

Building Huffman Tree

Given a set **S** of characters and their frequencies (in 10^3)

S a:20 b:55 c:20 d:5 e:30 f:35 g:50 h:45

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Given a set **S** of characters and their frequencies (in 10^3)

S a:20 b:55 c:20 d:5 e:30 f:35 g:50 h:45

Insert the characters in a priority queue using frequency as priority

PQ d:5 a:20 c:20 e:30 f:35 h:45 g:50 b:55

Building Huffman Tree

PQ

d:5

a:20

c:20

e:30

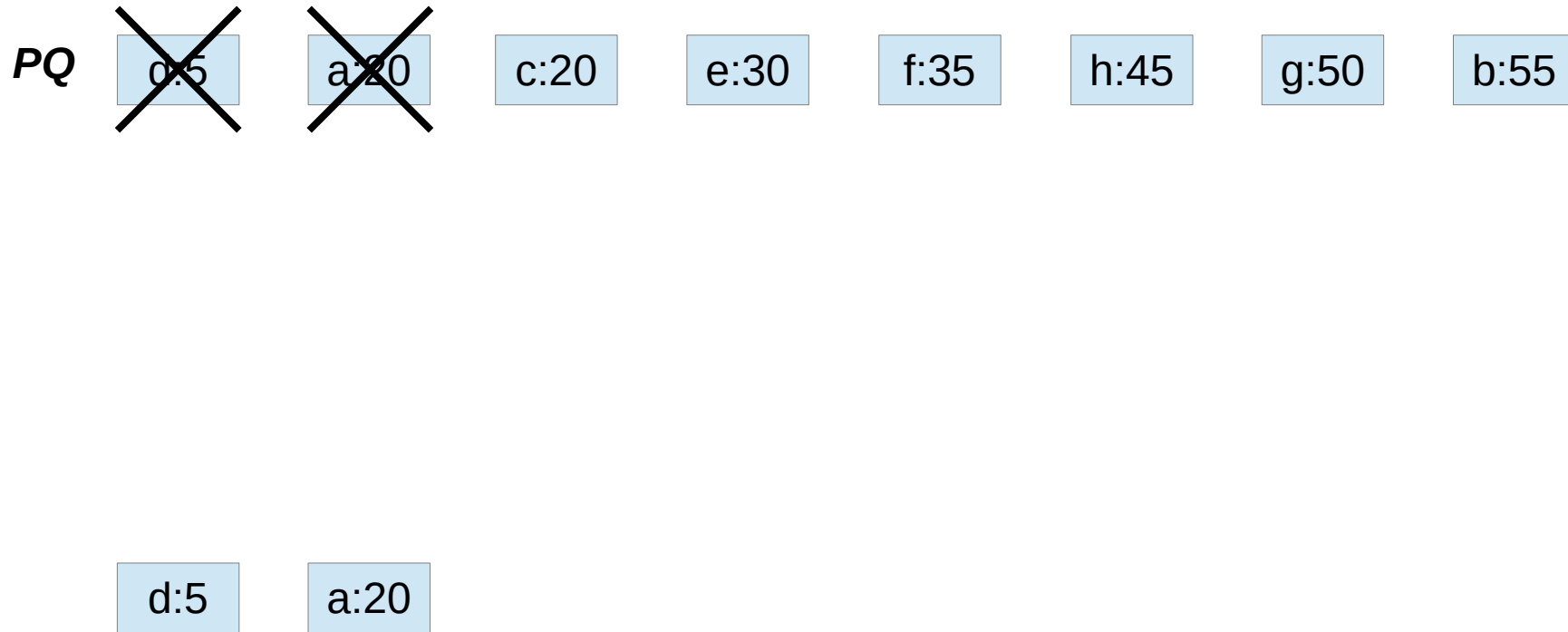
f:35

h:45

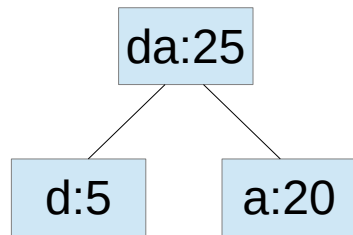
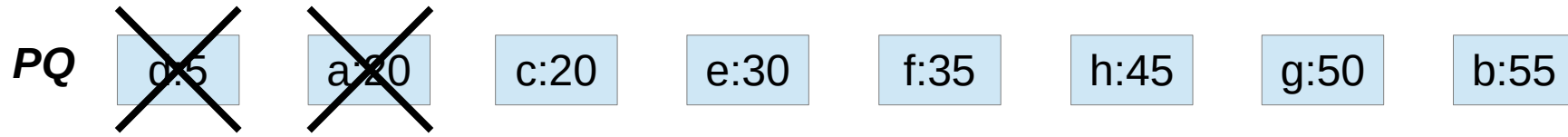
g:50

b:55

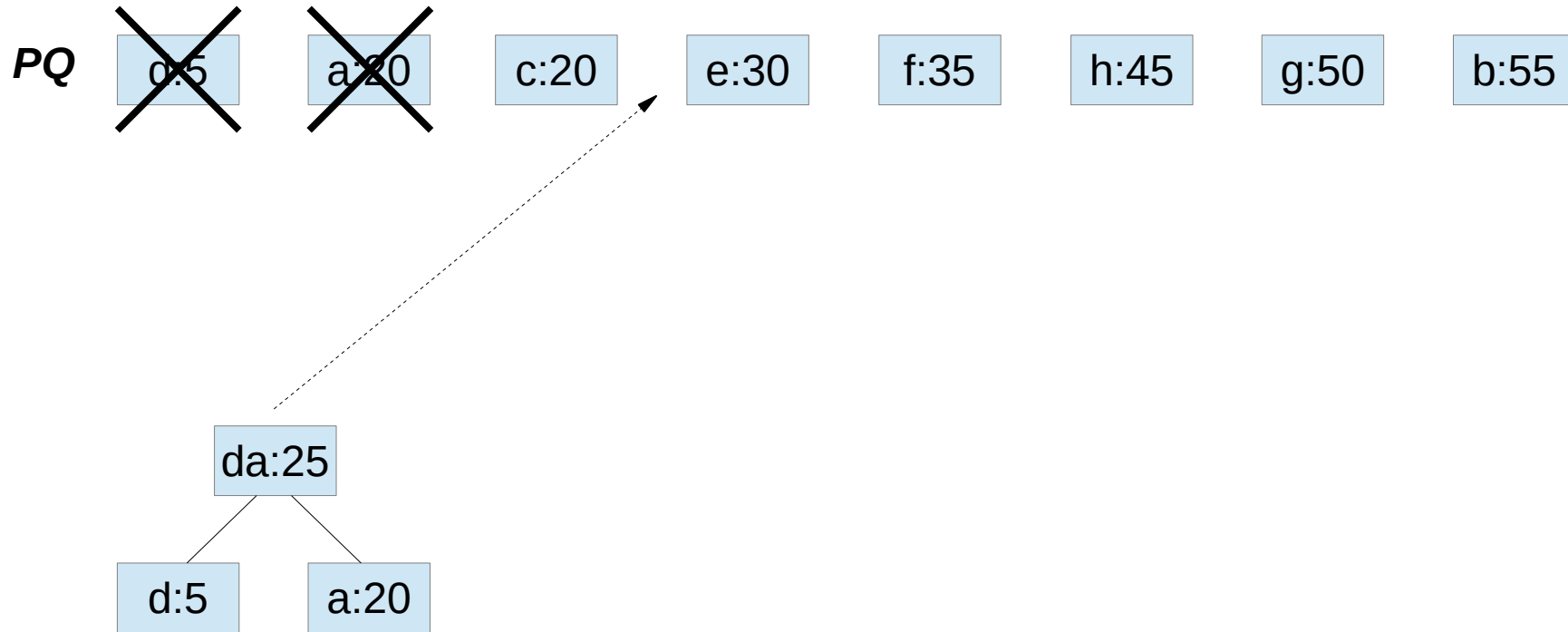
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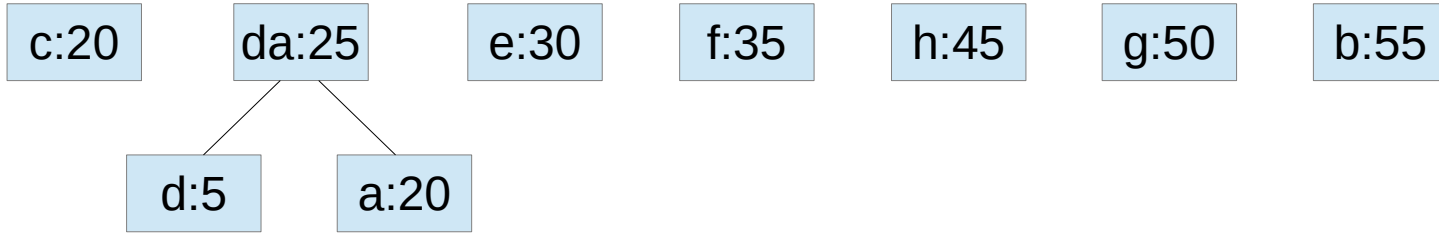


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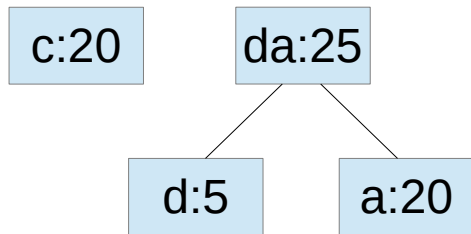
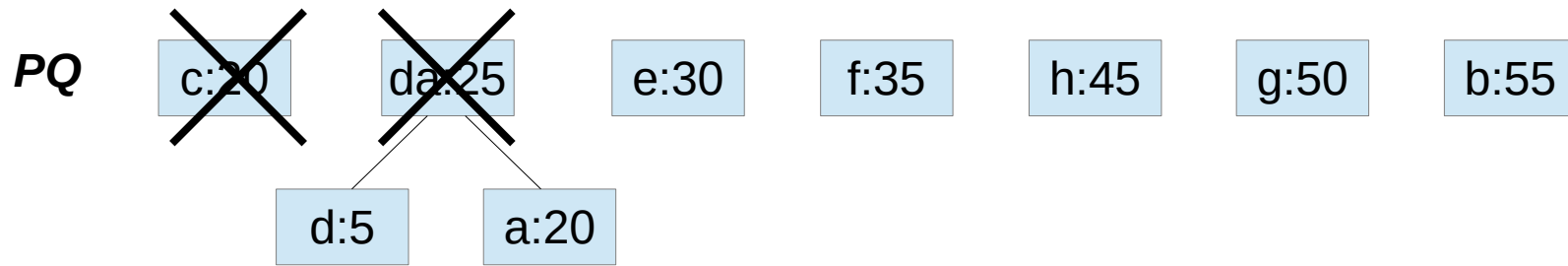


