

Atividade Manual

REO 4

Aluno: Dênis de Souza Cordeiro
Matrícula: 202110235

Questão 4

Inserção:

GL, RN, DH, TV, XE, GJ, DG, SN, SL, DM e GG

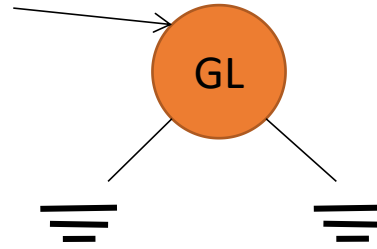
Remoção:

GG, RN e GL

RAIZ



RAIZ



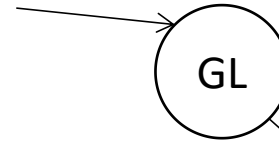
Inserção:

GL, RN, DH, TV, XE, GJ, DG, SN, SL, DM e GG

Remoção:

GG, RN e GL

RAIZ

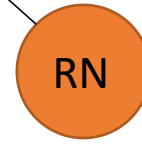


Inserção:

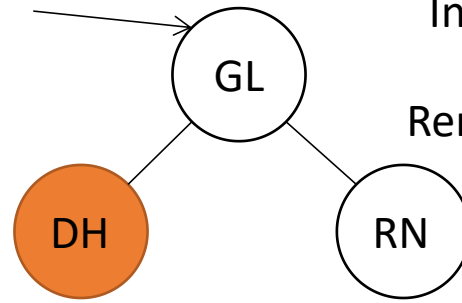
GL, RN, DH, TV, XE, GJ, DG, SN, SL, DM e GG

Remoção:

GG, RN e GL



RAIZ



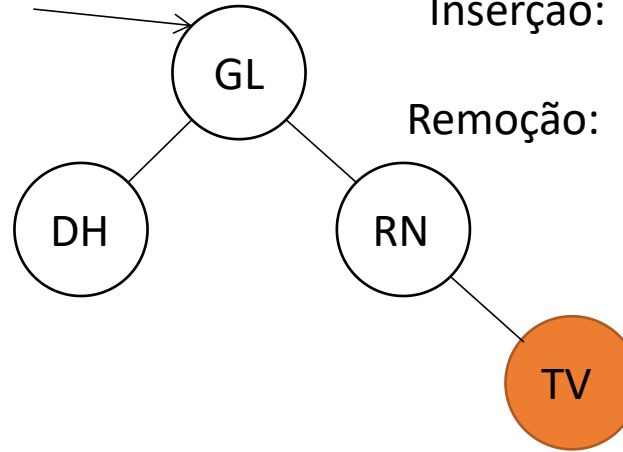
Inserção:

GL, RN, DH, TV, XE, GJ, DG, SN, SL, DM e GG

Remoção:

GG, RN e GL

RAIZ



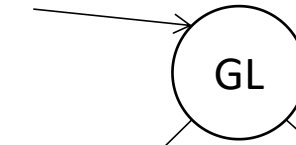
Inserção:

GL, RN, DH, TV, XE, GJ, DG, SN, SL, DM e GG

Remoção:

GG, RN e GL

RAIZ

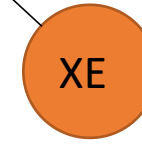
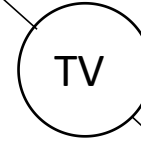
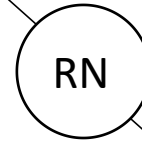
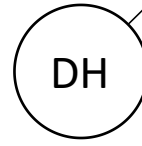


Inserção:

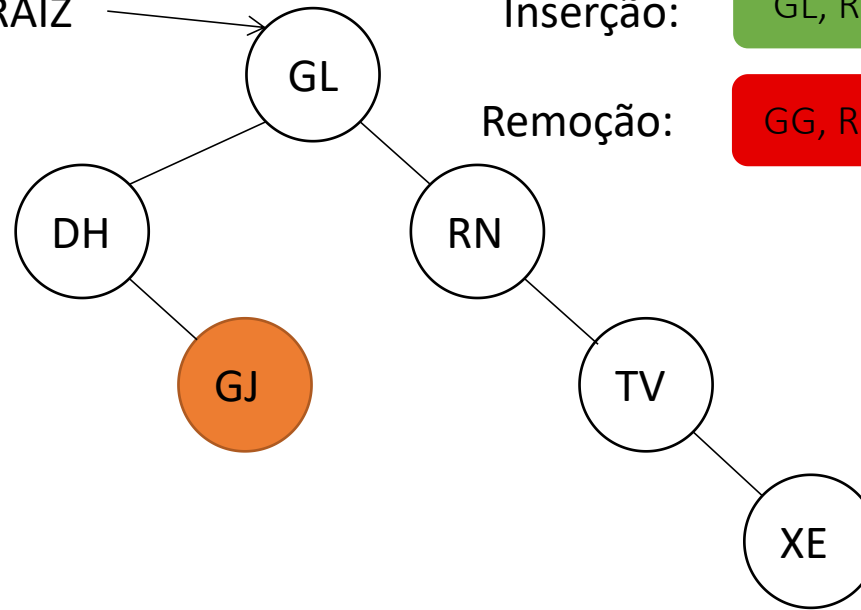
GL, RN, DH, TV, XE, GJ, DG, SN, SL, DM e GG

Remoção:

GG, RN e GL



RAIZ

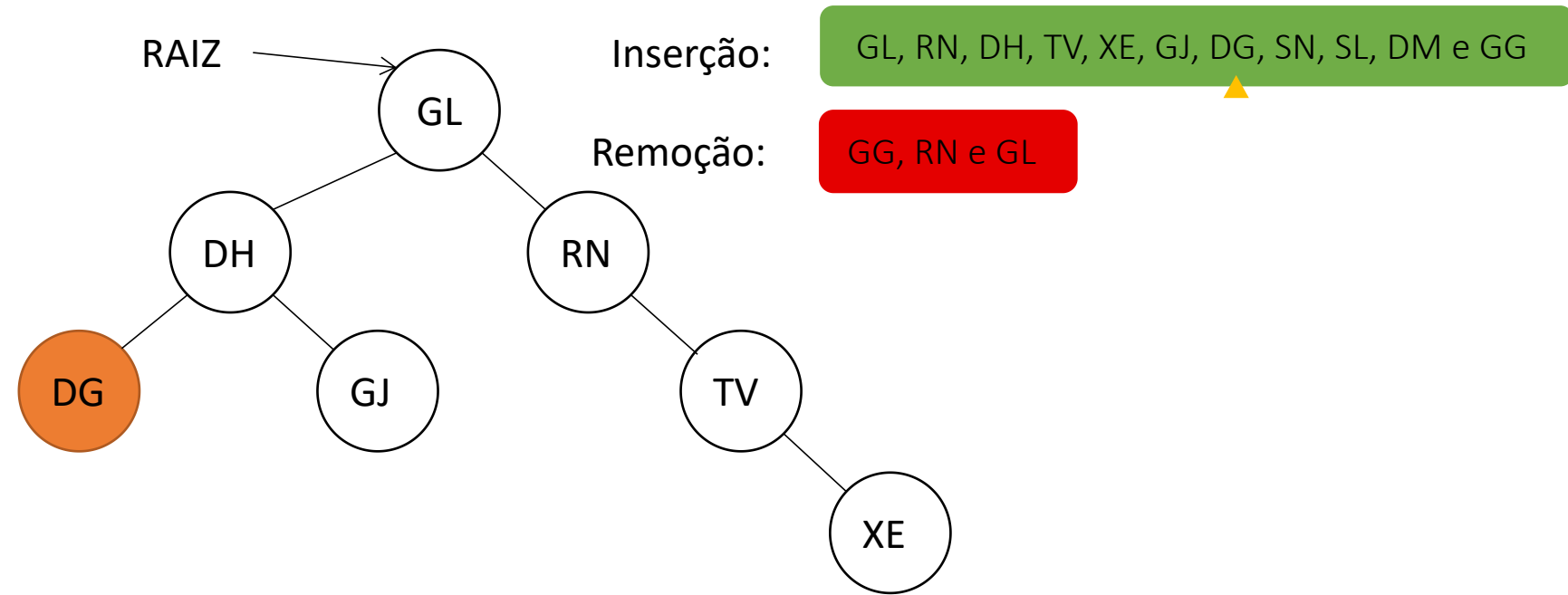


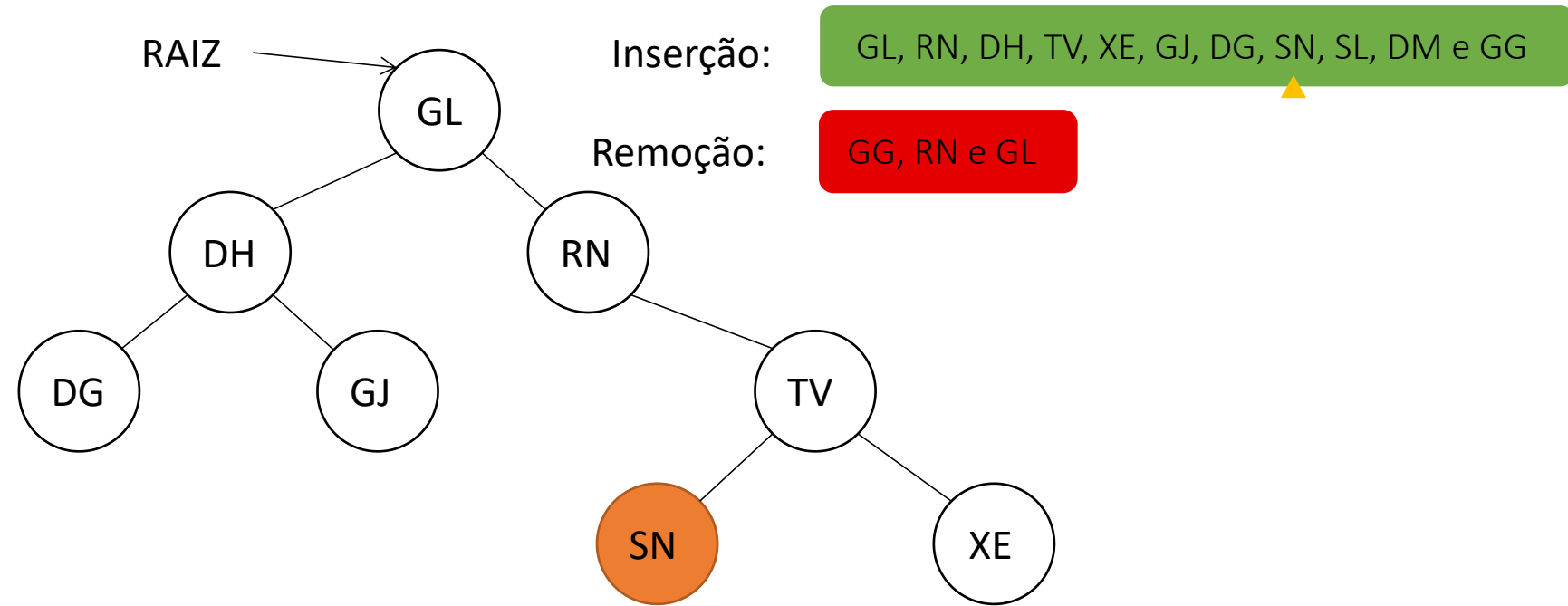
Inserção:

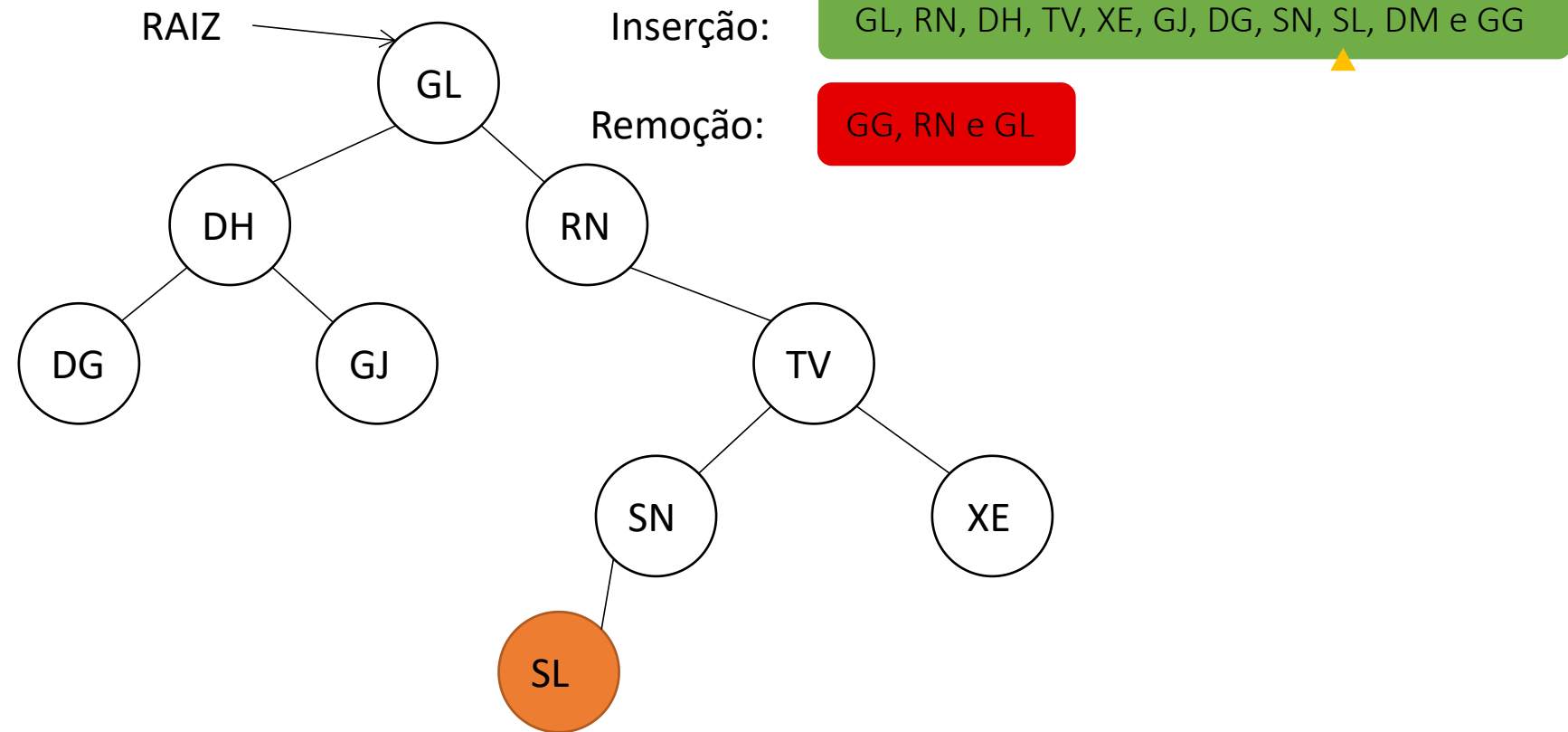
GL, RN, DH, TV, XE, GJ, DG, SN, SL, DM e GG

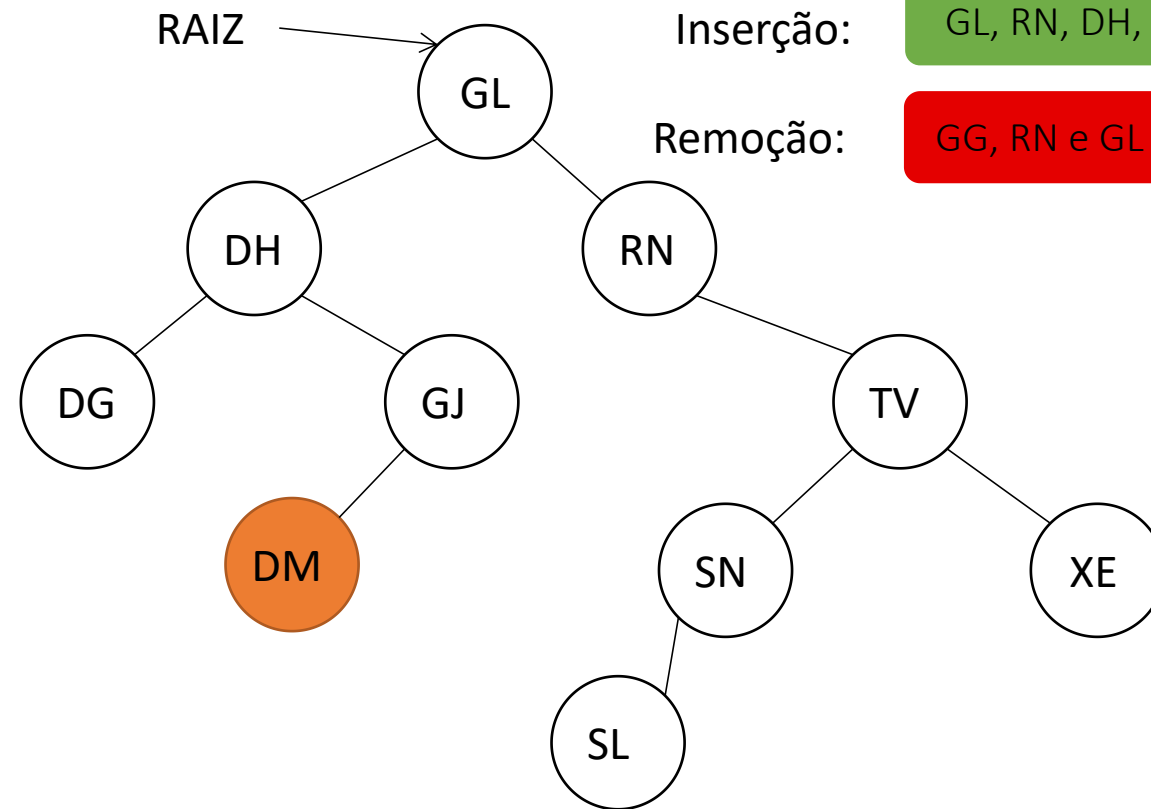
Remoção:

GG, RN e GL







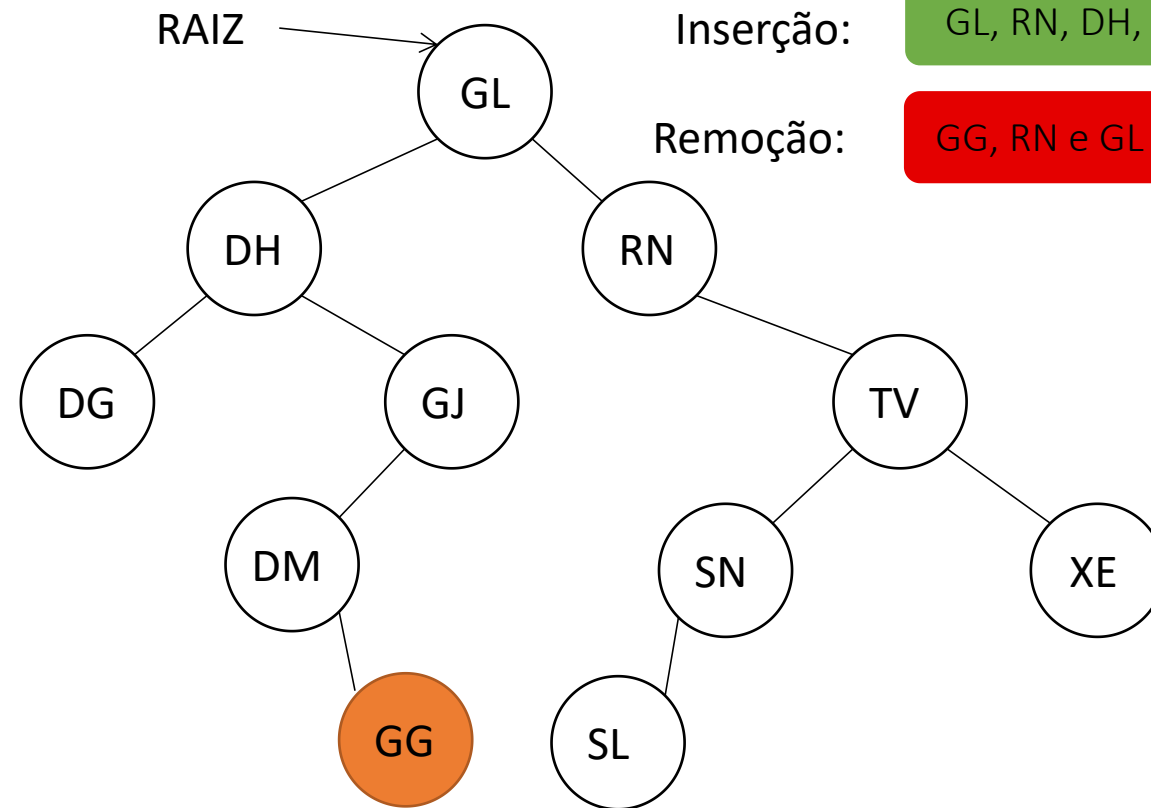


Inserção:

GL, RN, DH, TV, XE, GJ, DG, SN, SL, DM e GG

Remoção:

GG, RN e GL

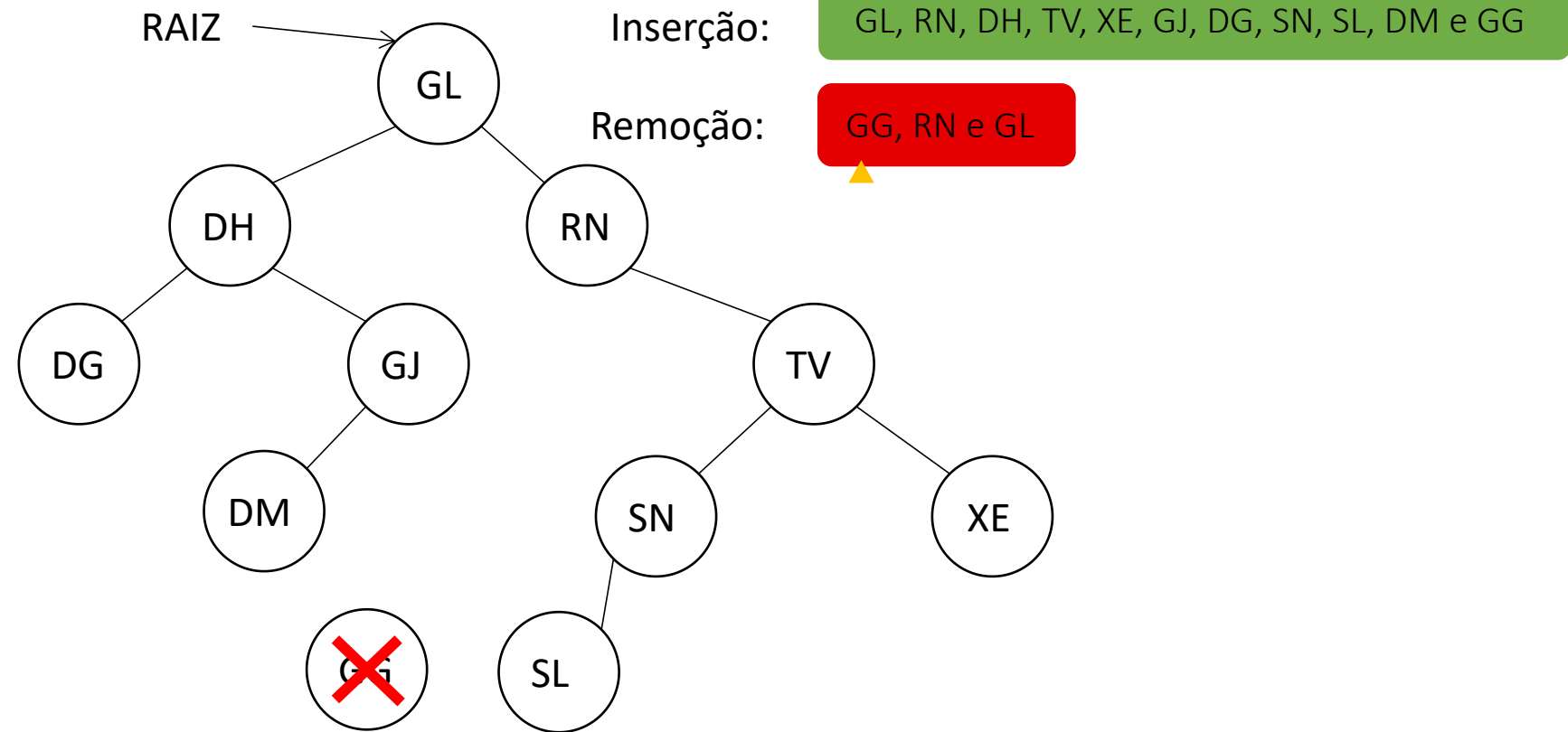


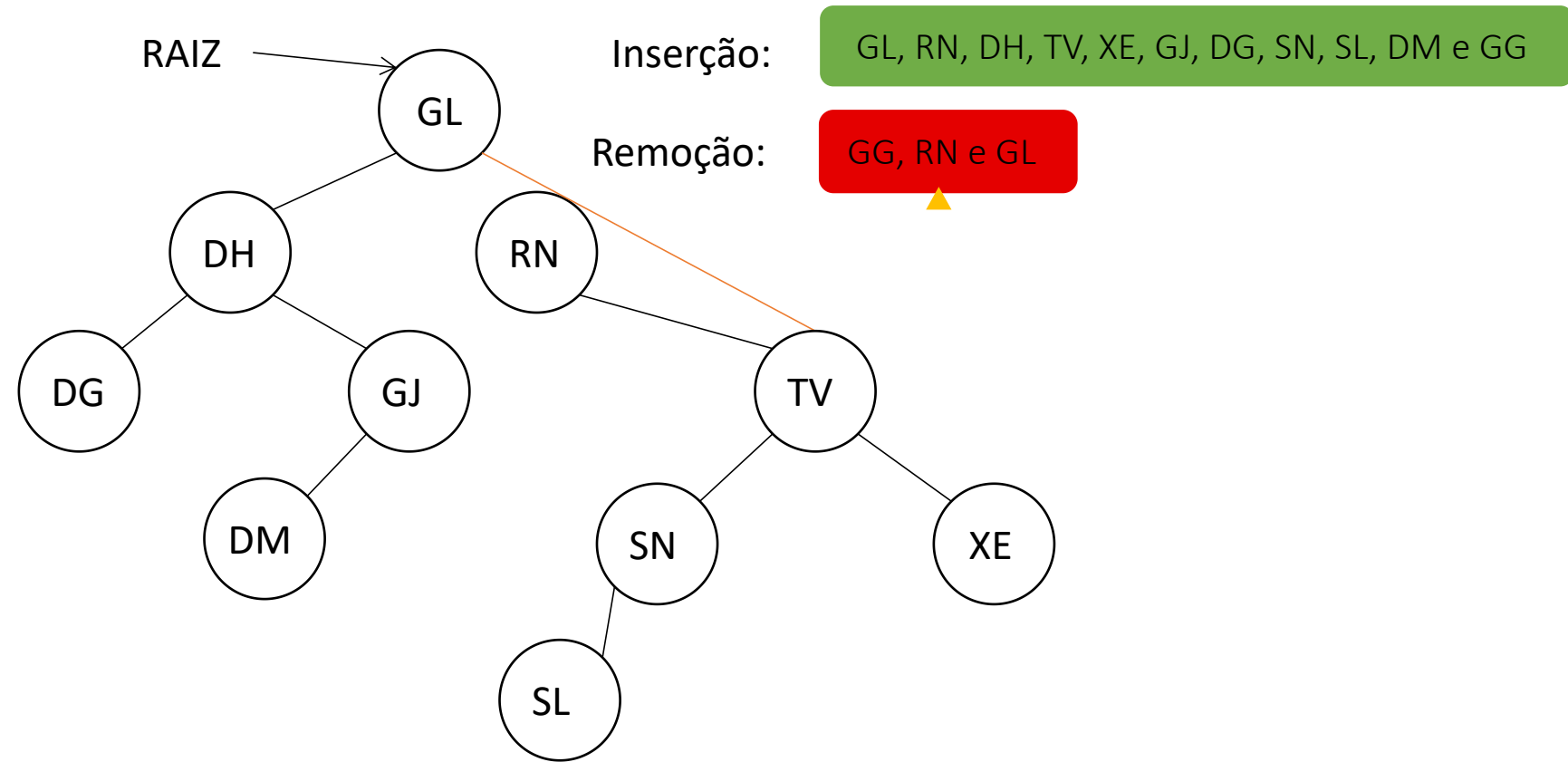
Inserção:

GL, RN, DH, TV, XE, GJ, DG, SN, SL, DM e GG

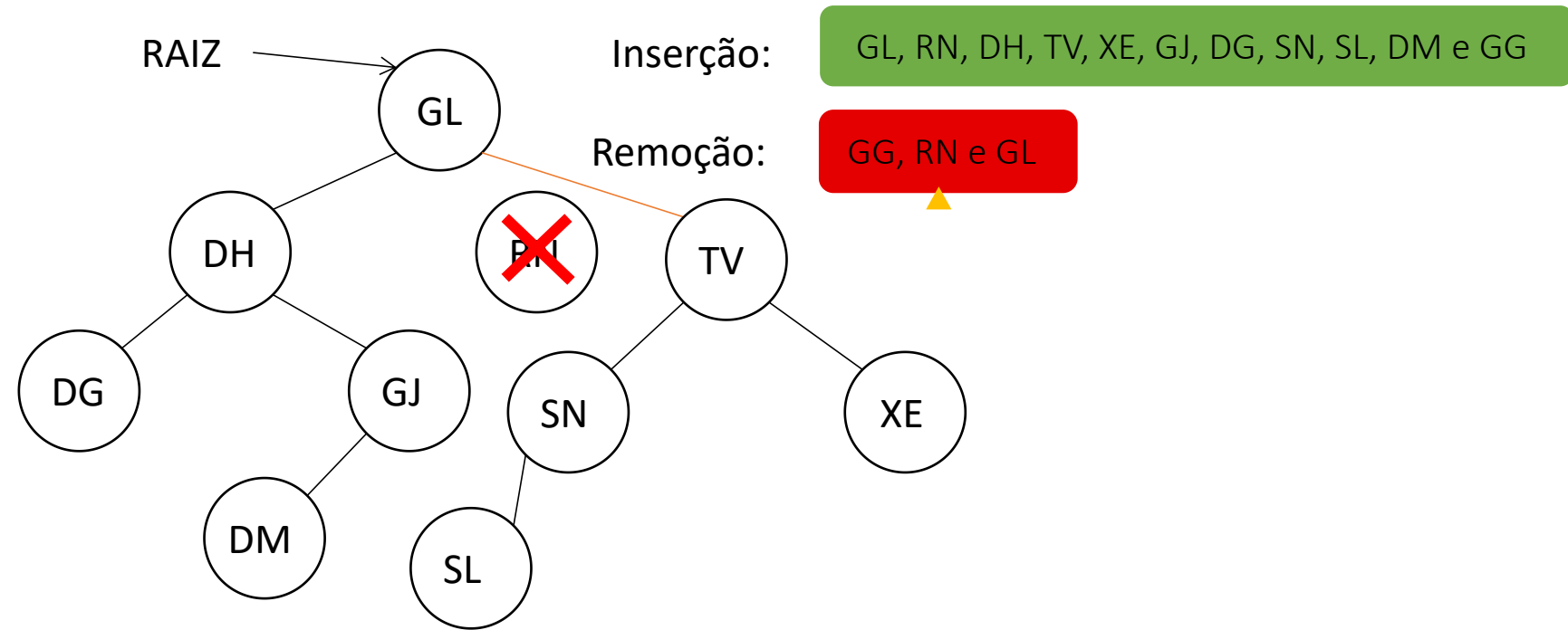
Remoção:

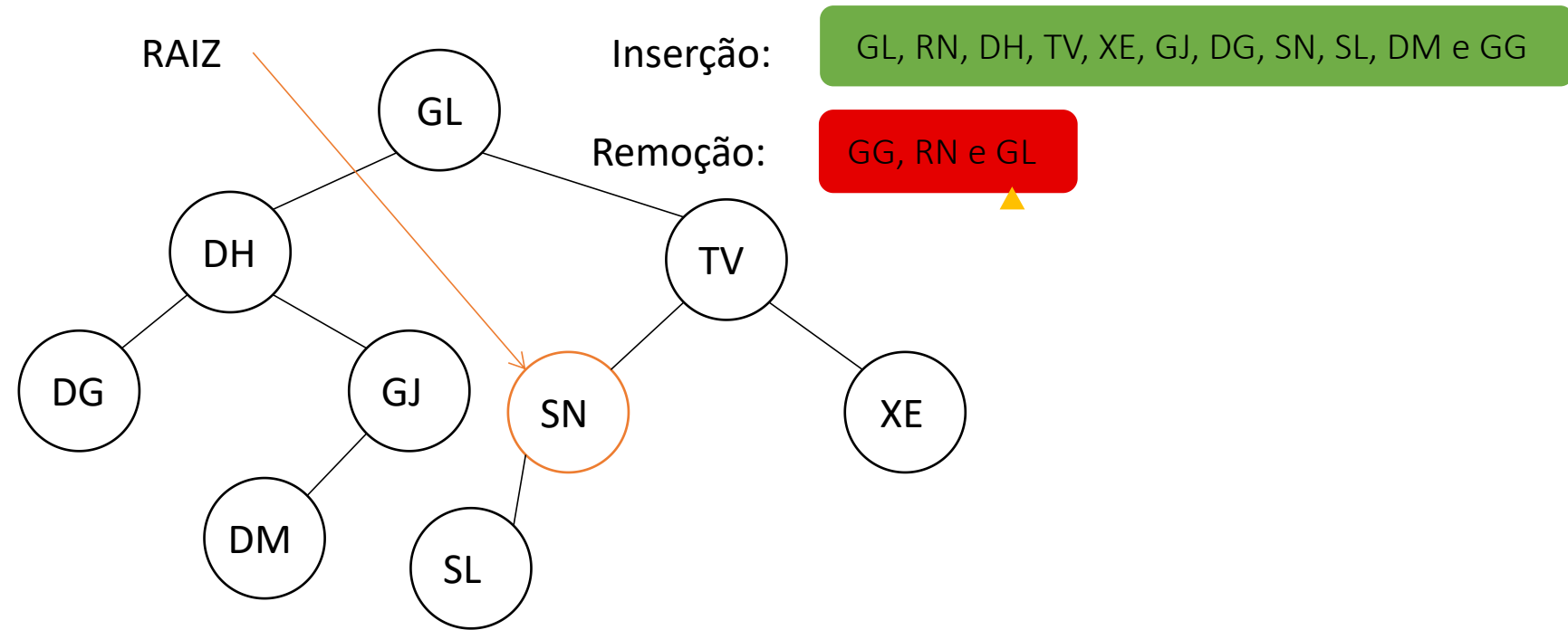
GG, RN e GL

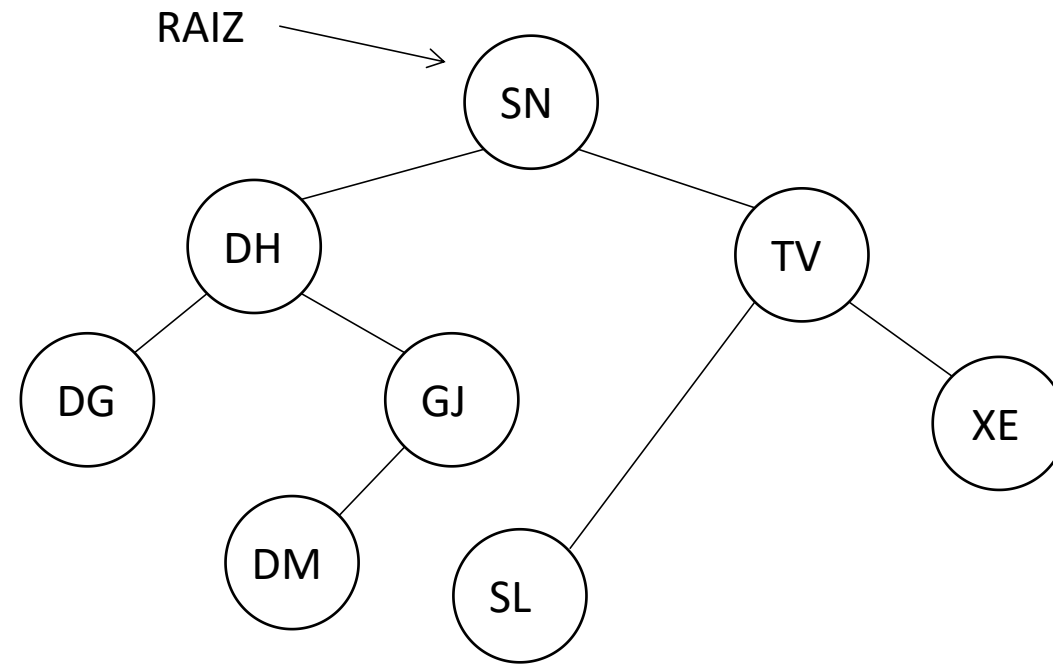




(1/2)







RESULTADO

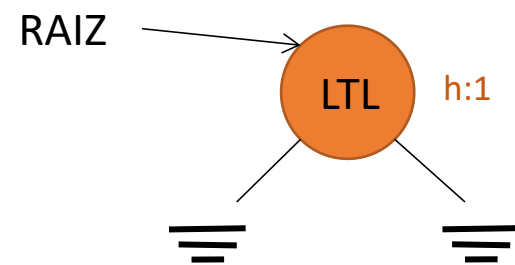
Questão 9

Inserção: LTL, PXQ, FHV, BJL, MIL, NZV, DOI, CHD, TPA, VSS e UTA

Remoção: LTL, PXQ e FHV

RAIZ

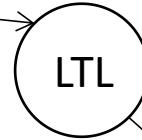




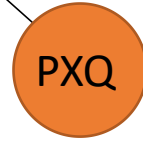
Inserção: LTL, PXQ, FHV, BJL, MIL, NZV, DOI, CHD, TPA, VSS e UTA

