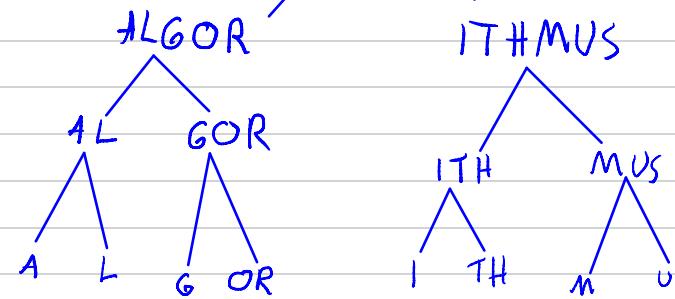
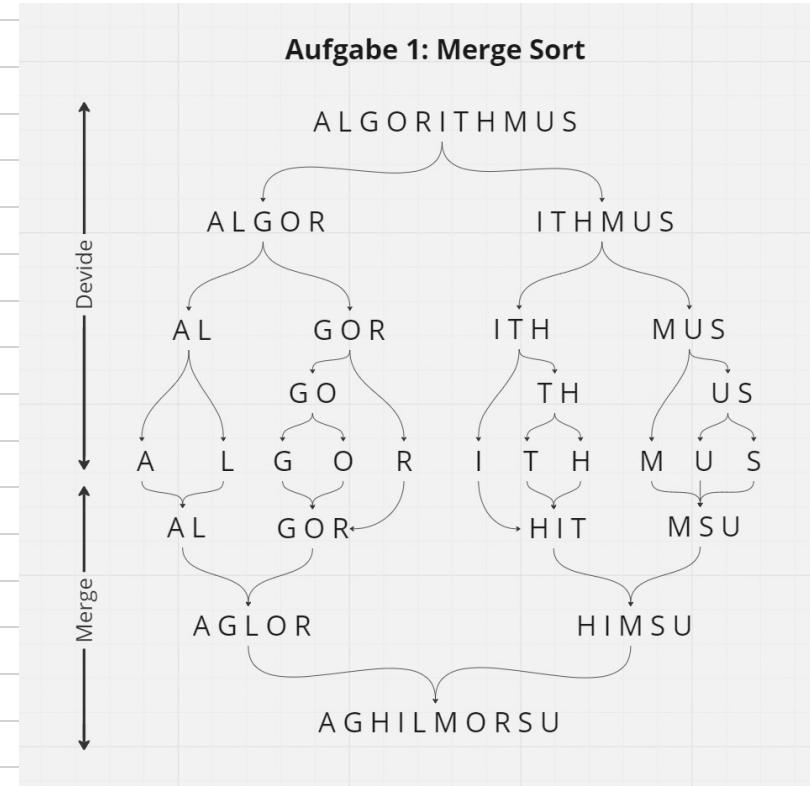
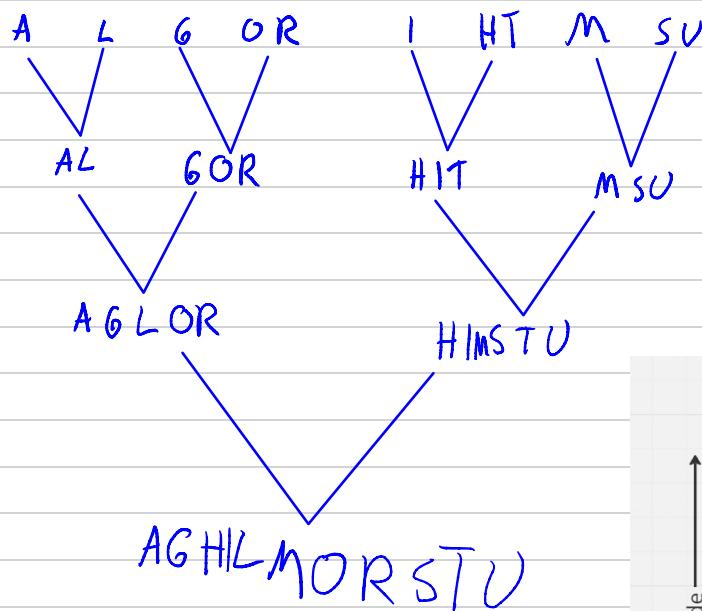