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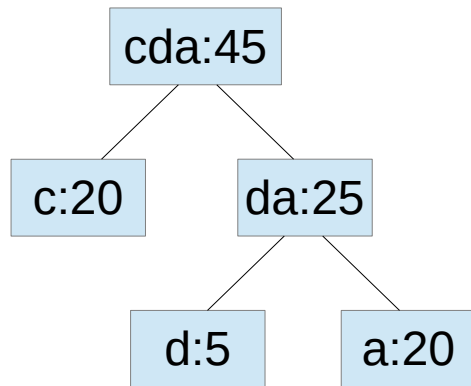
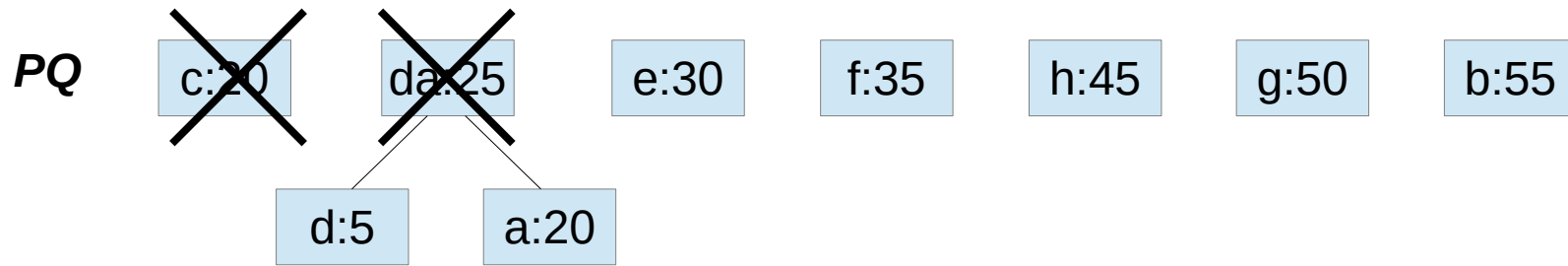
PQ



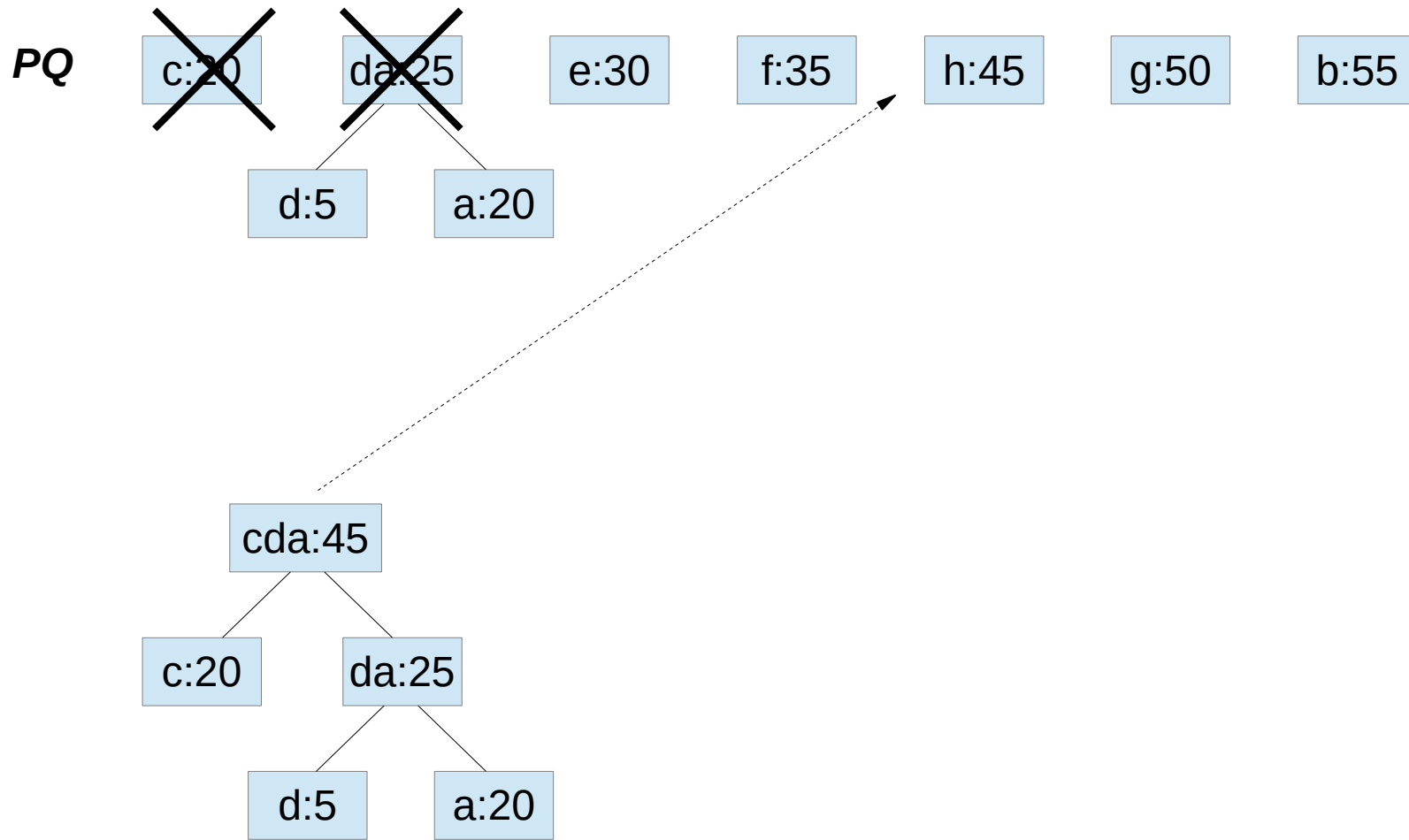
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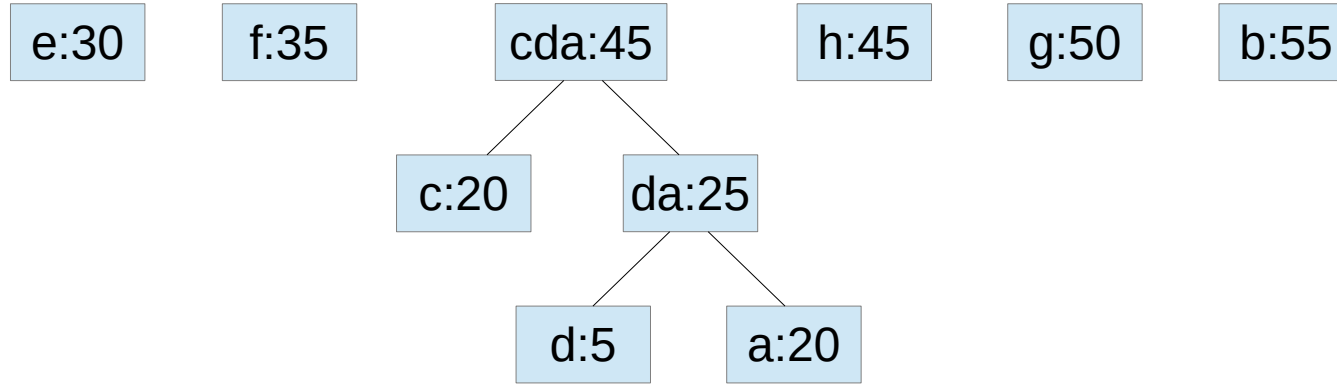


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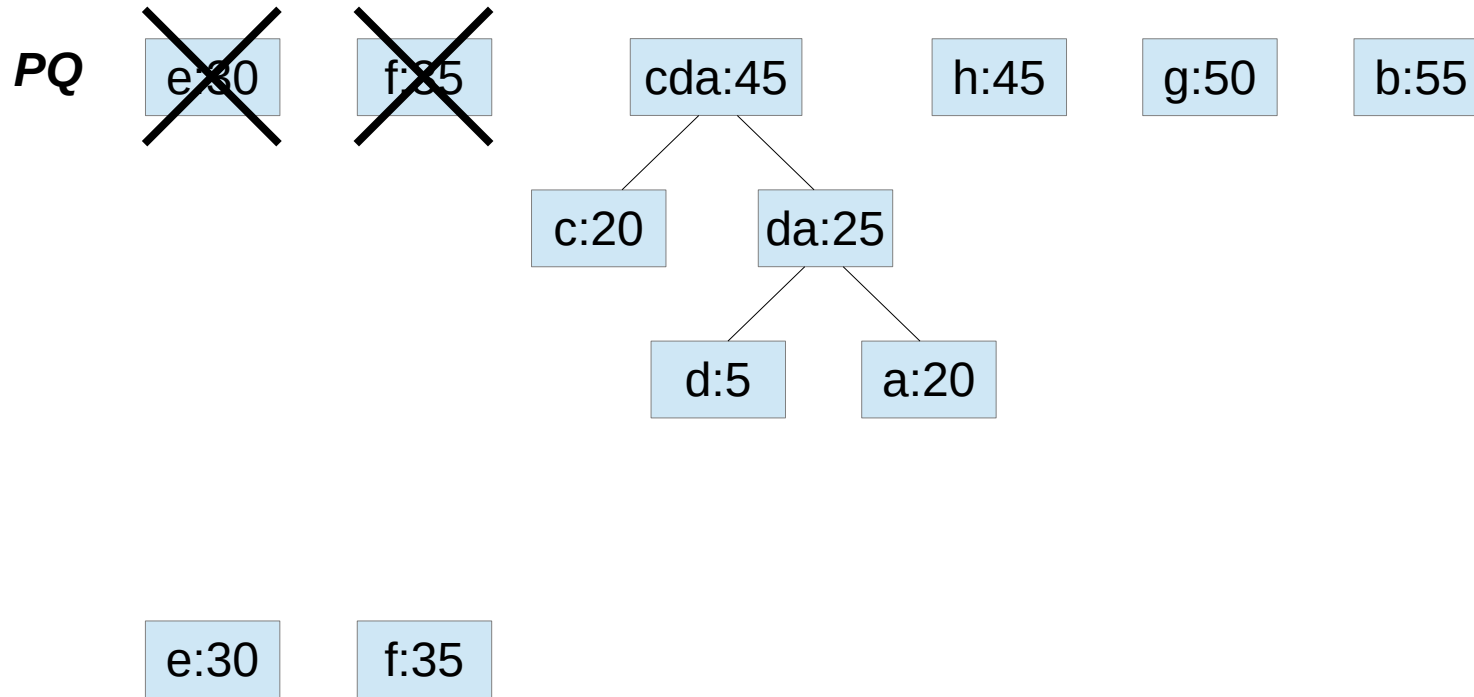


