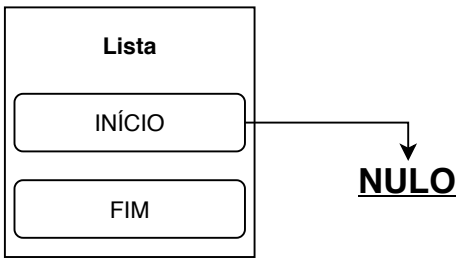
Vitor André de Oliveira Tenório - Questões 3, 4, 9

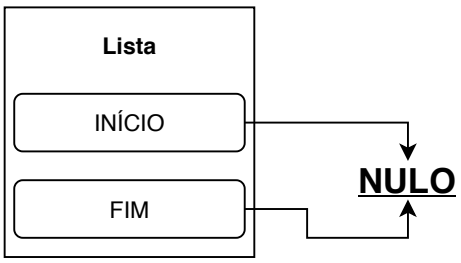
Questão 3

0 -Criar Lista

Cria a lista



Atribui o inicio como nulo



Atribui o fim como nulo

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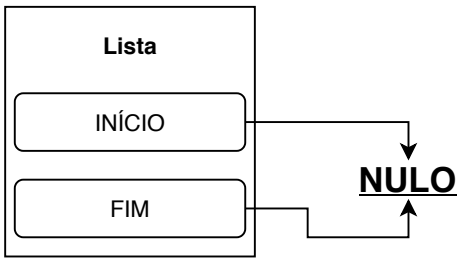
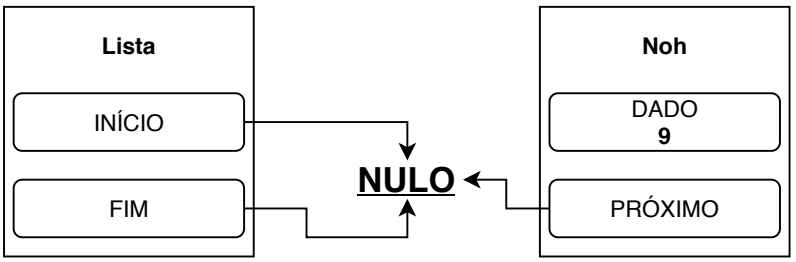
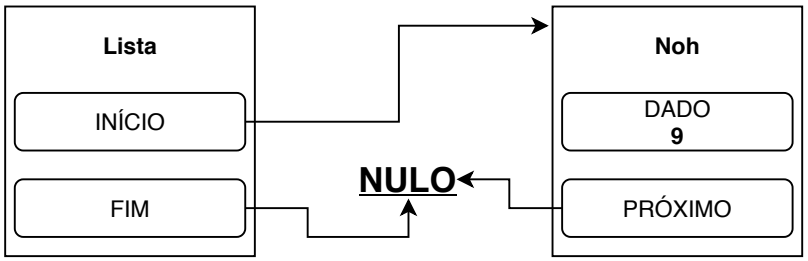
1. Inserir ordenado os elementos 9, 10, 3



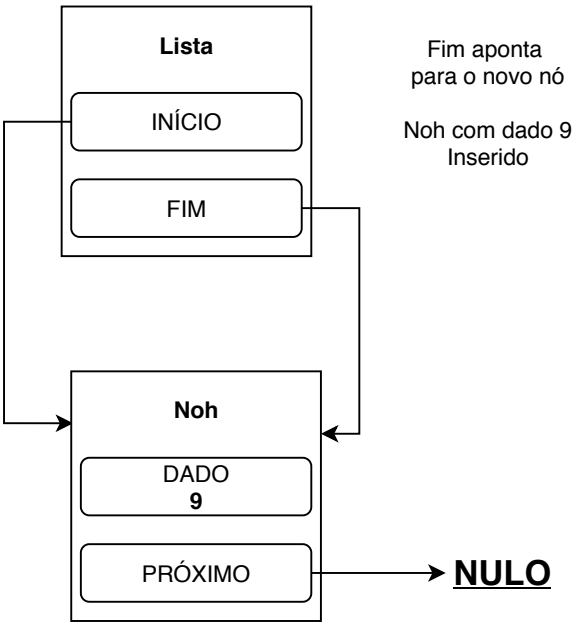
Lista Atual



Criar Noh que será inserido
em uma lista vazia

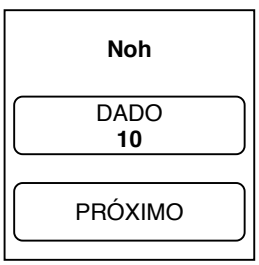


Início aponta para o novo nó

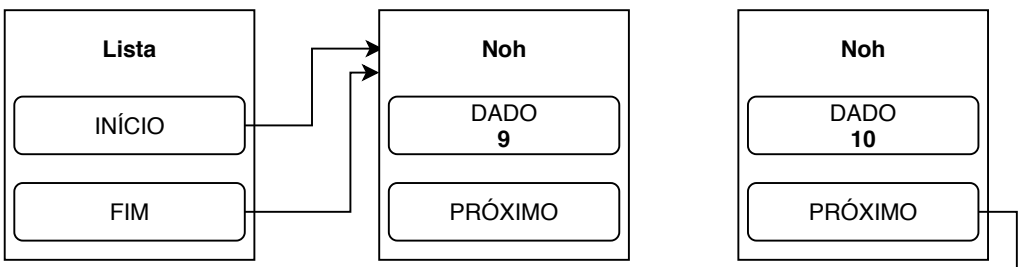


Fim aponta
para o novo nó

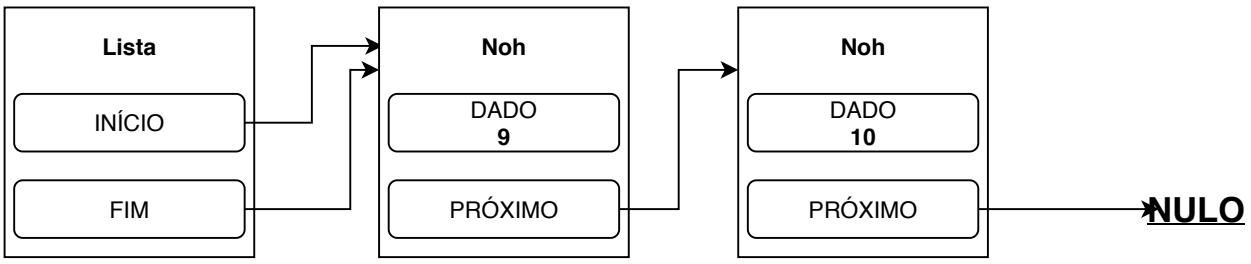
Noh com dado 9
Inserido



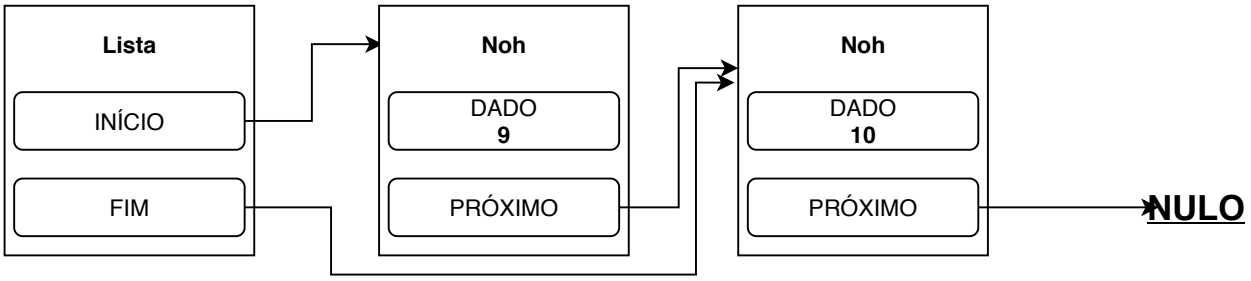
Criar Noh



Atualiza Próximo do Novo Noh

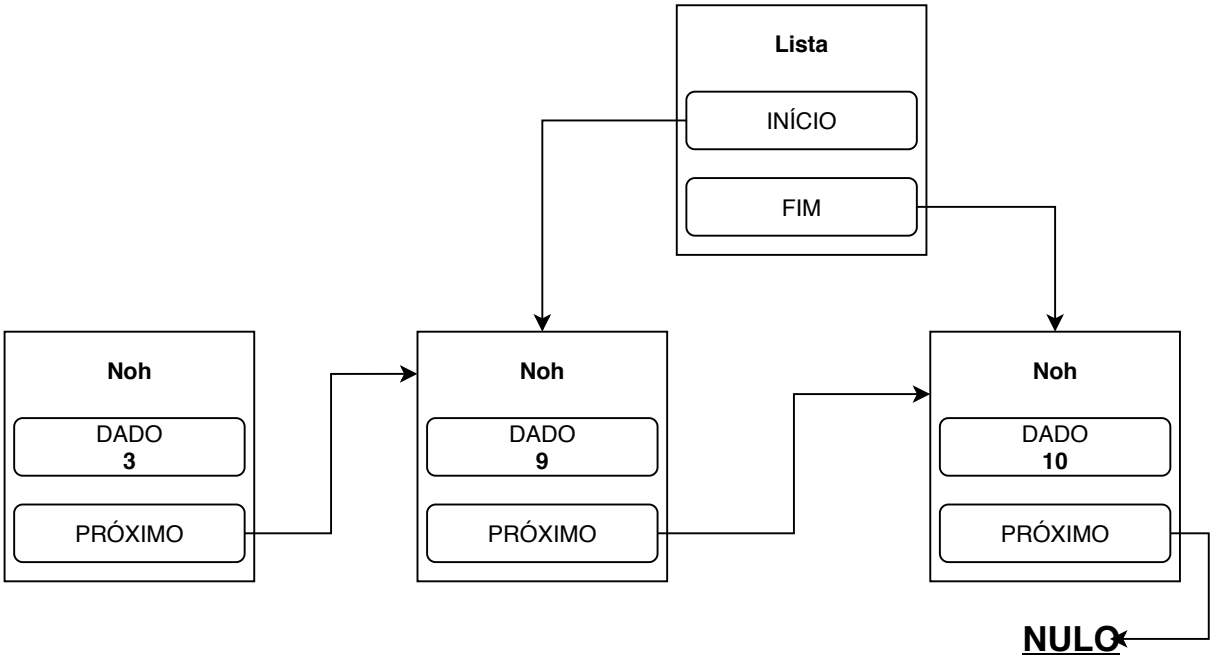


Atualiza Próximo do Início

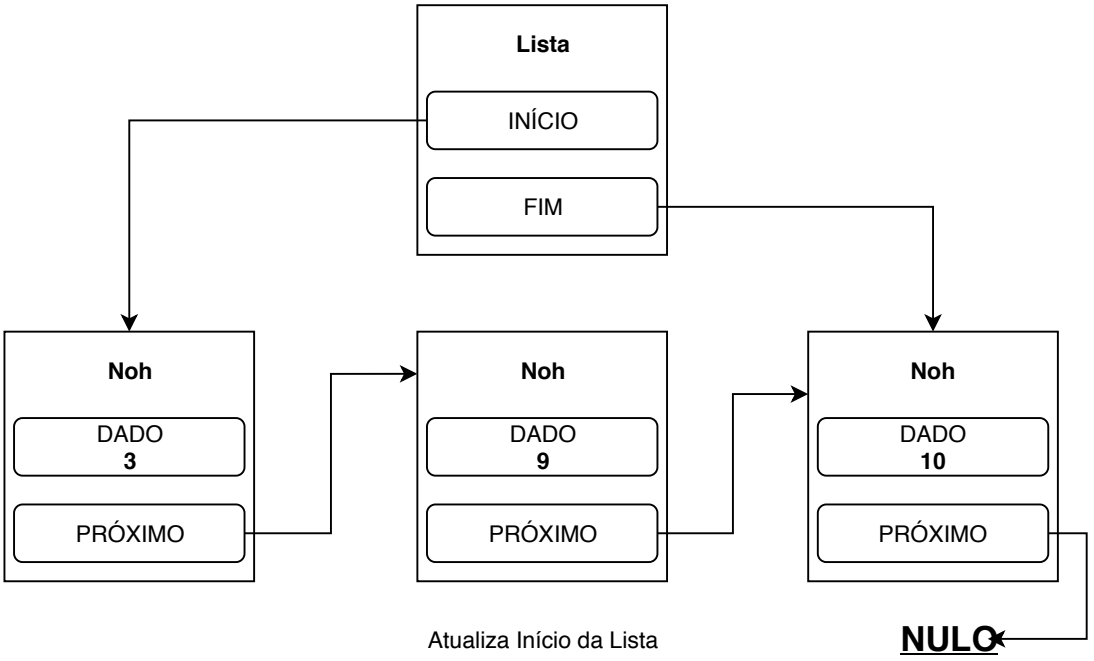


Atualiza Fim

Criar Noh



Atualiza Proximo do novo noh



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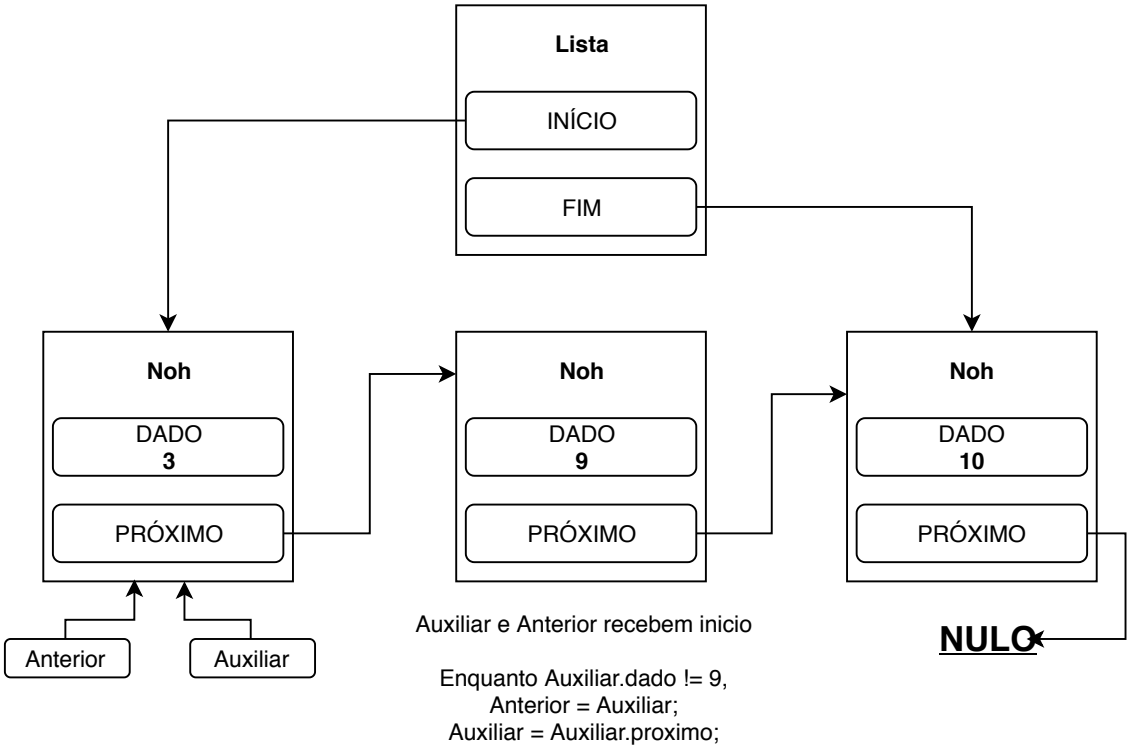
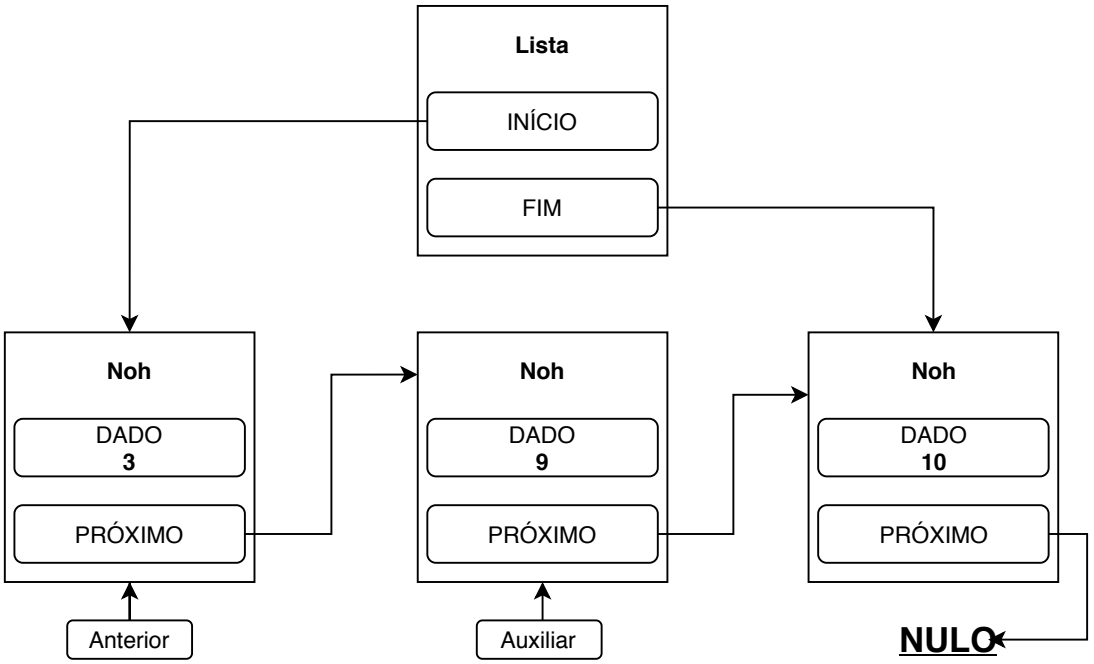
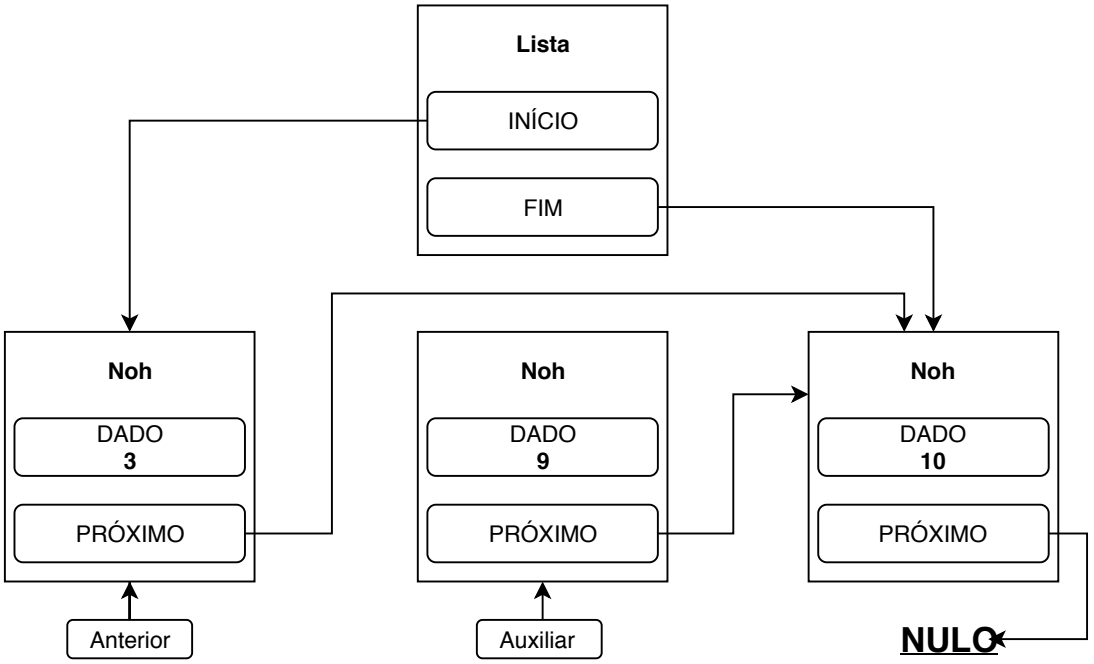
2. Remover elemento 9