Remoção: LTL, PXQ e FHV

RAIZ



h:2



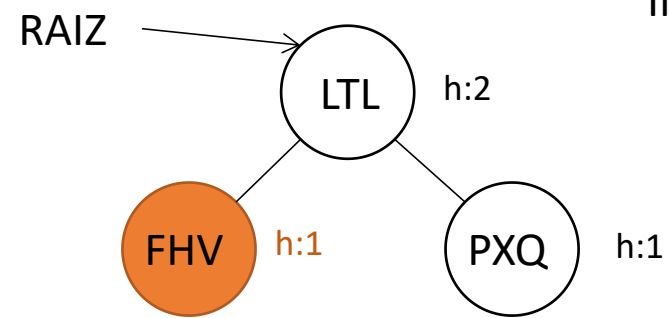
h:1

Inserção:

LTL, PXQ, FHV, BJL, MIL, NZV, DOI, CHD, TPA, VSS e UTA

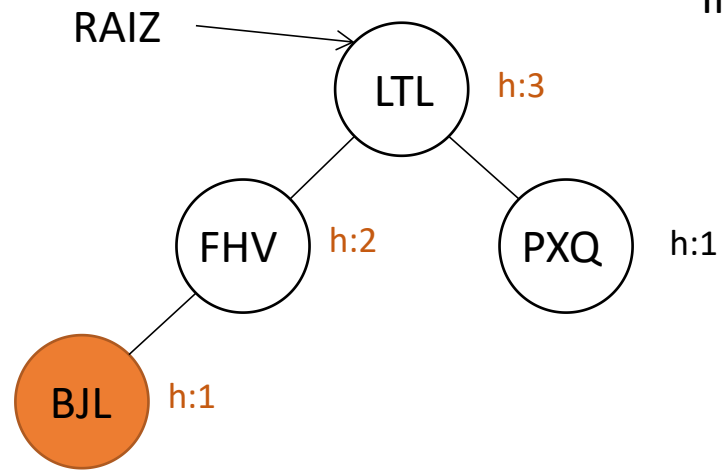
Remoção:

LTL, PXQ e FHV



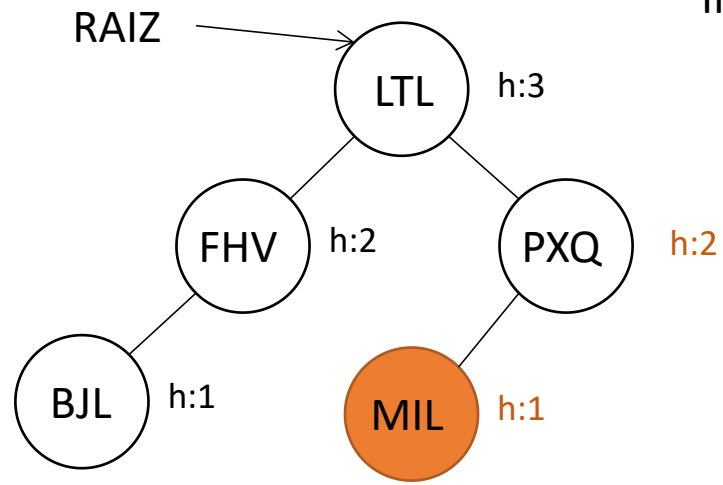
Inserção: LTL, PXQ, FHV, B JL, MIL, NZV, DOI, CHD, TPA, VSS e UTA

Remoção: LTL, PXQ e FHV



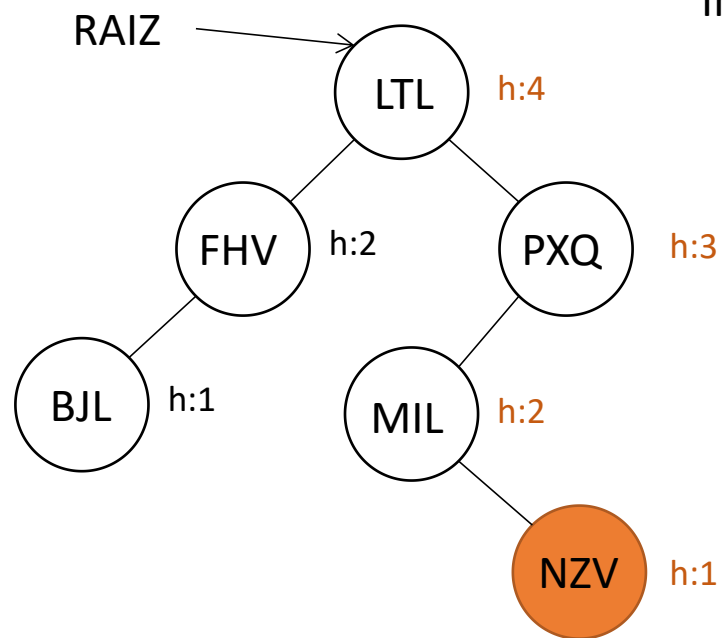
Inserção: LTL, PXQ, FHV, BJL, MIL, NZV, DOI, CHD, TPA, VSS e UTA

Remoção: LTL, PXQ e FHV



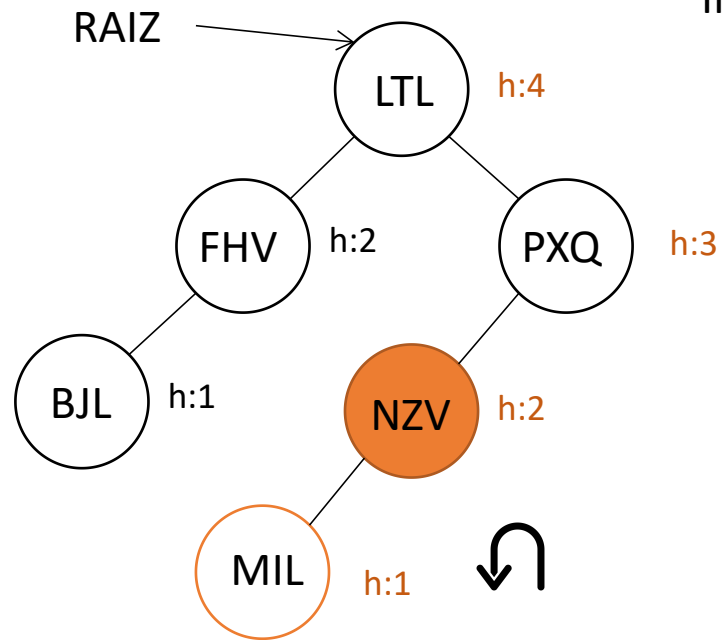
Inserção: LTL, PXQ, FHV, BJL, MIL, NZV, DOI, CHD, TPA, VSS e UTA

Remoção: LTL, PXQ e FHV



Inserção: LTL, PXQ, FHV, BJL, MIL, NZV, DOI, CHD, TPA, VSS e UTA

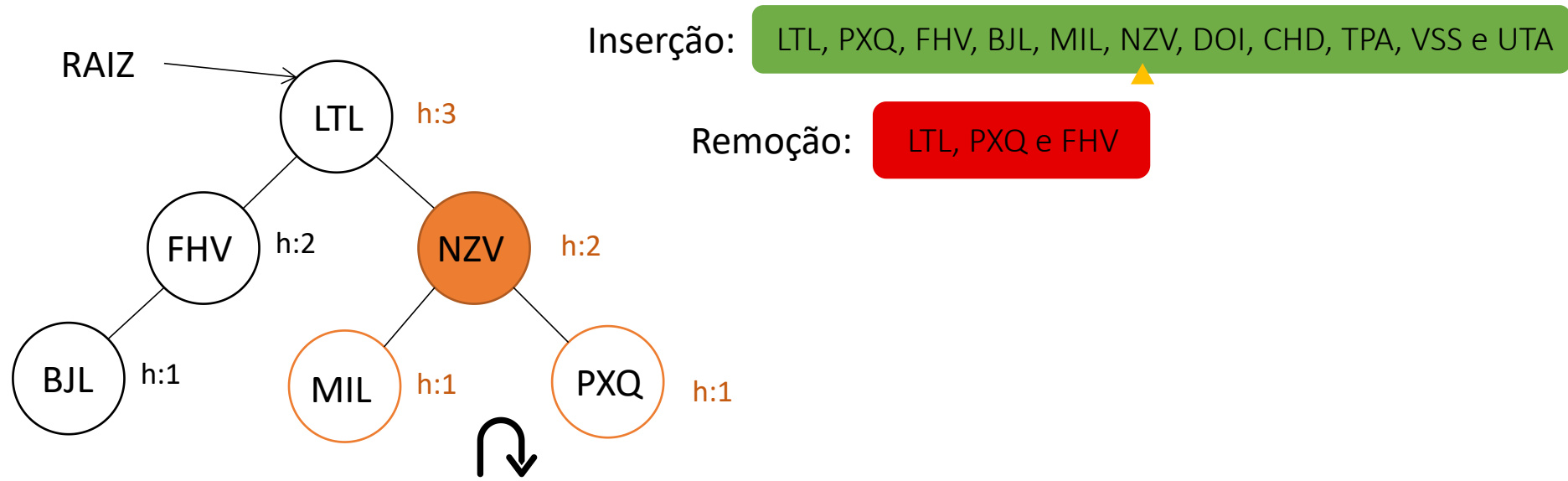
Remoção: LTL, PXQ e FHV



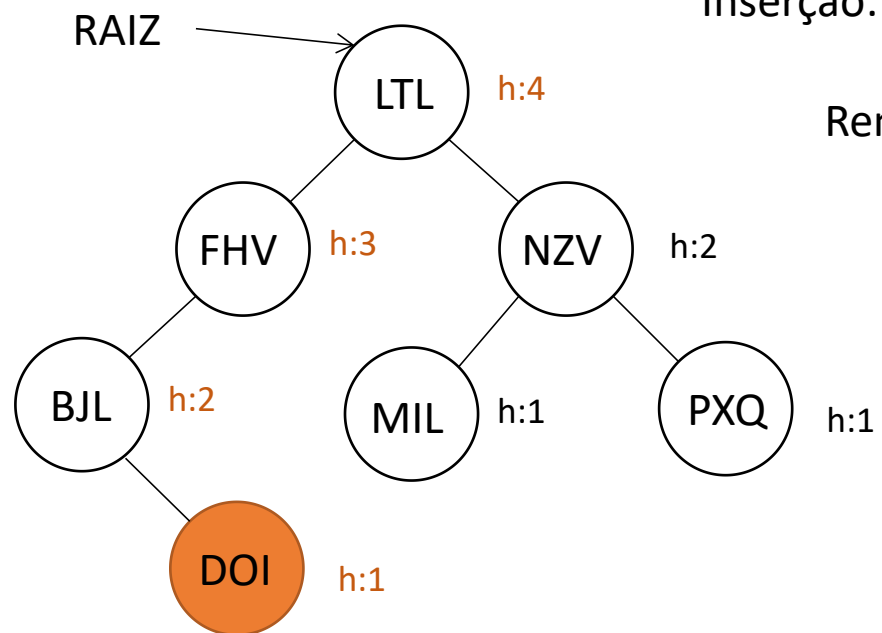
Inserção: LTL, PXQ, FHV, BJL, MIL, NZV, DOI, CHD, TPA, VSS e UTA

Remoção: LTL, PXQ e FHV

Rotação dupla direita(1/2)

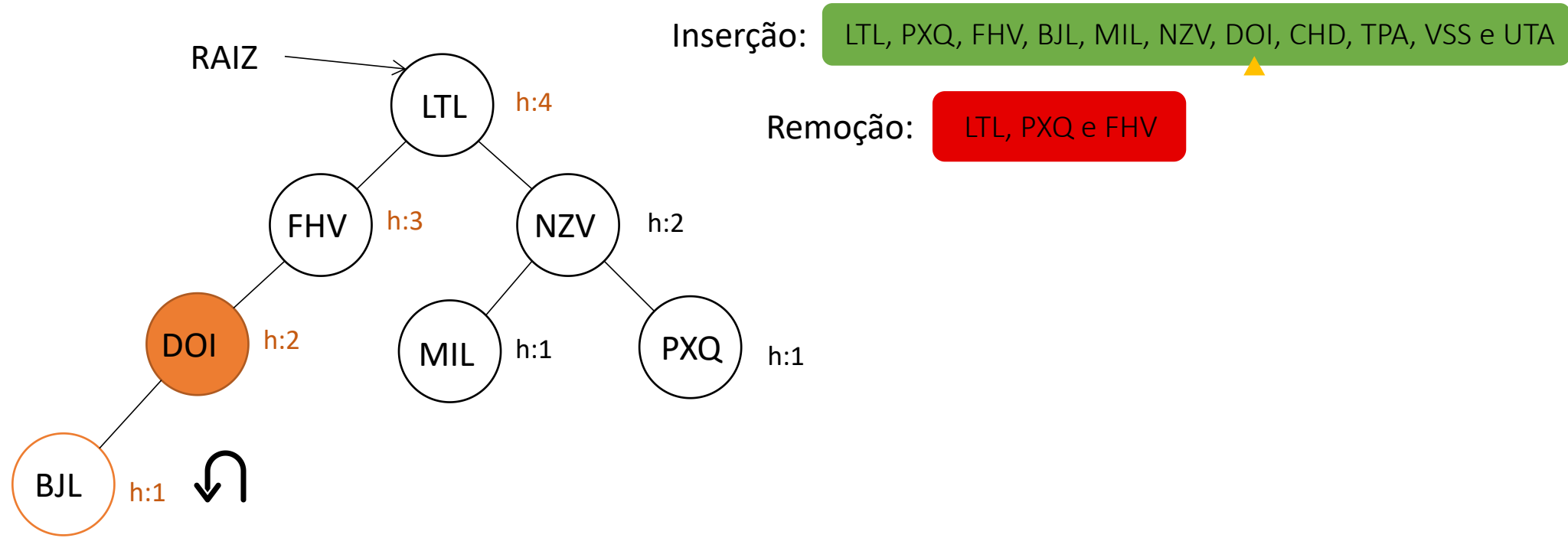


Rotação dupla direita(2/2)