5.1 Merge Sort

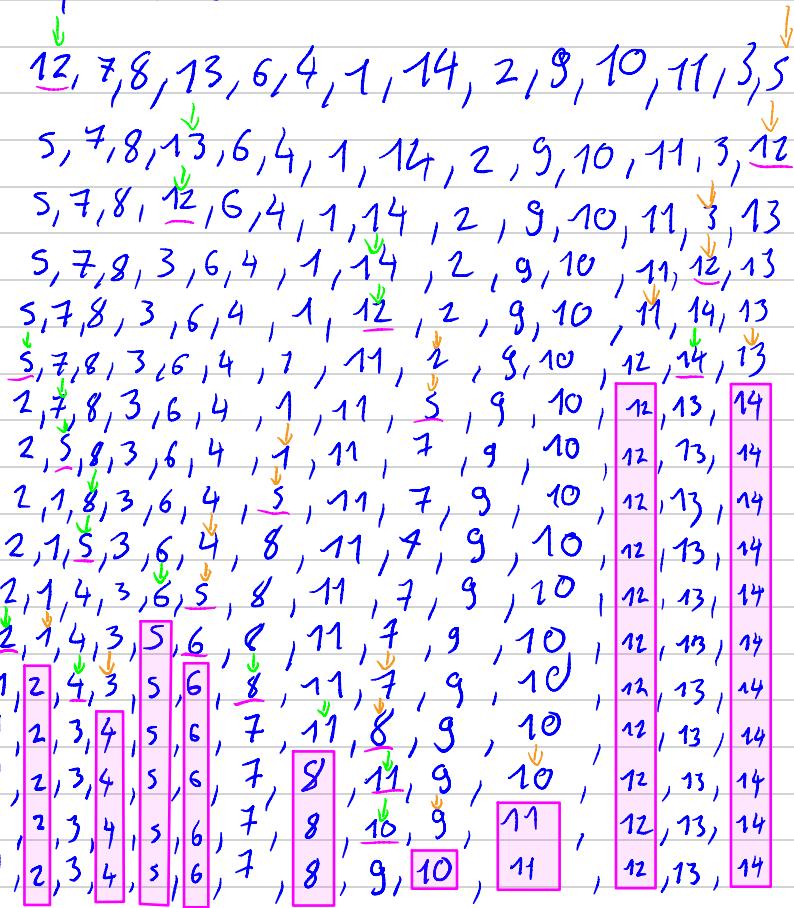
ALGORITHMUS



A B C D E F G H I J K L M N O P
Q R S T U V W X Y Z



5.2. Quick Sort



Aufgabe 2: Quick Sort

1.Schritt: 12, 7, 8, 13, 6, 4, 1, 14, 2, 9, 10, 11, 3, 5

Pivotelement: 12

>= Pivotelement

<= Pivotelement

Festes Element, da Pivot & Rekursion

Haben getauscht

Beide Zeiger

5, 7, 8, 13, 6, 4, 1, 14, 2, 9, 10, 11, 3, 12

5, 7, 8, 12, 6, 4, 1, 14, 2, 9, 10, 11, 3, 13

5, 7, 8, 3, 6, 4, 1, 14, 2, 9, 10, 11, 12, 13

5, 7, 8, 3, 6, 4, 1, 12, 2, 9, 10, 11, 14, 13

5, 7, 8, 3, 6, 4, 1, 11, 2, 9, 10, 12, 14, 13

-> Ab hier Rekursiv (Pivot Festes Element)

2.Schritt: 5, 7, 8, 3, 6, 4, 1, 11, 2, 9, 10, 12, 14, 13 Pivotelemente: 5 & 14

5, 7, 8, 3, 6, 4, 1, 11, 2, 9, 10, 12, 14, 13

2, 7, 8, 3, 6, 4, 1, 11, 5, 9, 10, 12, 13, 14 -> Ab hier Rekursiv (13,14)