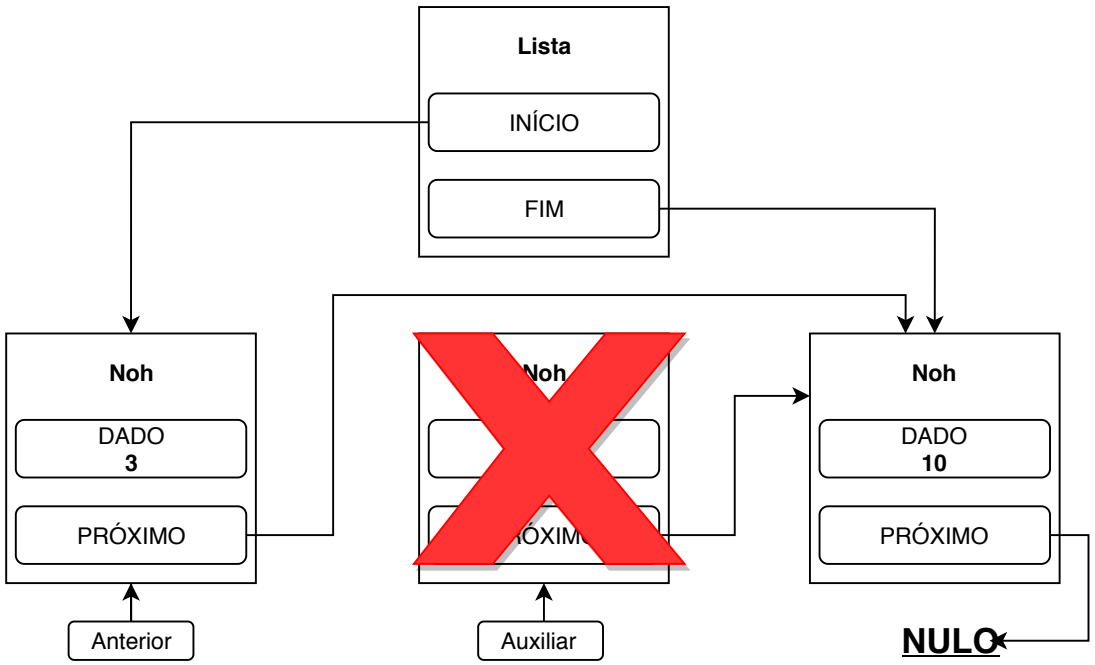
**Os espaços em branco foram deixados para não prejudicar os desenhos no momento da exportação para PDF*



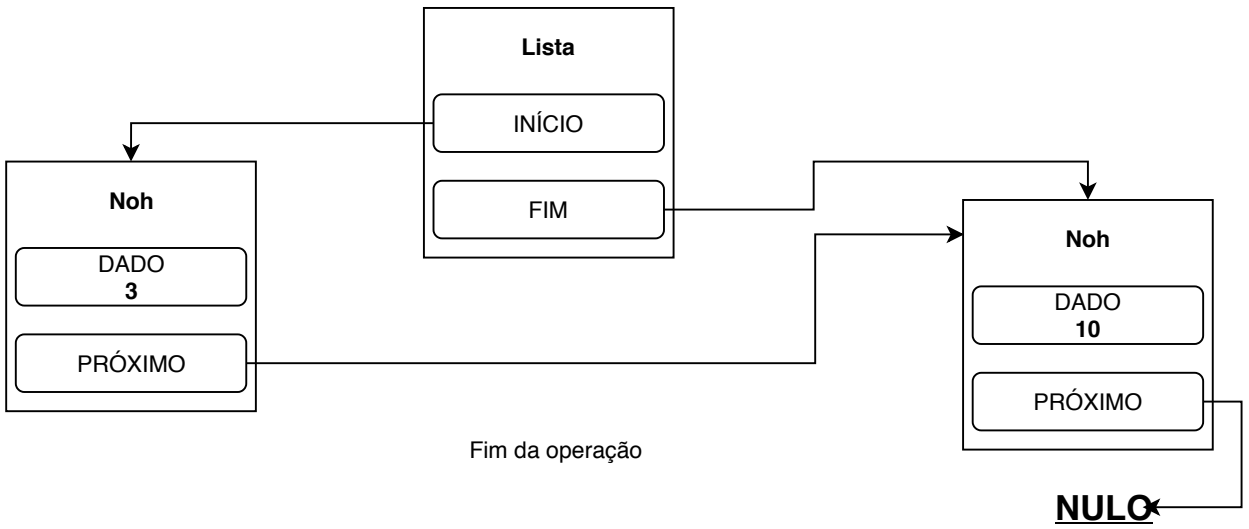
Auxiliar = Auxiliar.proximo



Encontrou o dado 9
Anterior.proximo = Auxiliar.proximo



Apaga Auxiliar



Fim da operação

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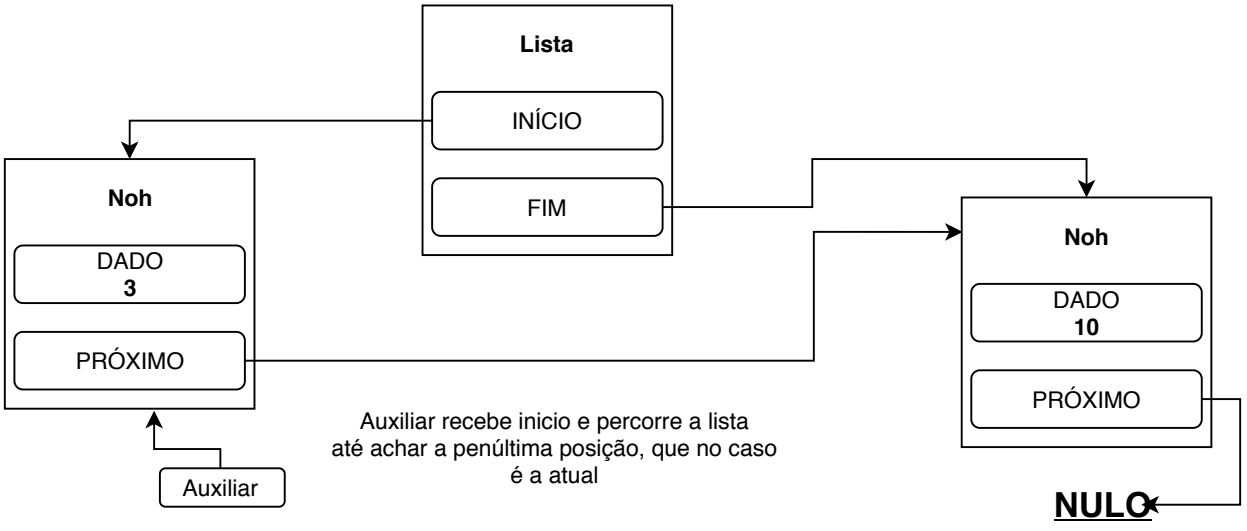
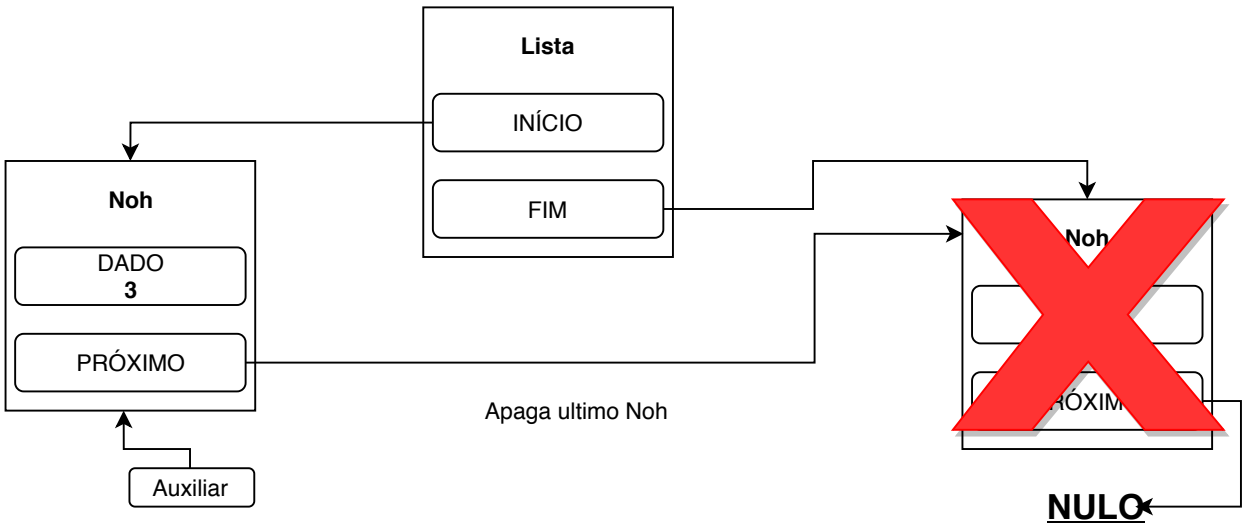
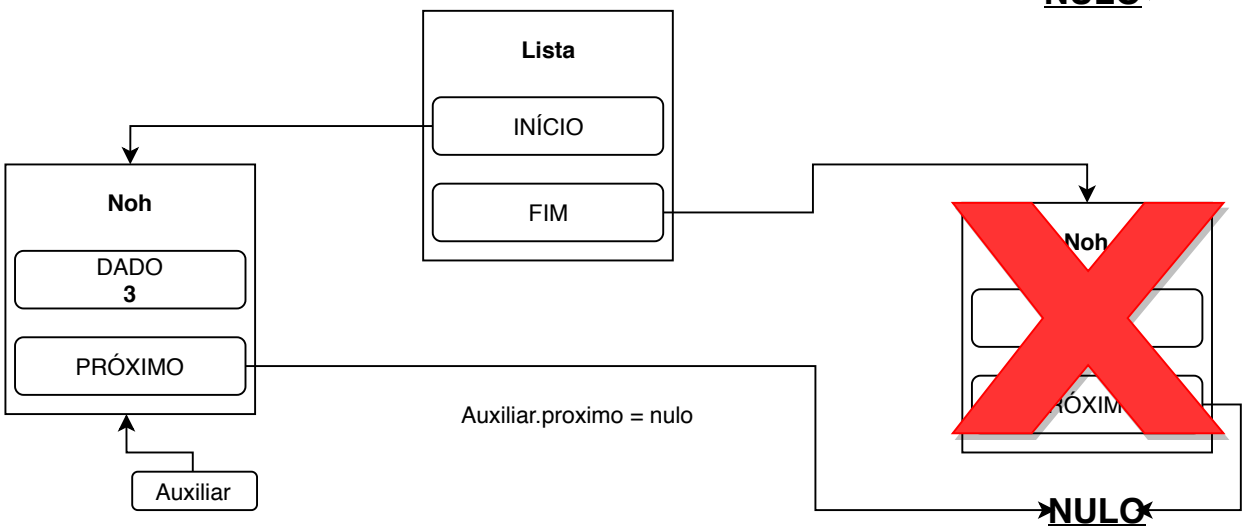
3. Remover elemento 10



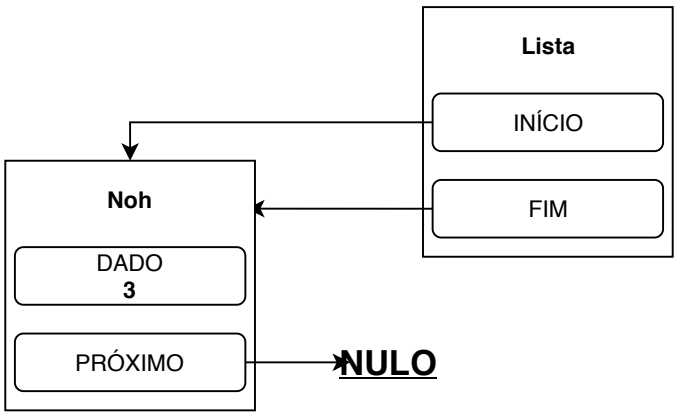
Auxiliar recebe inicio e percorre a lista até achar a penúltima posição, que no caso é a atual



Apaga ultimo Noh



Auxiliar.proximo = nulo



Fim = auxiliar

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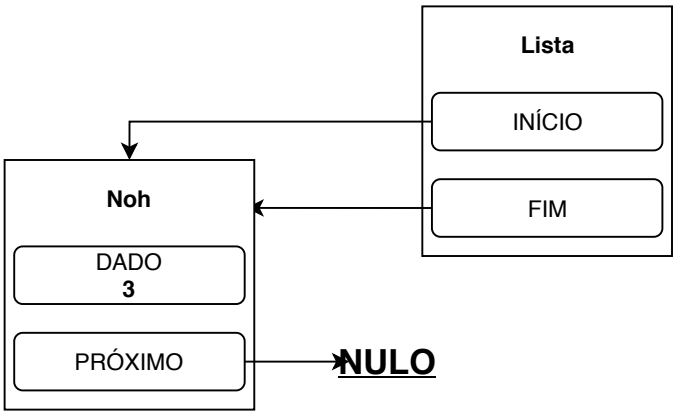
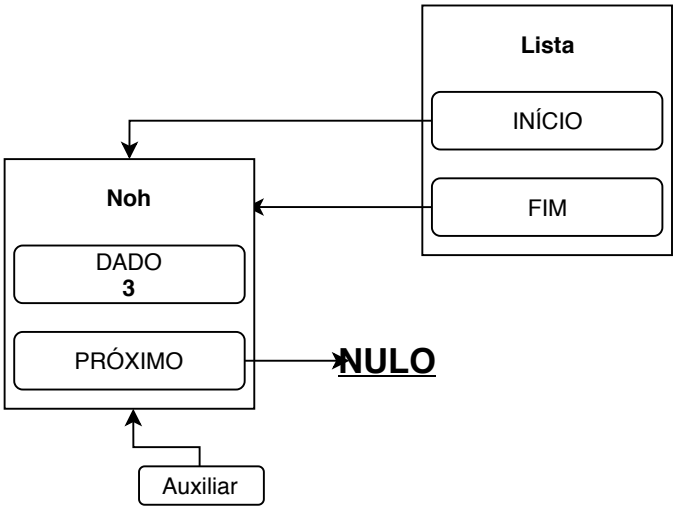
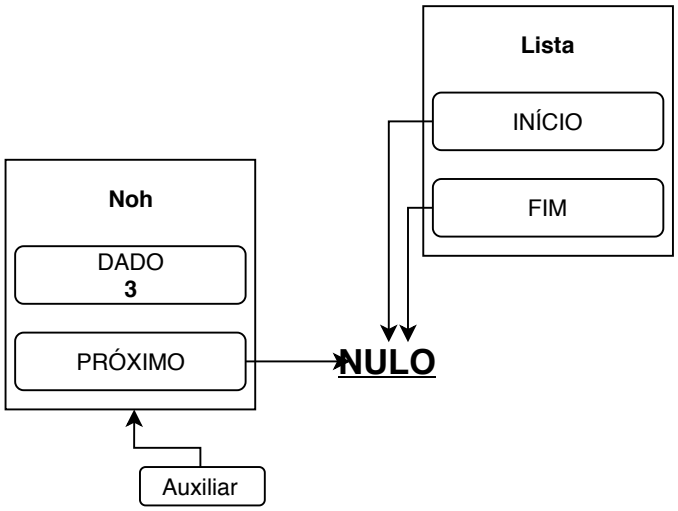
4. Remover elemento 3

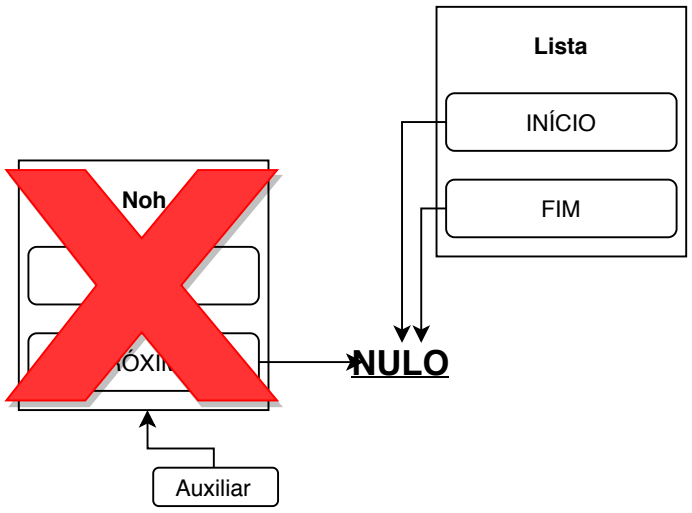




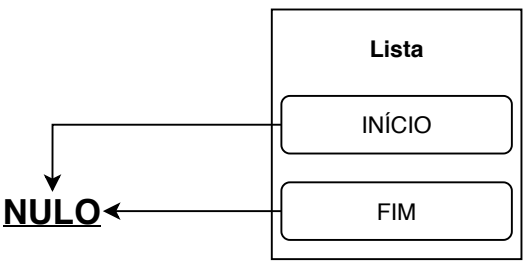
Auxiliar recebe Inicio



Inicio e Fim recebem NULO
(Auxiliar.proximo)

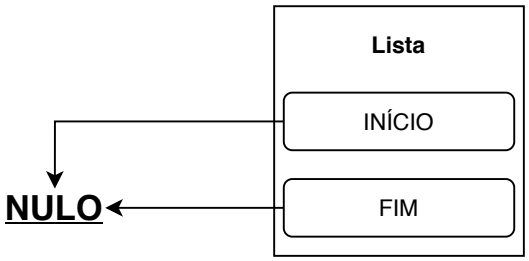


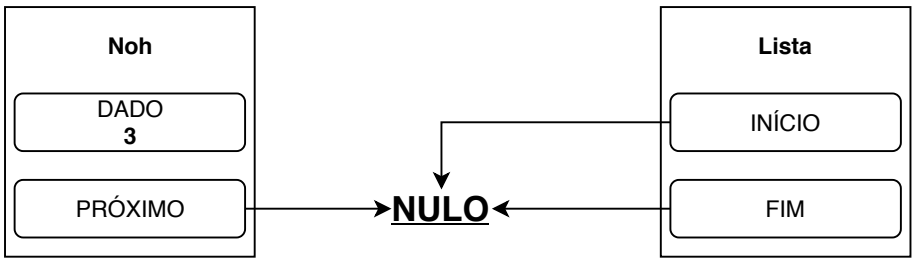
Apaga Auxiliar



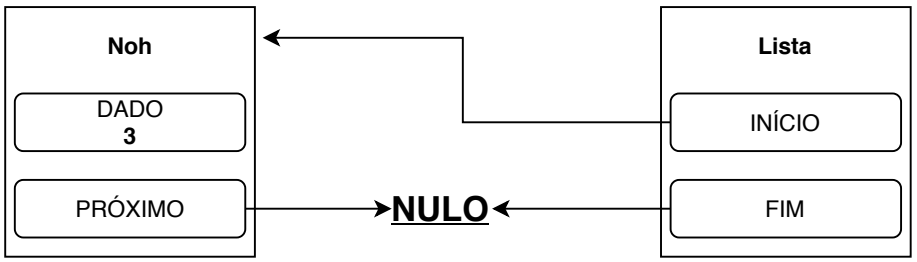
Fim da operação

5. Inserir ordenado o elemento 3

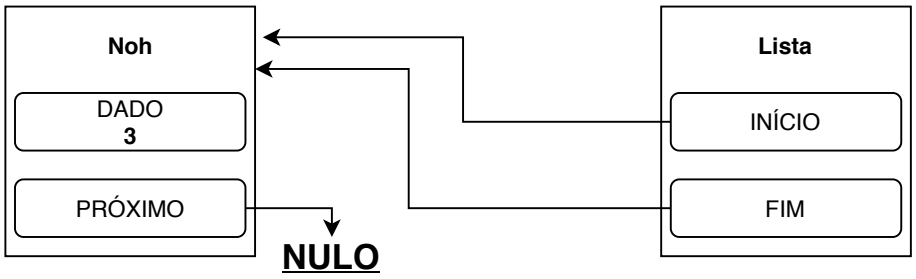




Criar Noh



Inicio aponta para novo Noh



Fim aponta para novo Noh

Fim da Operação

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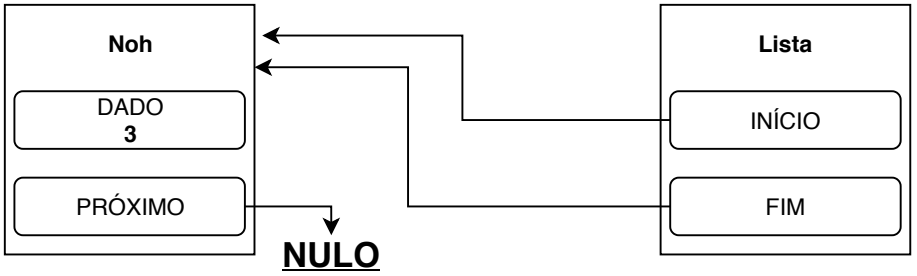
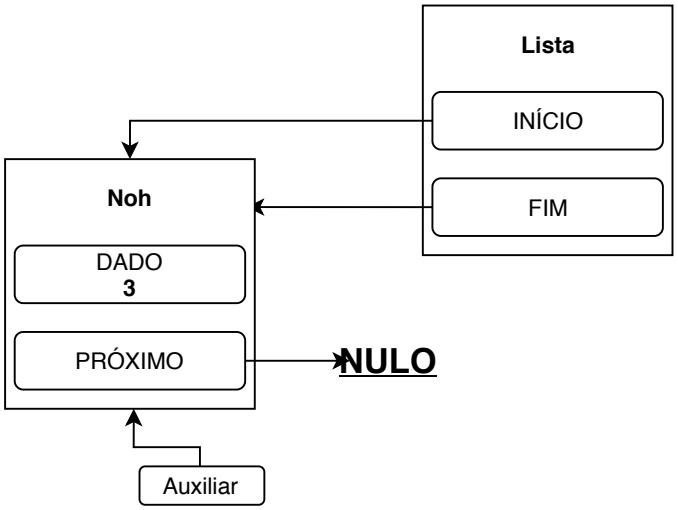
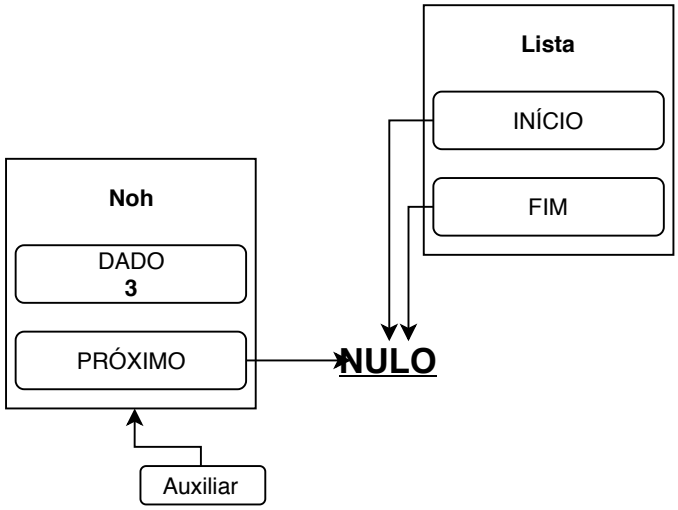
6. Remover elemento 3