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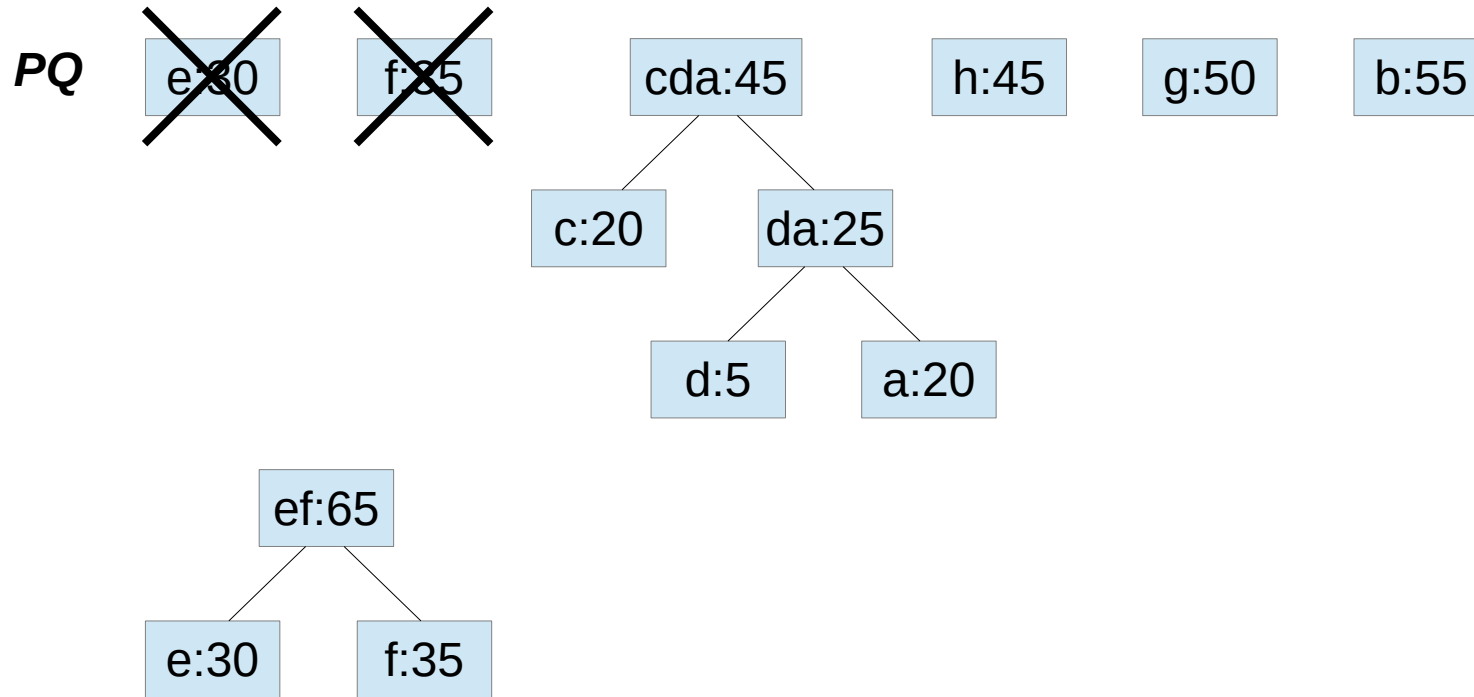
PQ



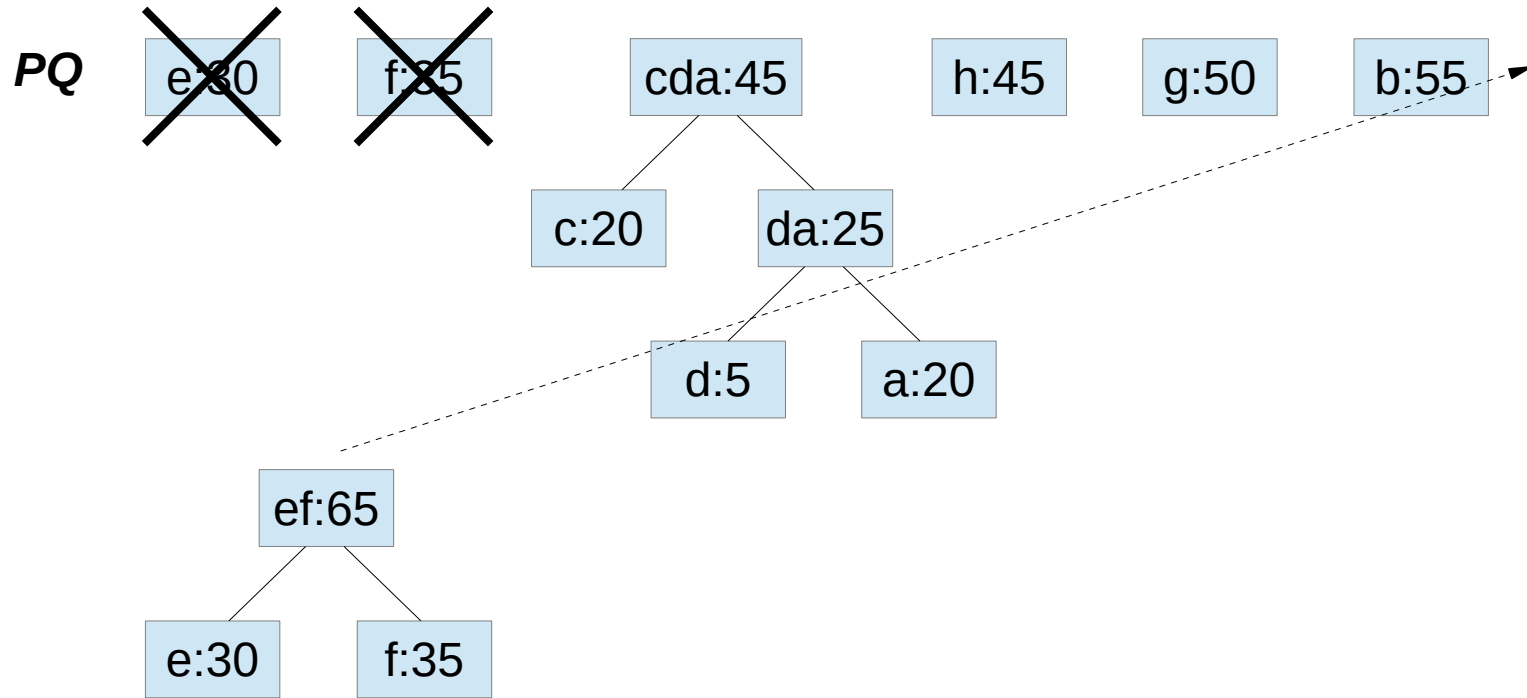
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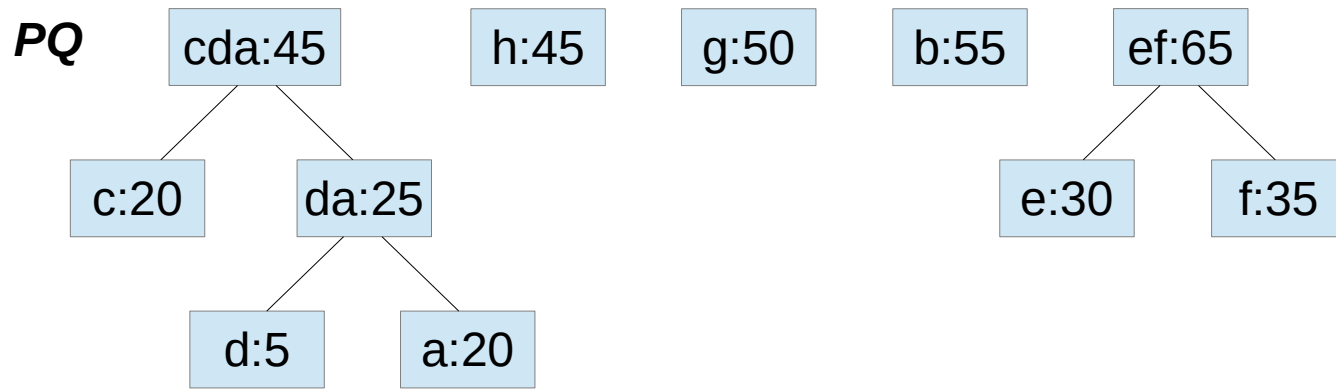
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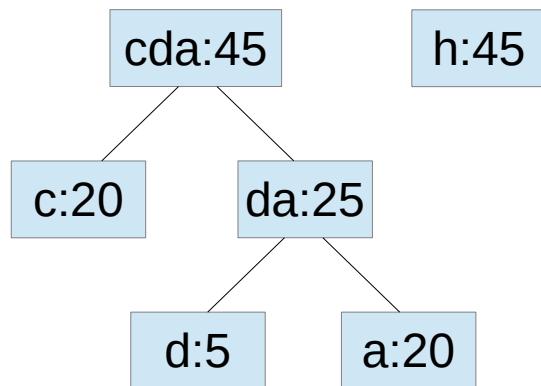
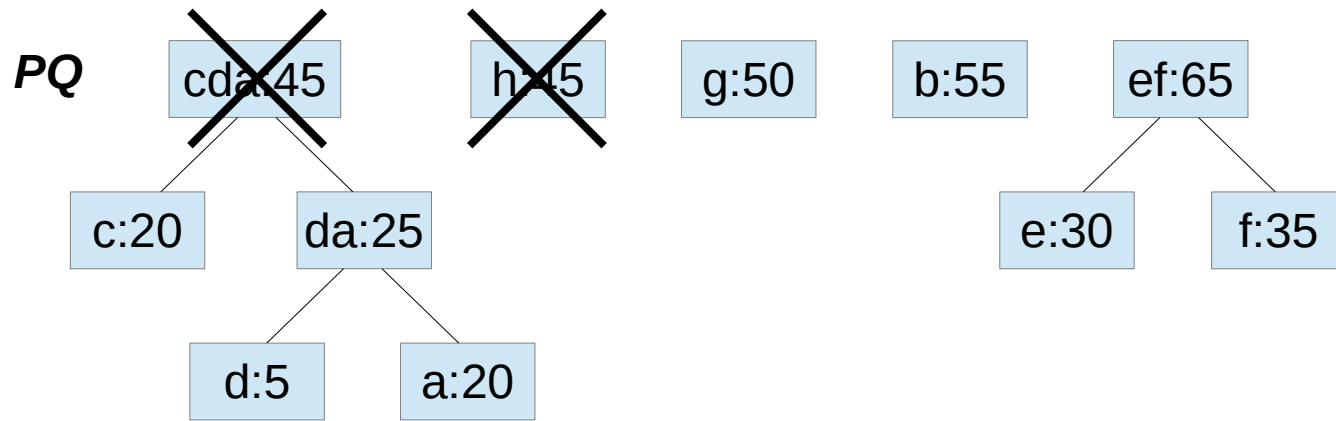
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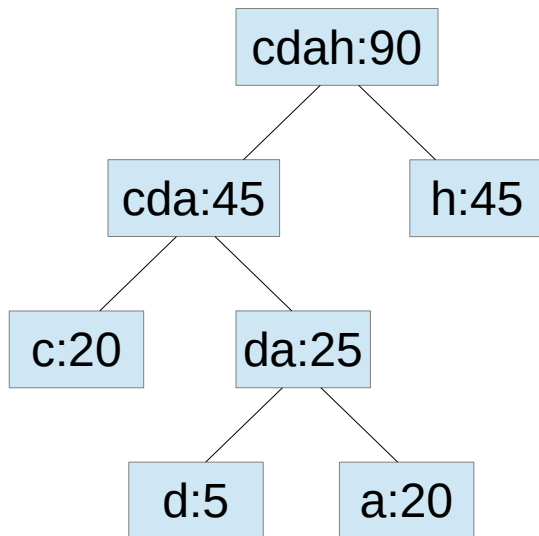
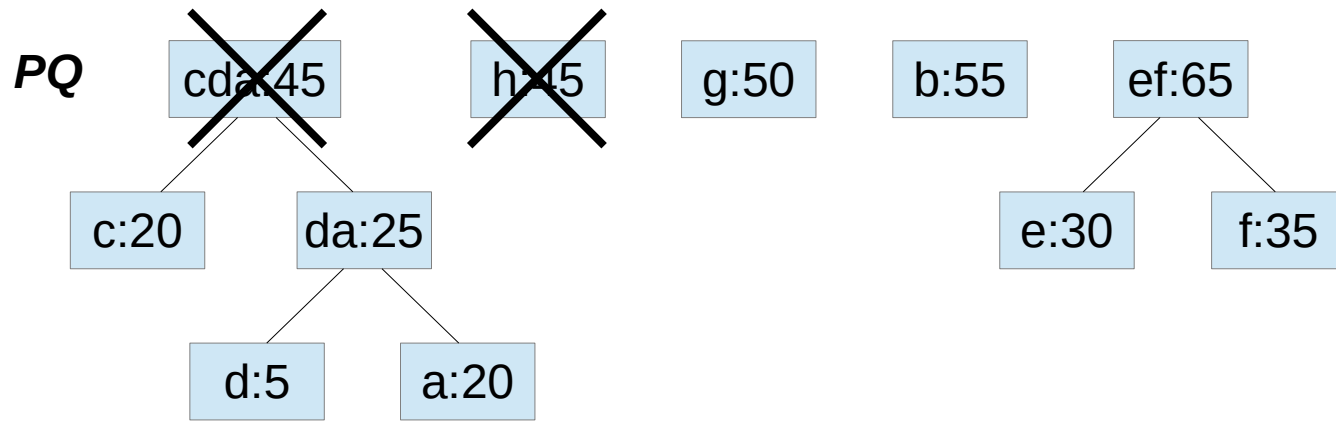
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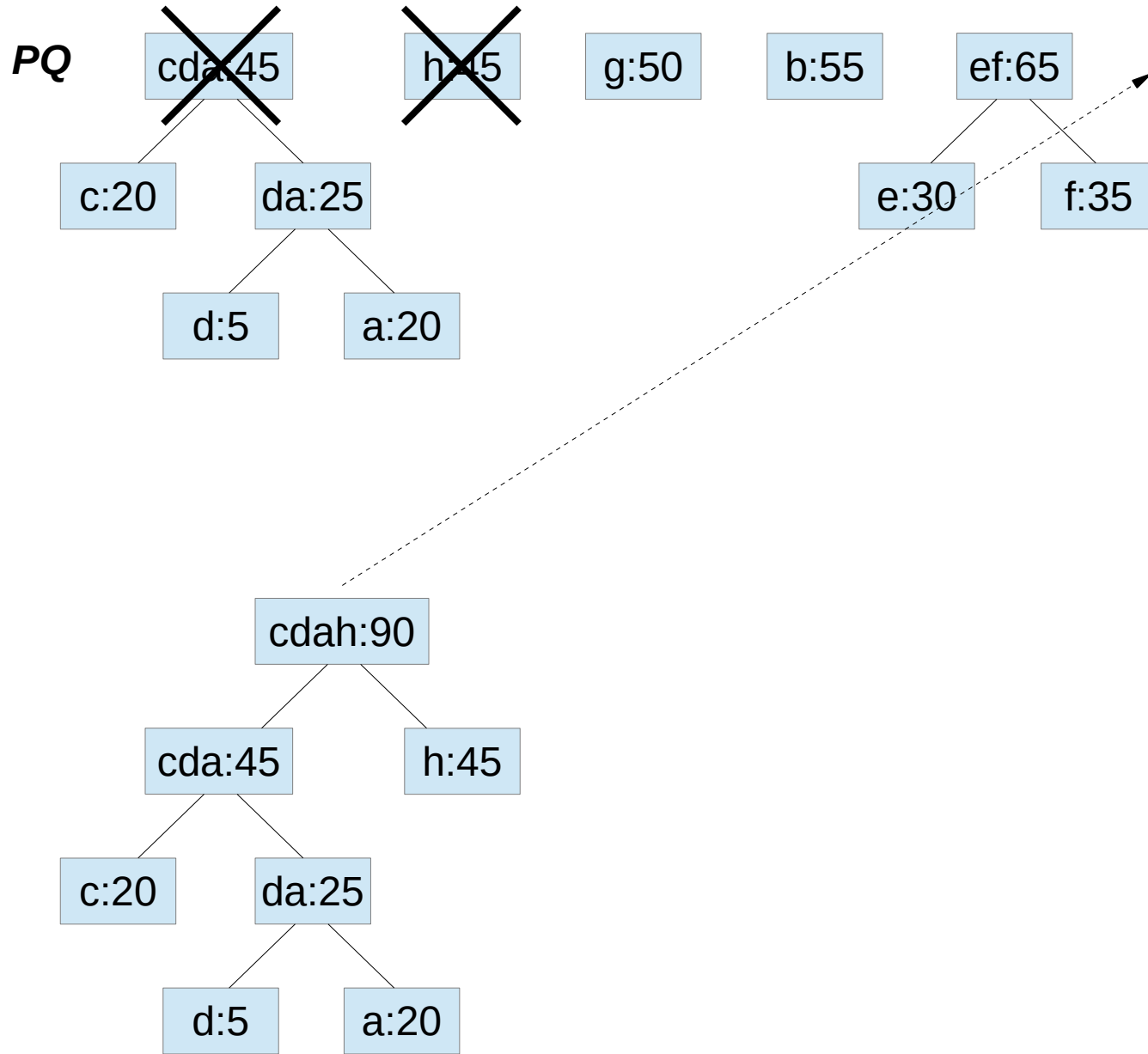
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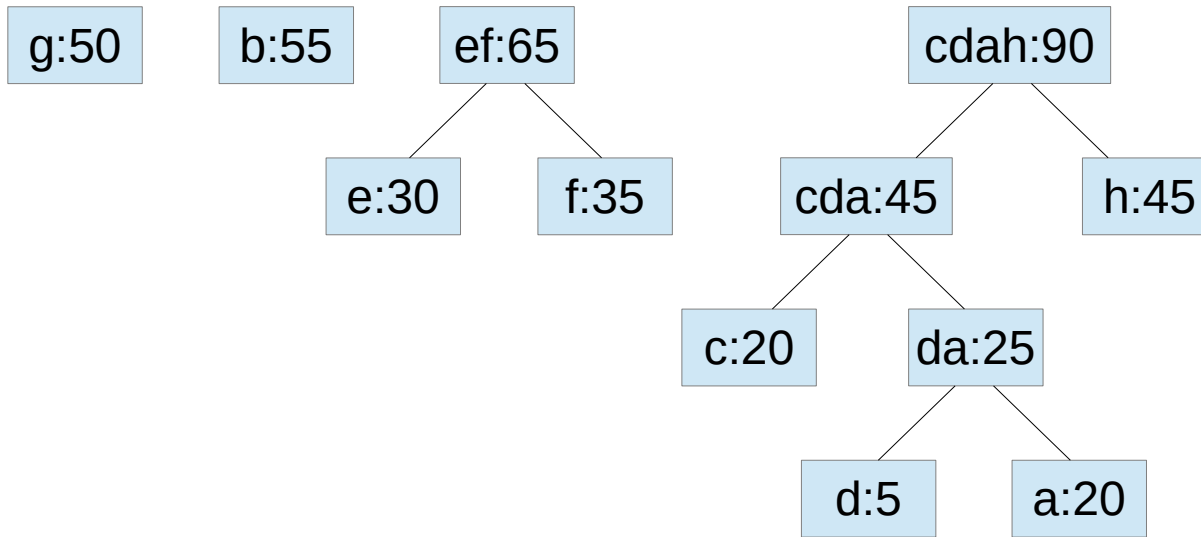