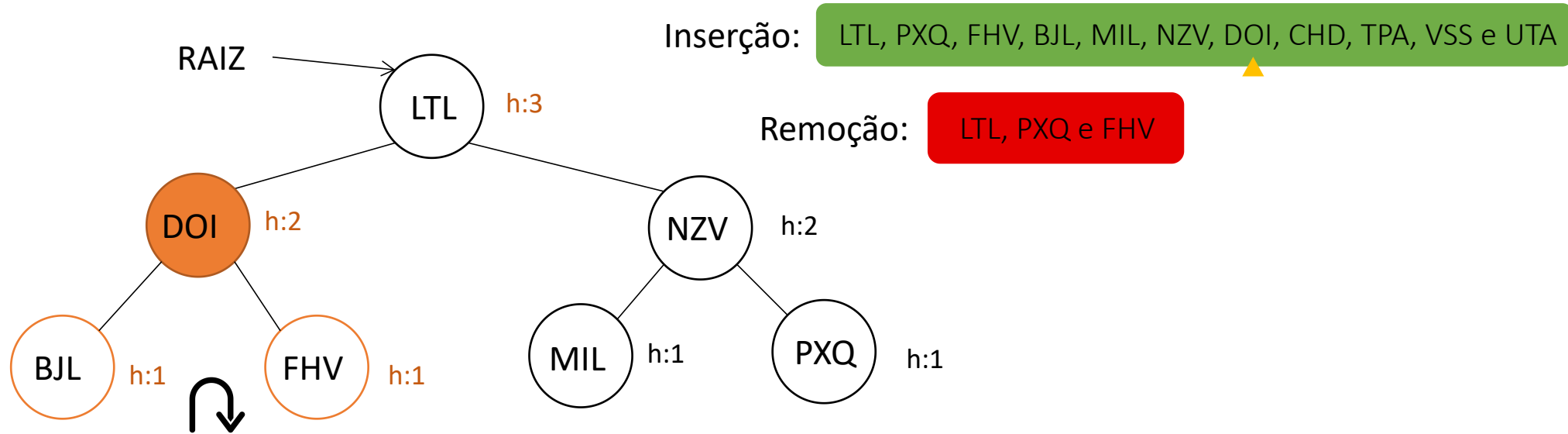


Inserção: LTL, PXQ, FHV, BJT, MIL, NZV, DOI, CHD, TPA, VSS e UTA

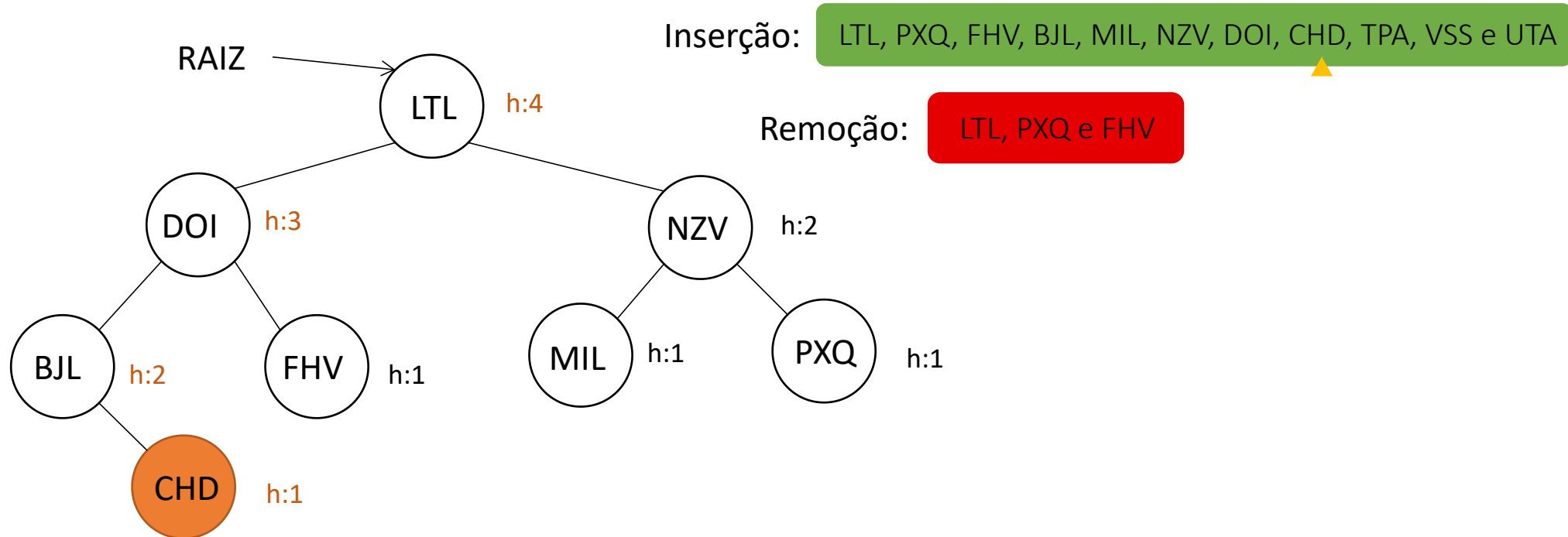
Remoção: LTL, PXQ e FHV

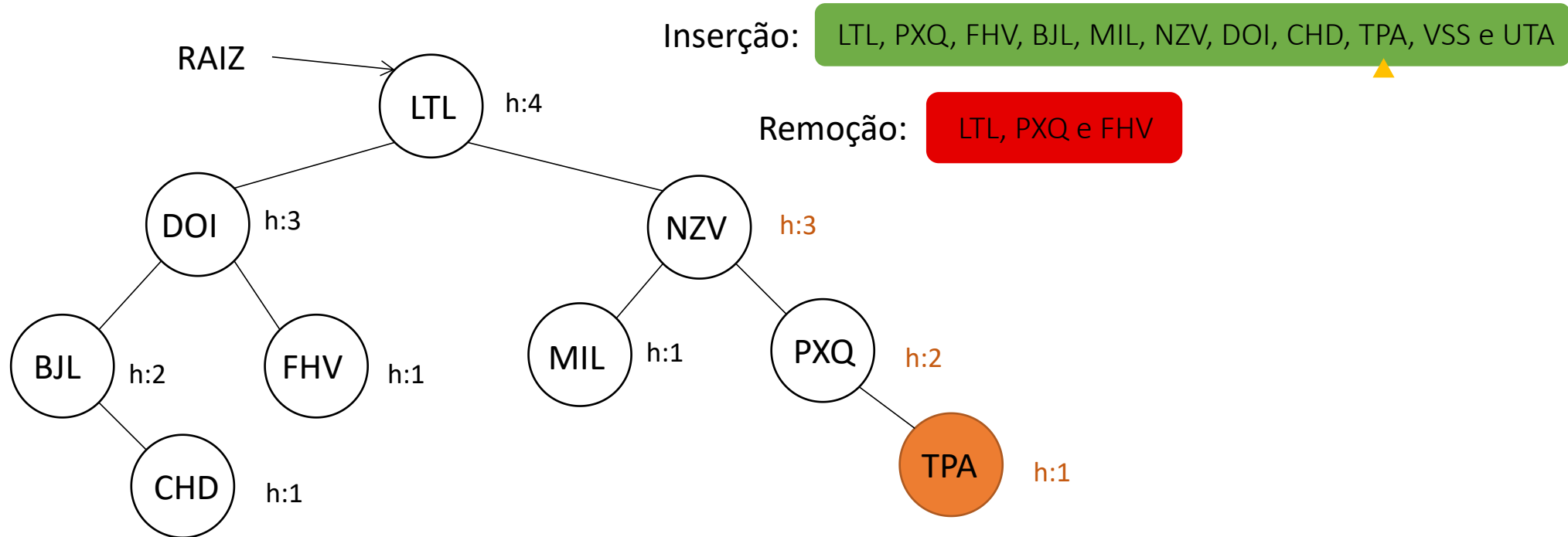


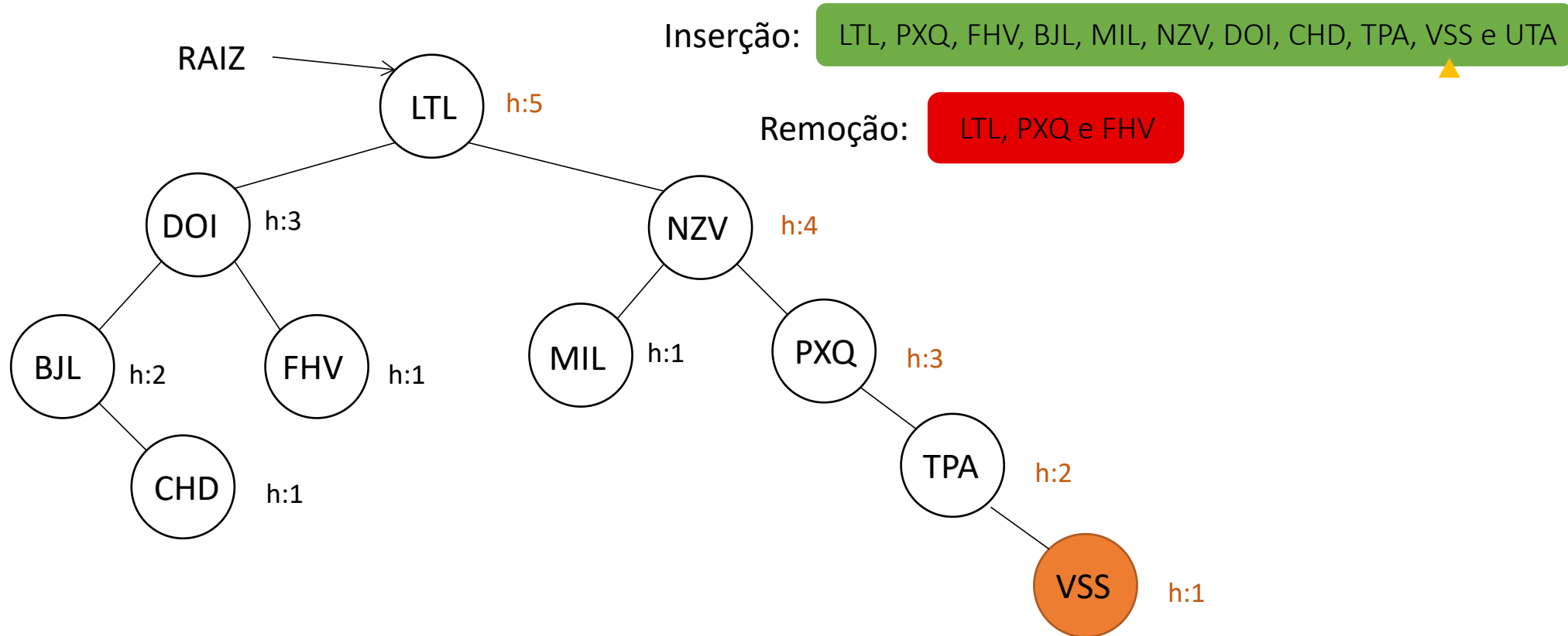
Rotação dupla direita(1/2)

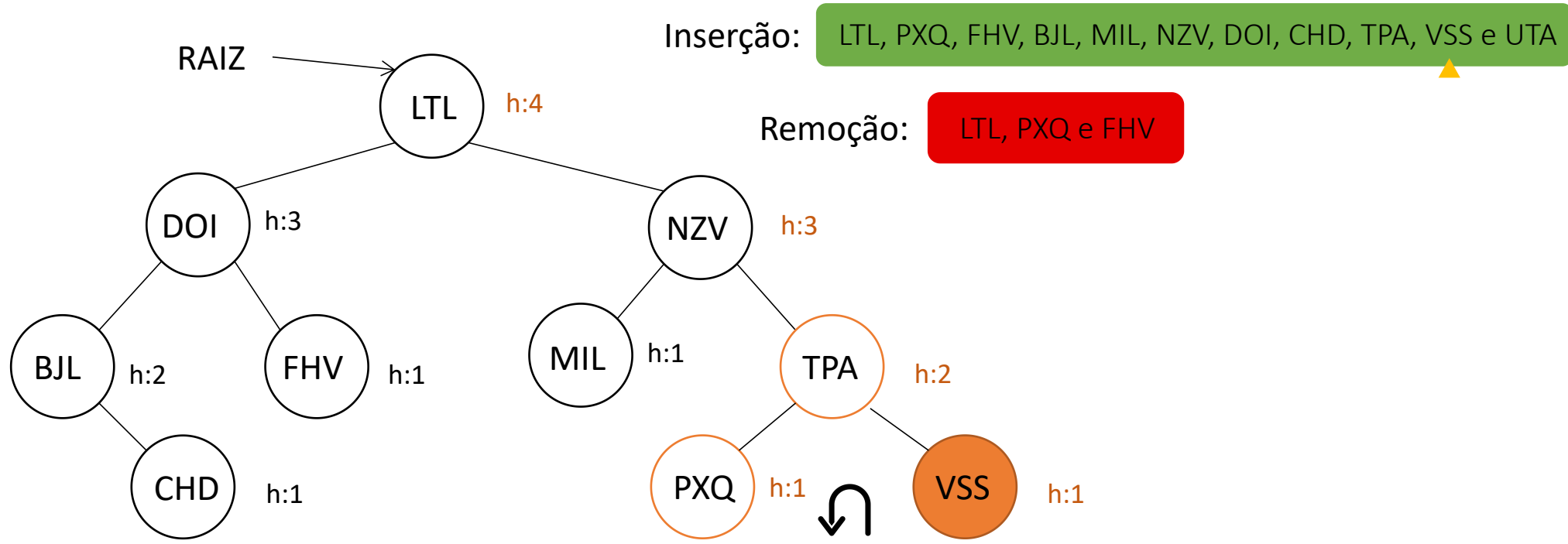


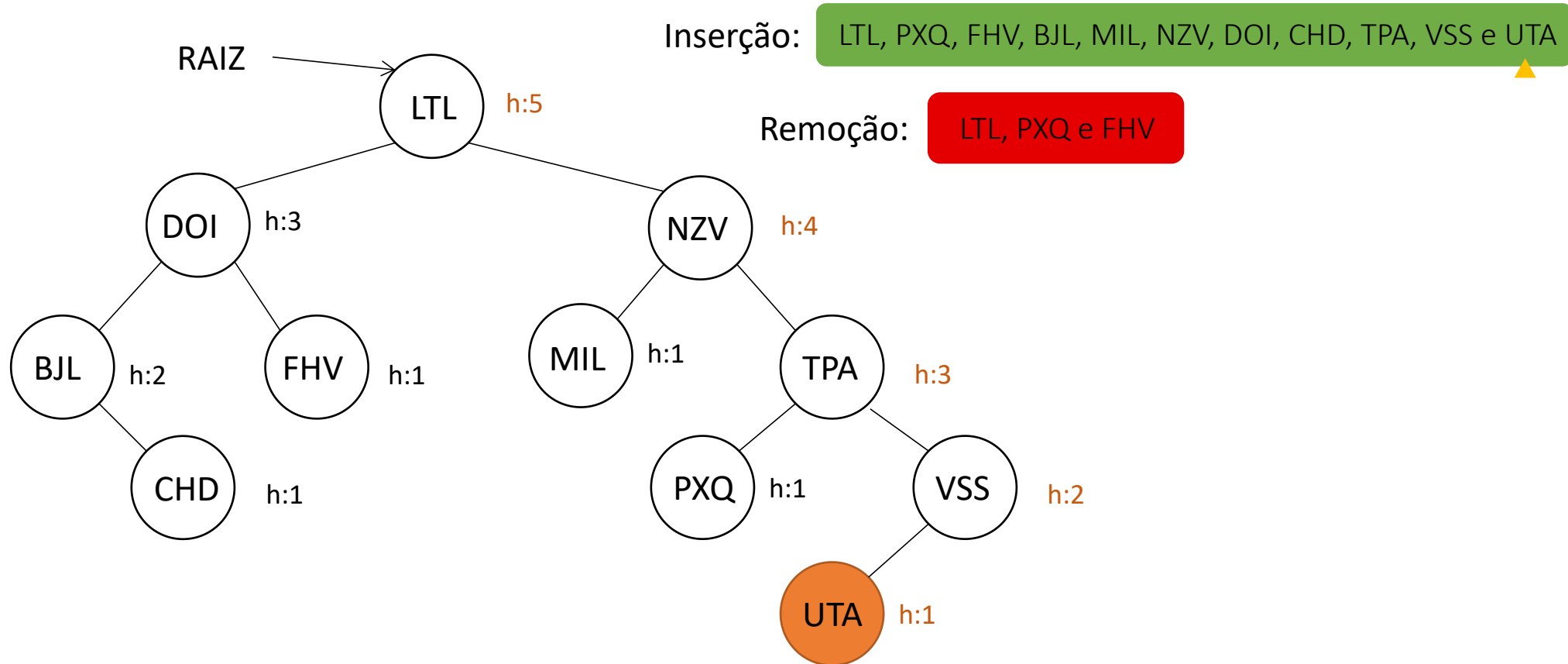
Rotação dupla direita(2/2)