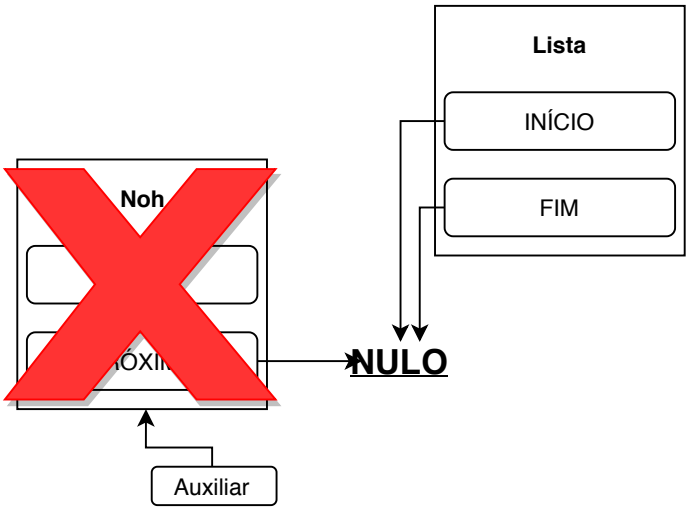




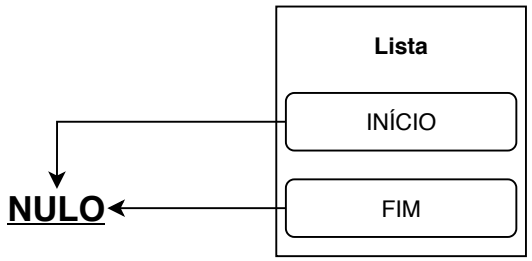
Auxiliar recebe Inicio



Inicio e Fim recebem NULO
(Auxiliar.proximo)

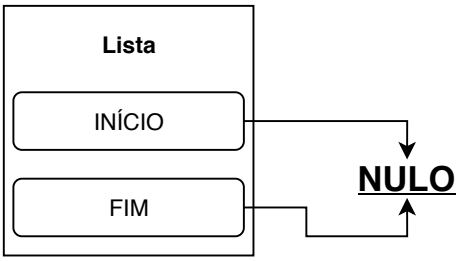


Apaga Auxiliar

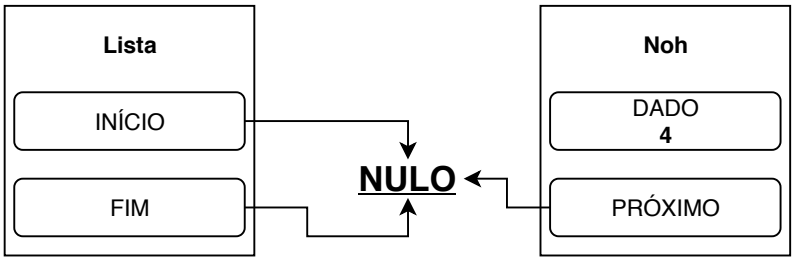


Fim da operação

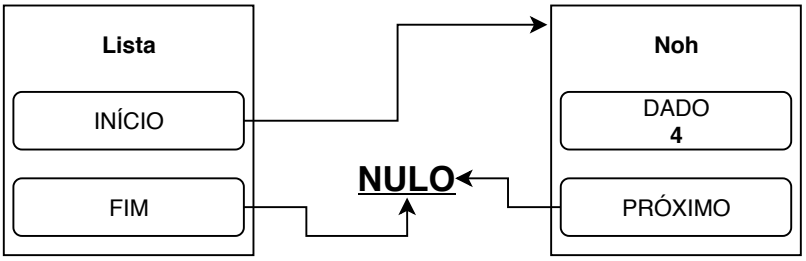
7. Inserir ordenado os elementos 4, 8, 2, 3



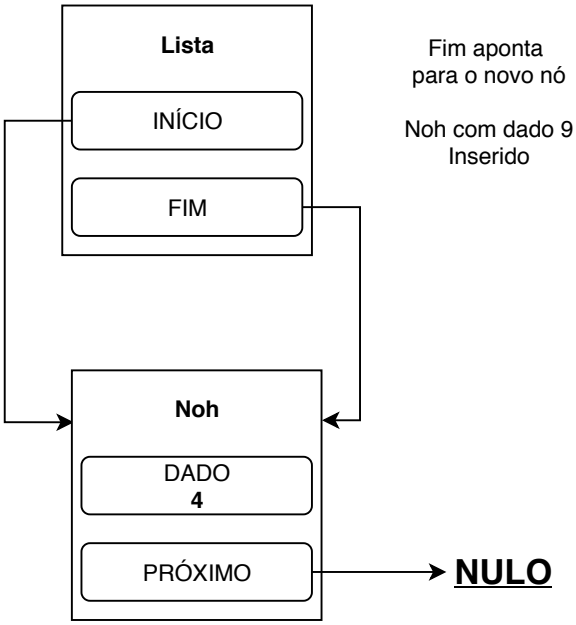
Lista Atual



Criar Noh que será inserido
em uma lista vazia



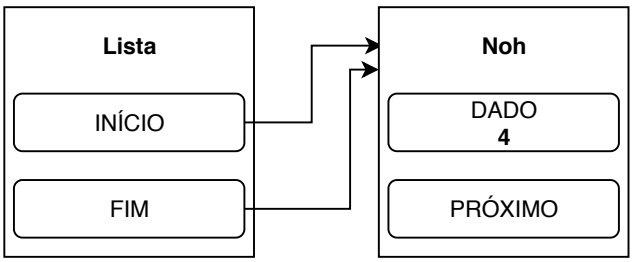
Início aponta para o novo nó

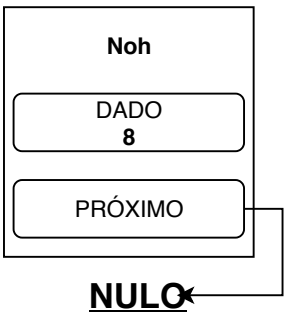


Fim aponta
para o novo nó

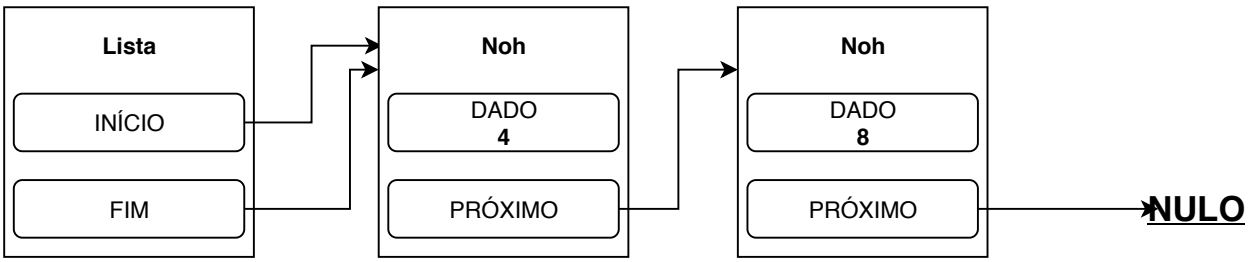
Noh com dado 9
Inserido

Criar Noh

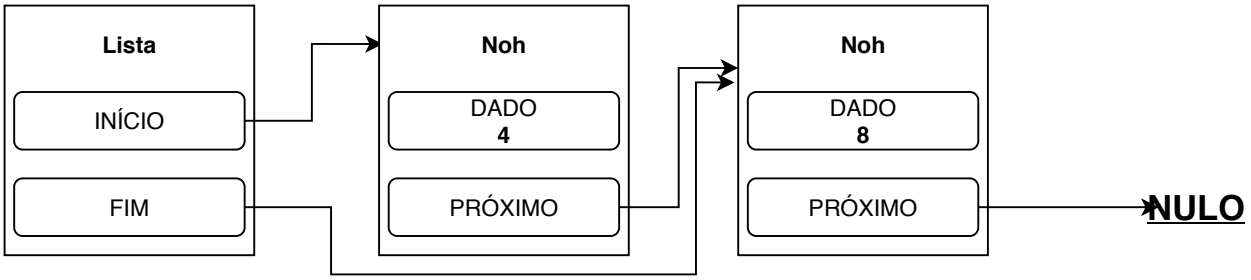




Atualiza Próximo do Novo Noh

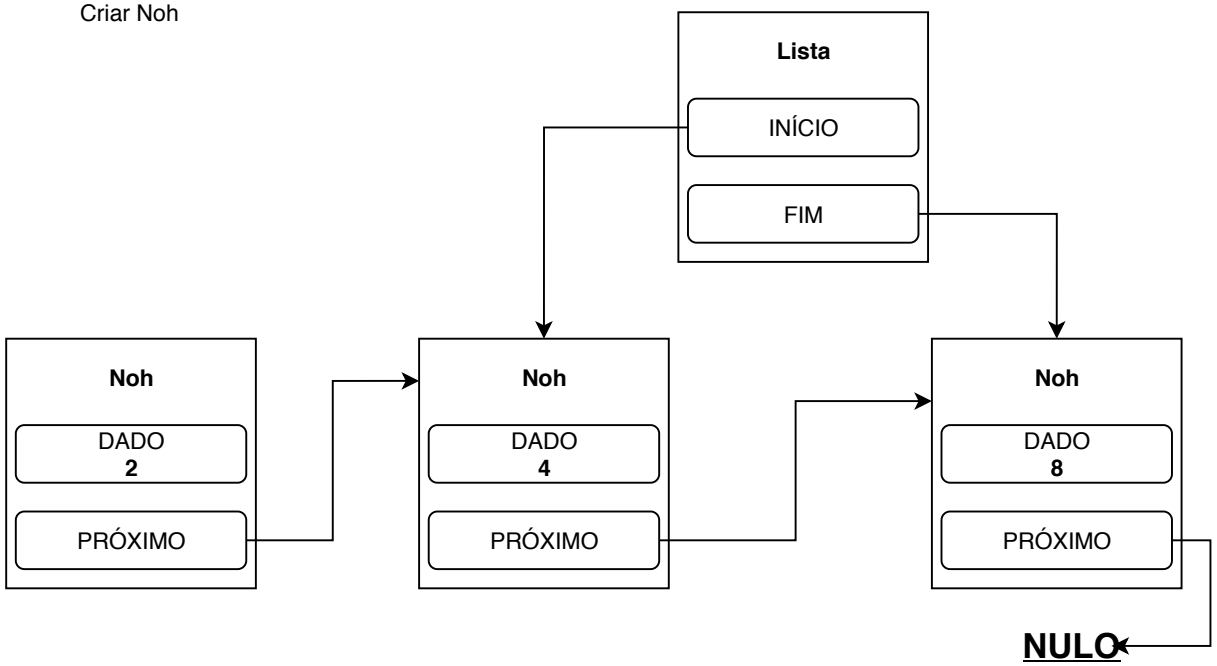


Atualiza Próximo do Início

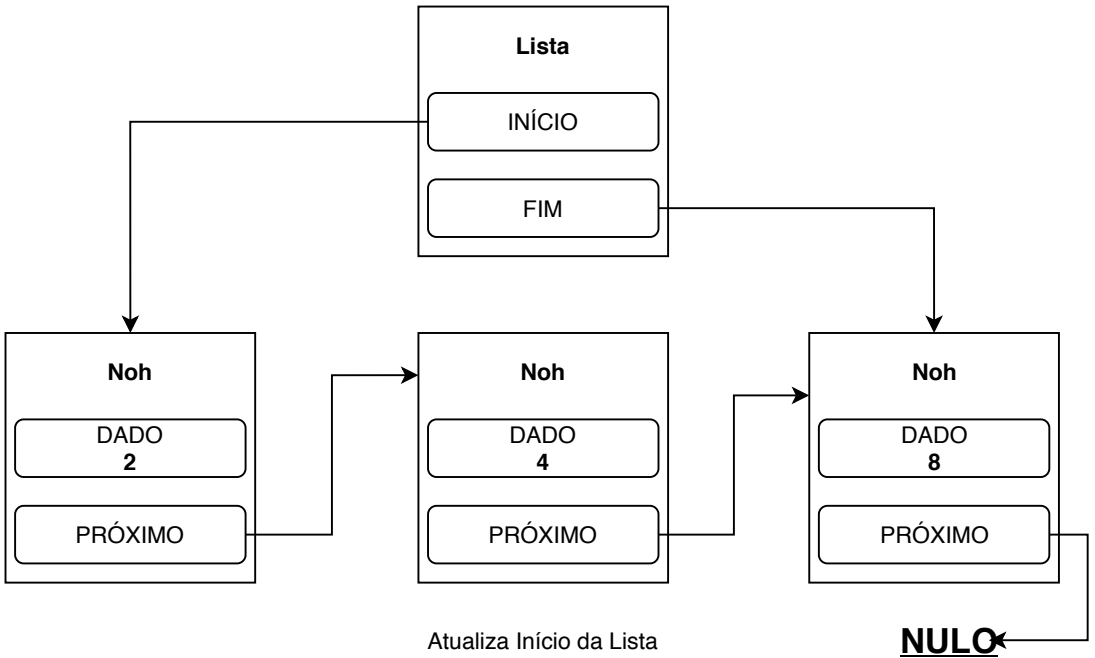


Atualiza Fim

Criar Noh

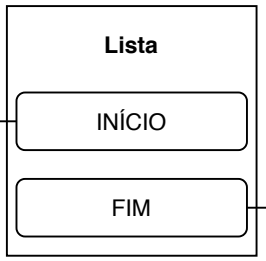


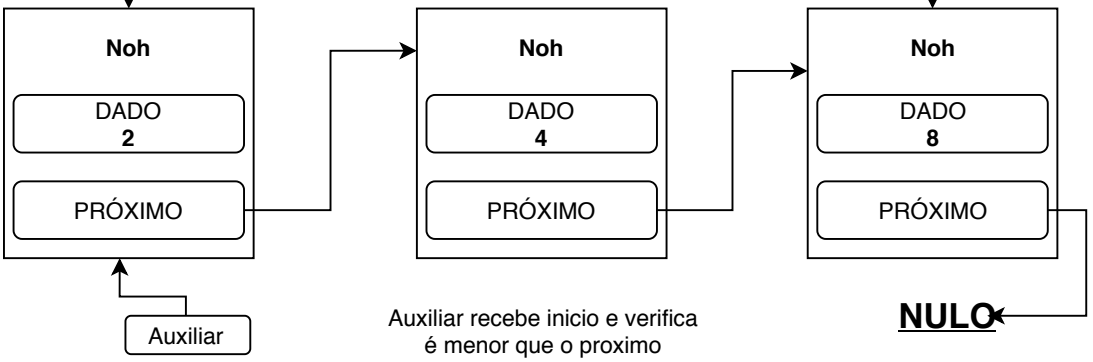
Atualiza Proximo do novo noh



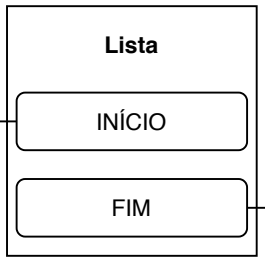
Atualiza Início da Lista

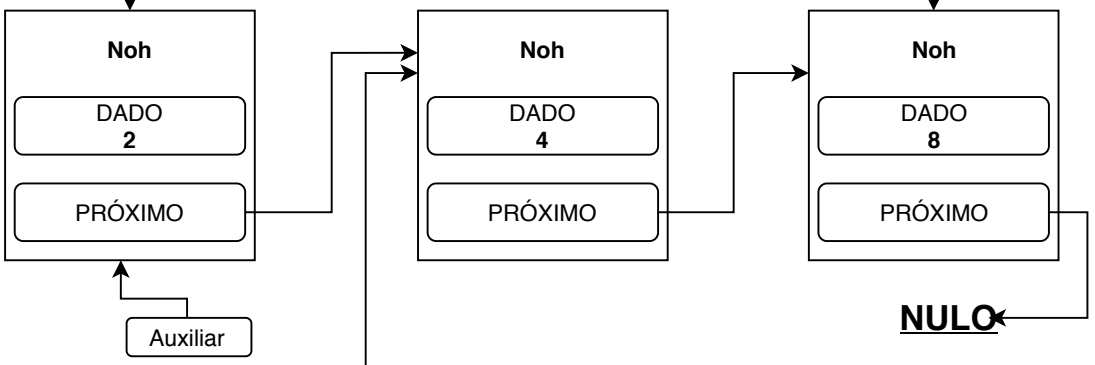
Criar Noh

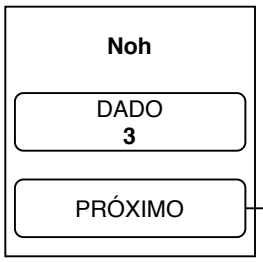




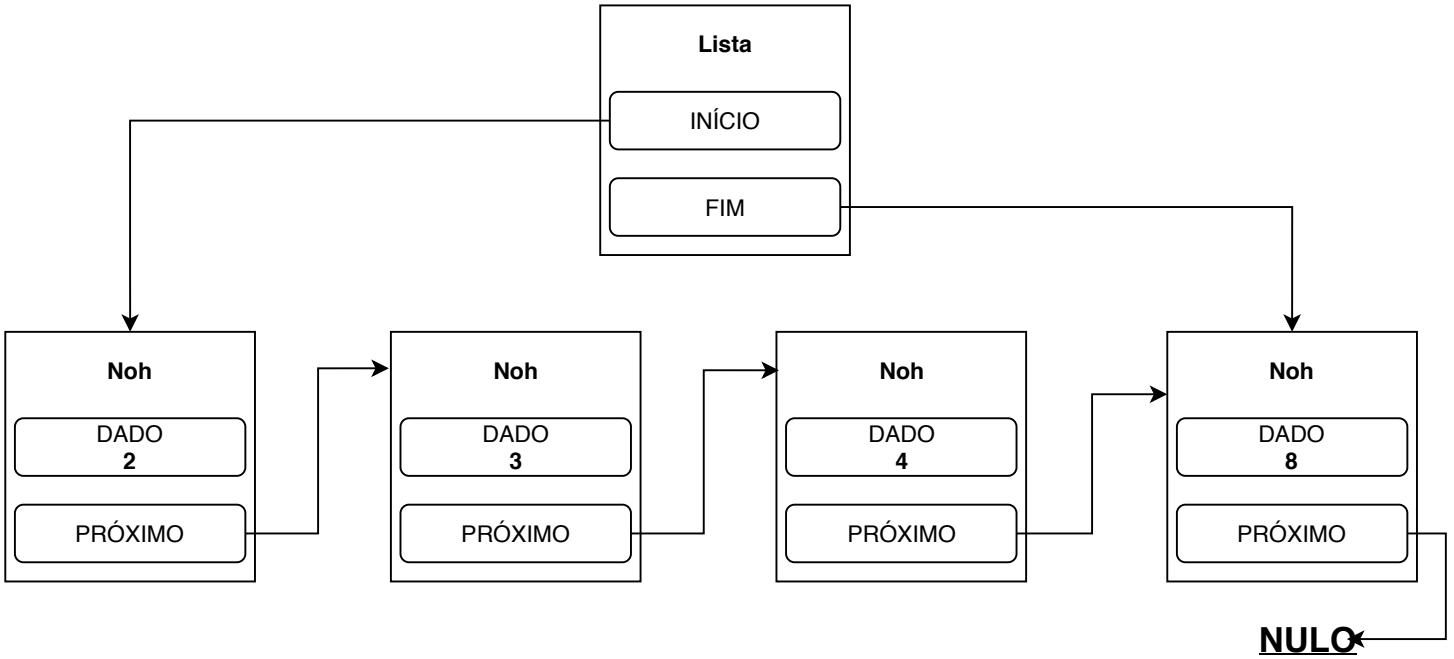
Auxiliar recebe inicio e verifica
é menor que o proximo
(o que acontece já nesse momento)