2, 5, 8, 3, 6, 4, 1, 11, 7, 9, 10, 12, 13, 14

2, 1, 8, 3, 6, 4, 5, 11, 7, 9, 10, 12, 13, 14

2, 1, 5, 3, 6, 4, 8, 11, 7, 9, 10, 12, 13, 14

2, 1, 4, 3, 5, 8, 11, 7, 9, 10, 12, 13, 14

2, 1, 4, 3, 5, 6, 8, 11, 7, 9, 10, 12, 13, 14 -> Ab hier weitere Teilung, da Zeiger gekreuzt

3.Schritt: 2, 1, 4, 3, 5, 6, 8, 11, 7, 9, 10, 12, 13, 14 Pivotelemente: 2 & 6

2, 1, 4, 3, 5, 6, 8, 11, 7, 9, 10, 12, 13, 14

1, 2, 4, 3, 5, 6, 8, 11, 7, 9, 10, 12, 13, 14

1, 2, 4, 3, 5, 6, 8, 11, 7, 9, 10, 12, 13, 14

1, 2, 4, 3, 5, 6, 7, 11, 8, 9, 10, 12, 13, 14

Neues Pivotelemente: 8

Neues Pivotelemente: 4

-> Ab hier Rekursiv (7,8,11,9,10) & Neues Pivotelemente: 11

1, 2, 4, 3, 5, 6, 7, 8, 11, 9, 10, 12, 13, 14

1, 2, 4, 3, 5, 6, 7, 8, 10, 9, 11, 12, 13, 14 -> Ab hier weitere Teilung, da Zeiger gekreuzt

1, 2, 4, 3, 5, 6, 7, 8, 10, 9, 11, 12, 13, 14

Neues Pivotelemente: 10

1, 2, 4, 3, 5, 6, 7, 8, 10, 9, 11, 12, 13, 14

1, 2, 4, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 -> Ab hier weitere Teilung, da Zeiger gekreuzt

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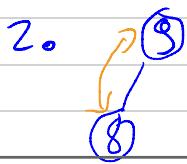
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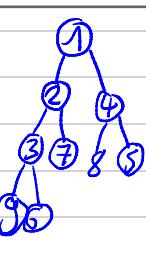
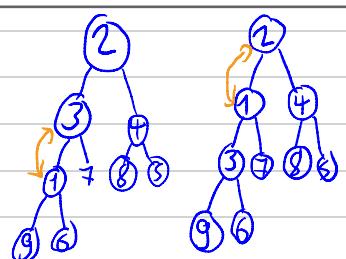
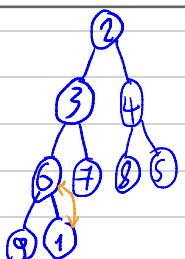
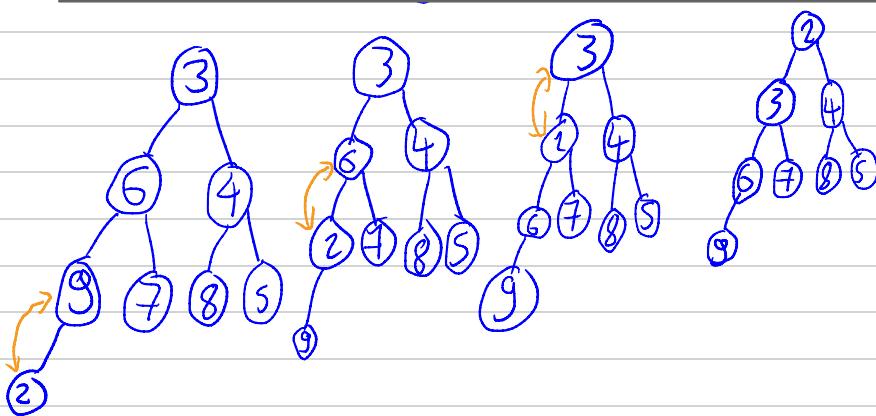
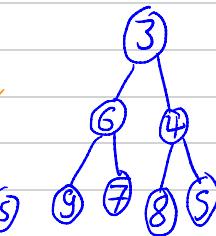
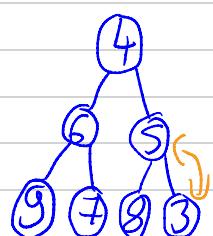
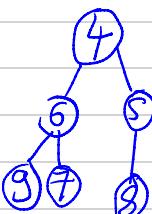
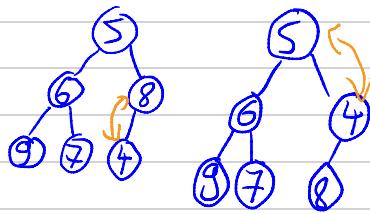
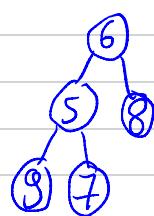
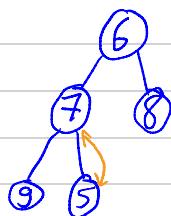
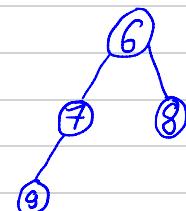
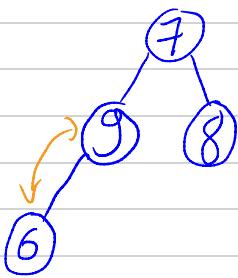
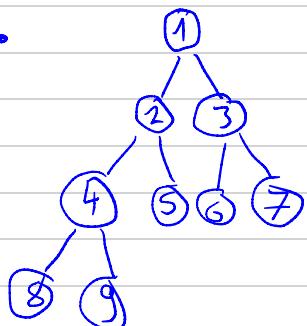
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5.3. Heap