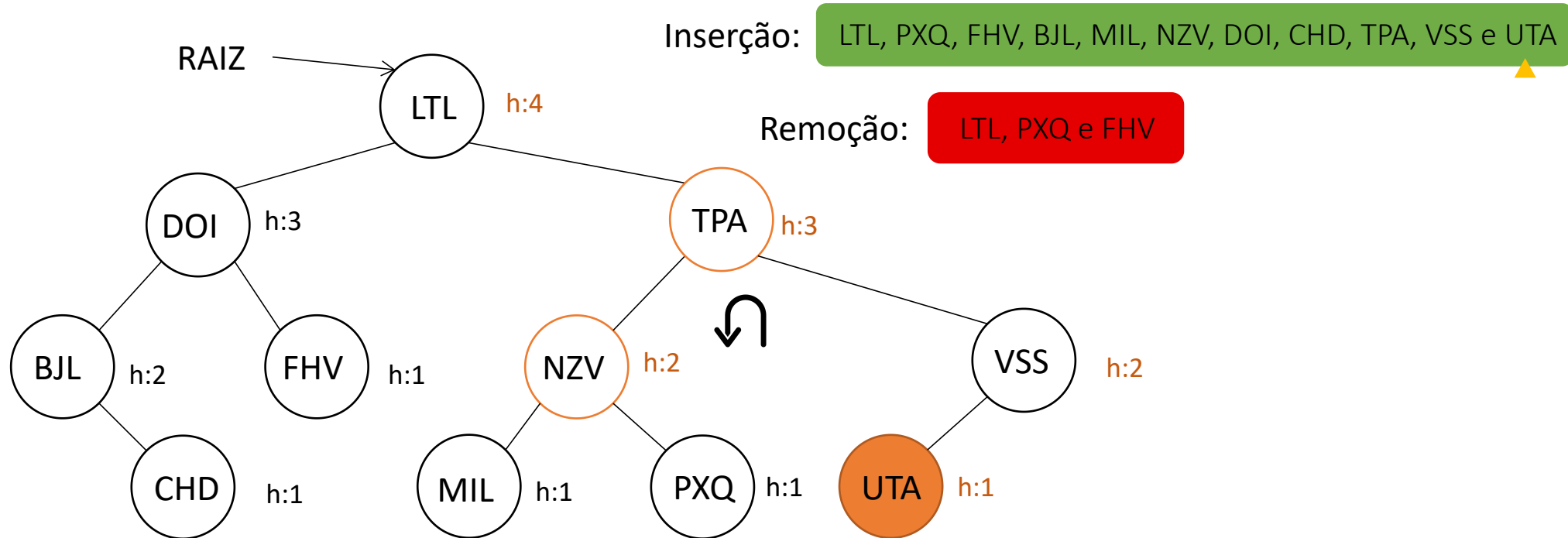




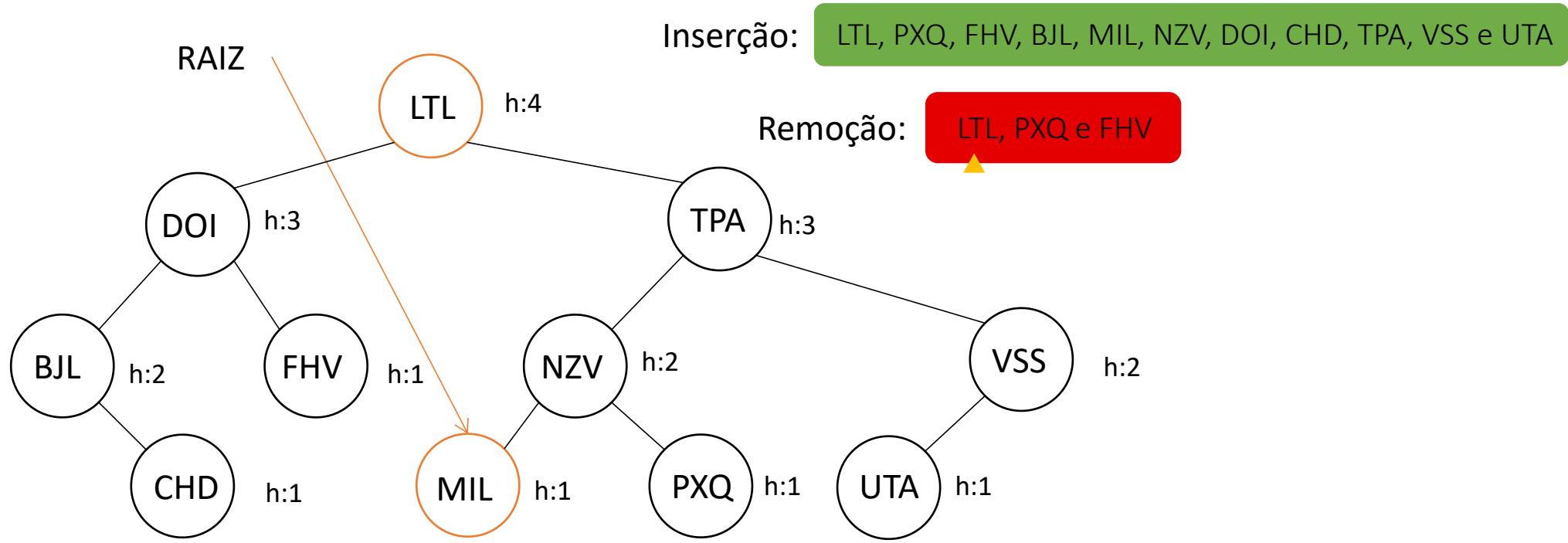






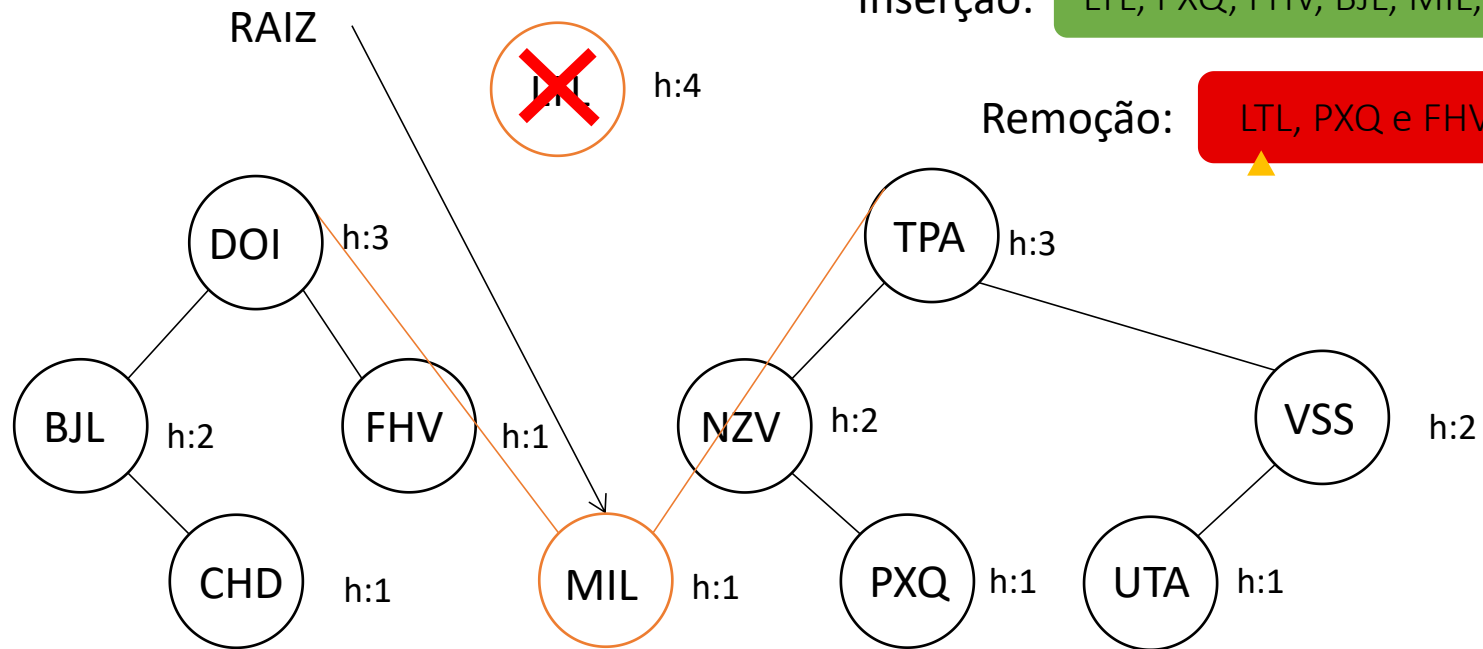


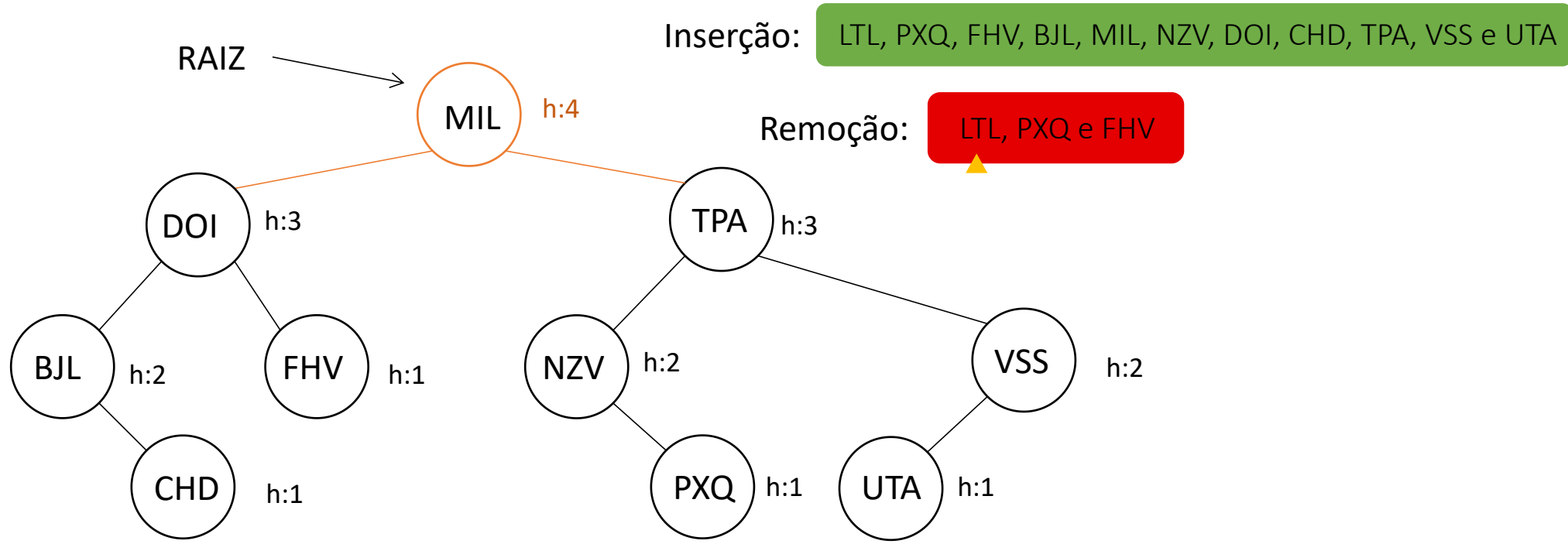
Rotação simples à esquerda

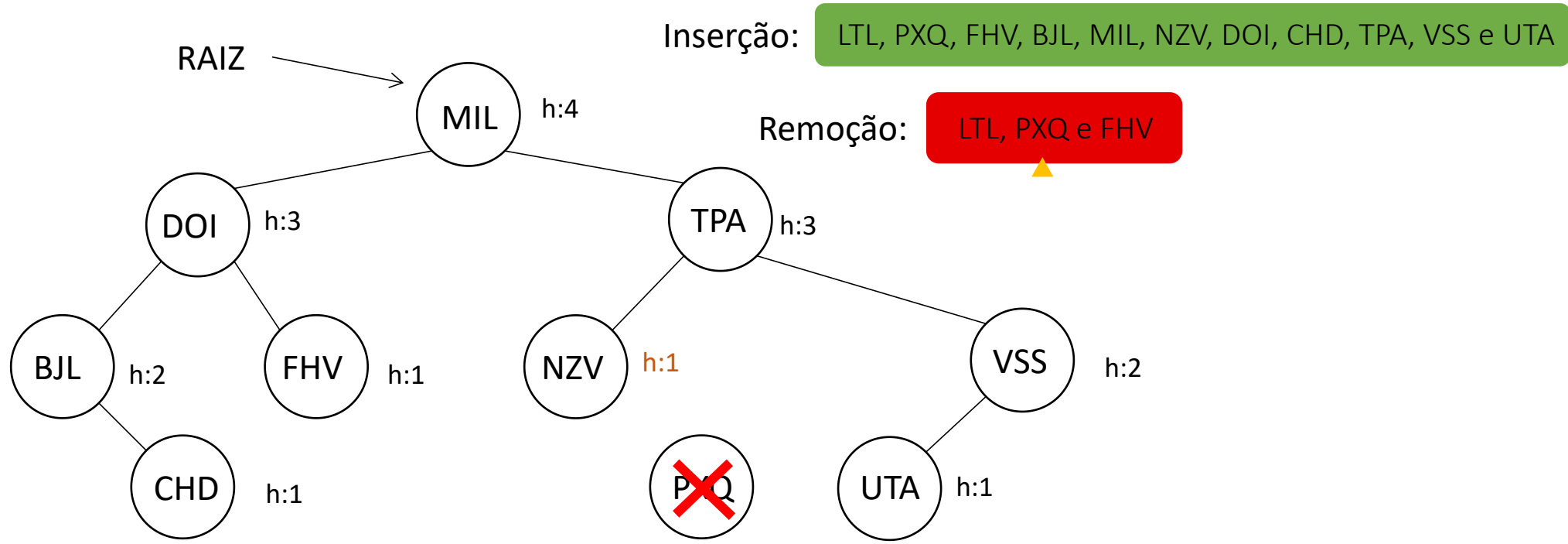


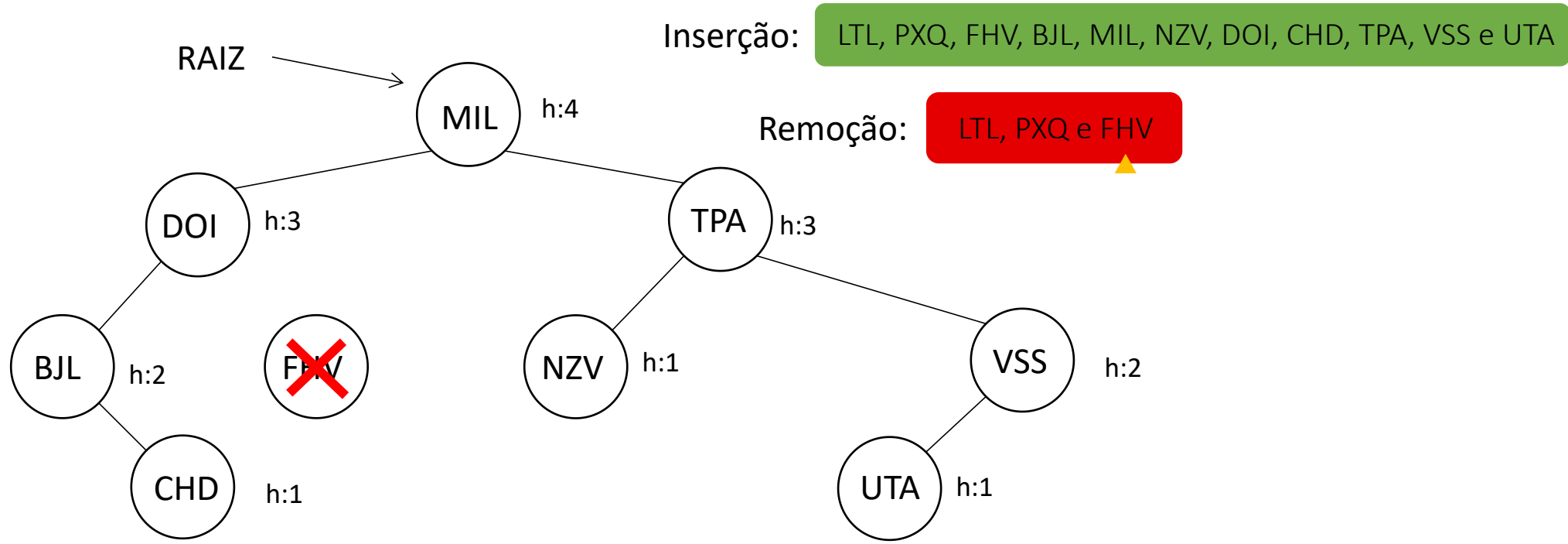
LTL, PXQ, FHV, BJL, MIL, NZV, DOI, CHD, TPA, VSS e UTA

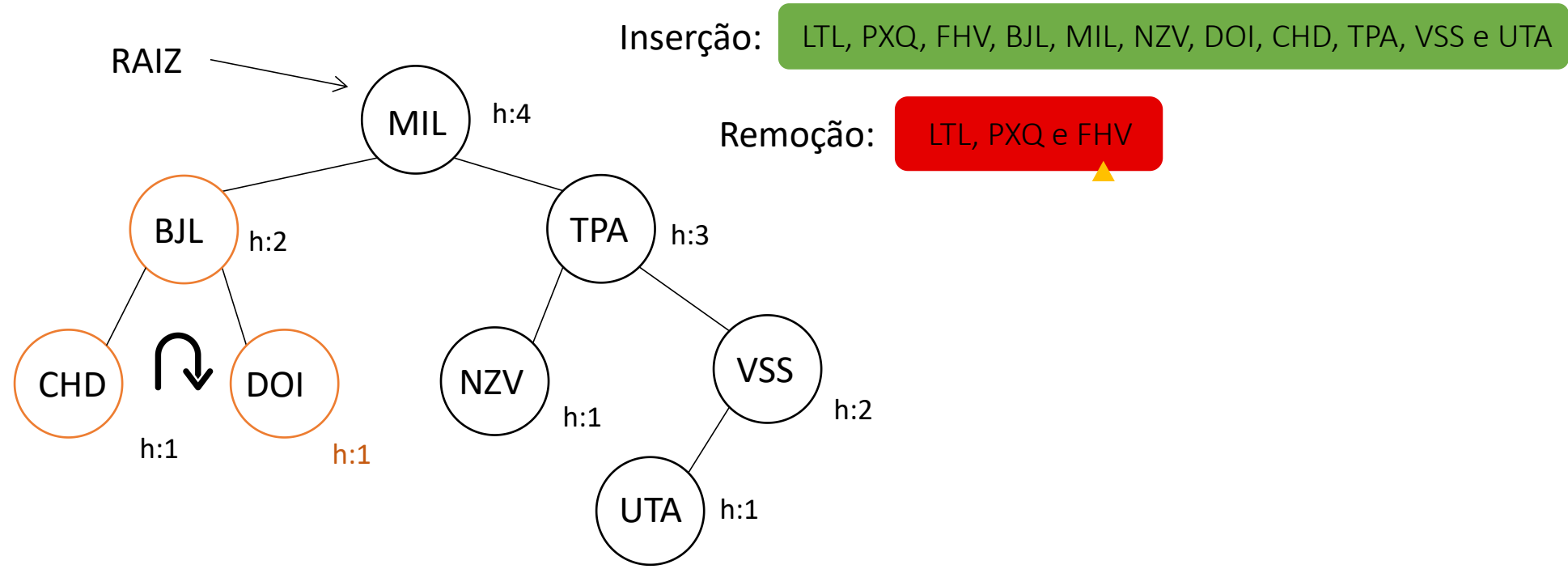
LTL, PXQ e FHV



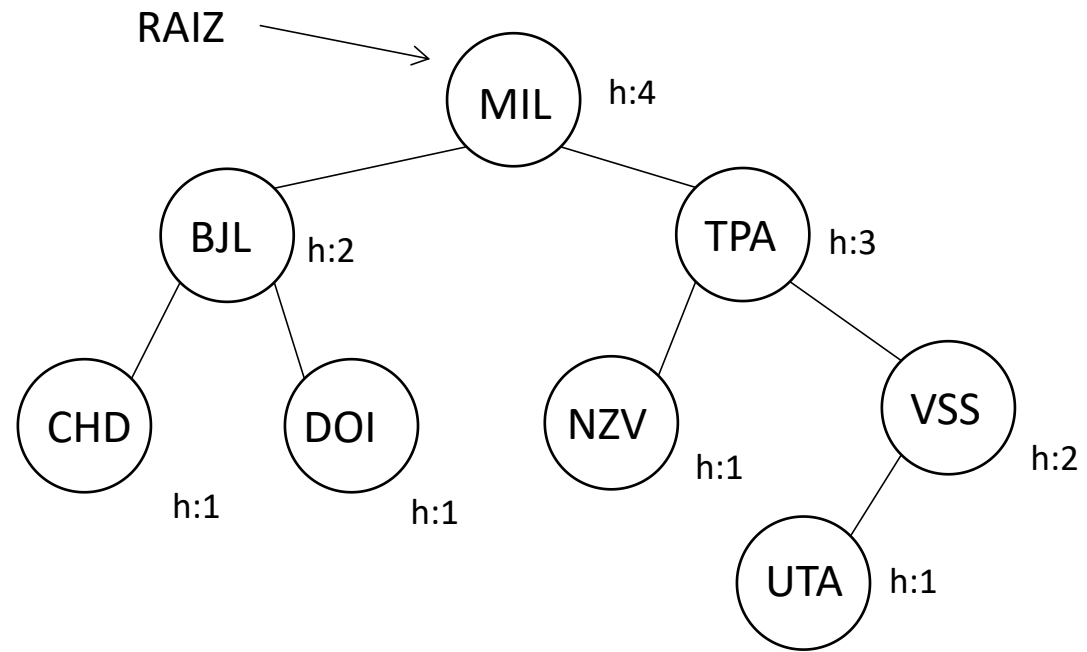






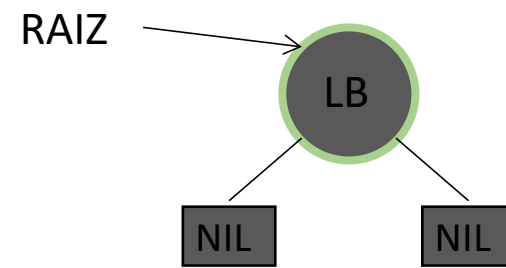


Rotação simples à direita



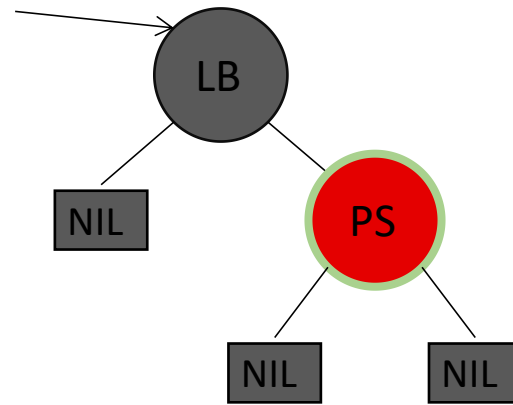
RESULTADO

Questão 14



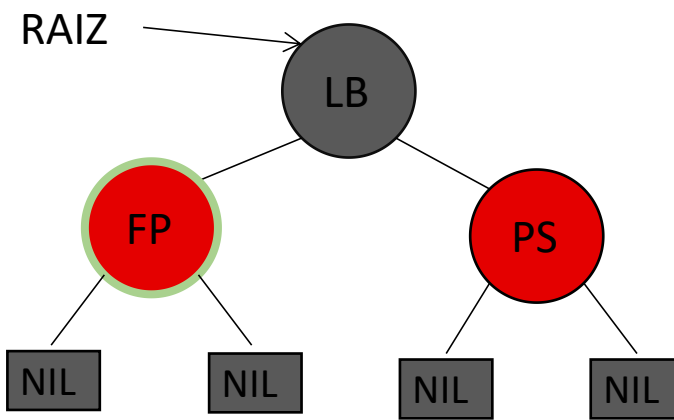
Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

RAIZ

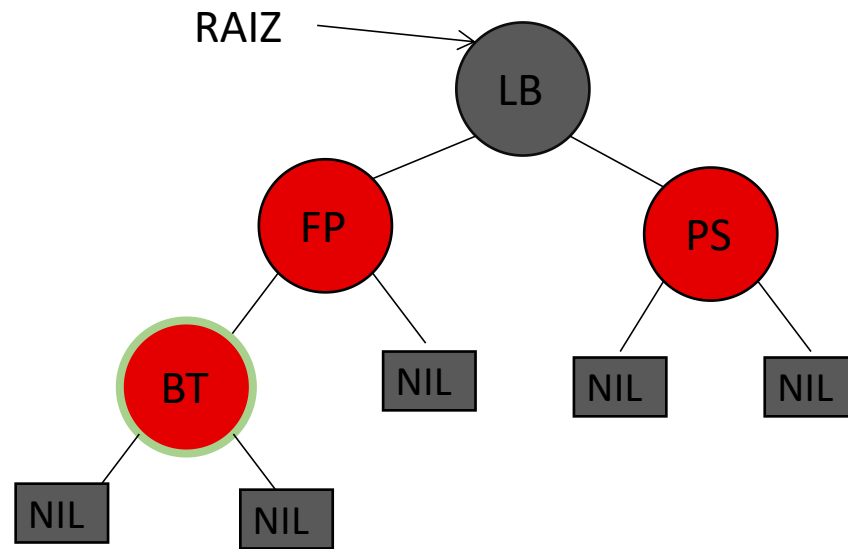


Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.