O próximo elemento do novo Noh recebe o Noh com dado 4



O Noh com dado 2 tem seu próximo atualizado para o novo Noh

Fim da operação

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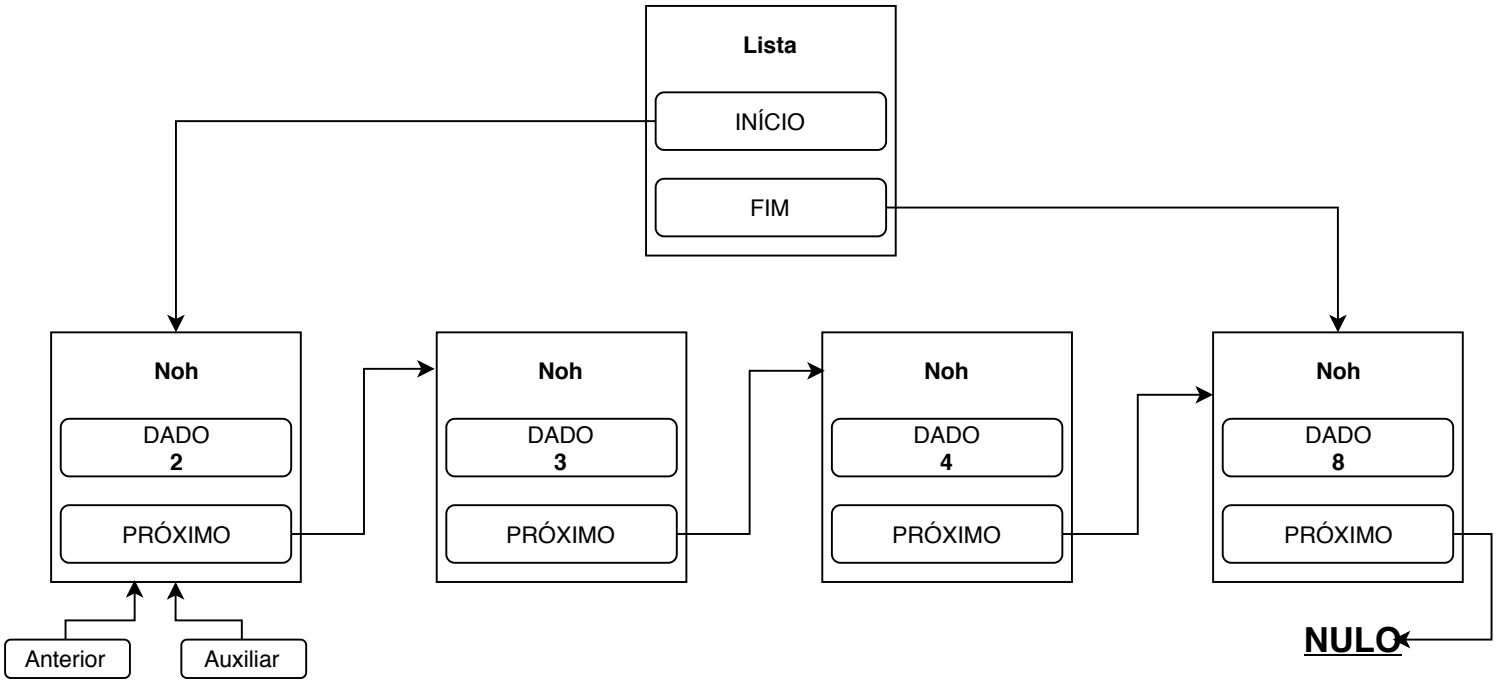
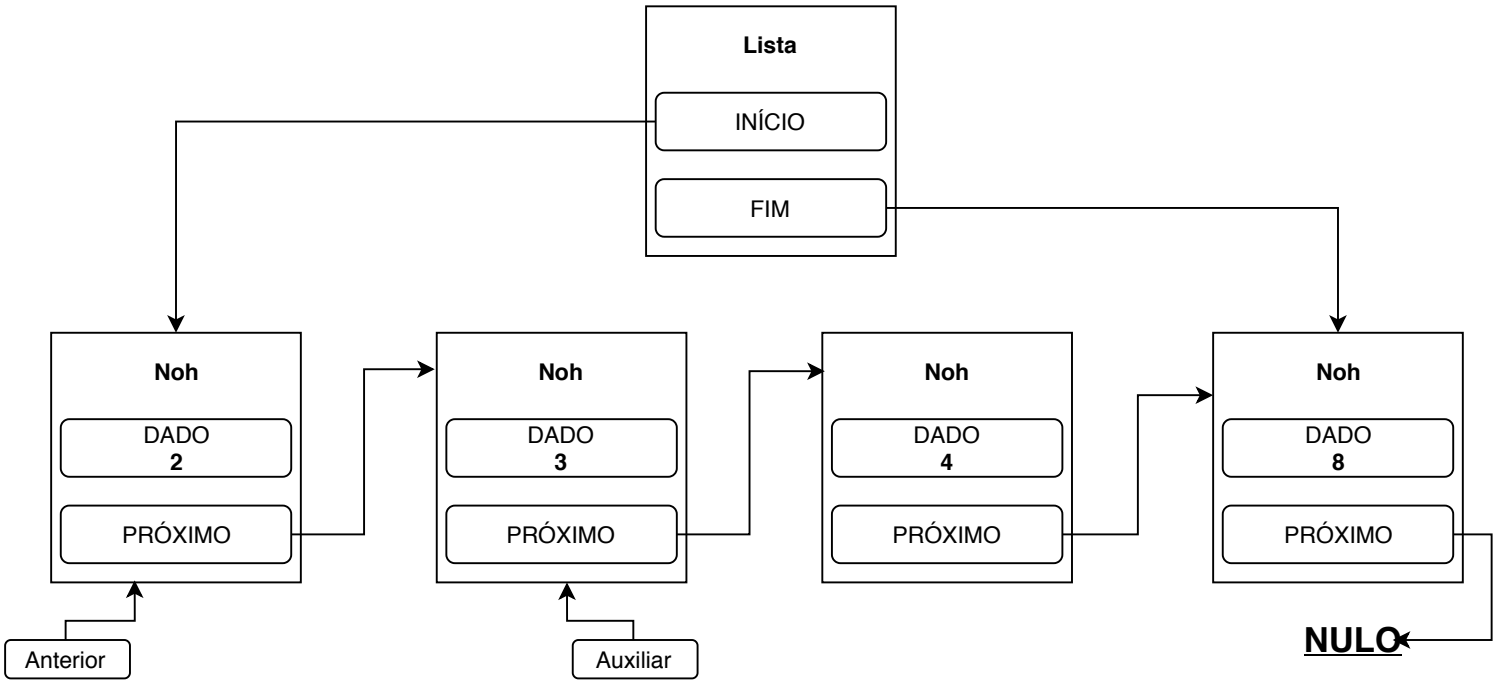
8. Remover elemento 4

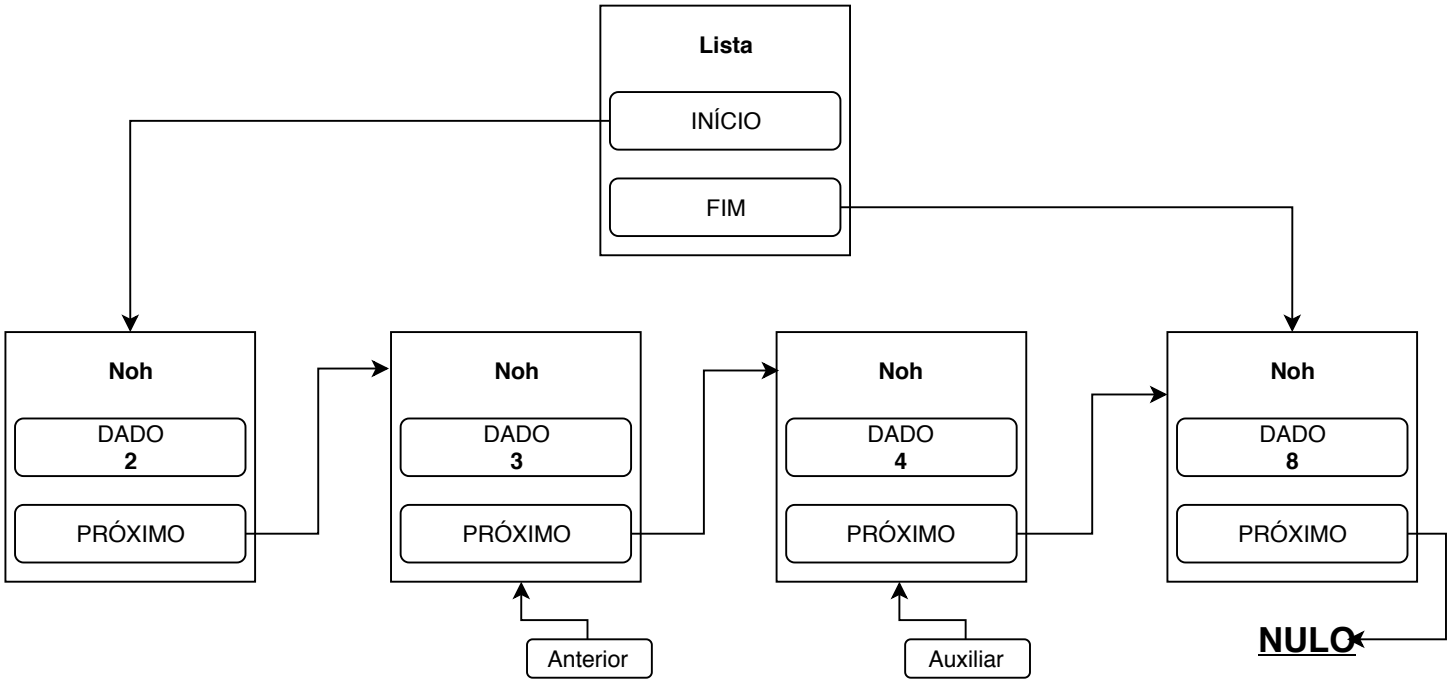


Auxiliar e Anterior recebem inicio

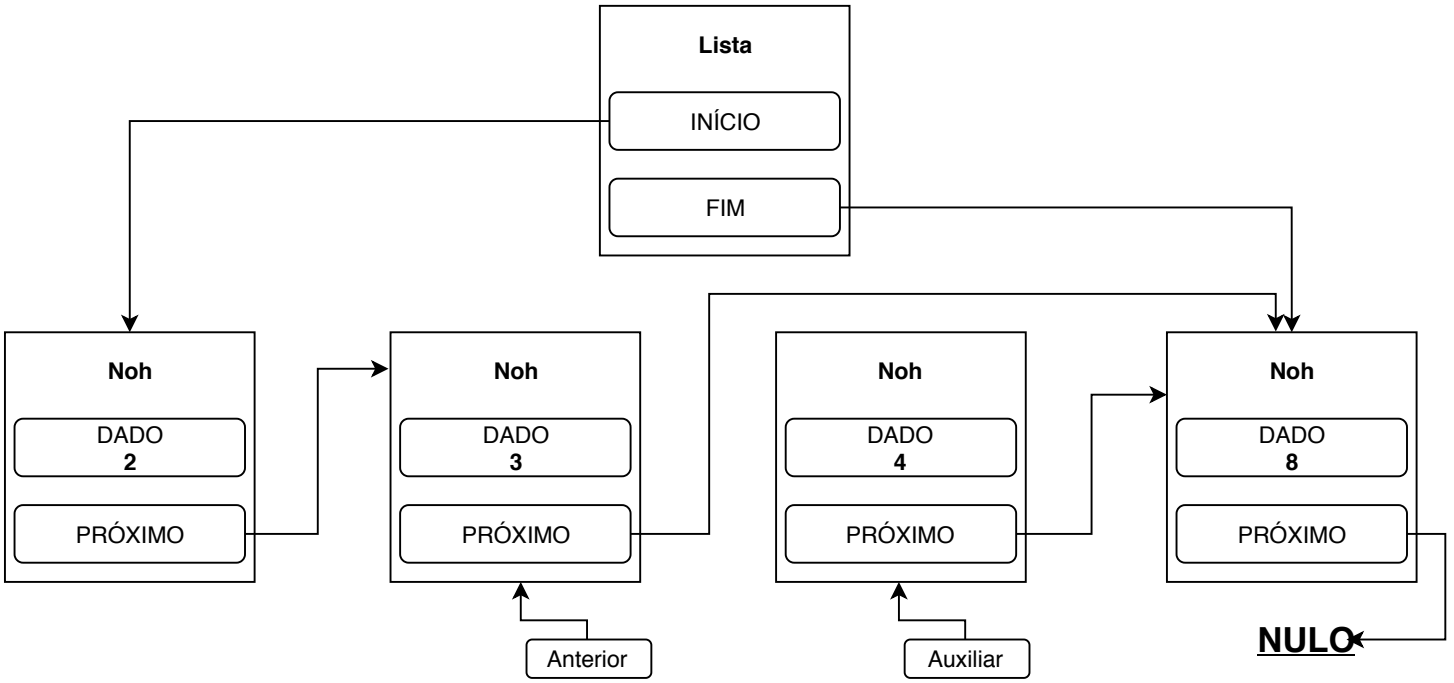
Enquanto Auxiliar.dado != 4,
Anterior = Auxiliar;
Auxiliar = Auxiliar.proximo;



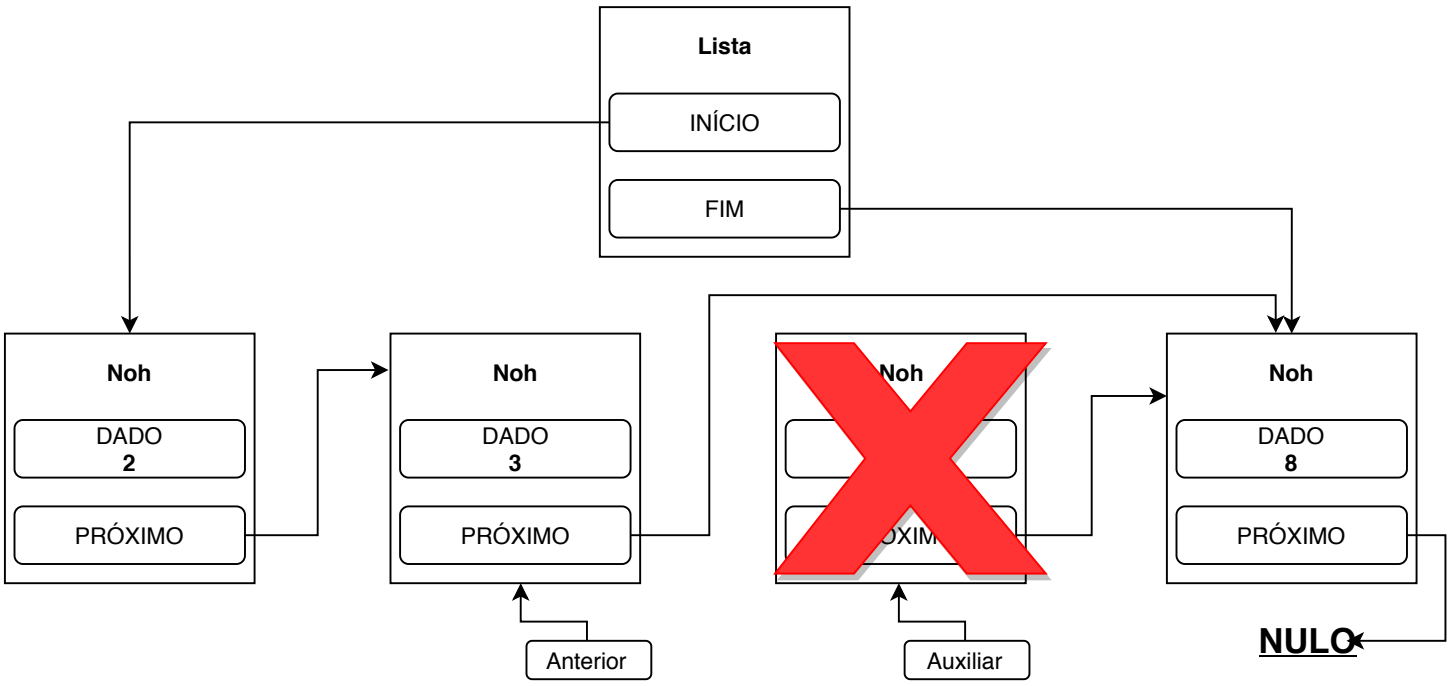
Anterior = Auxiliar
Auxiliar = Auxiliar.proximo



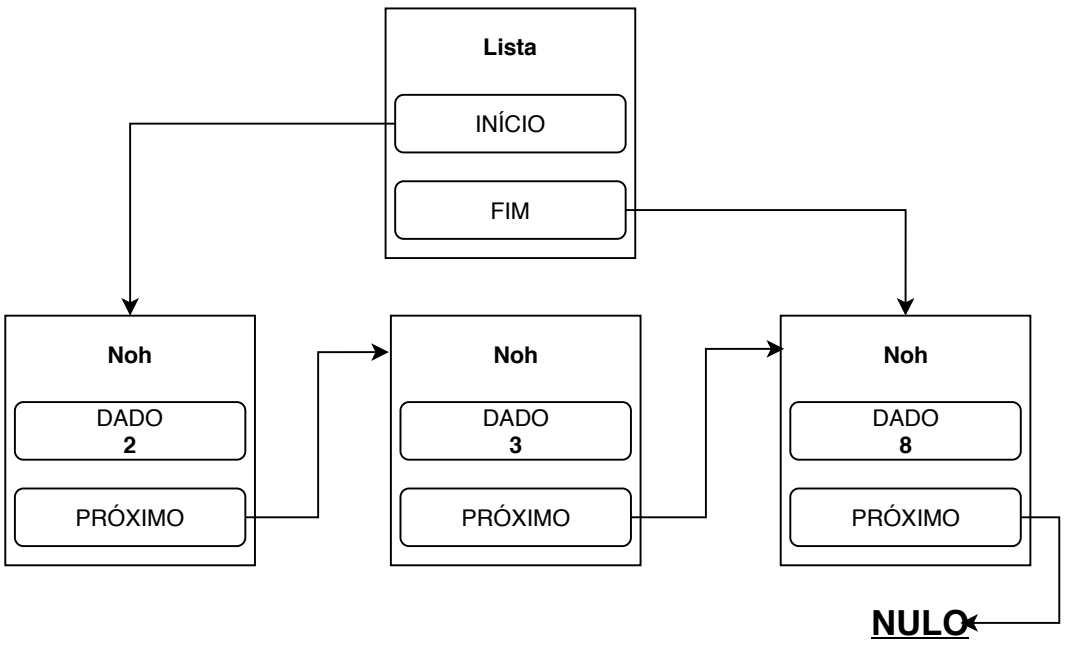
Anterior = Auxiliar
Auxiliar = Auxiliar.proximo