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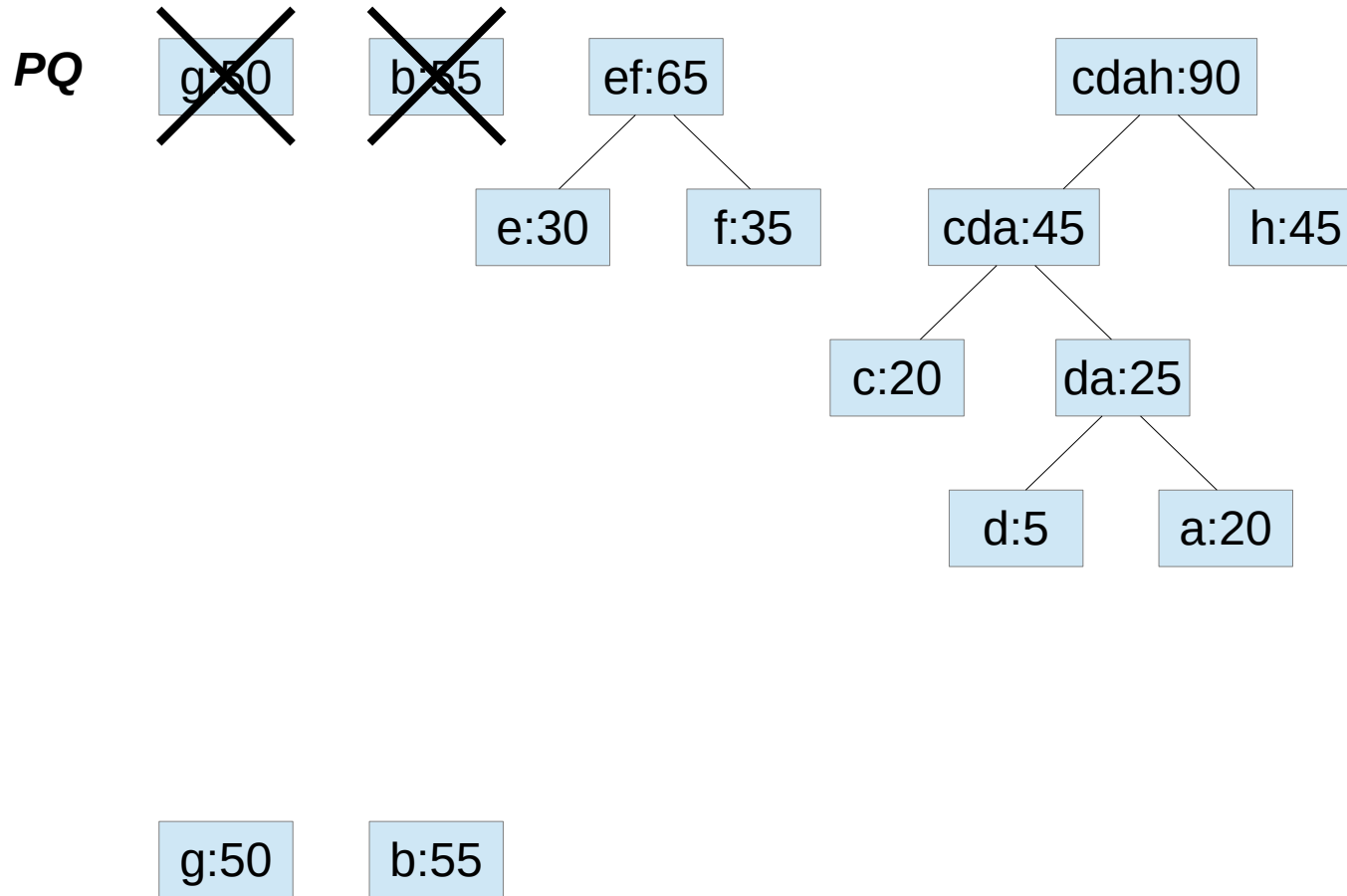