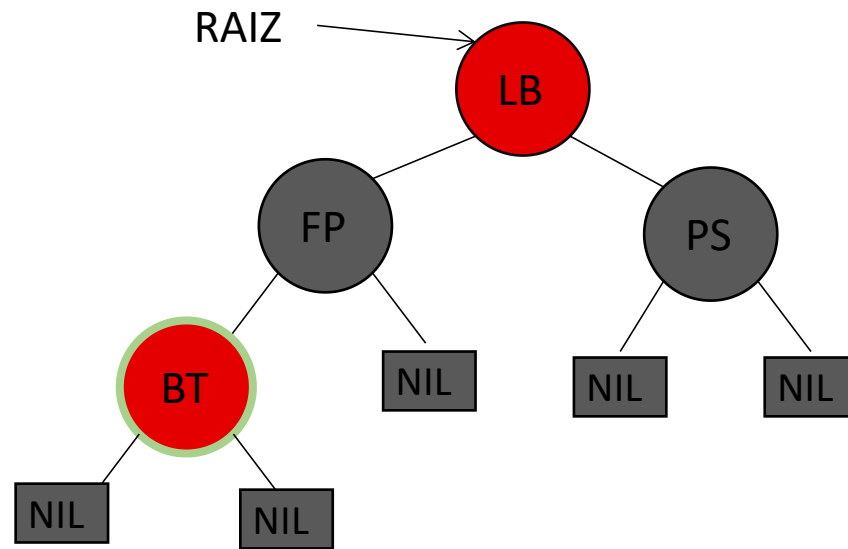


Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.



Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

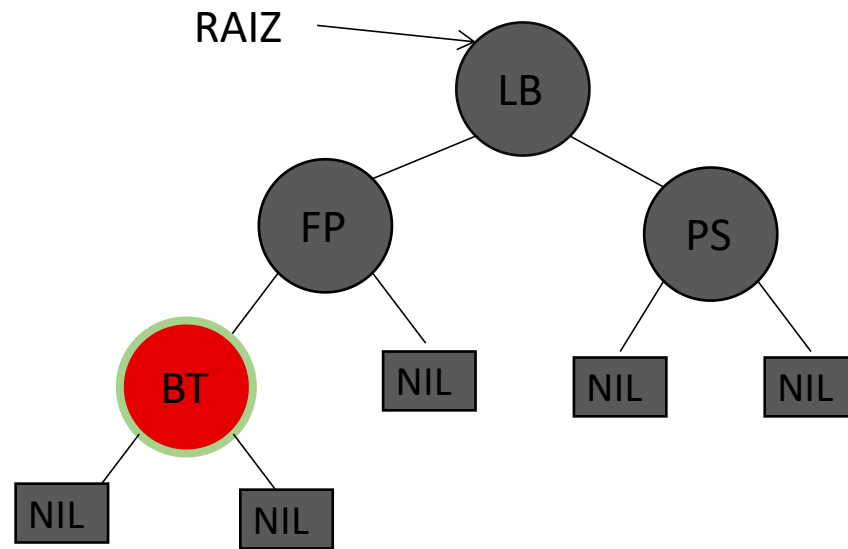
CASO 1



Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 1

Trocar a cor do pai, tio e
avô

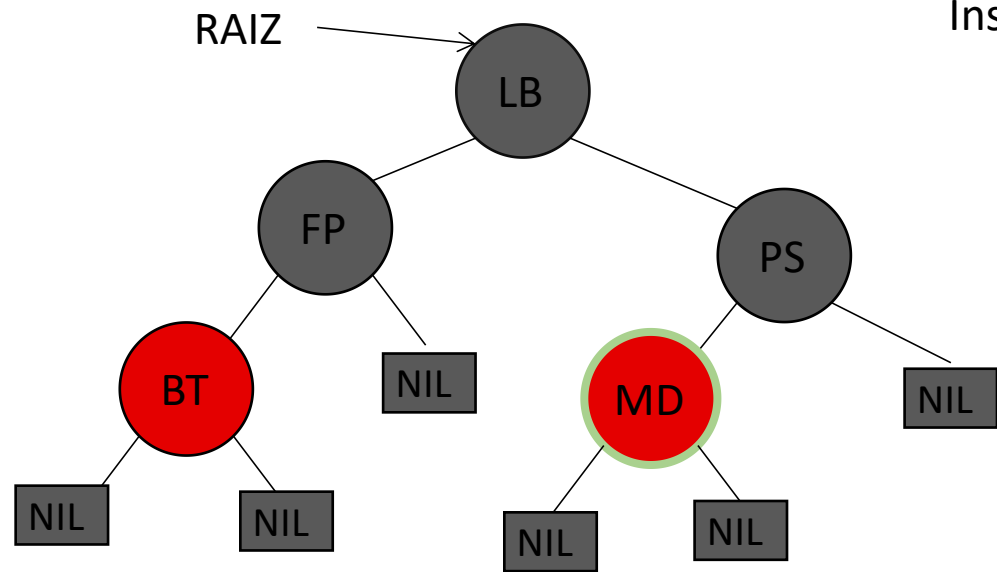


Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 1

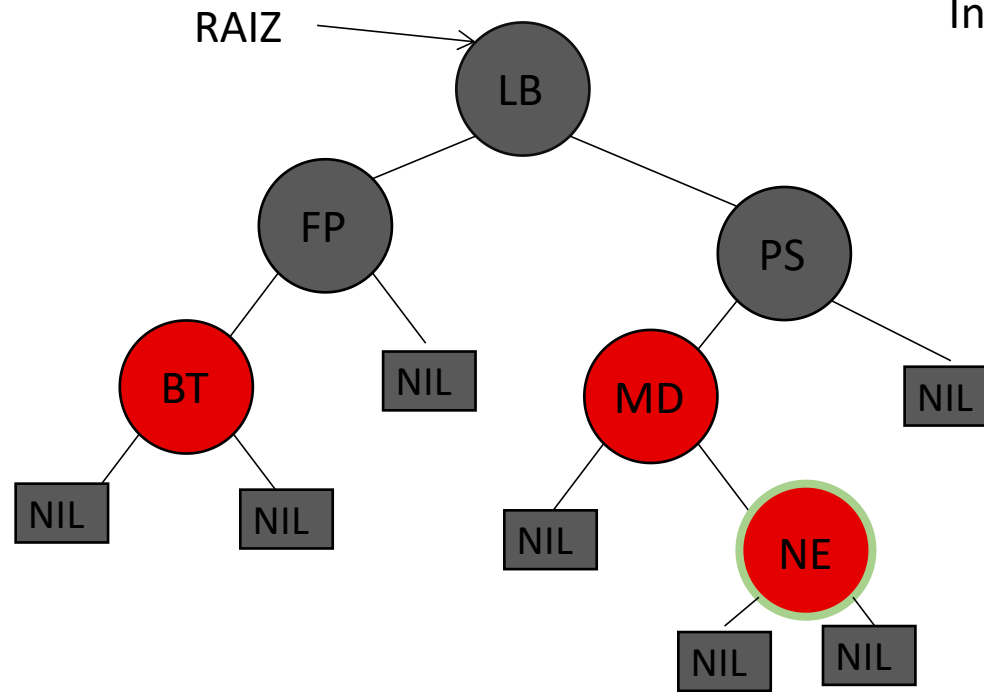
Trocar a cor do pai, tio e
avô

EXCEÇÃO: avô é raiz!



Inserção:

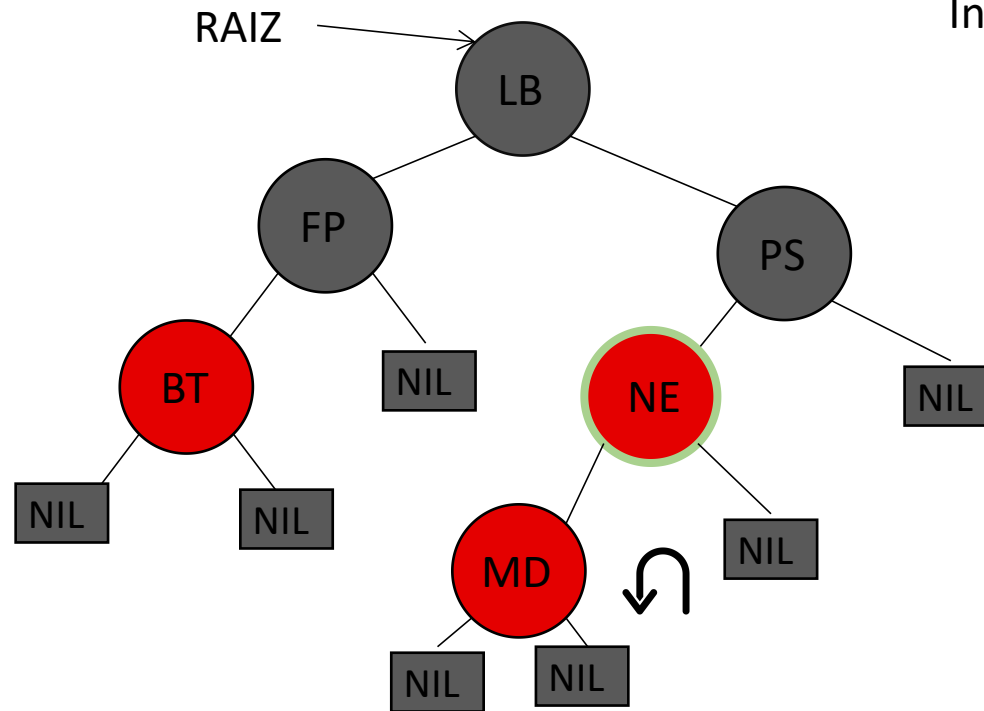
LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.



Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 5

ROTAÇÃO DUPLA

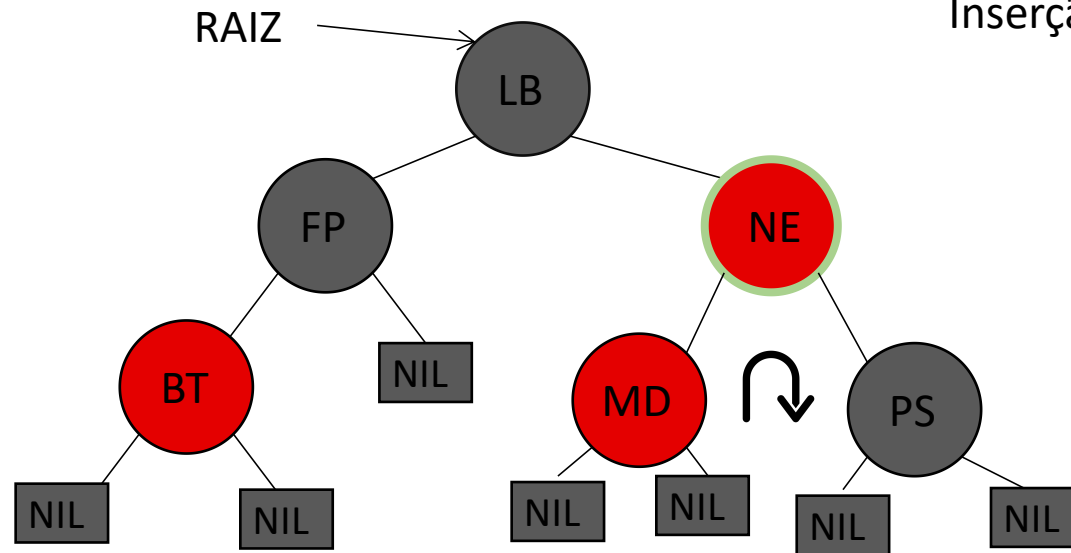


Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 5

ROTAÇÃO DUPLA

* rotação à esquerda



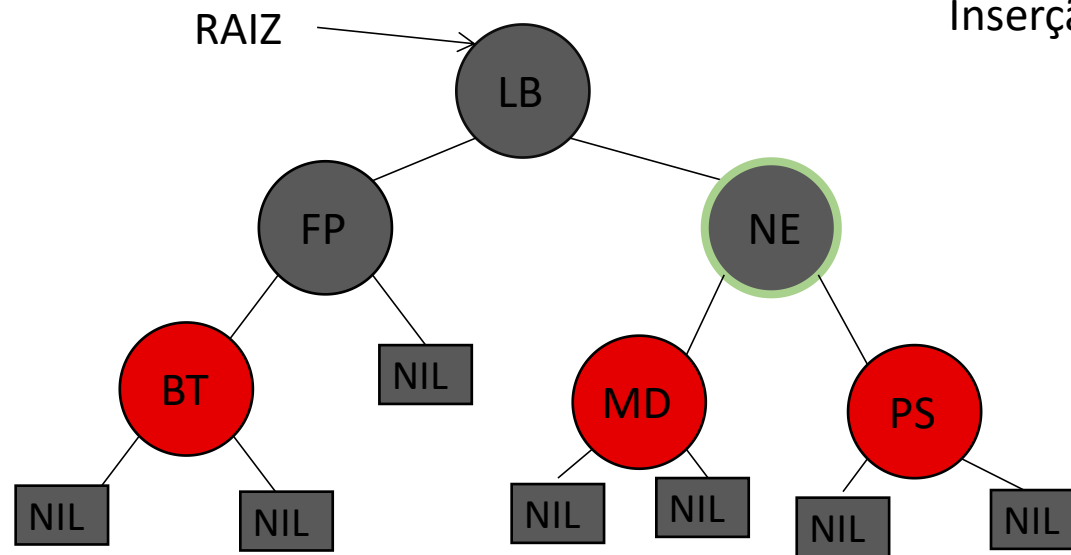
Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 5

ROTAÇÃO DUPLA

* rotação à esquerda

* rotação à direita

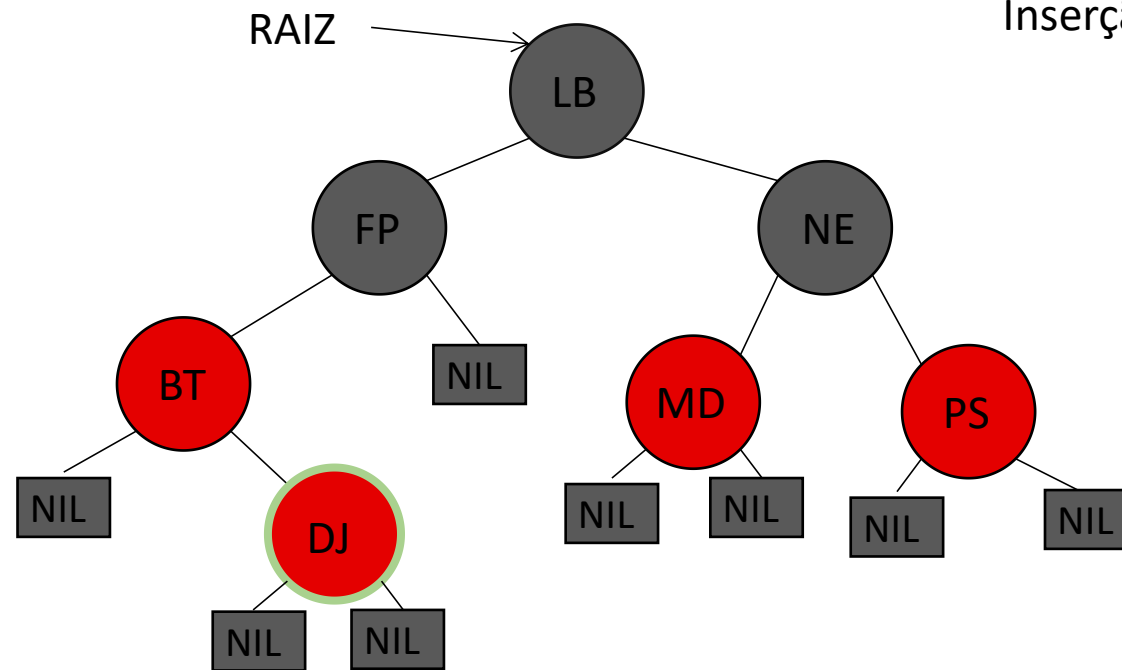


Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 5

ROTAÇÃO DUPLA

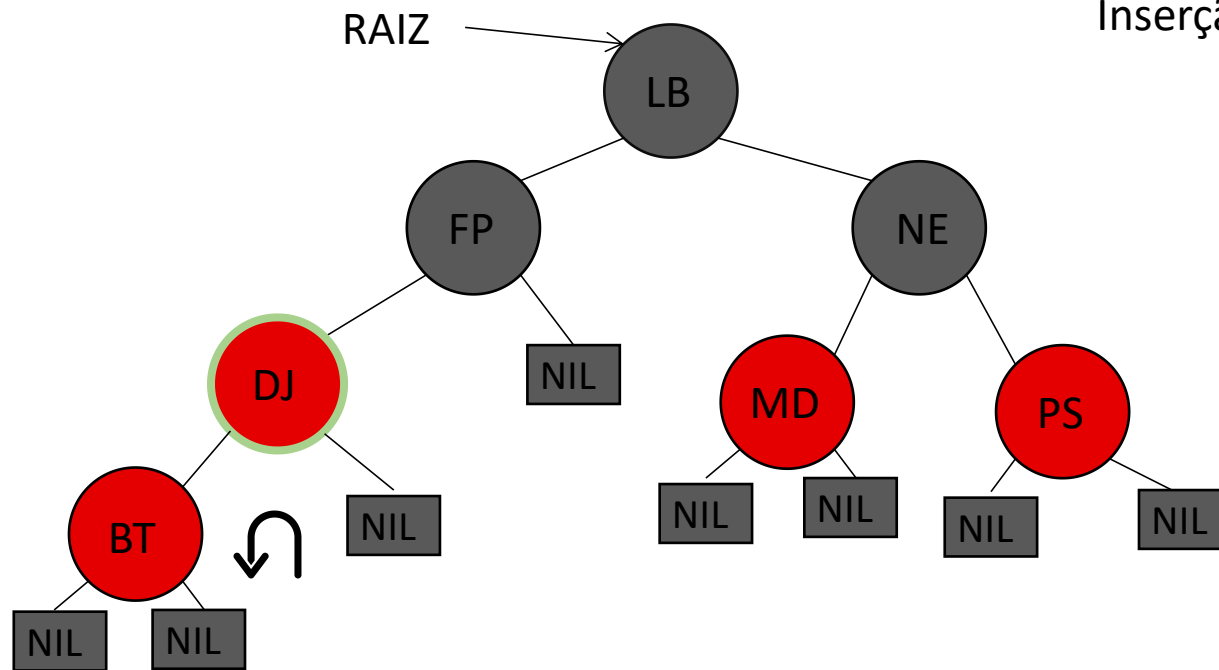
- * rotação à esquerda
- * rotação à direita
- * trocar as cores



Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 5

ROTAÇÃO DUPLA

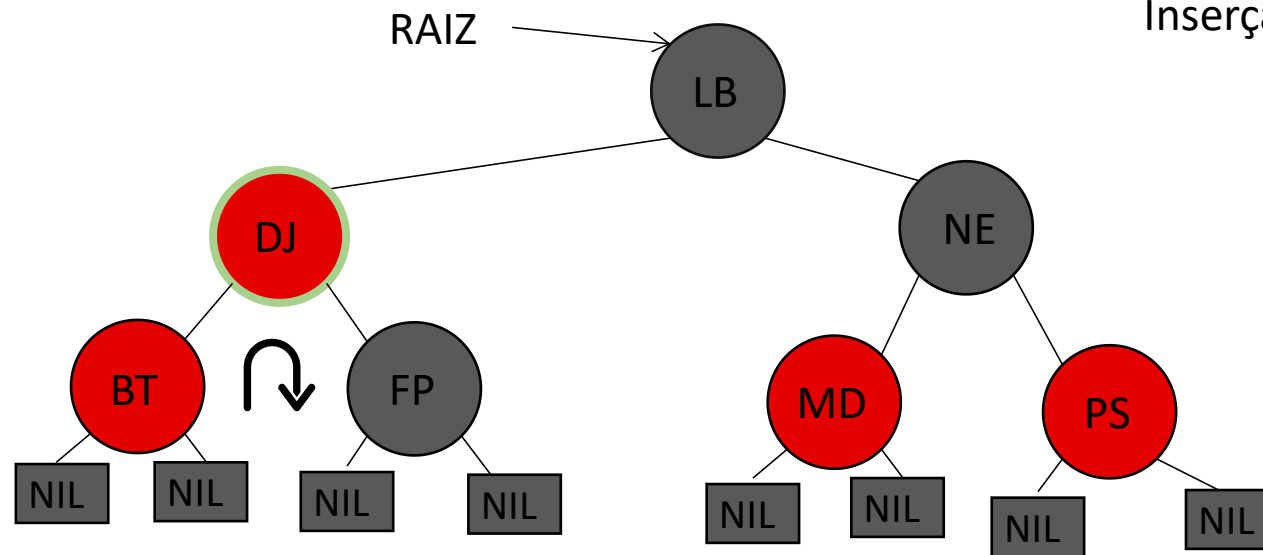


Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 5

ROTAÇÃO DUPLA

* rotação à esquerda



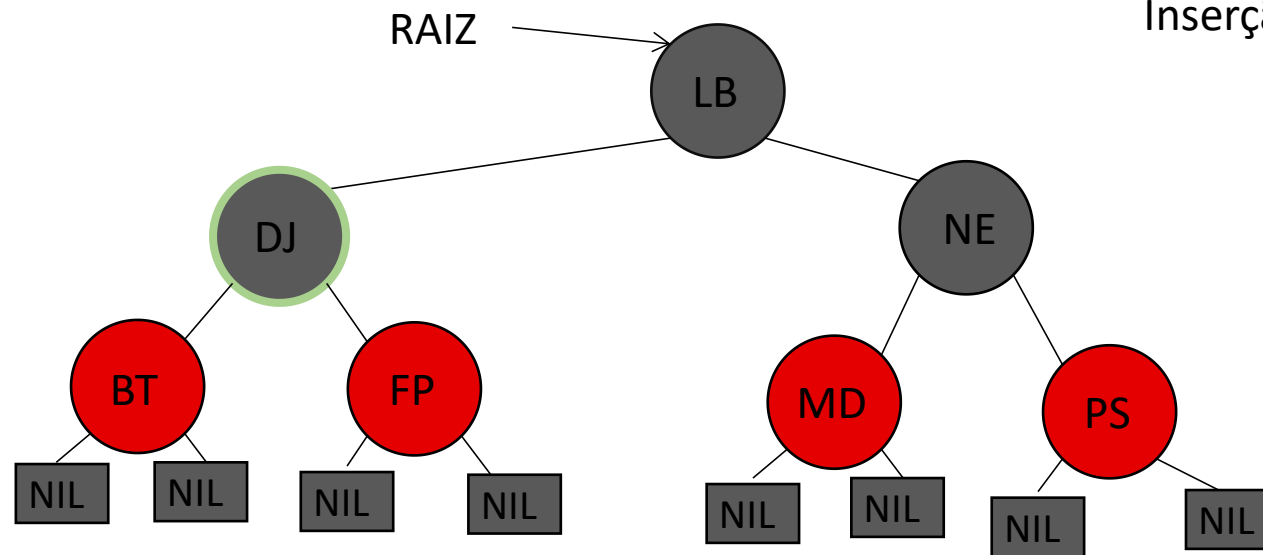
Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 5