Encontrou
Anterior.proximo = Auxiliar.proximo



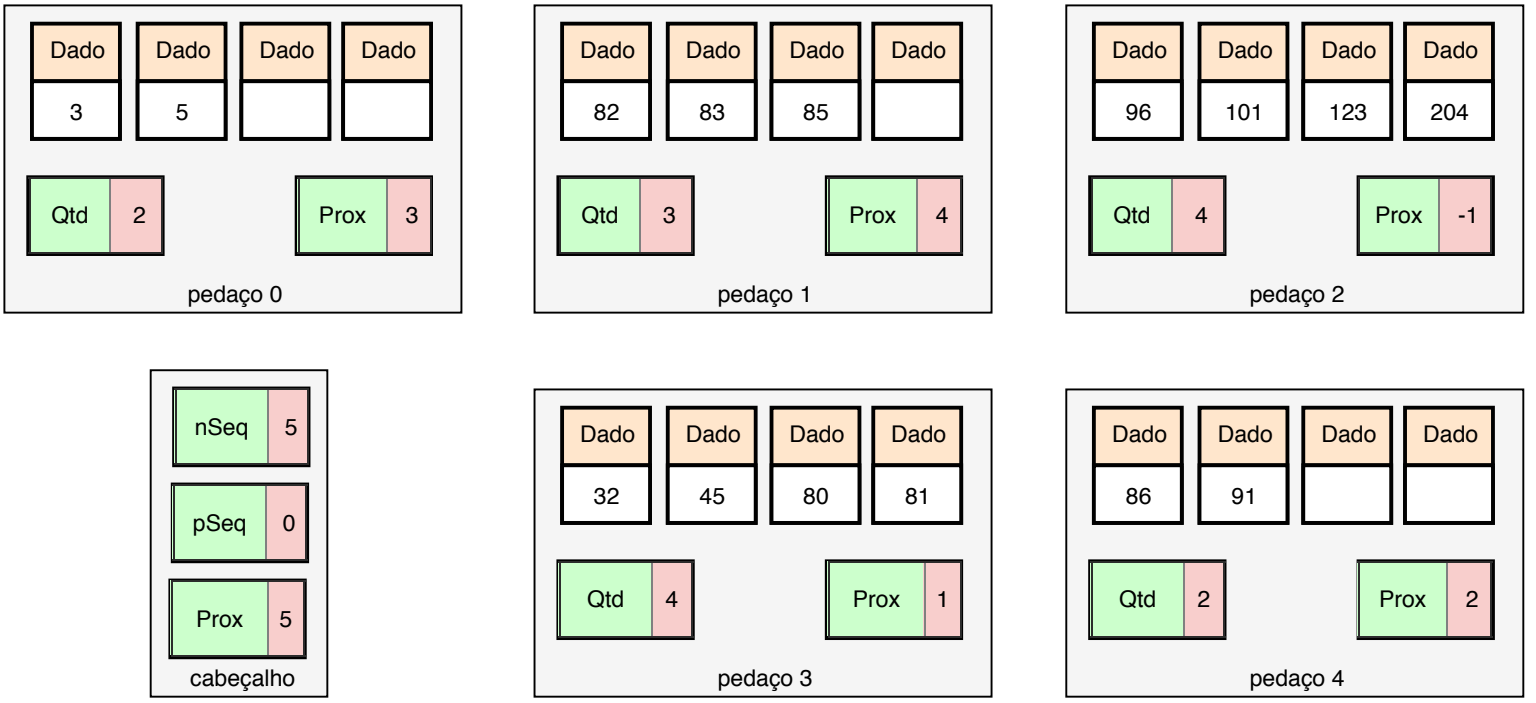
Apaga Auxiliar



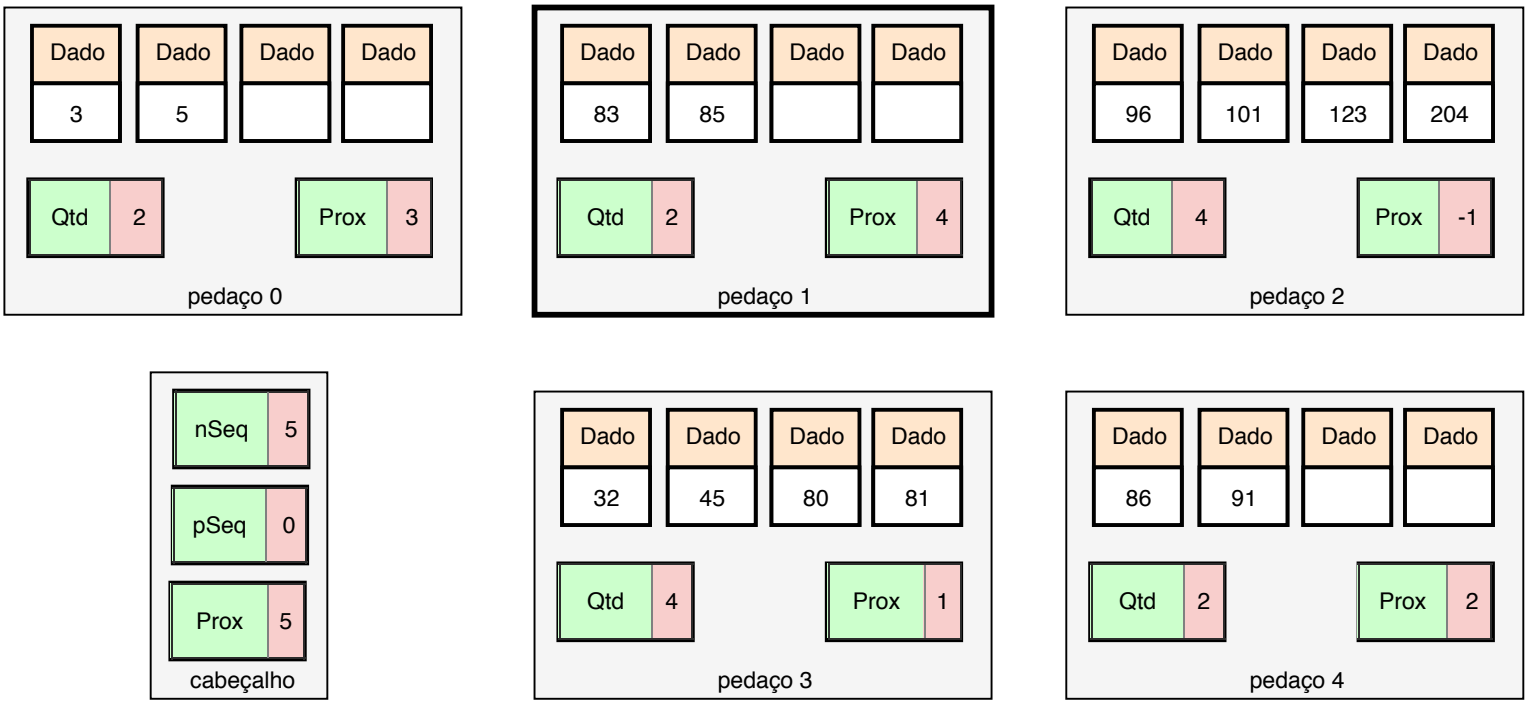
Fim da Operação e da questão 3

Questão 4

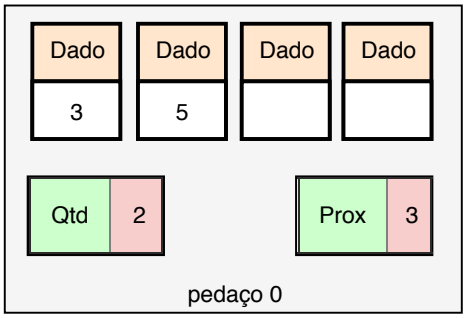
Original

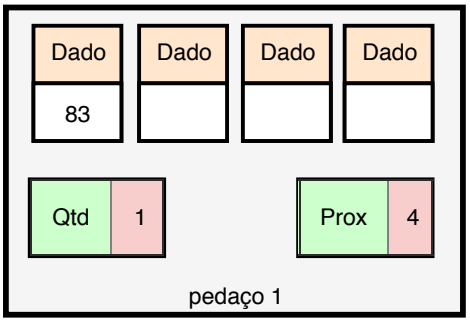


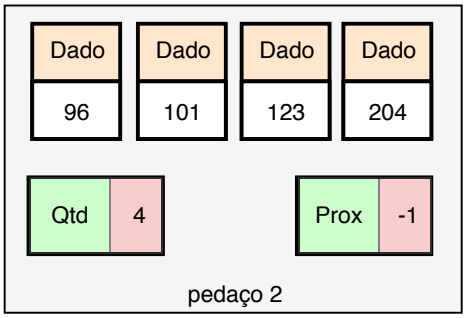
1. Remover o elemento 82

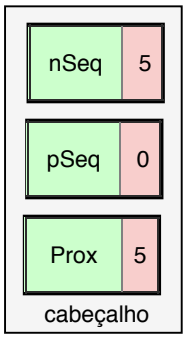


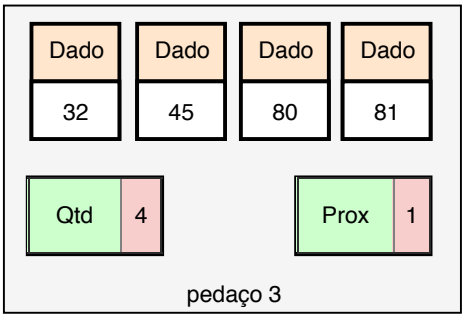
2. Remover o elemento 85

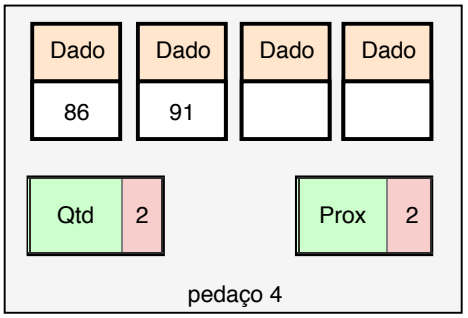


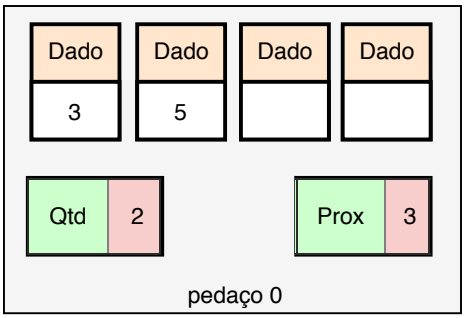


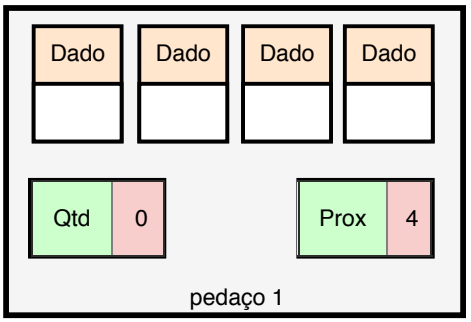


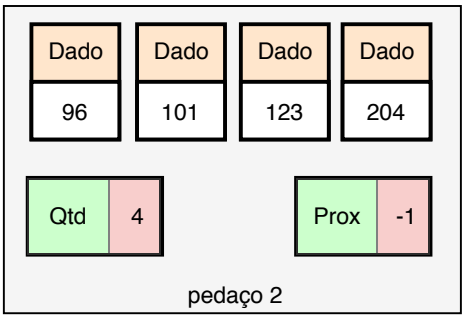


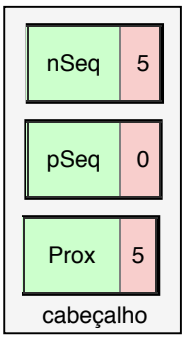


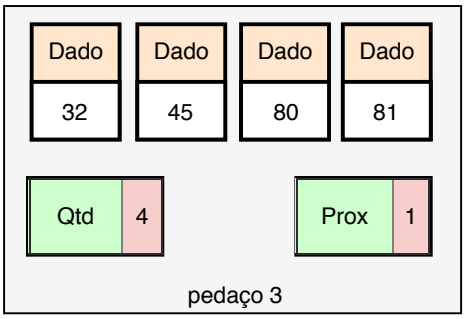


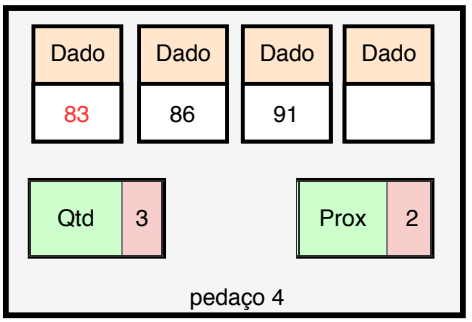




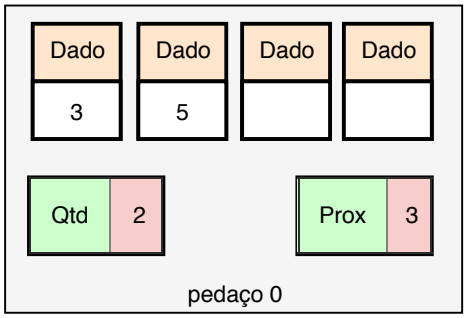


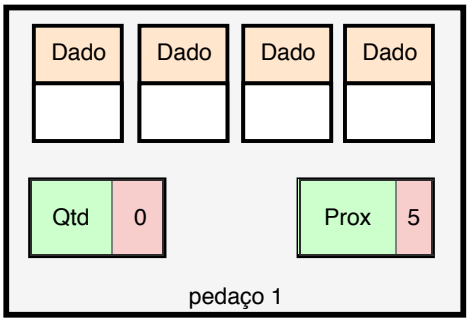


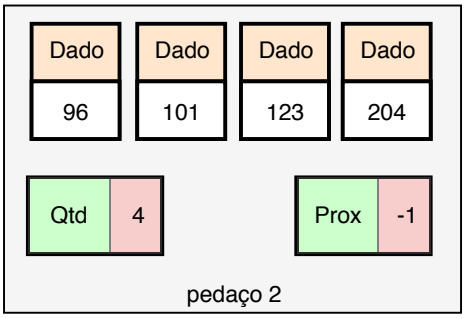


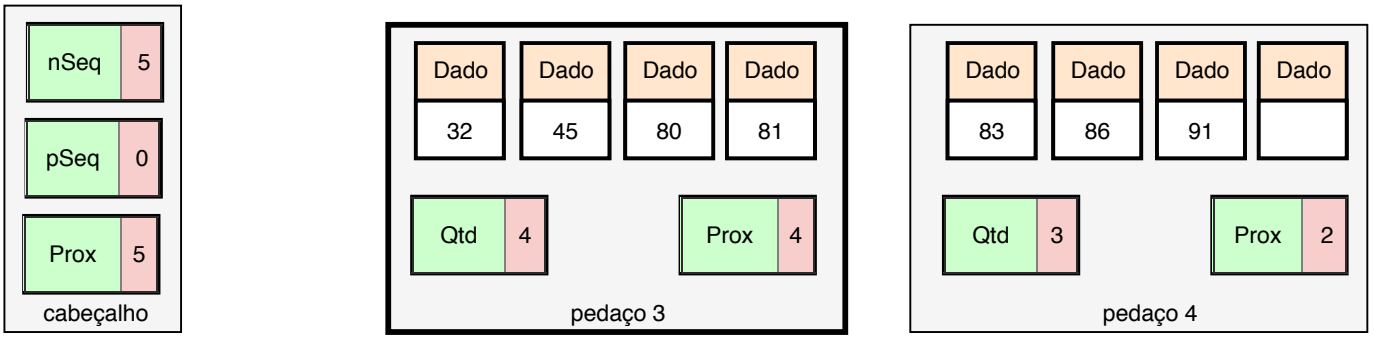


Para cada pedaço ter pelo menos a metade de sua capacidade ocupada, o elemento 83 é passado para o pedaço 4



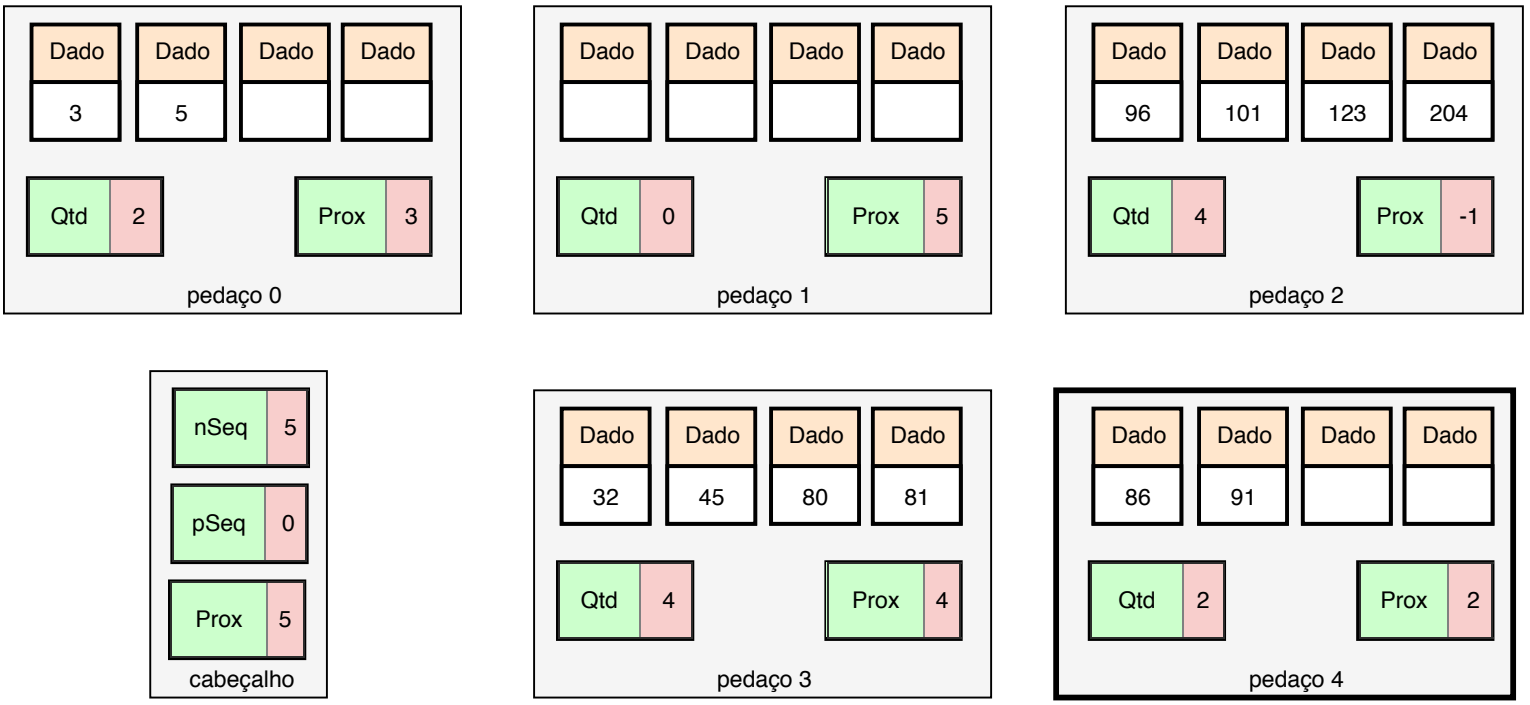






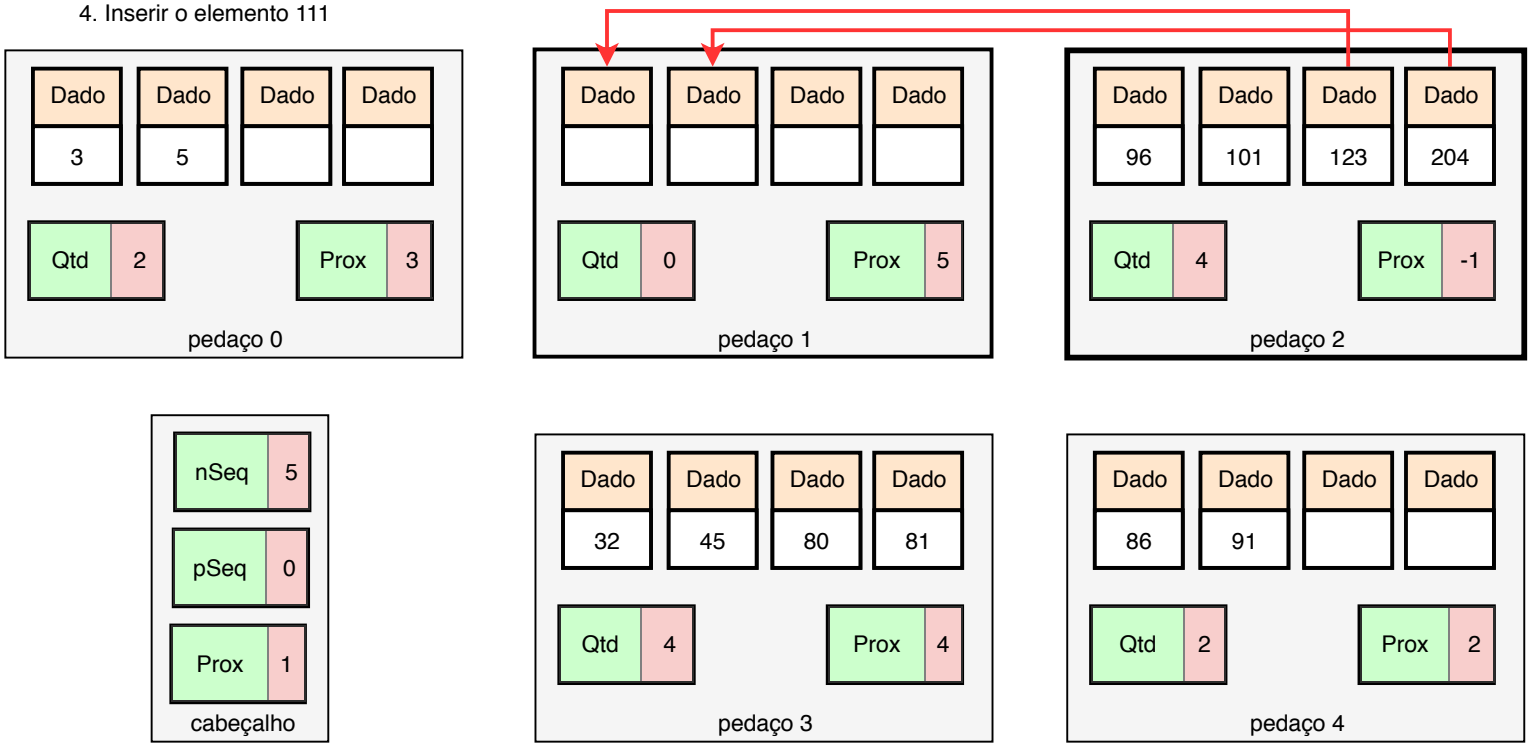
Os Prox. do pedaço 1 e do pedaço 3 são atualizados