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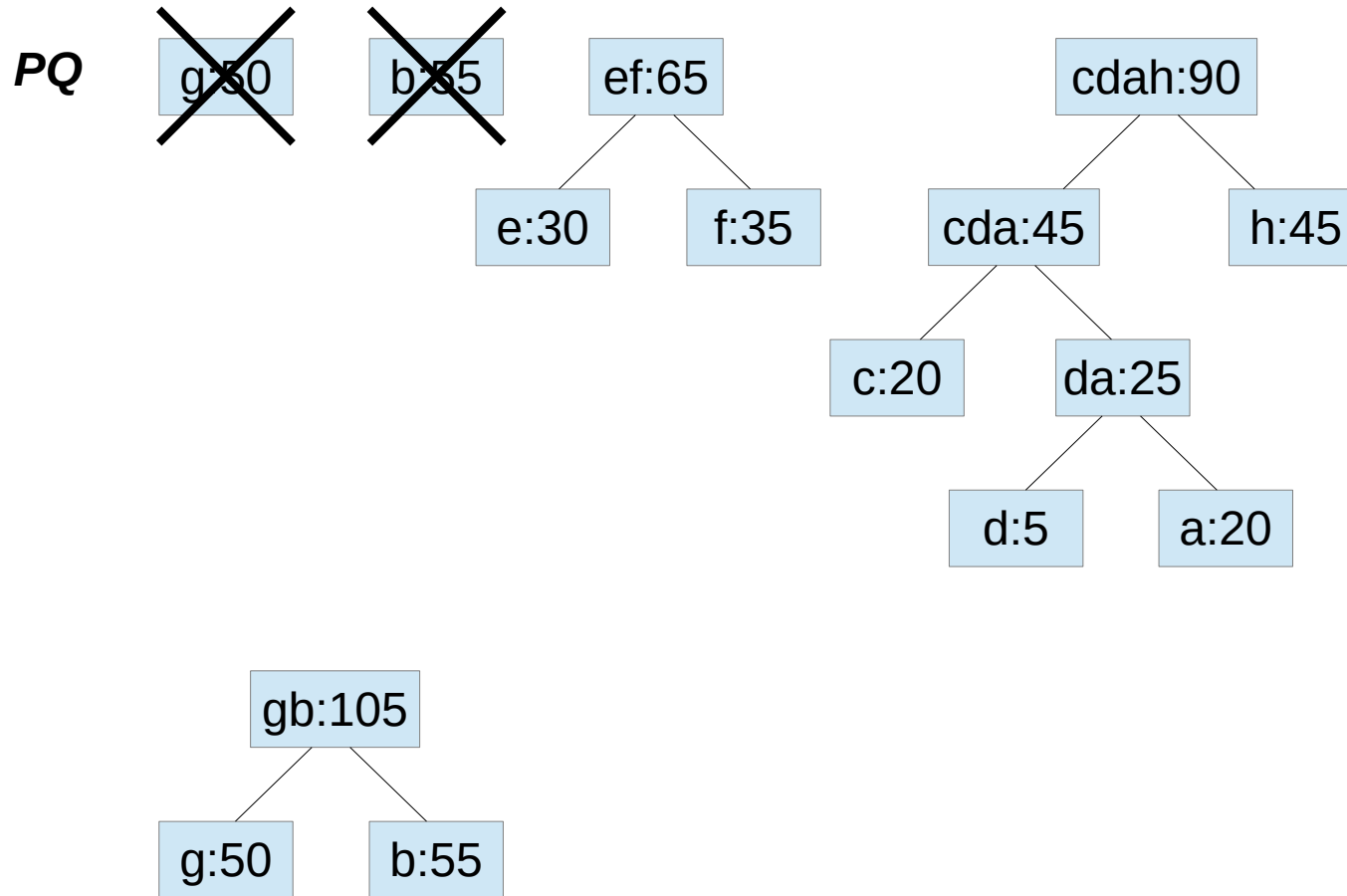
PQ