ROTAÇÃO DUPLA

* rotação à esquerda

* rotação à direita

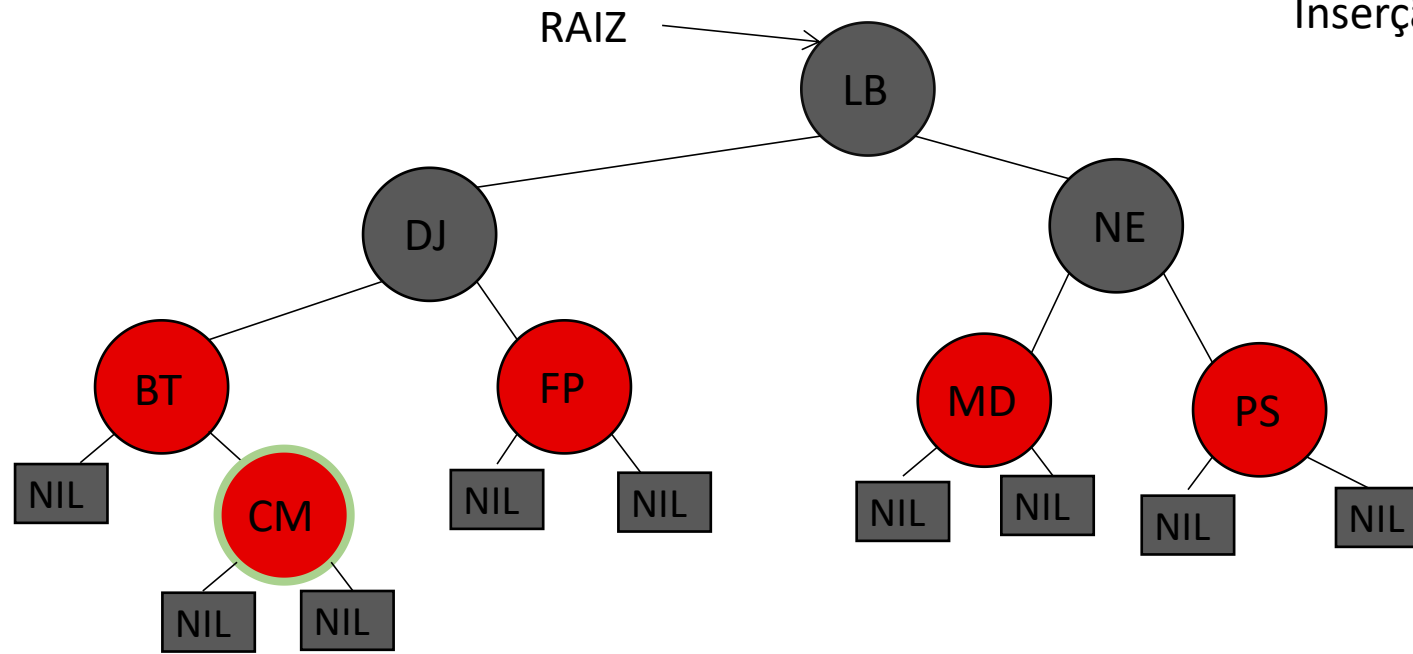


Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 5

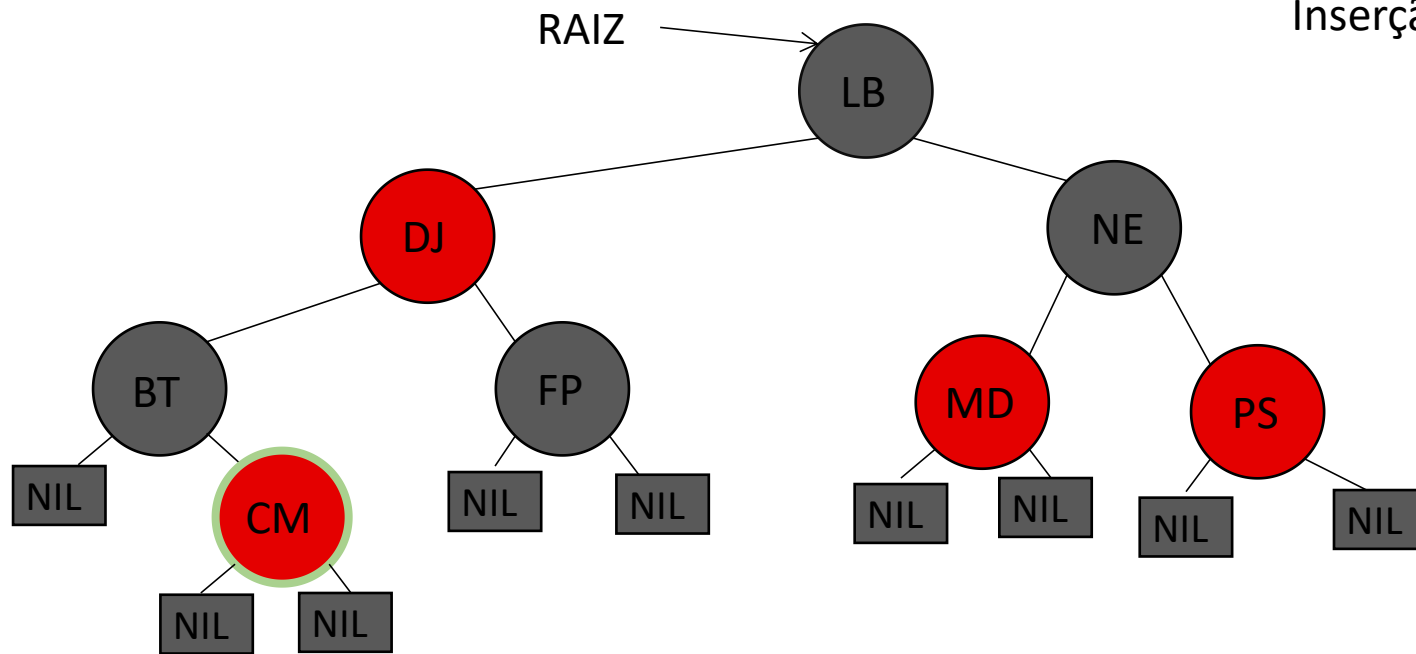
ROTAÇÃO DUPLA

- * rotação à esquerda
- * rotação à direita
- * trocar as cores



Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

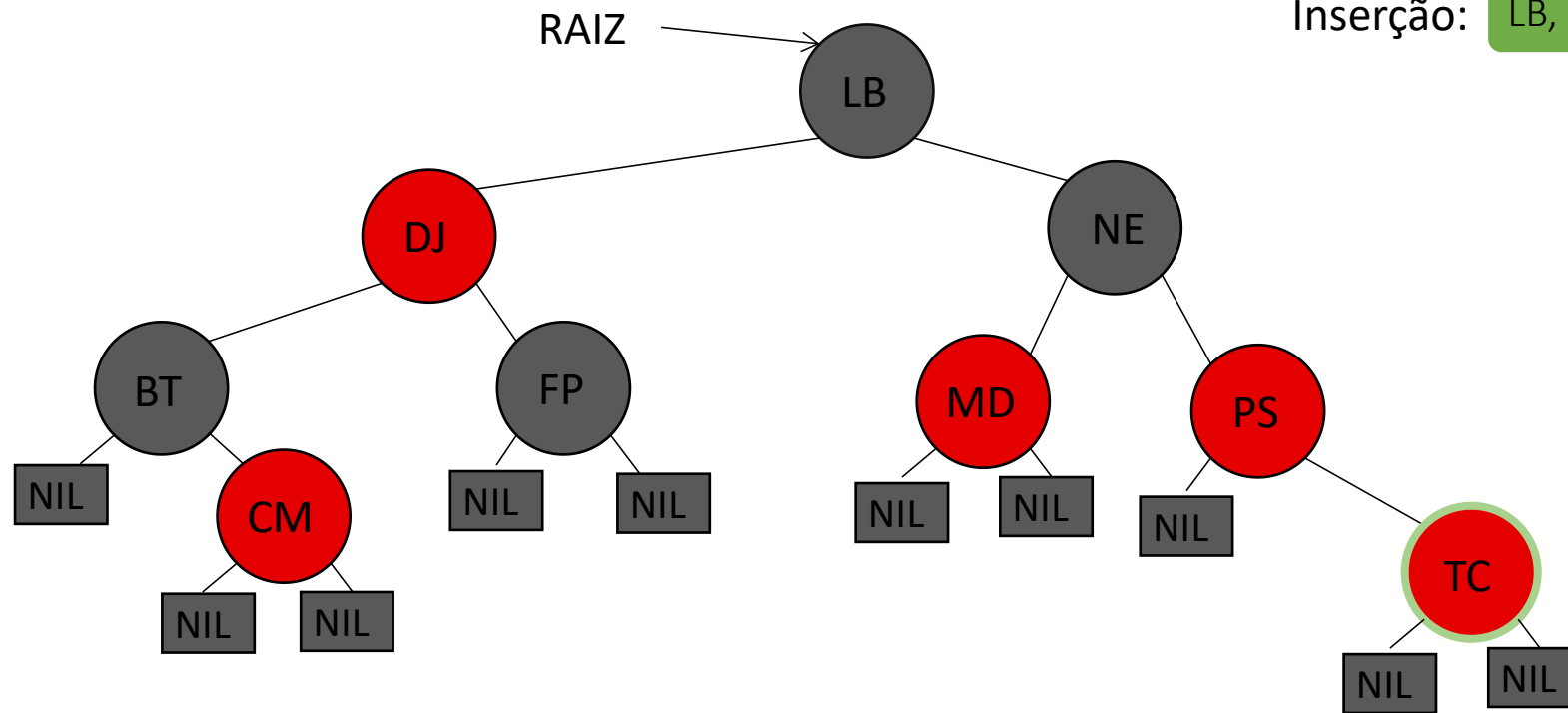
CASO 1



Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

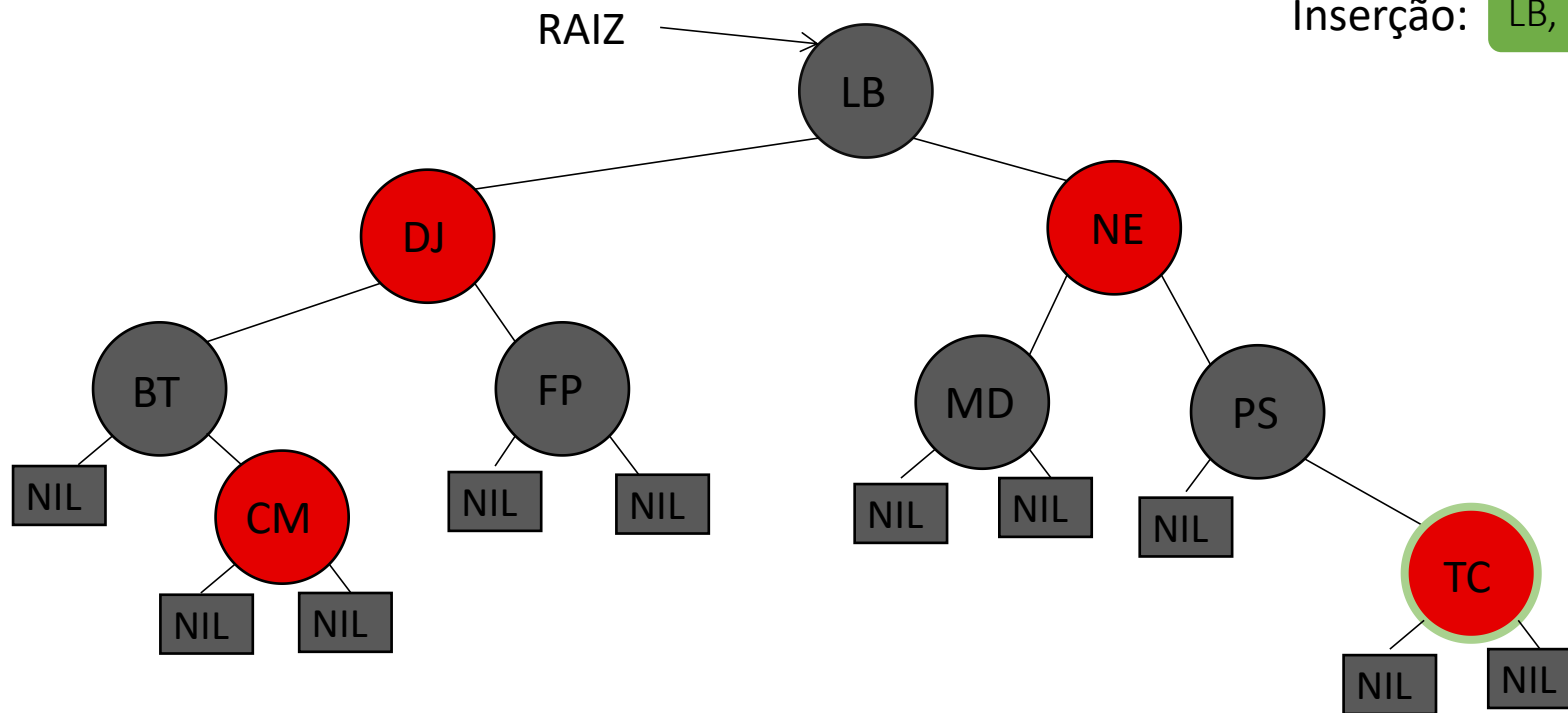
CASO 1

Trocar a cor do pai, tio e avô



Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

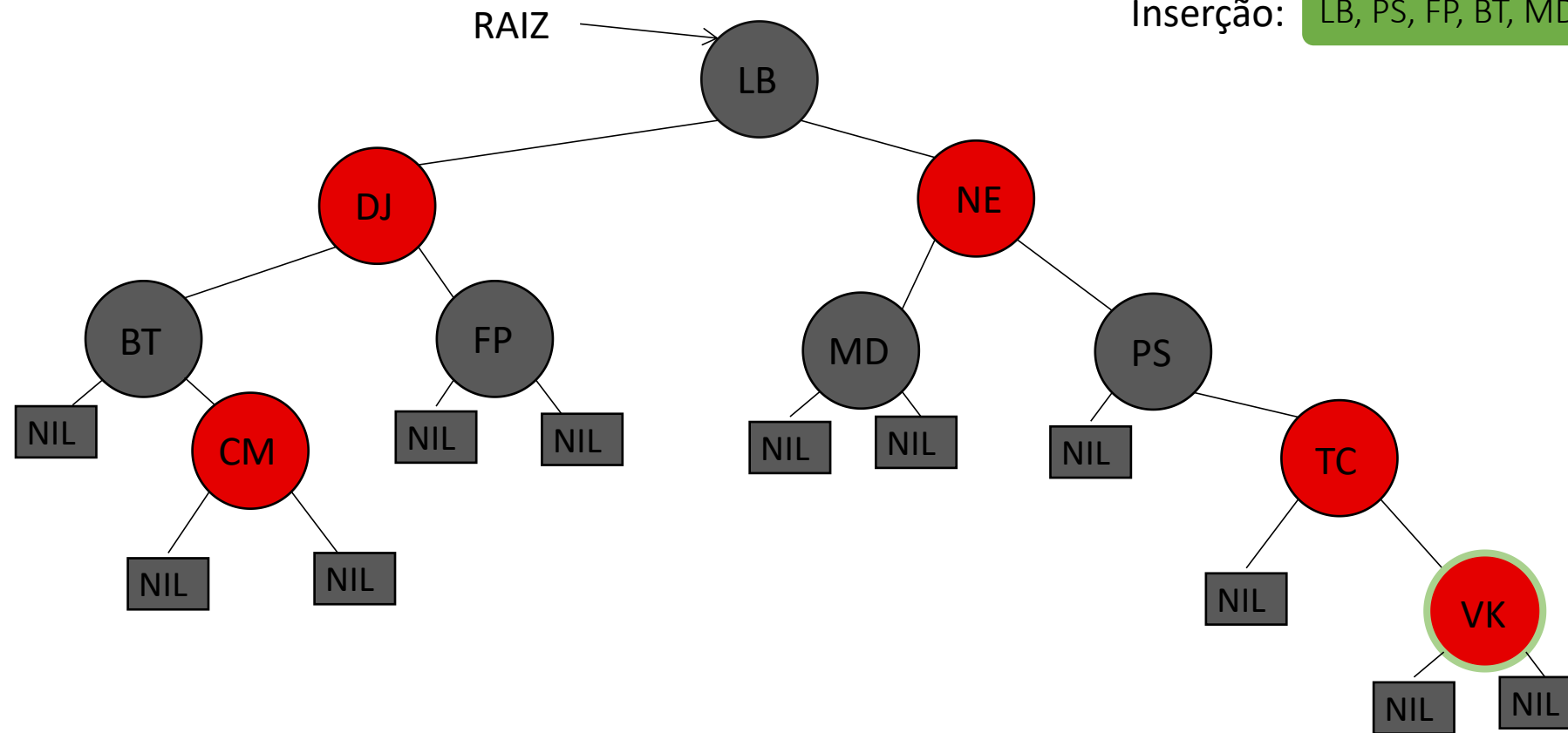
CASO 1



Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

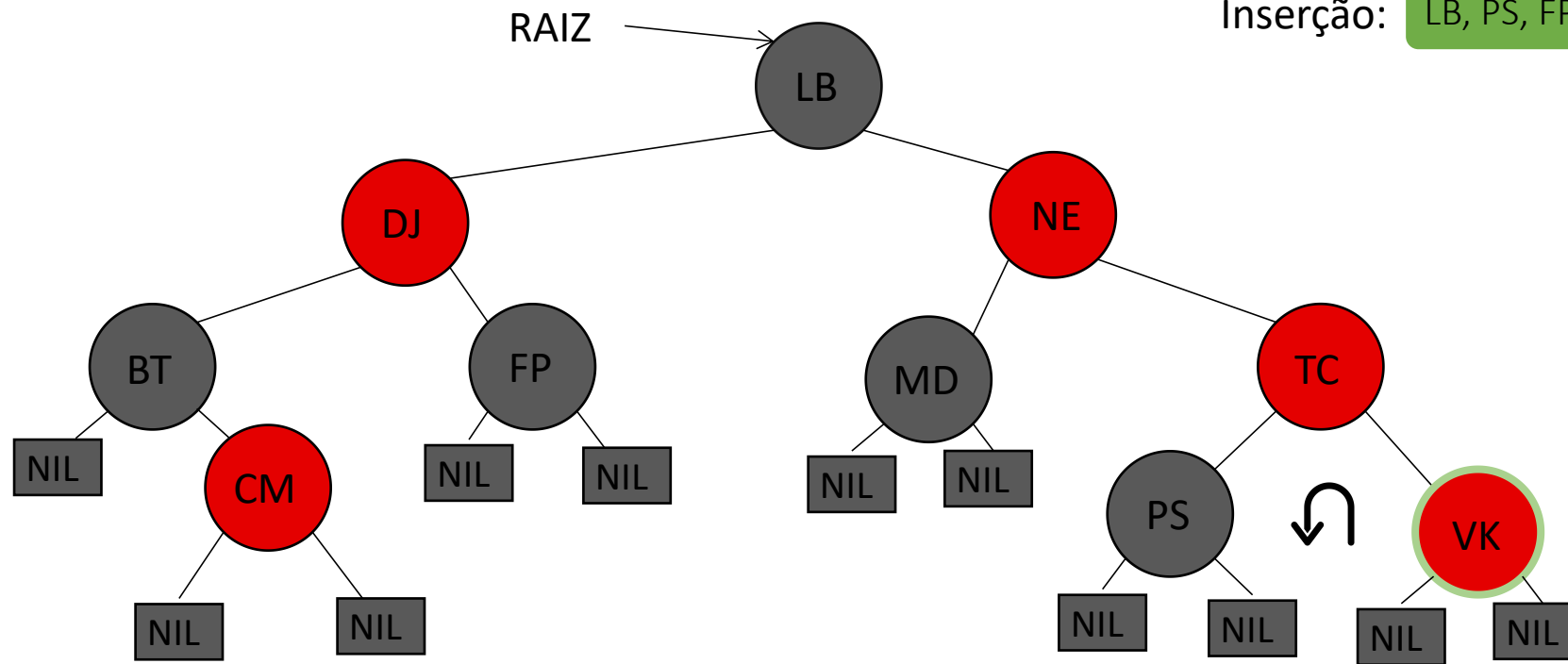
CASO 1

Trocar a cor do pai, tio e avô



Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

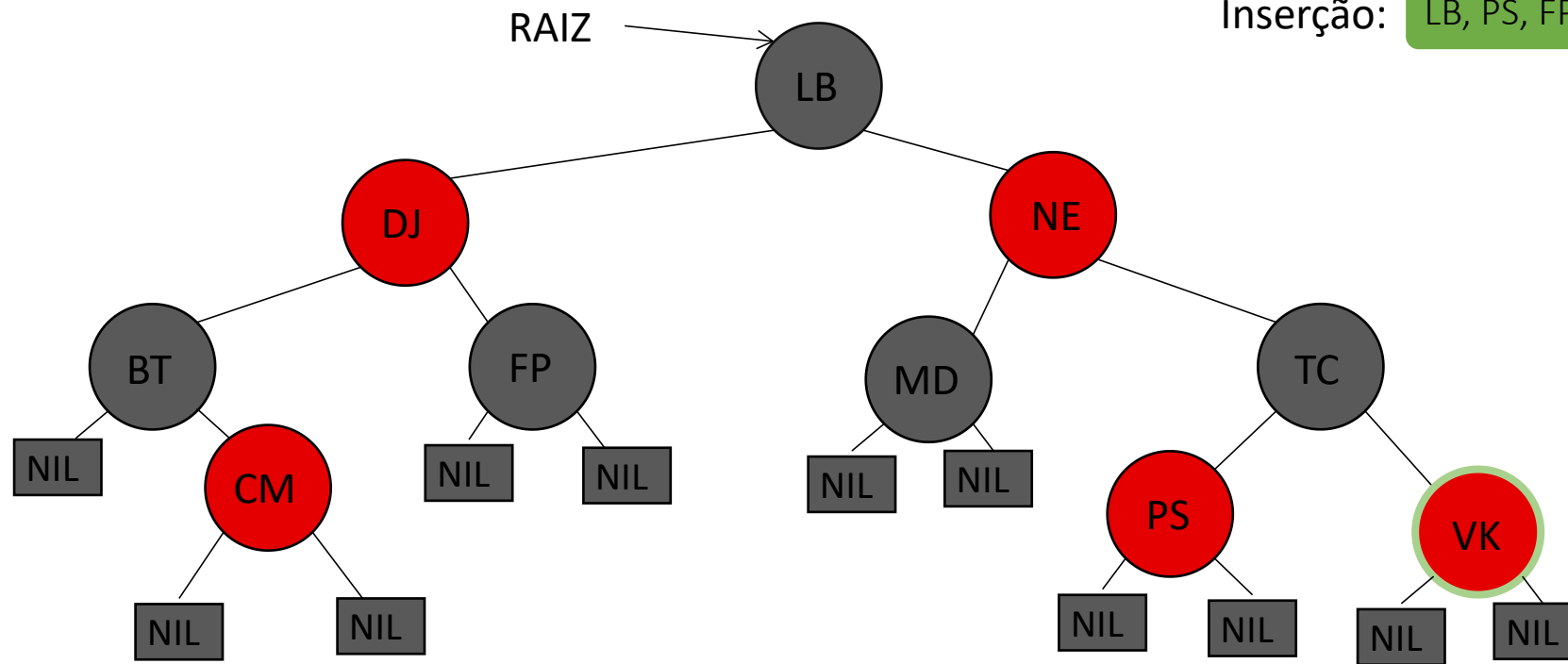
CASO 2



Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 2

* rotação à esquerda



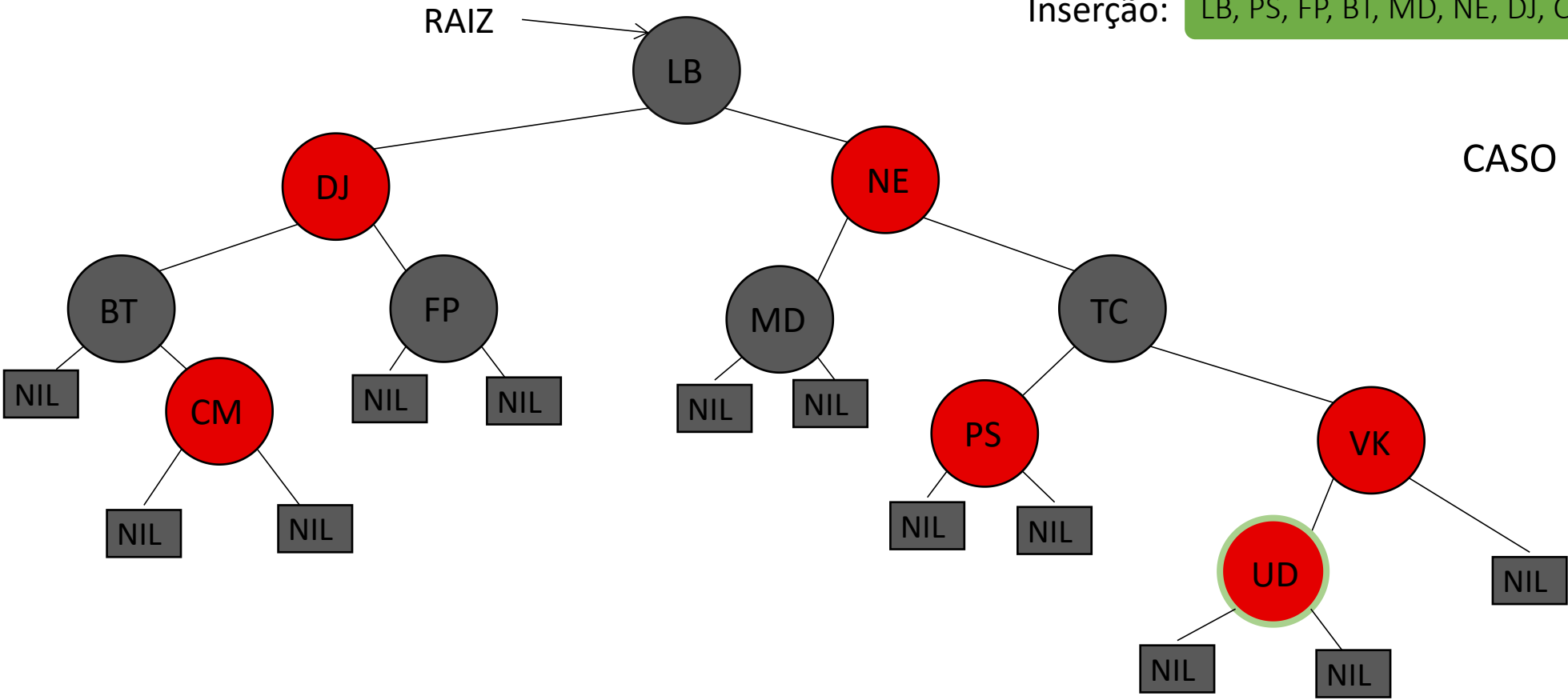
Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

CASO 2

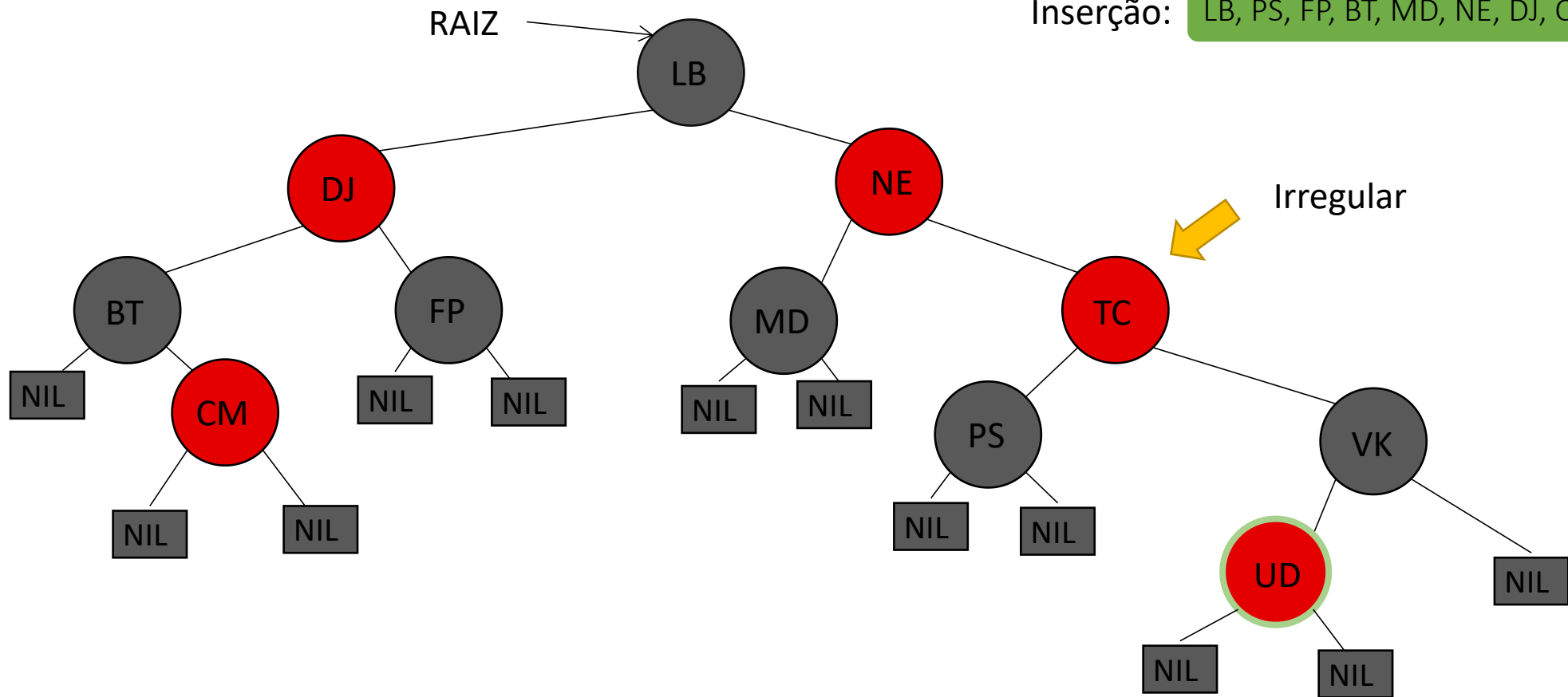
- * rotação à esquerda
- * trocar as cores

Inserção:

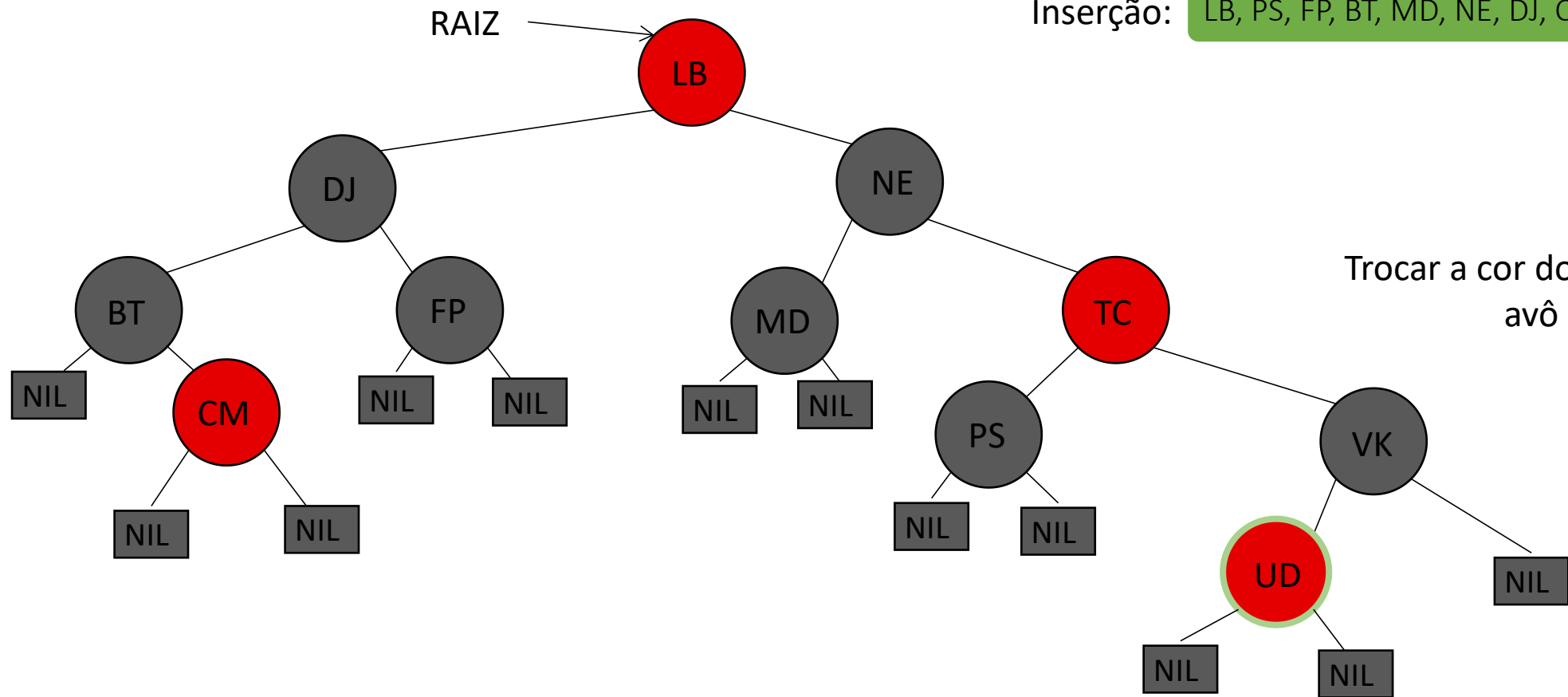
LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.



CASO 1



PROPRIEDADE: Um nó vermelho tem ambos os filhos pretos



Inserção: LB, PS, FP, BT, MD, NE, DJ, CM, TC, VK e UD.

