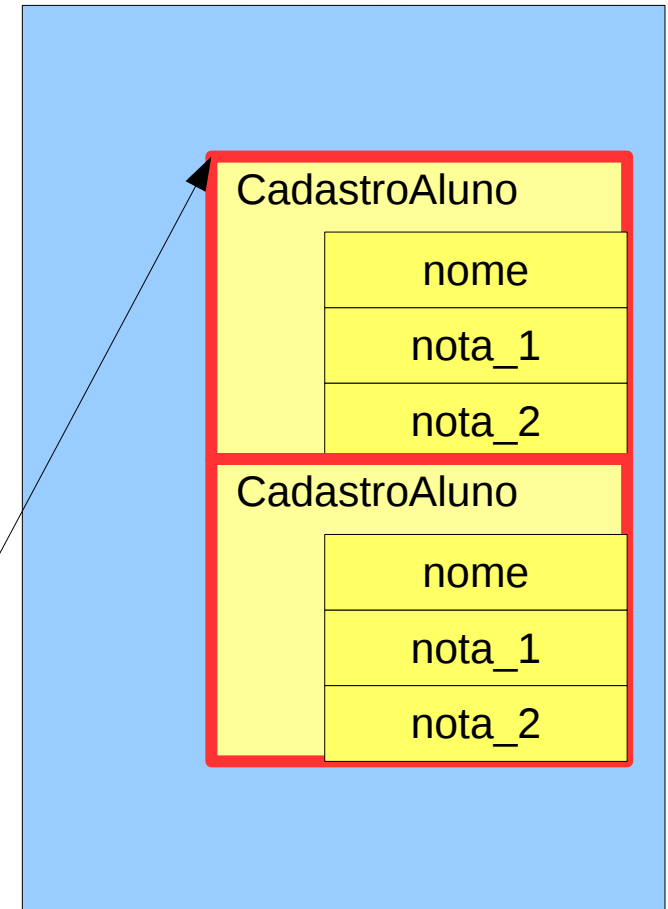
debugger na linha 24

contador = 2

Memória estática



Pilha (stack)



heap

# Dúvidas

**Prof. Orlando Saraiva Júnior**  
**[orlando.saraiva@unesp.br](mailto:orlando.saraiva@unesp.br)**

# Fechamento

---

**C para C++ :**

Migrar os programas, escritos em C para C++