3. Remover o elemento 83

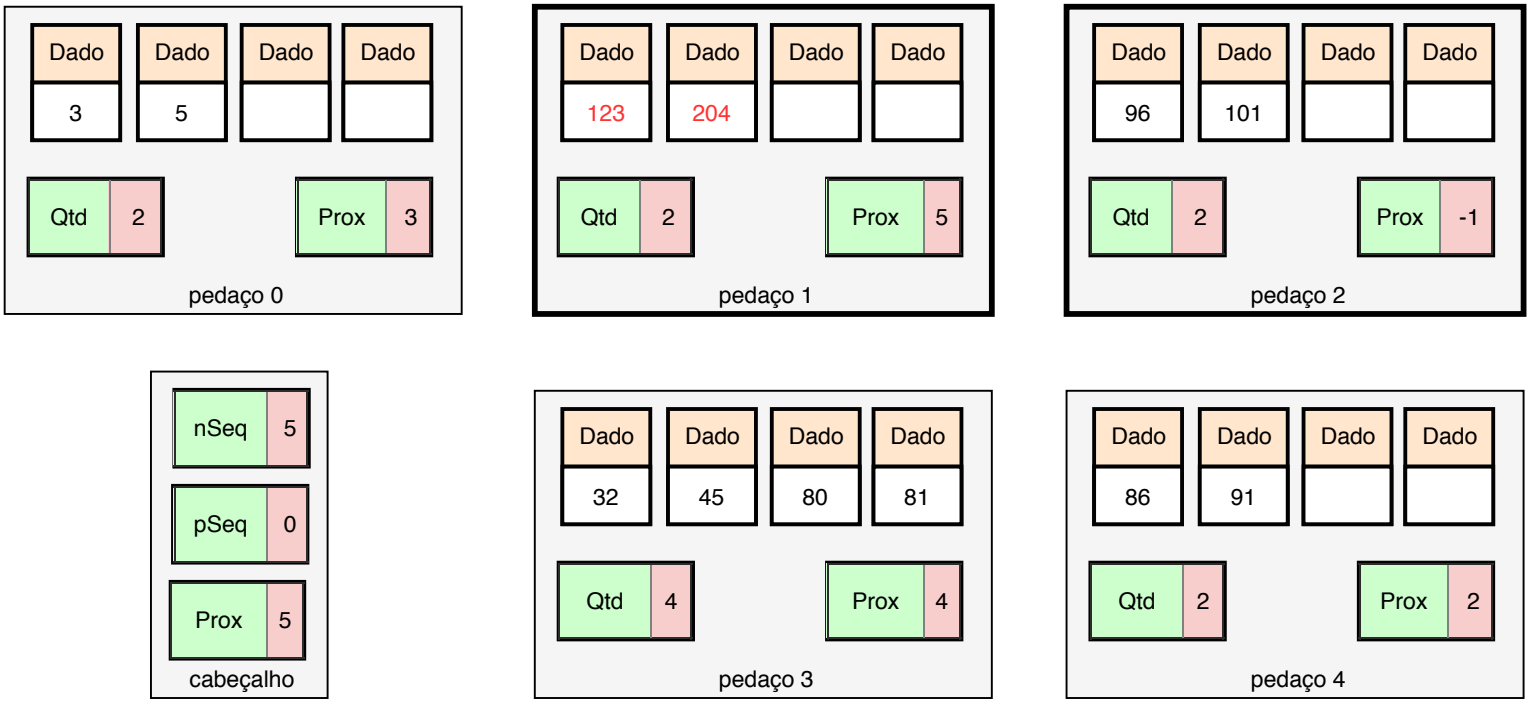


Elemento removido

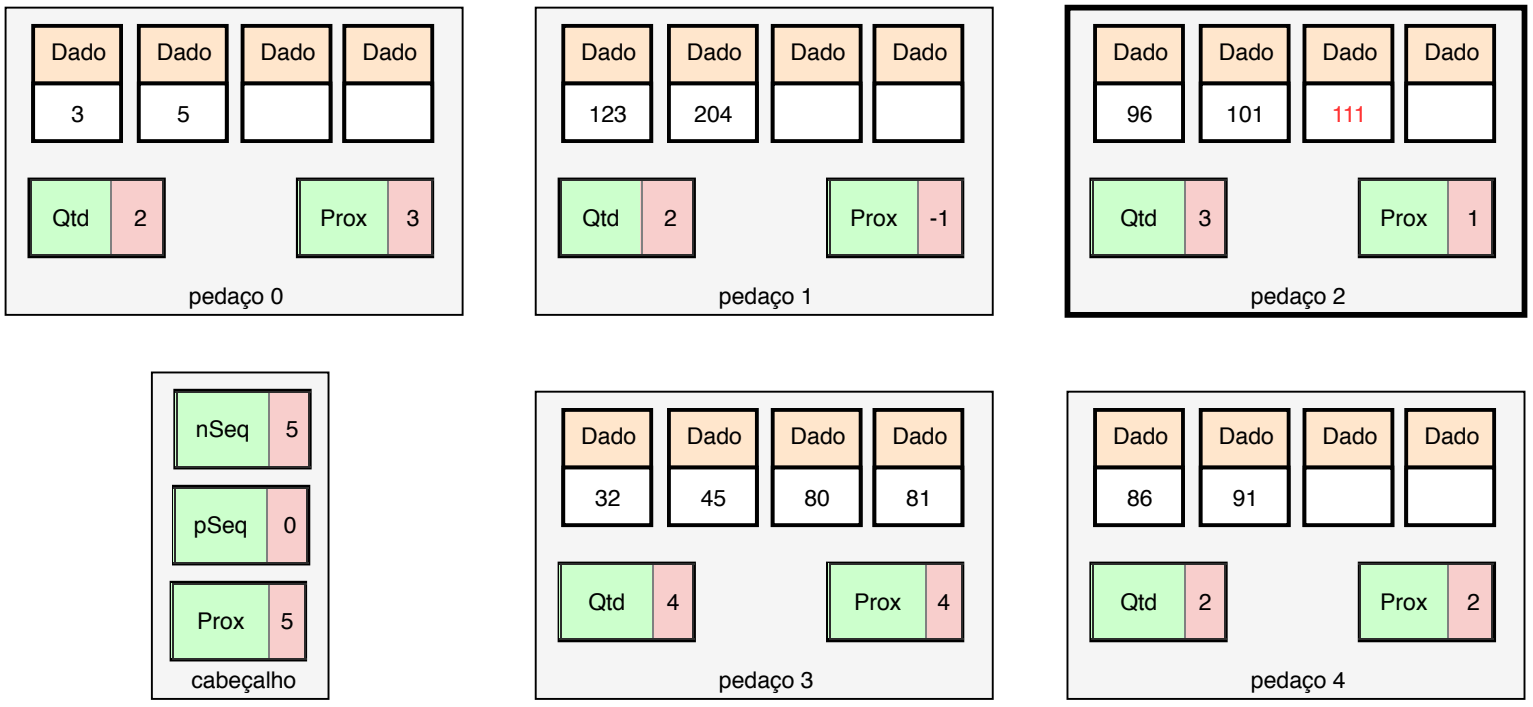
4. Inserir o elemento 111



O pedaço 2 é divido para a inserção do elemento 111;
O pedaço disponível é o 1

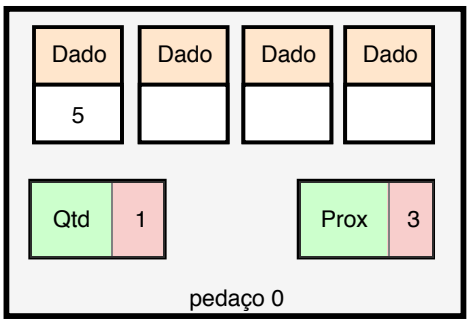


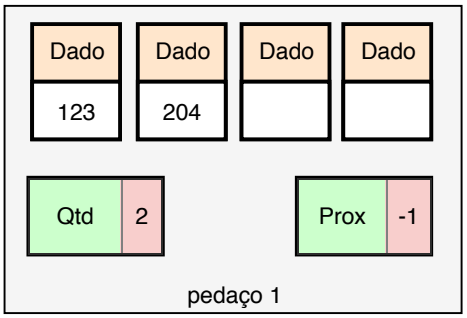
Dados movidos

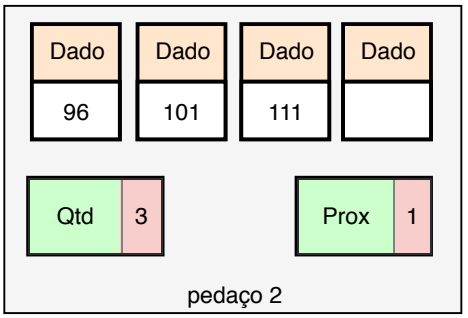


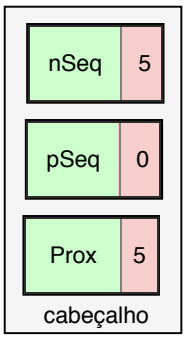
Dado 111 inserido e Prox. atualizado

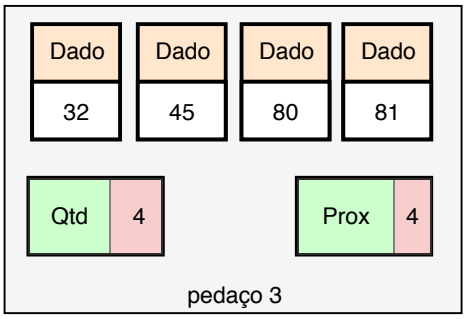
5. Remover o elemento 3

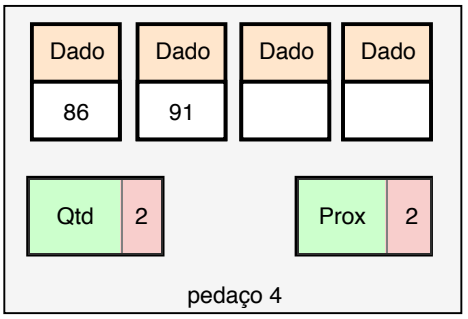




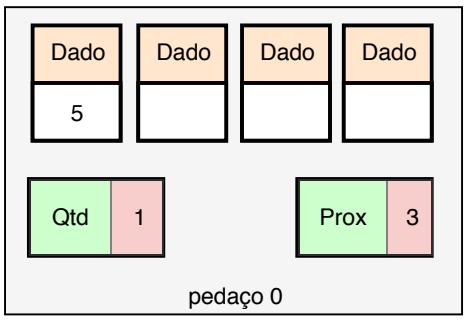


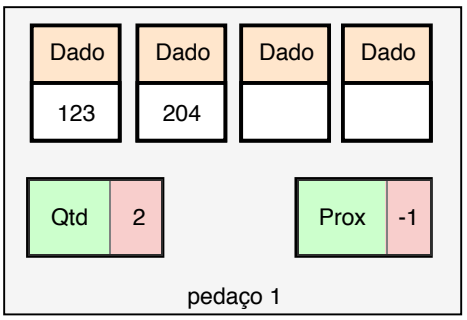


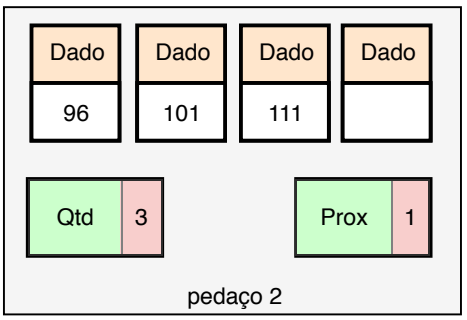


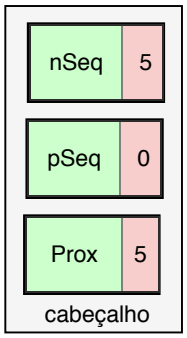


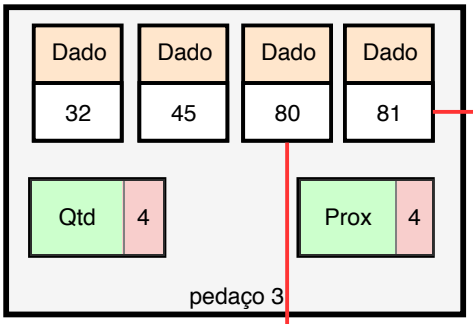
Elemento removido

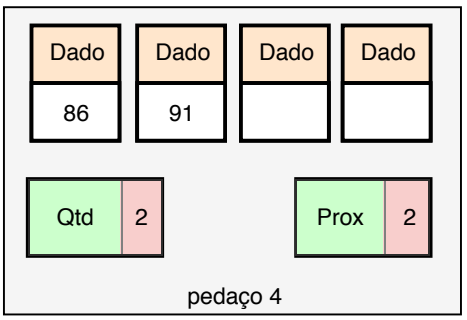


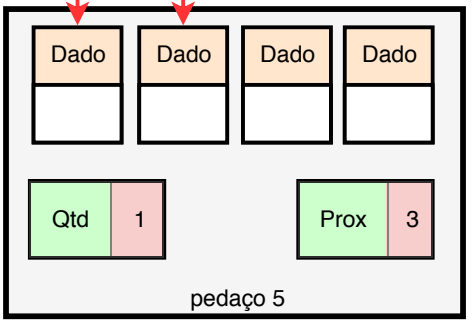




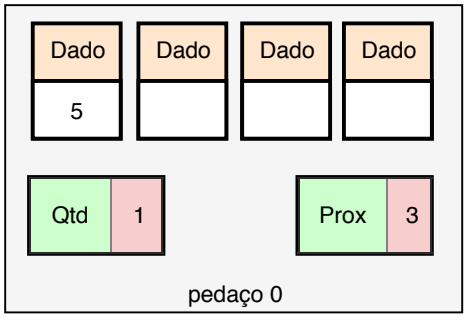


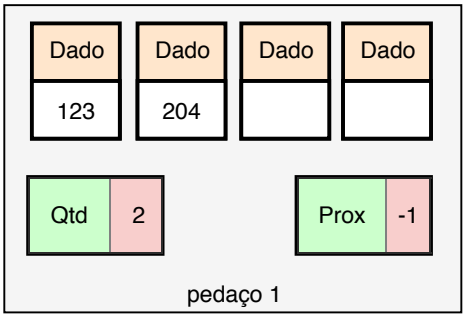


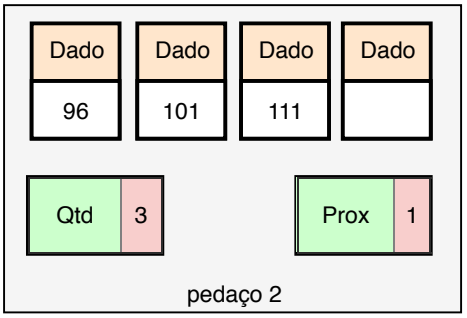


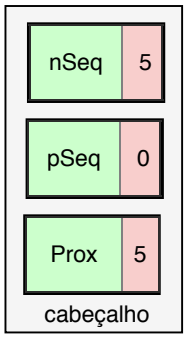


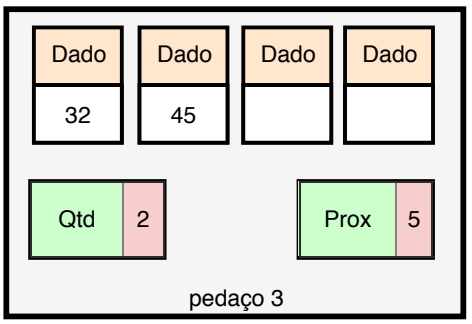
Para cada pedaço ter pelo menos a metade de sua capacidade ocupada, o elemento 5 é passado para o pedaço 3, porém este está cheio, portanto é necessário criar um novo pedaço para mover os dados que serão retirados

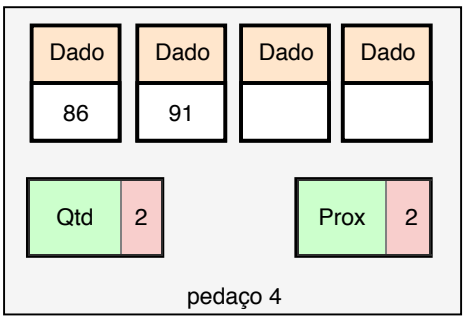




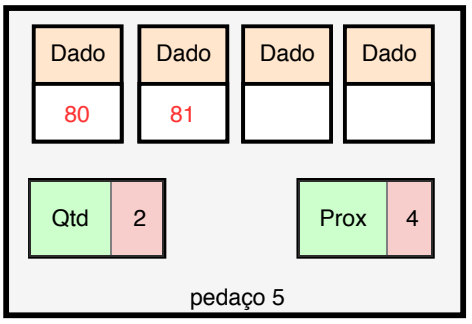


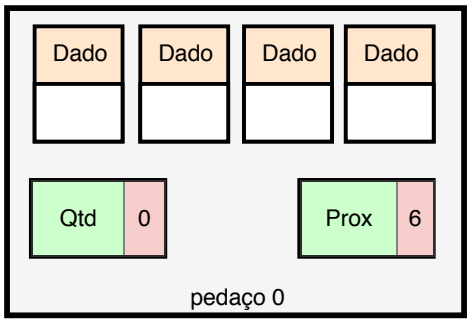


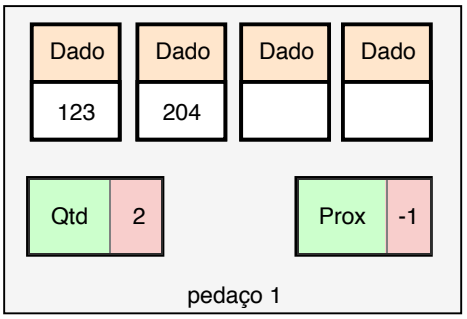


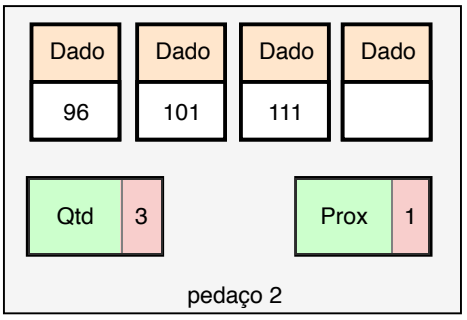


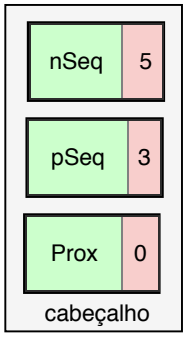
Elementos movidos e Prox. atualizado

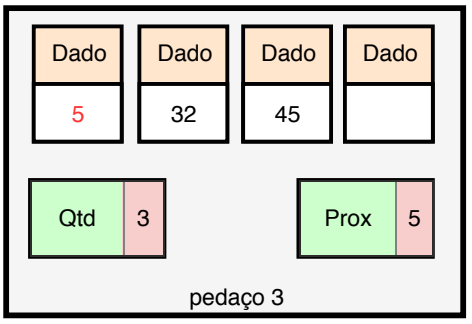


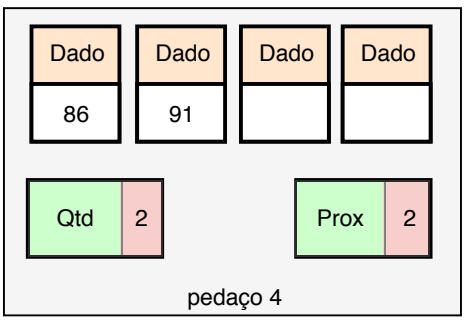




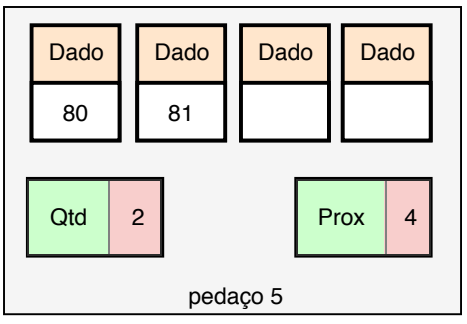




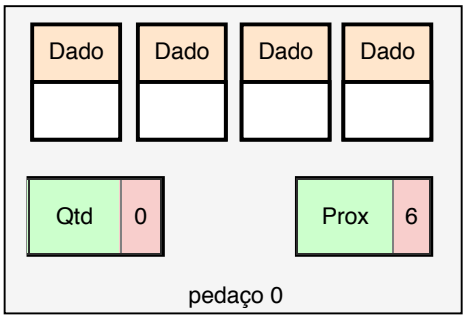


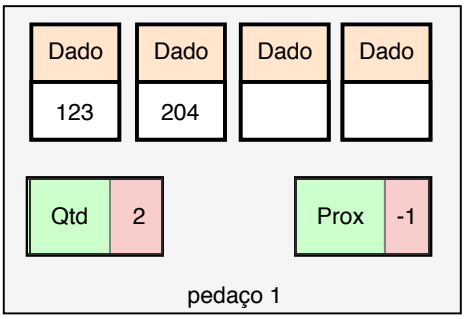


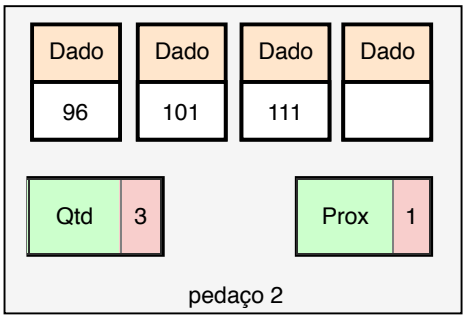
Elemento 5 movido e cabeçalho atualizado