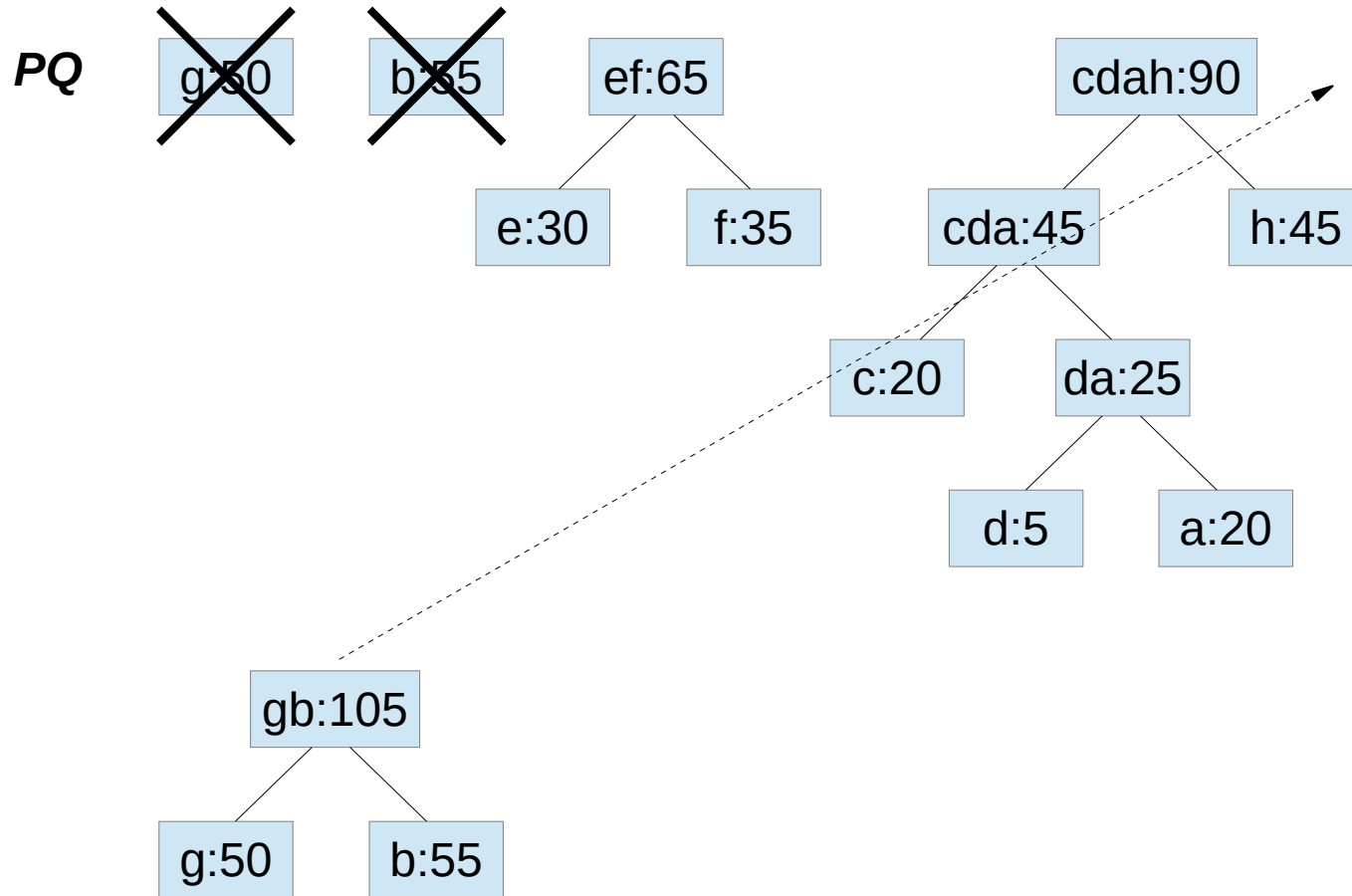
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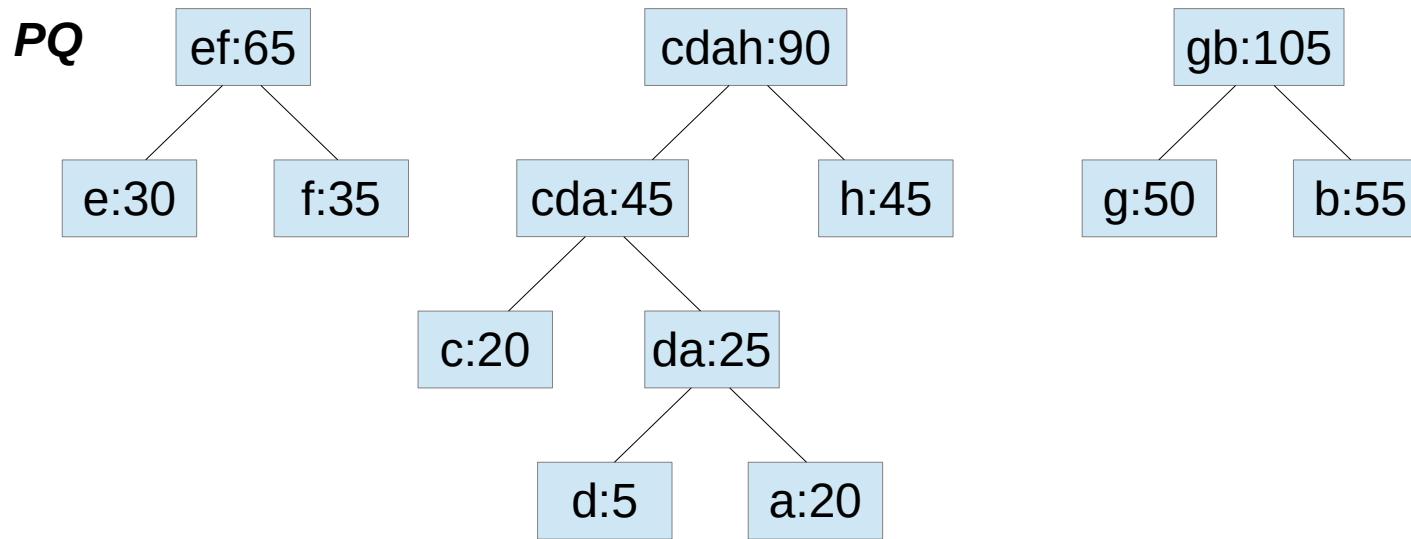
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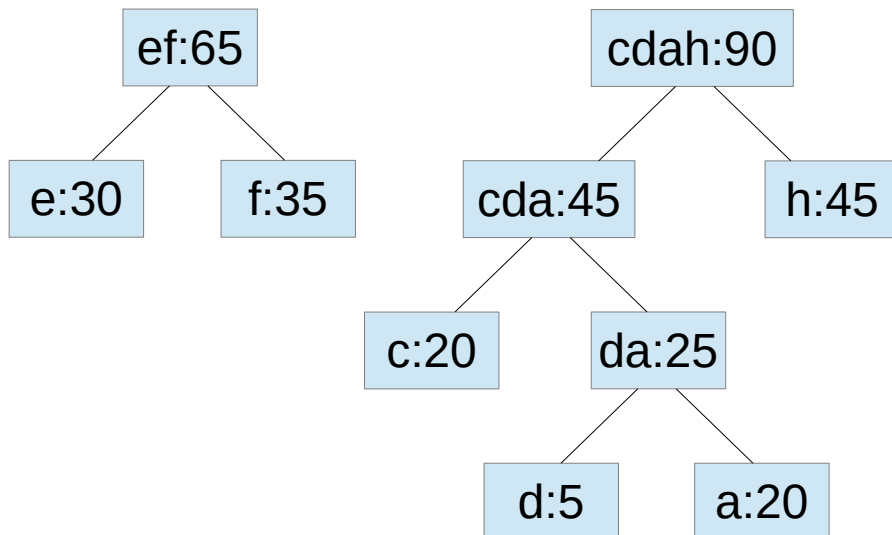
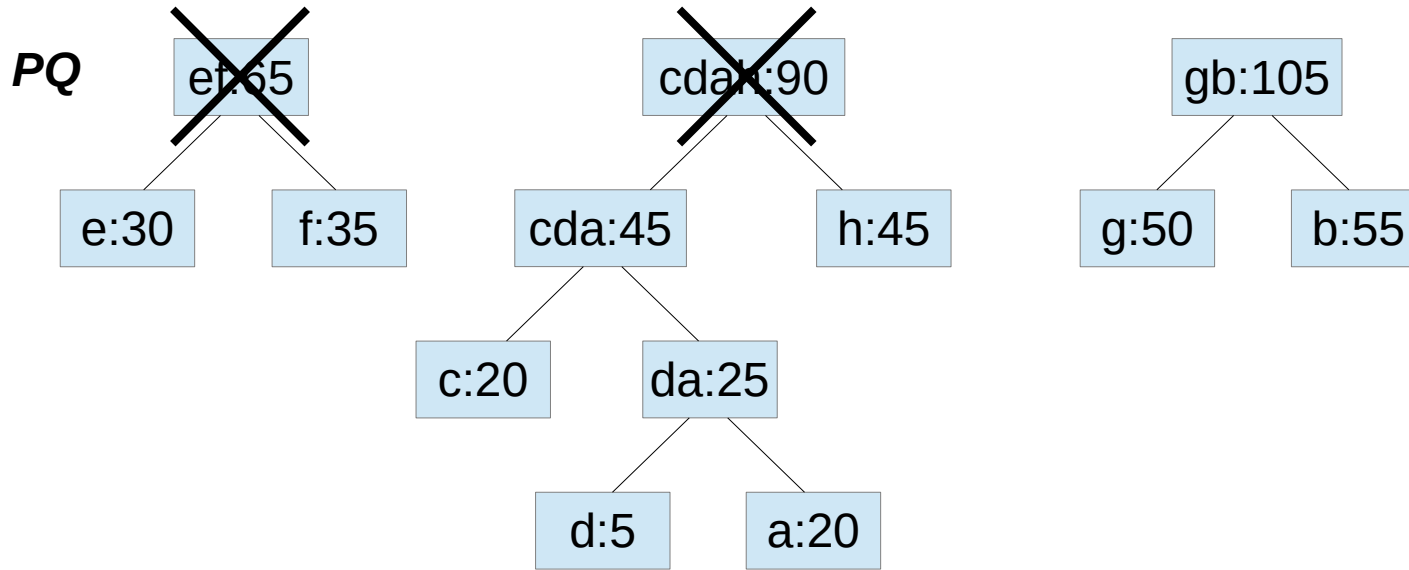
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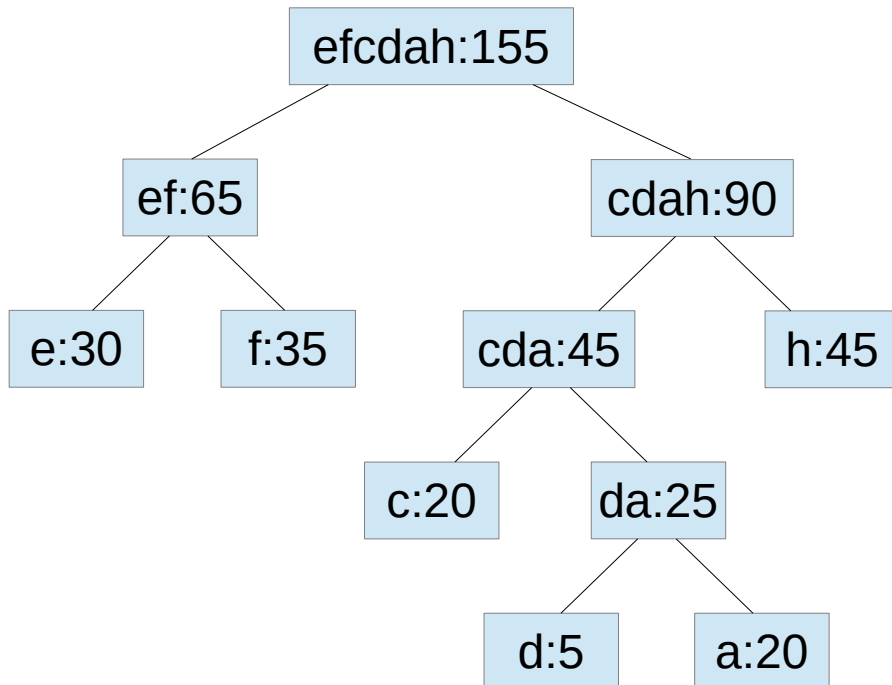
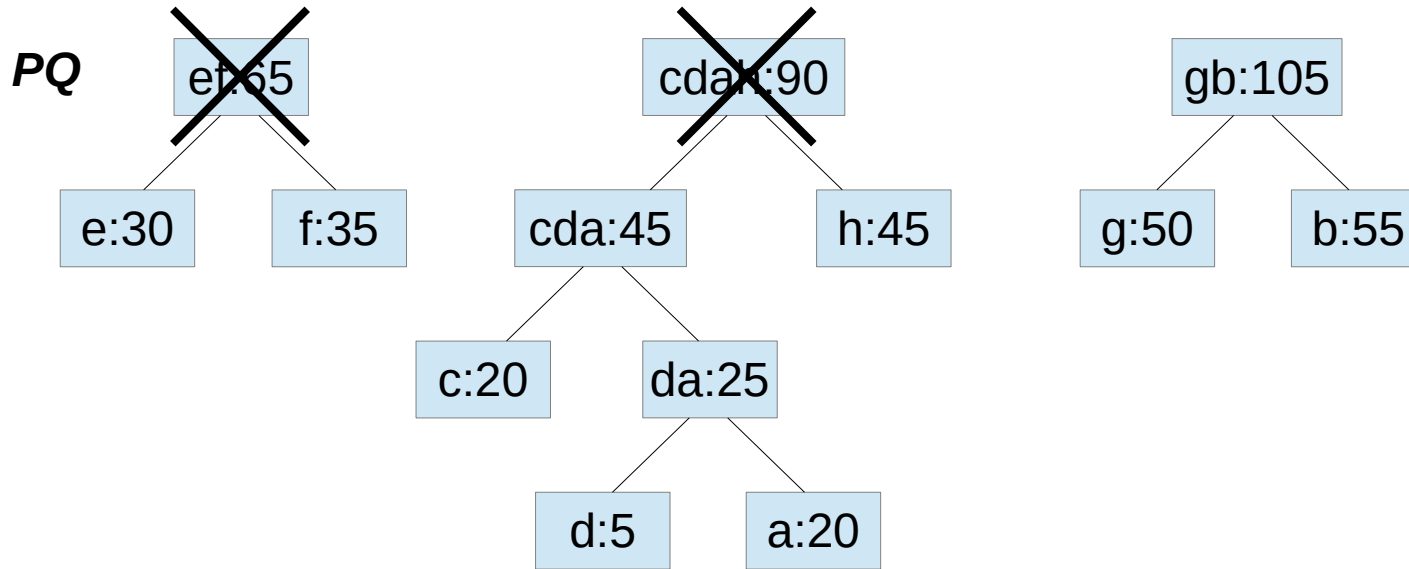
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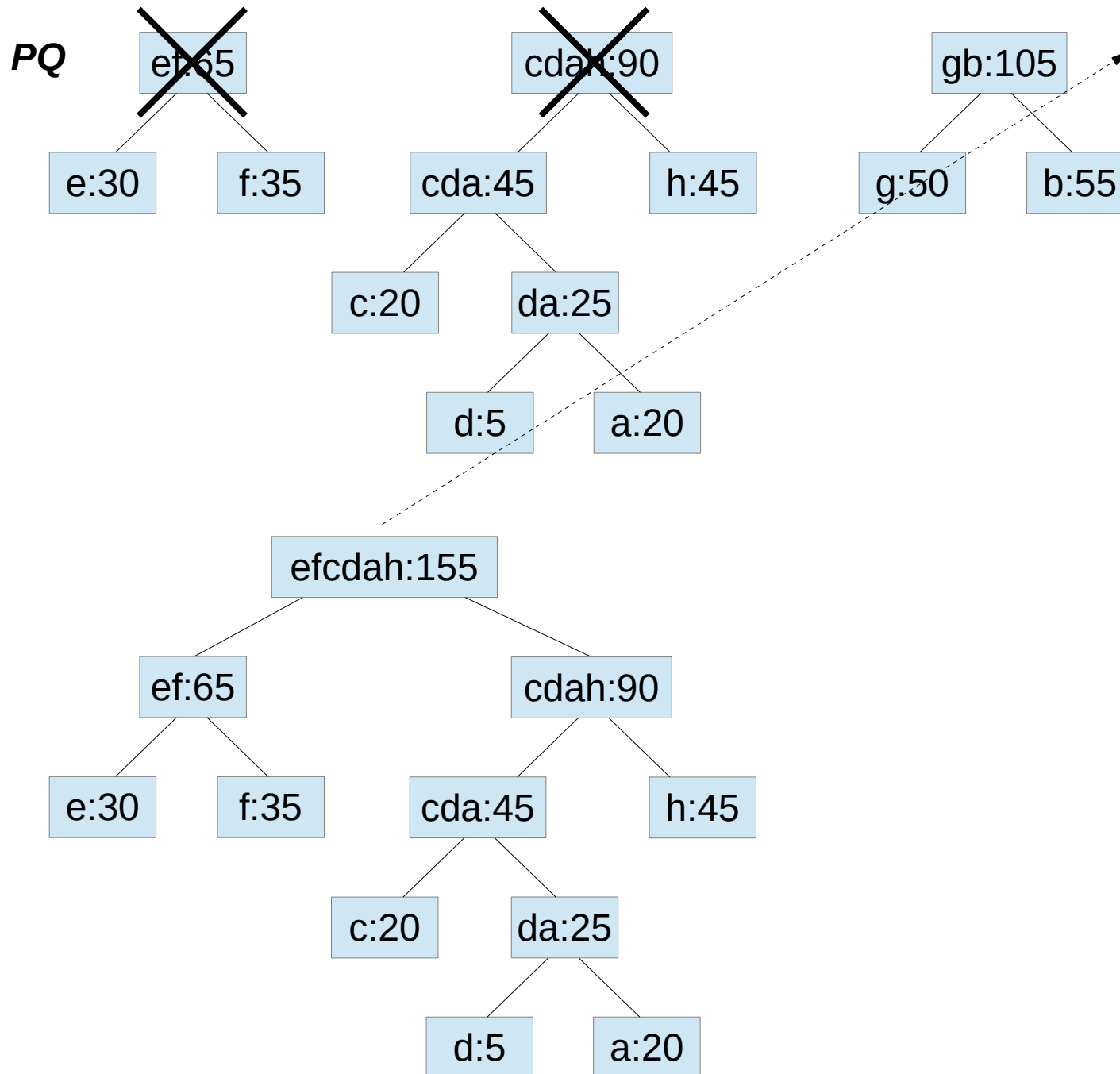