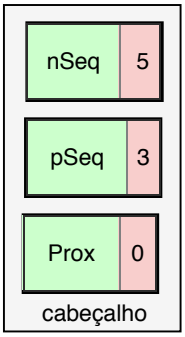


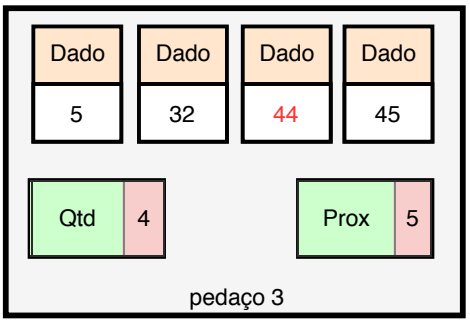
6. Inserir o elemento 44

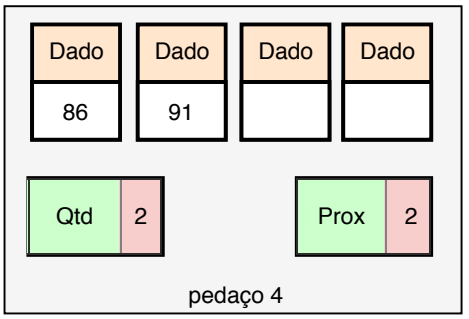




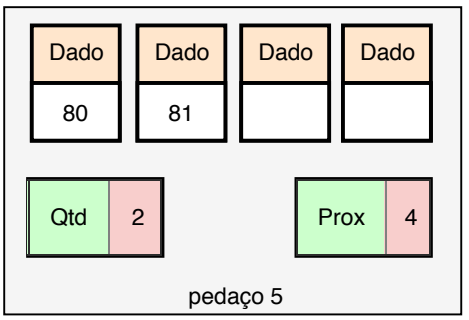




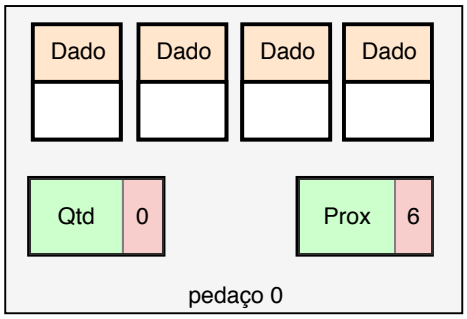


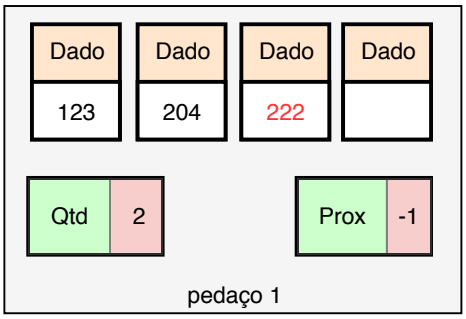


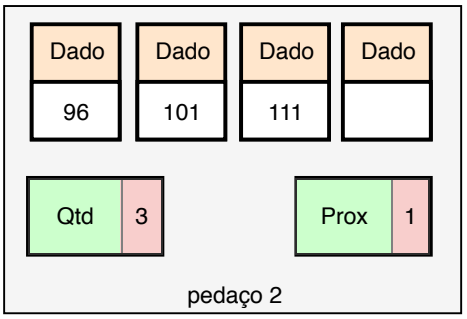
Elemento inserido no pedaço 3

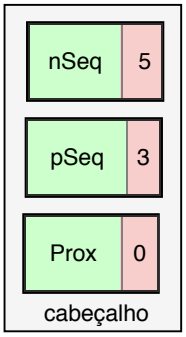


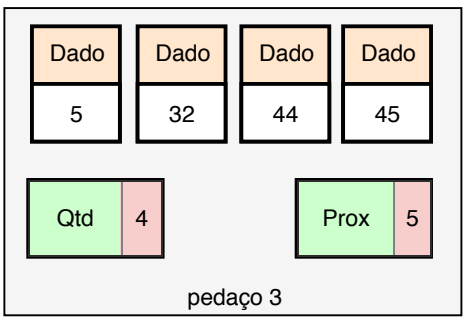
7. Inserir o elemento 222

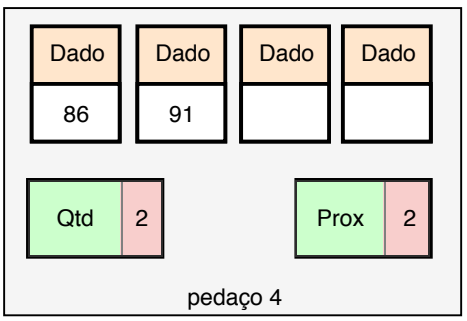




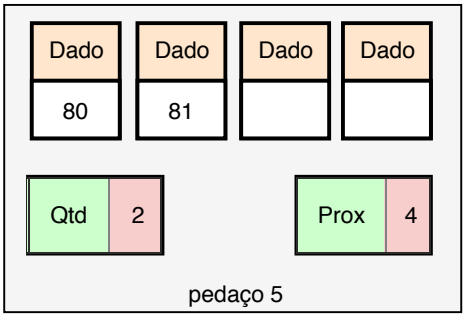






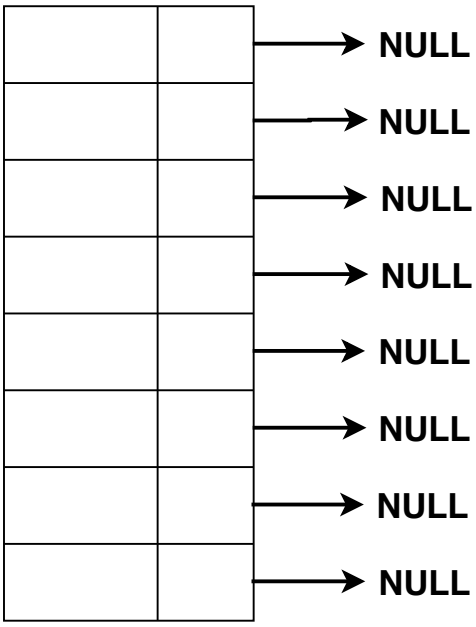


Elemento inserido no pedaço 2

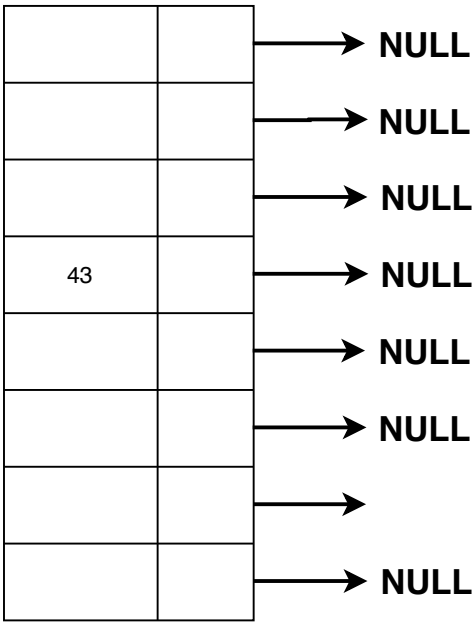


Questão 9

Início

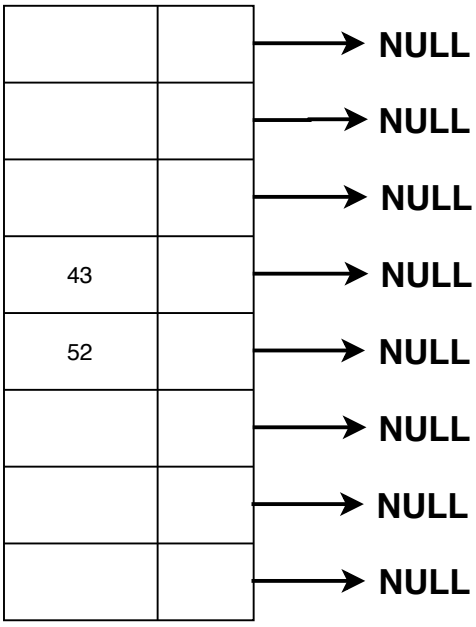


1. Inserir os elementos 43 52 17 27 9 5 8 80 4 65



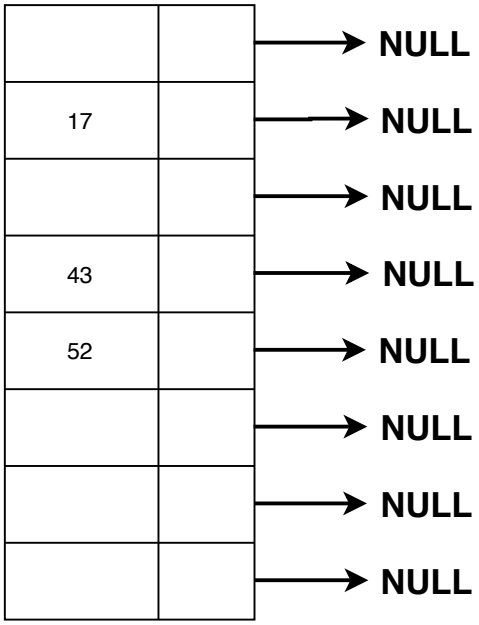
43 mod 8 = 3

Inserção do elemento 43 na posição 3



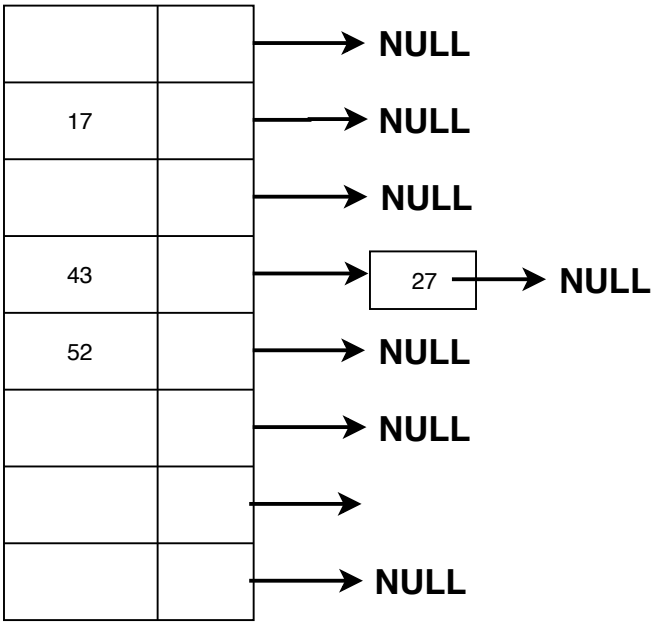
52 mod 8 = 4

Inserção do elemento 52 na posição 4



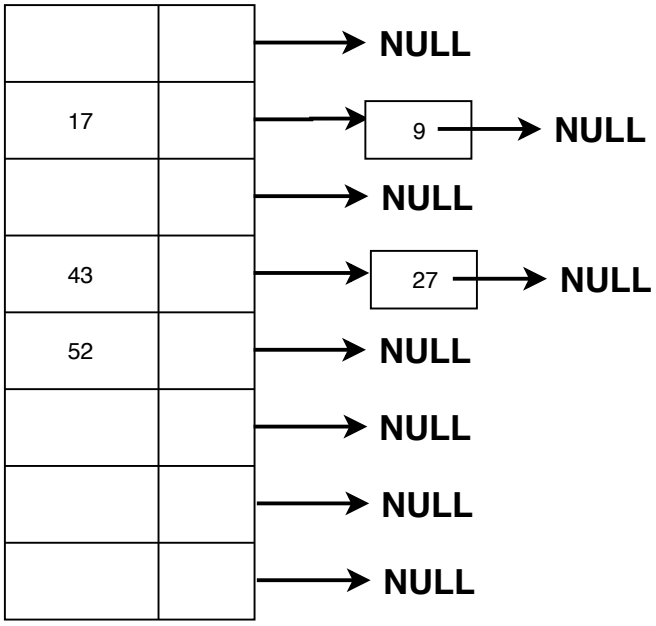
17 mod 8 = 1

Inserção do elemento 17 na posição 1



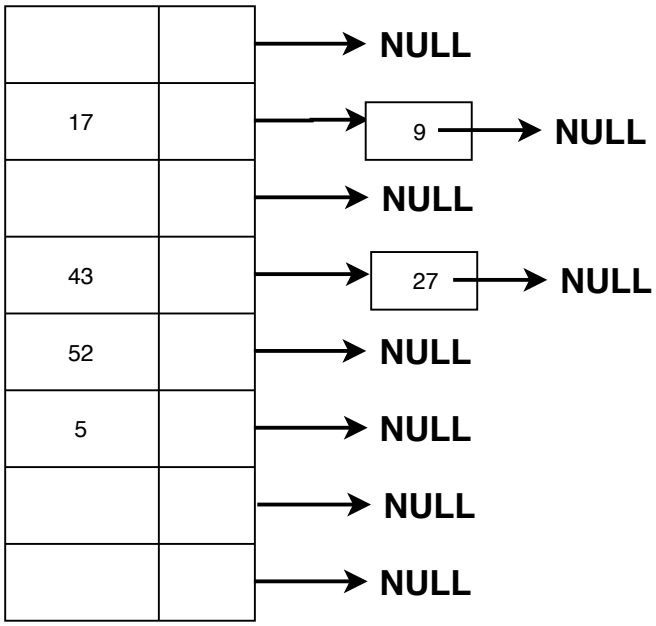
27 mod 8 = 3

Inserção do elemento 27 na posição 3



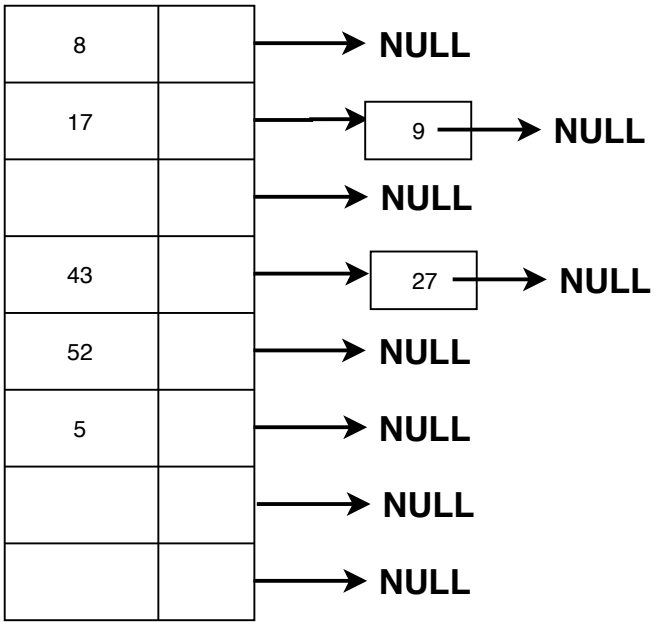
9 mod 8 = 1

Inserção do elemento 9 na posição 1



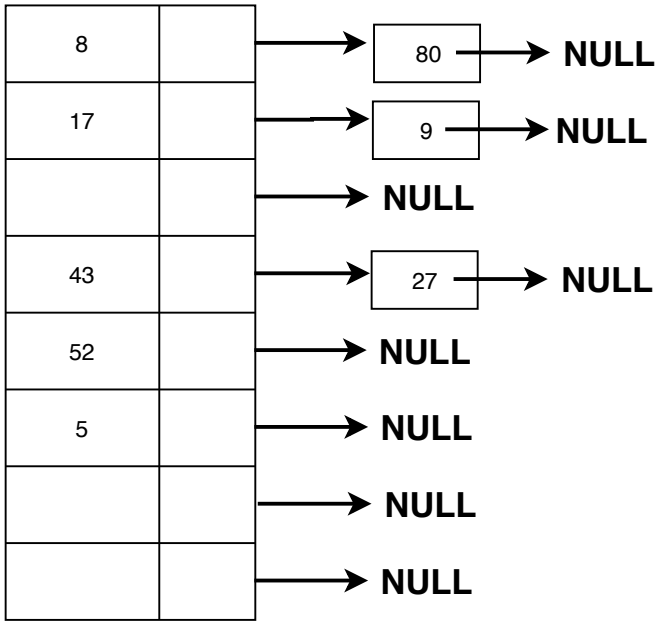
5 mod 8 = 5

Inserção do elemento 5 na posição 5



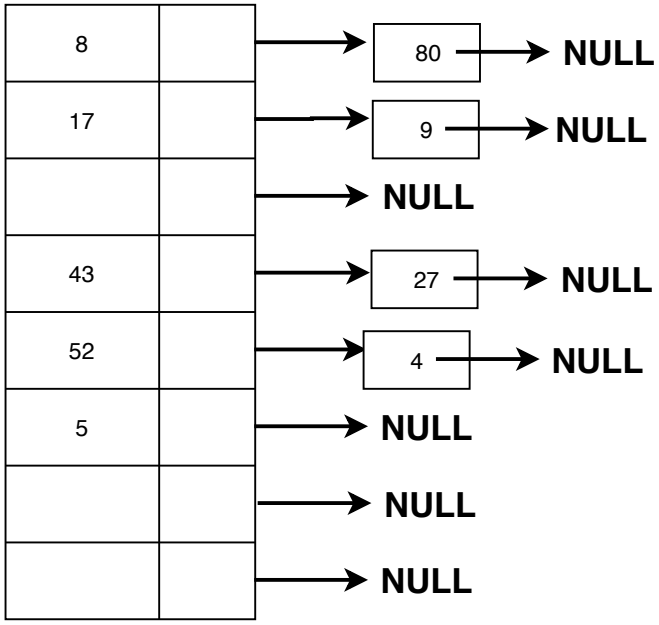
8 mod 8 = 0