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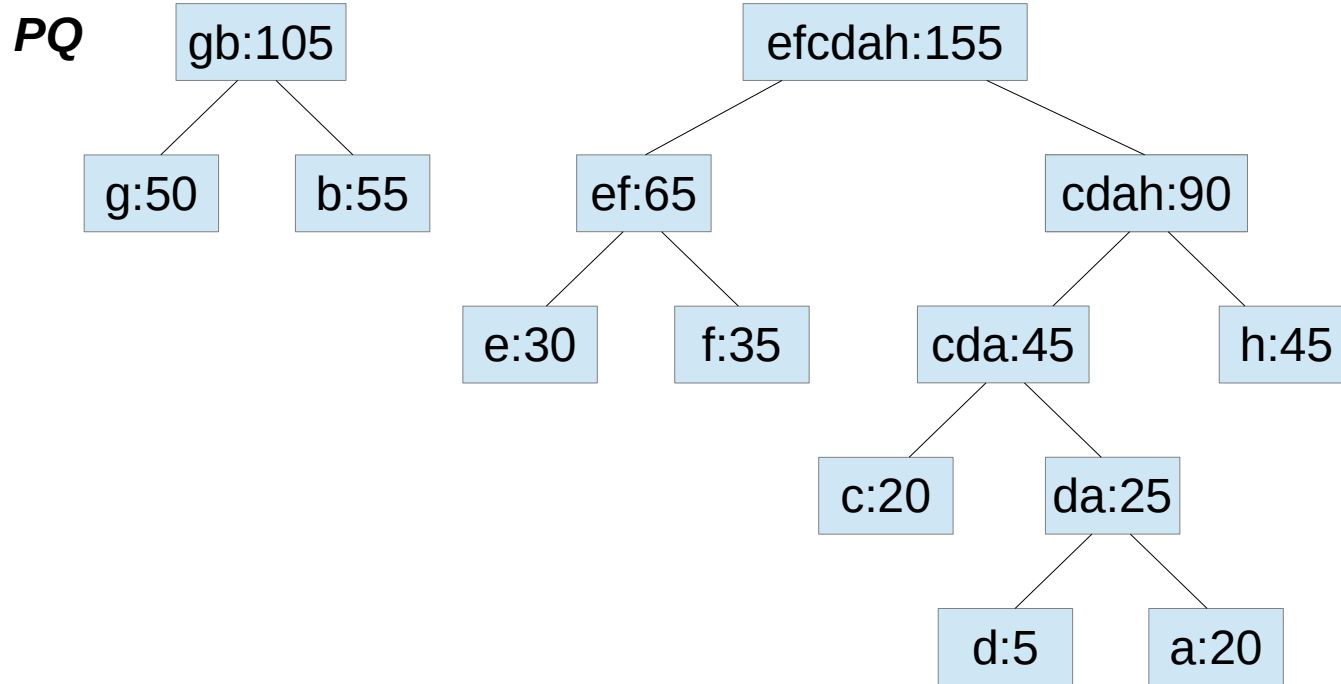
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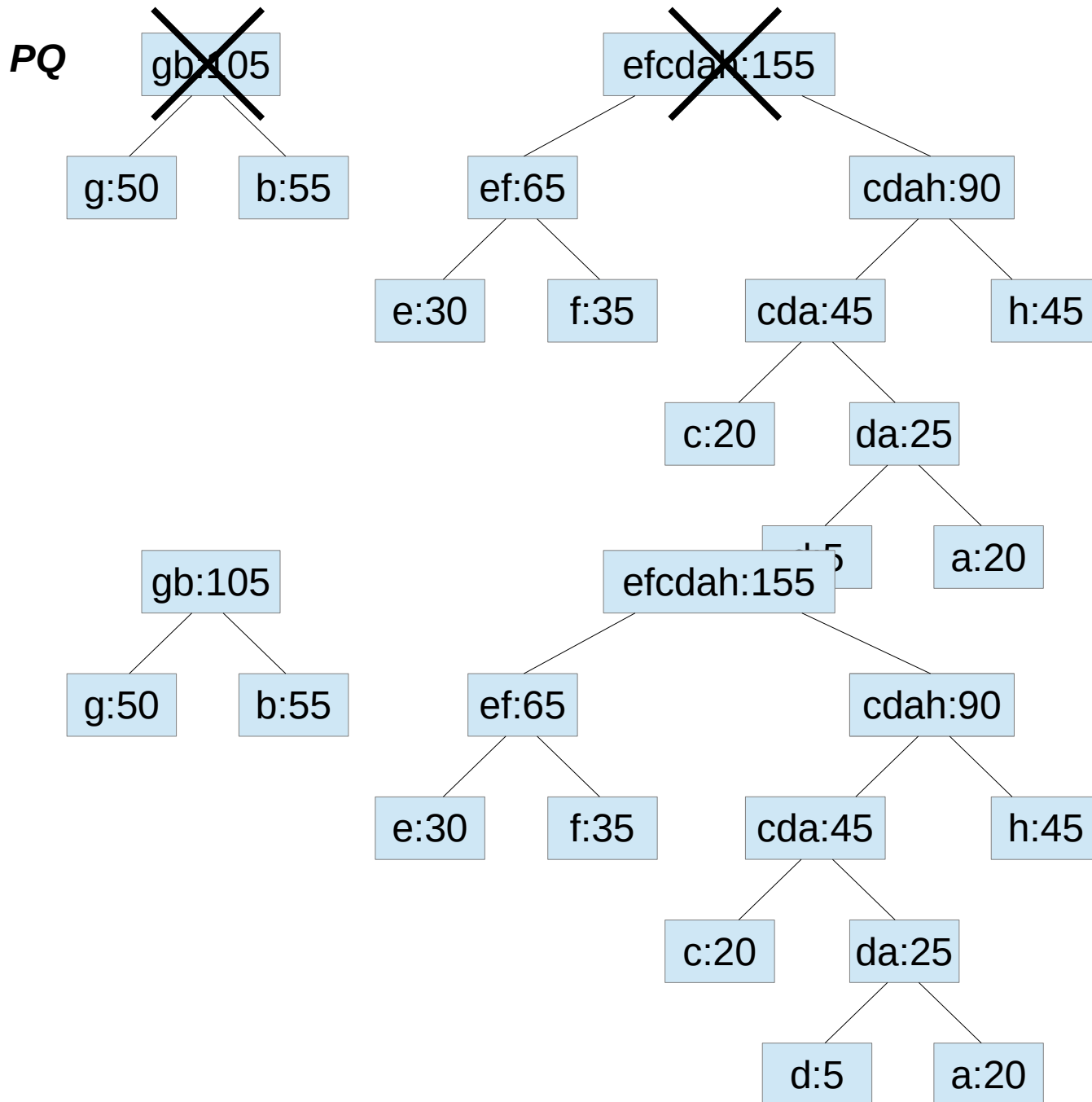
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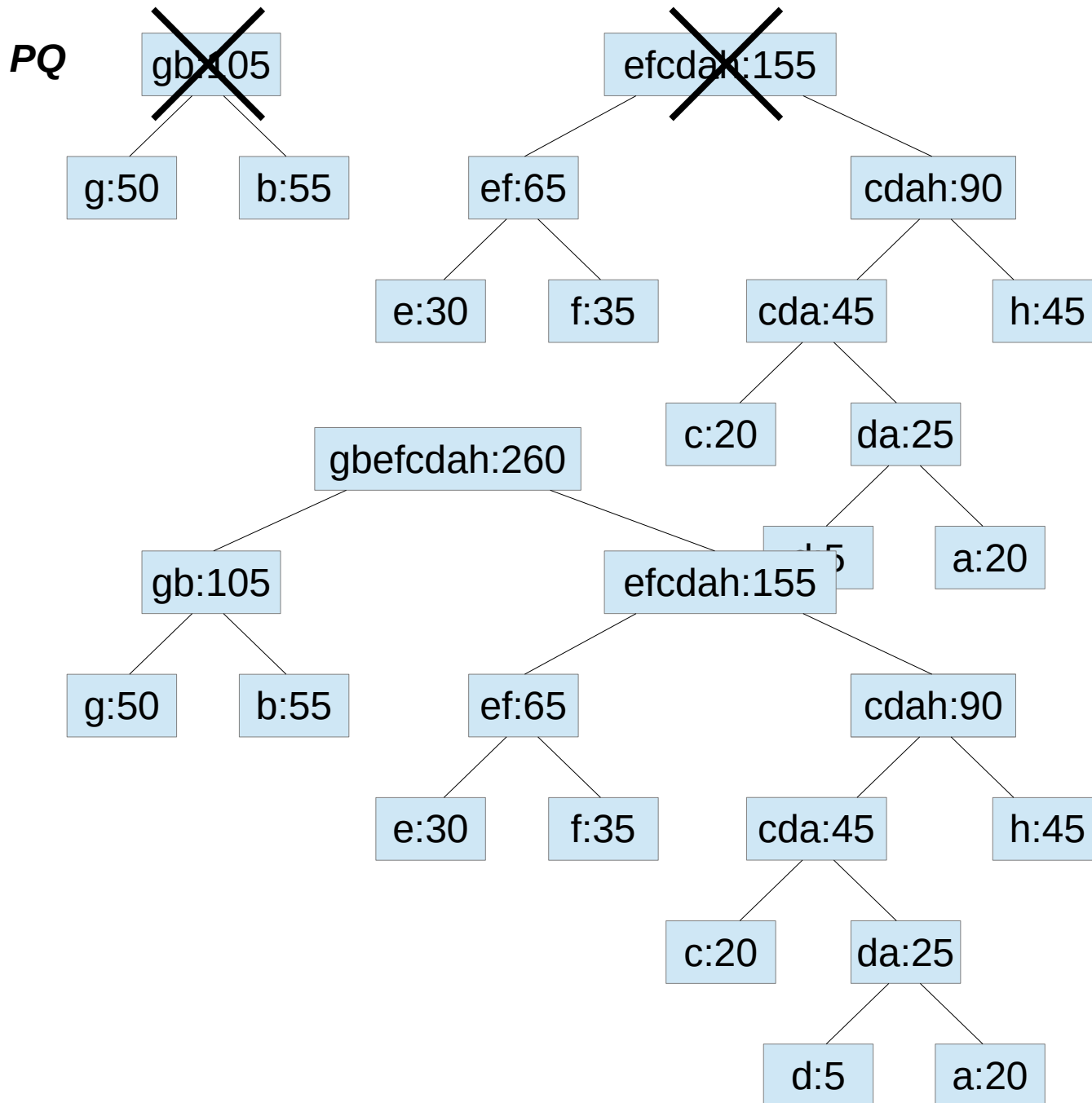
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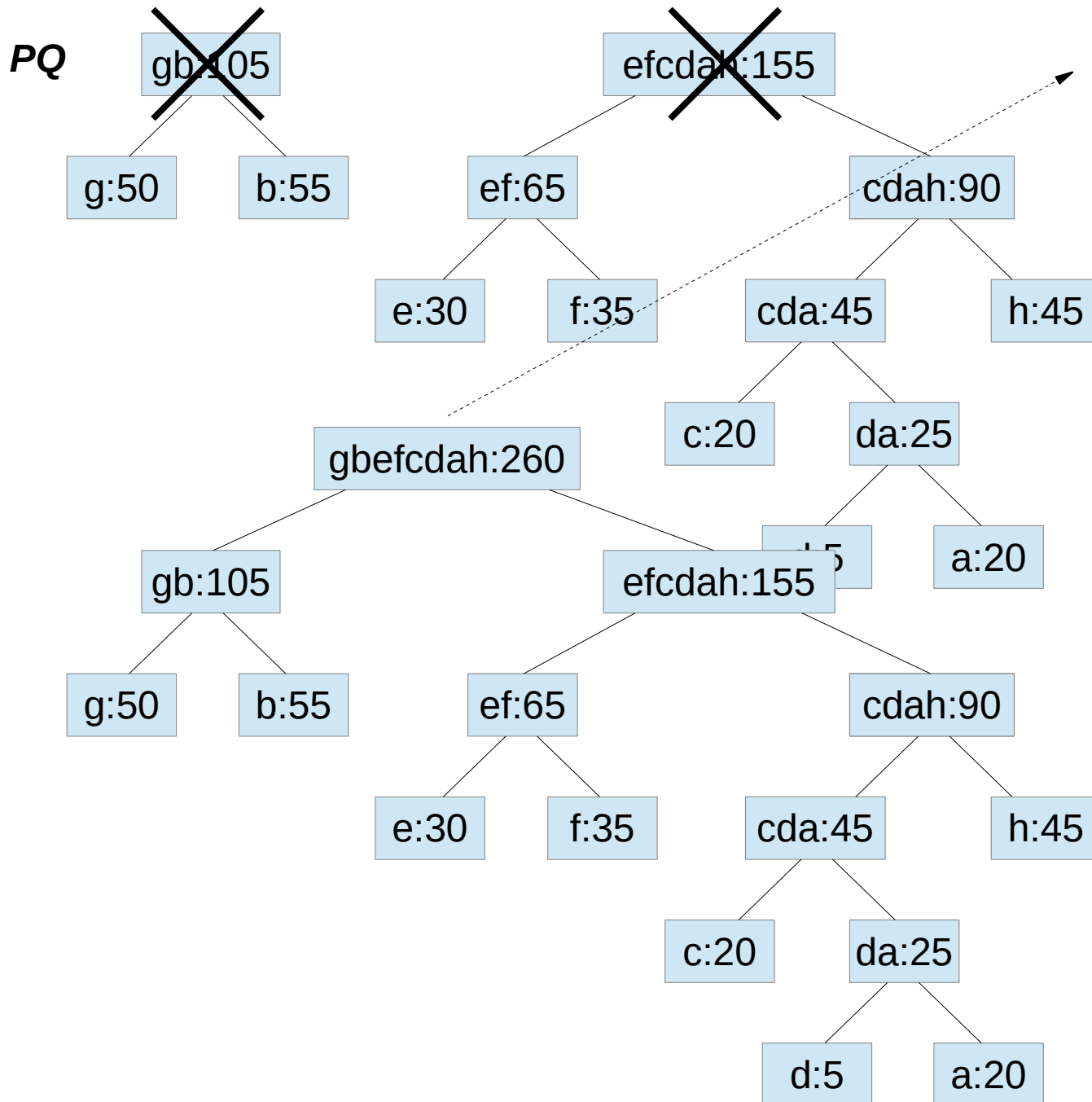
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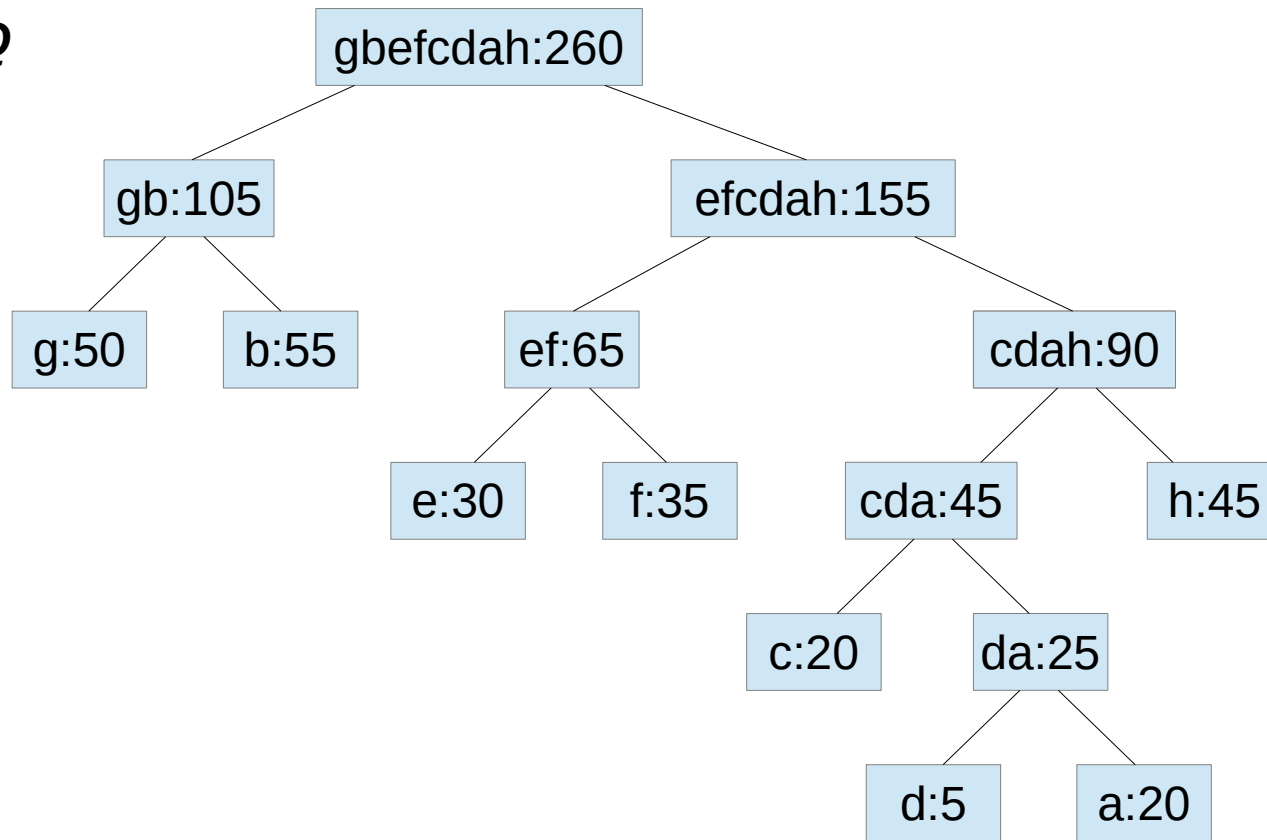