Inserção do elemento 8 na posição 0



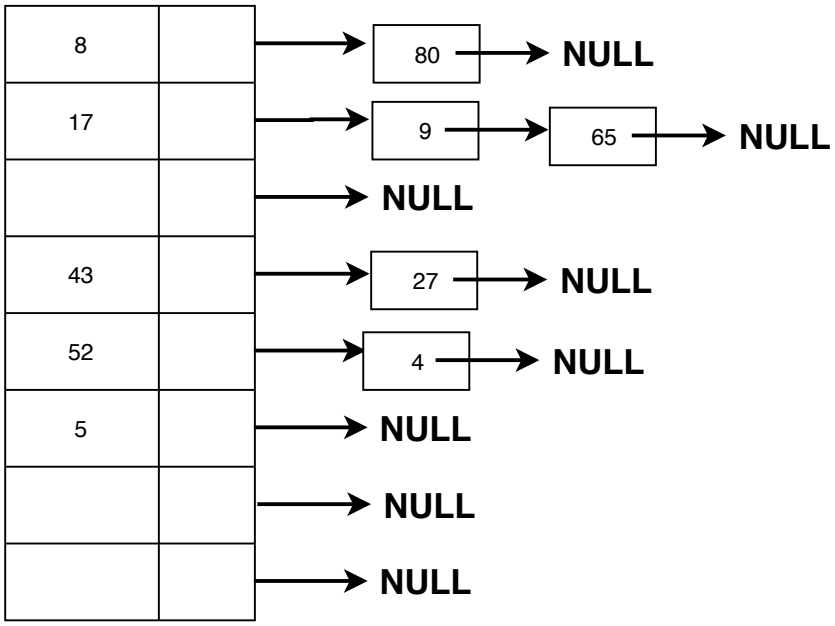
80 mod 8 = 0

Inserção do elemento 80 na posição 0



4 mod 8 = 4

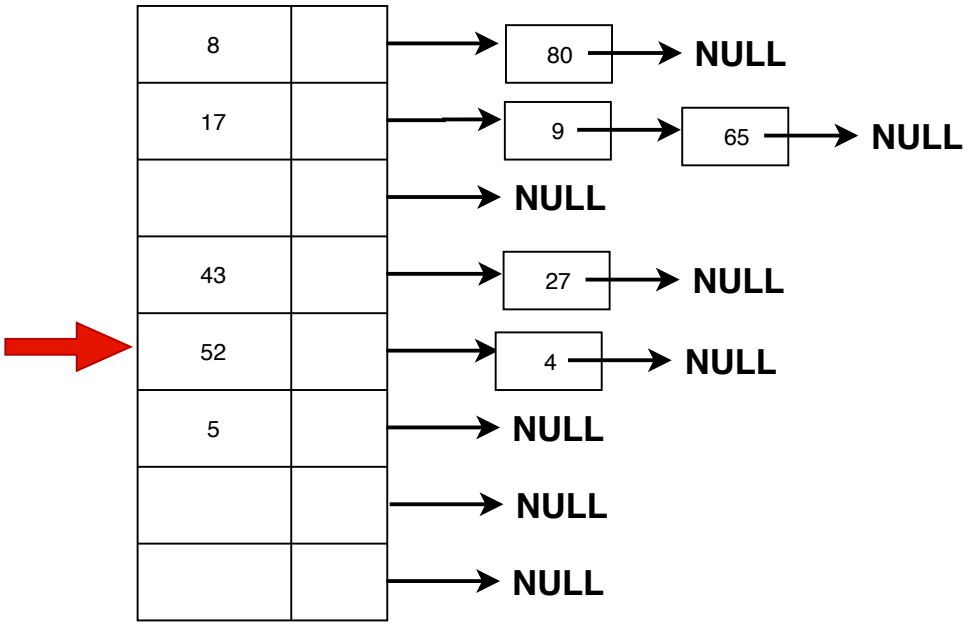
Inserção do elemento 4 na posição 4



65 mod 8 = 1

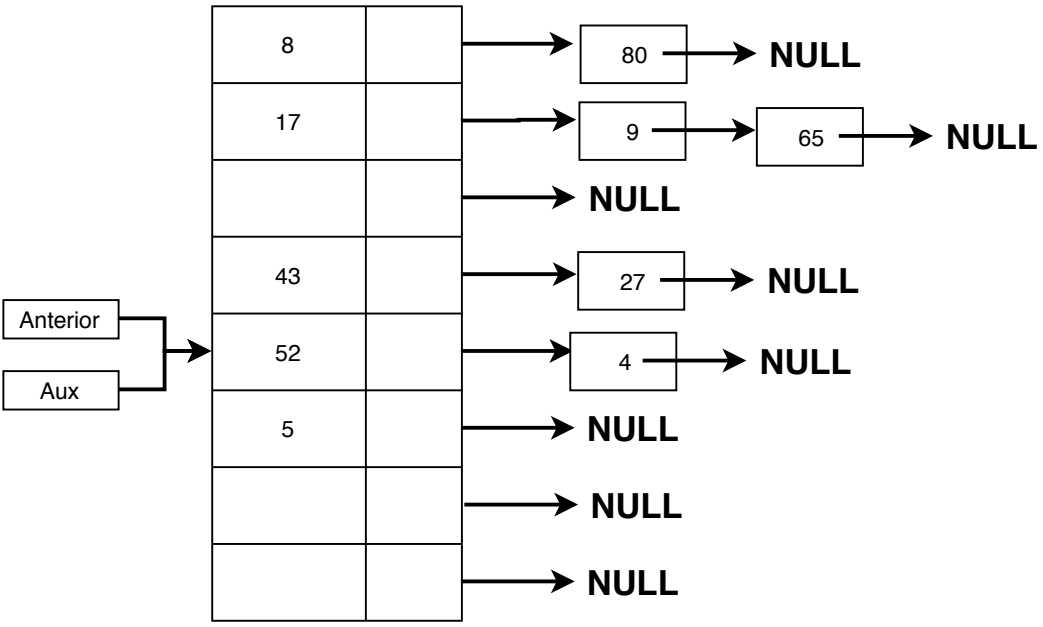
Inserção do elemento 65 na posição 1

2. Remover o elemento 52 9

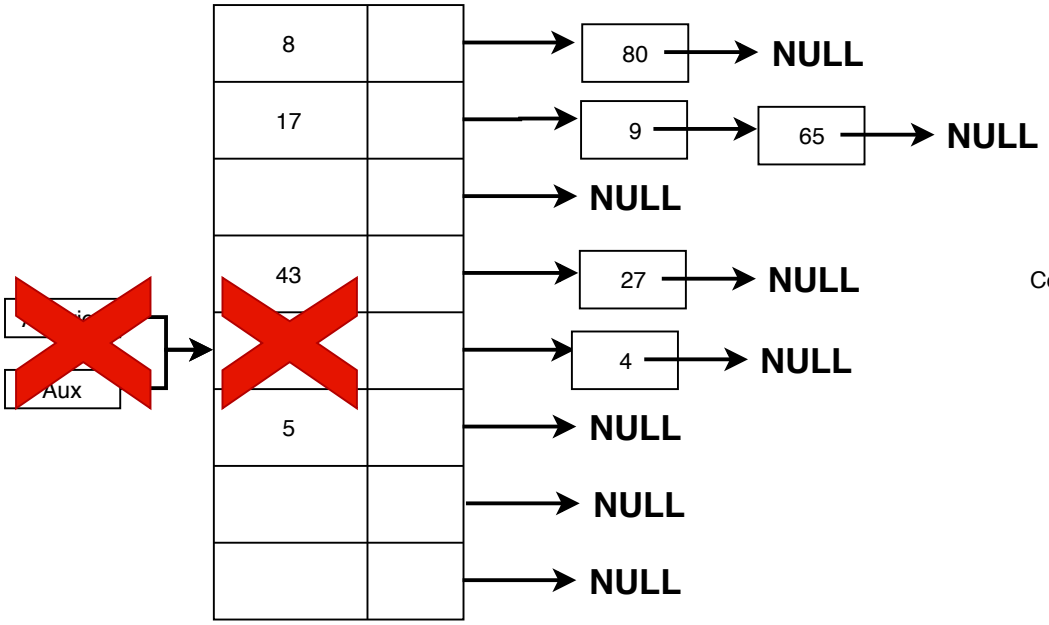


Realiza a conta: 52 mod 8
que tem como resultado 4,
portanto essa será a posição
a ser apagada

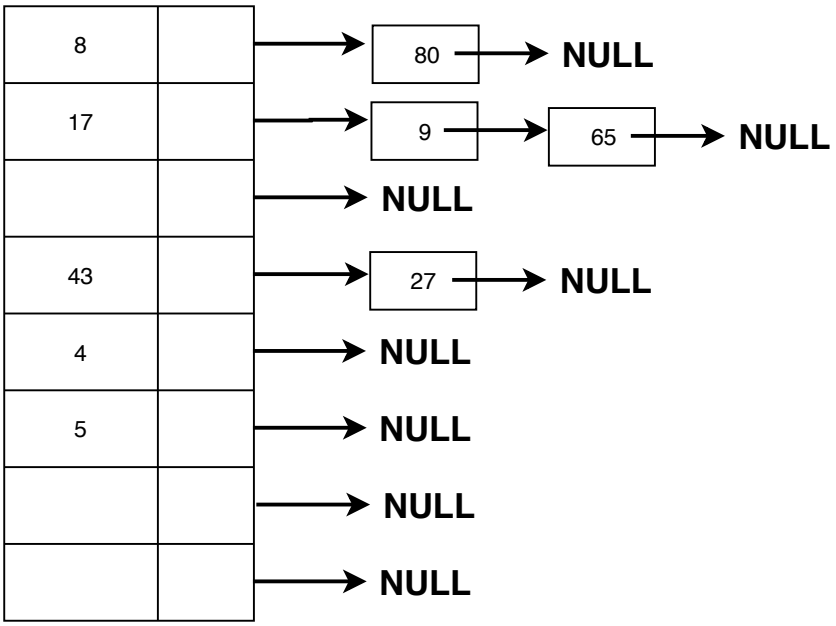
Como há mais de um elemento
nesta posição, será necessário percorrê-los
para apagar o dado correto



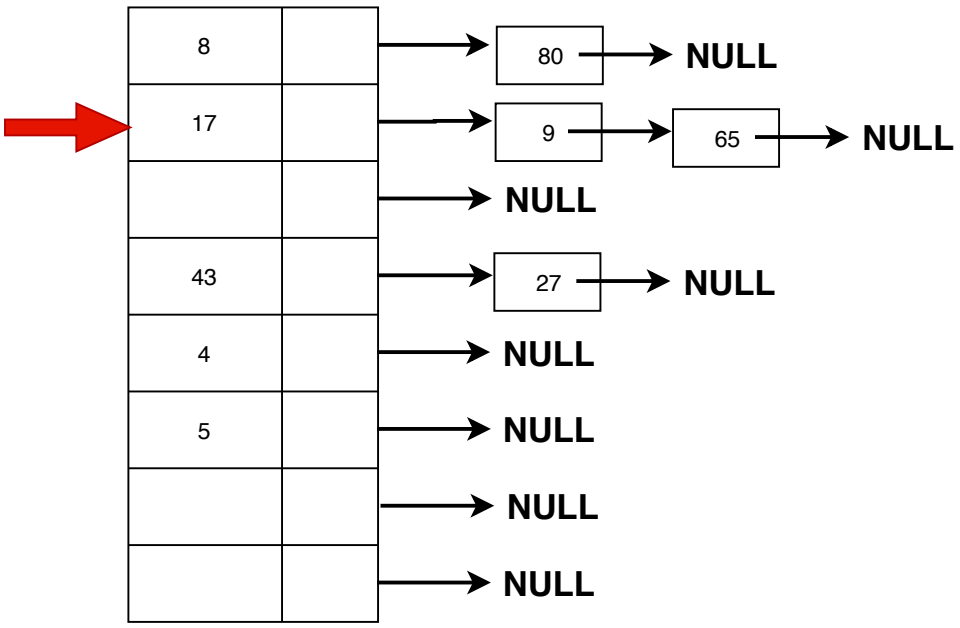
A busca é parecida com a utilizada na fila:
Aux e Anterior recebem o elemento 52



Como o dado já foi encontrado, ele é apagado e o próximo assume seu lugar

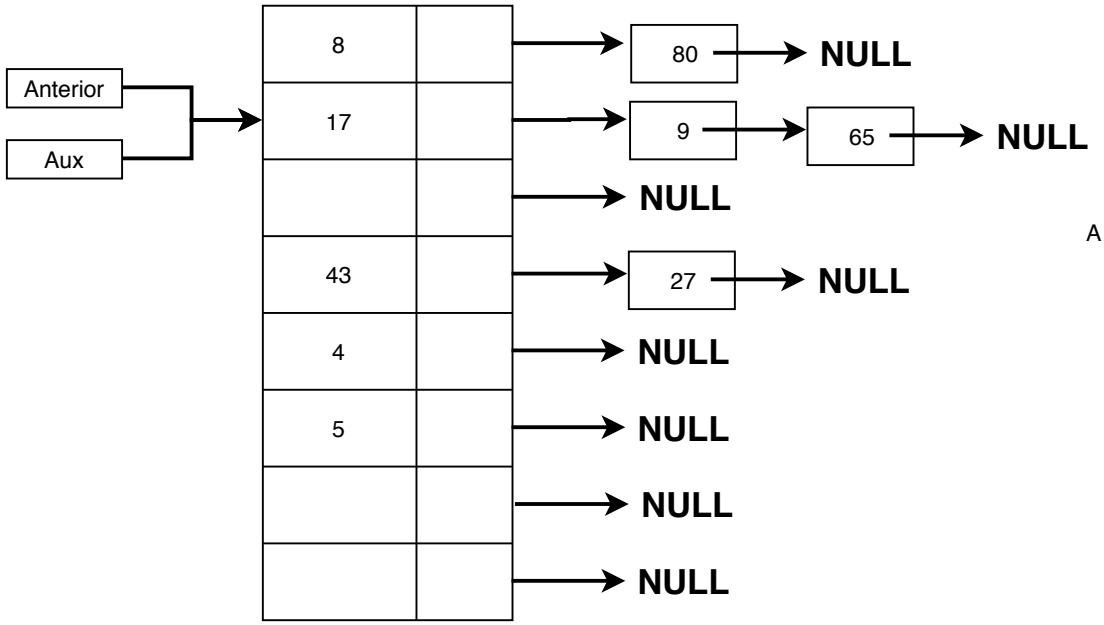


Fim da operação

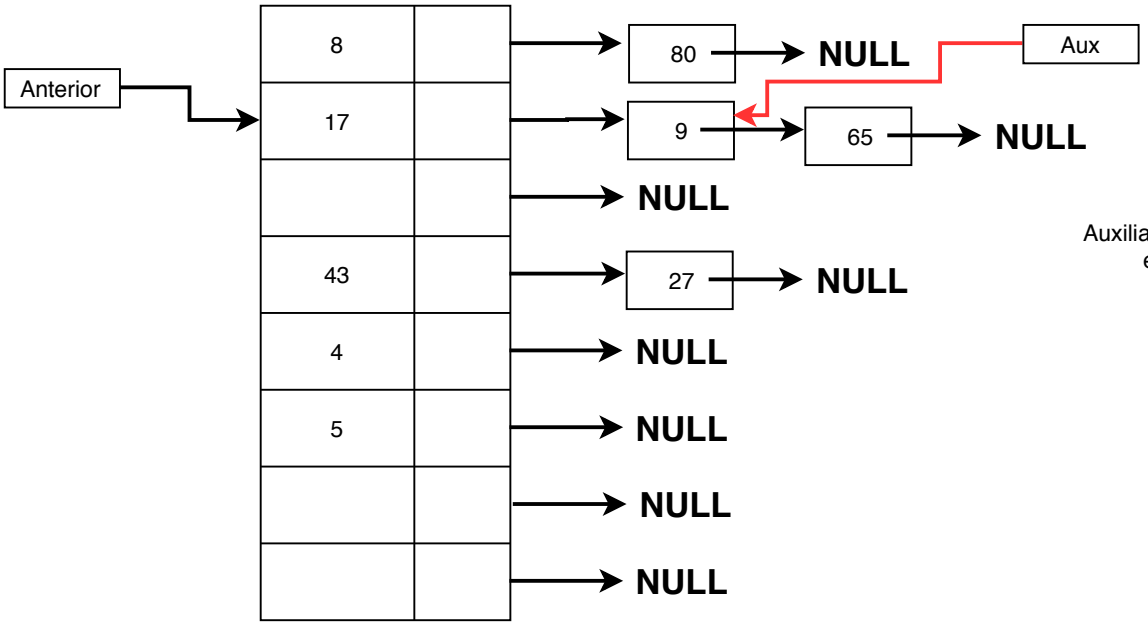


Realiza a conta: 9 mod 8
que tem como resultado 1,
portanto essa será a posição
a ser apagada

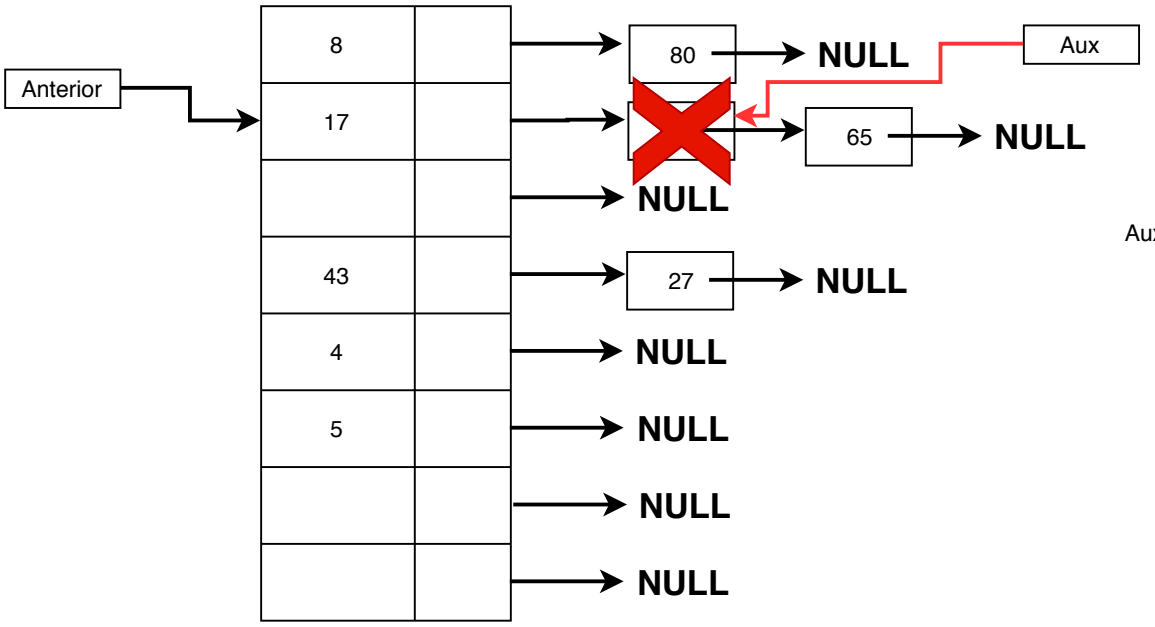
Como há mais de um elemento
nesta posição, será necessário percorrê-los
para apagar o dado correto



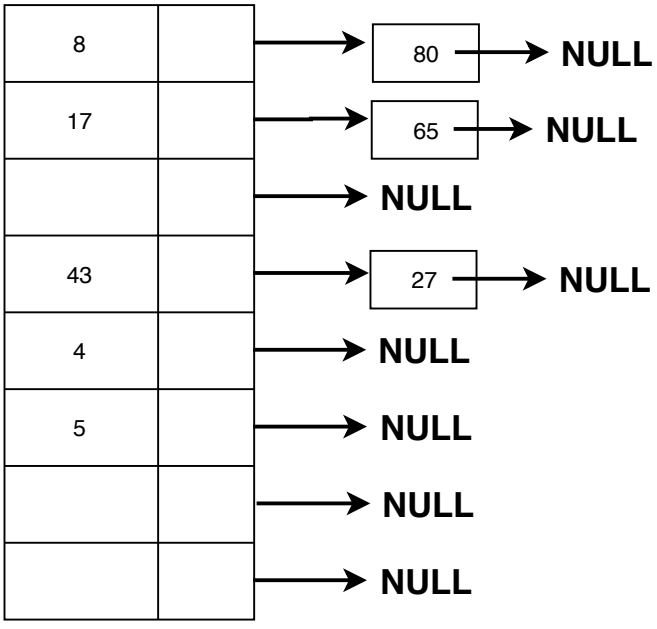
A busca é parecida com a utilizada na fila:
Aux e Anterior recebem o elemento 17



Auxiliar passa para o próximo elemento e encontra o elemento desejado



Auxiliar é apagado e em seu lugar é destinado ao elemento 65



Fim da operação