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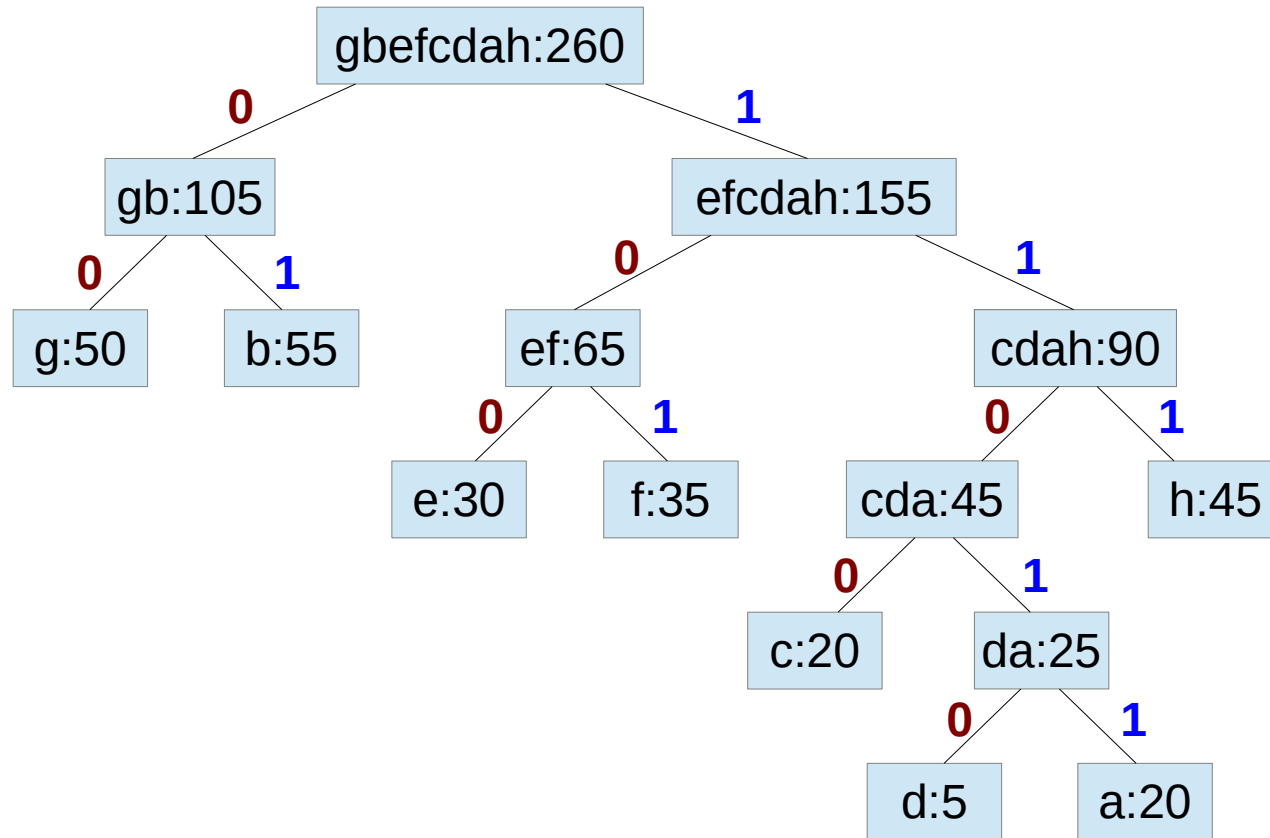
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PQ



Done. The *PQ* has size 1.

Building Huffman Tree



left moves – 0
right moves – 1

- a – 11011
- b – 01
- c – 1100
- d – 11010
- e – 100
- f – 101
- g – 00
- h – 111