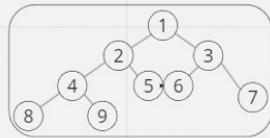
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3. 8, 7, 2, 5, 1, 3, 1, 6, 4



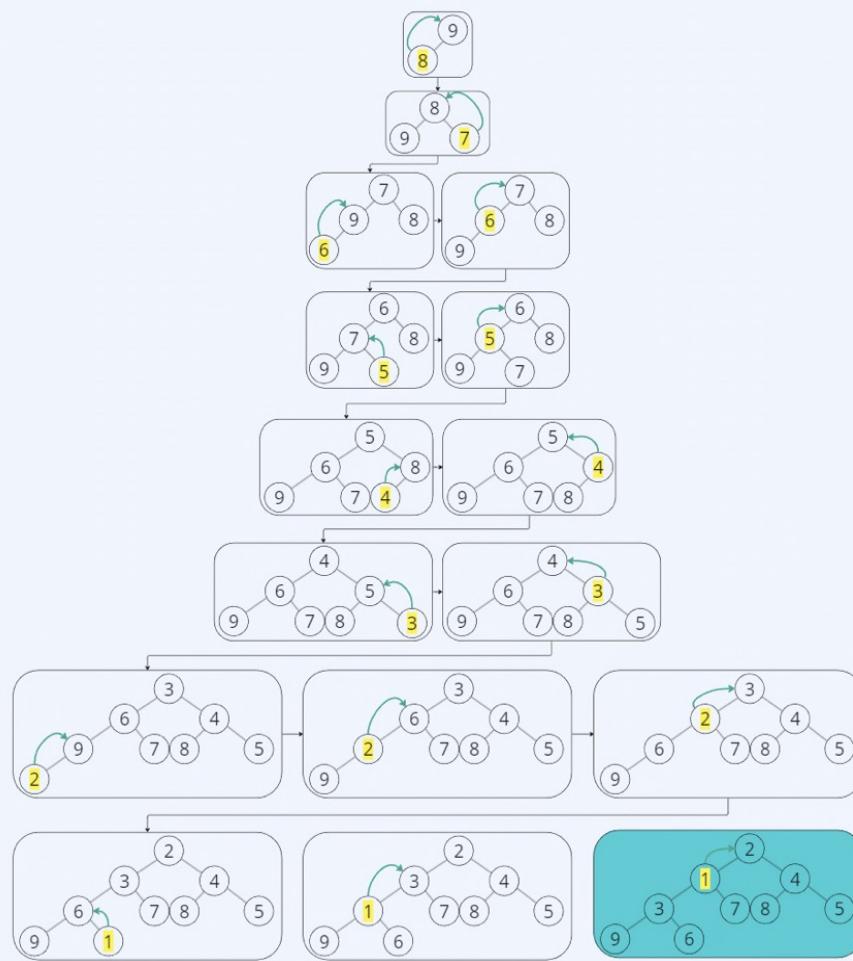
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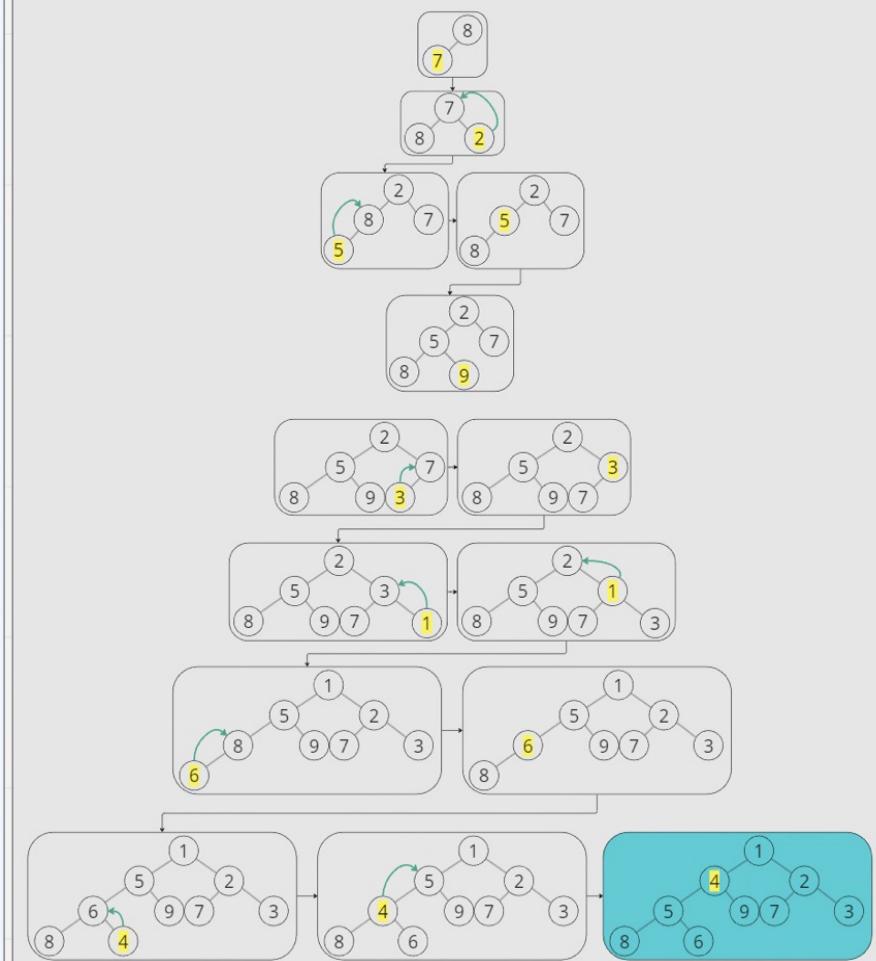
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9 8 7 6 5 4 3 2 1

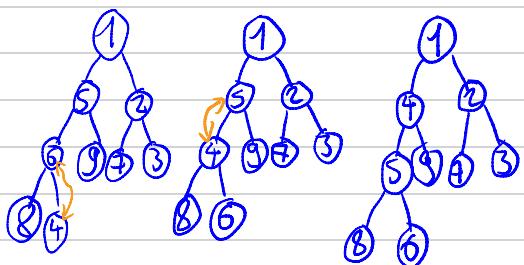
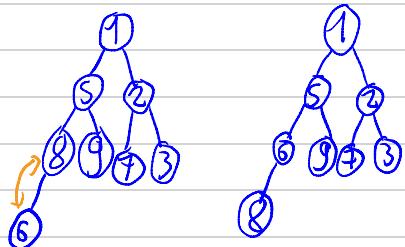
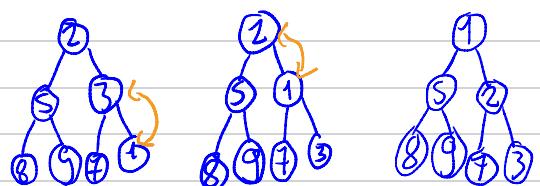
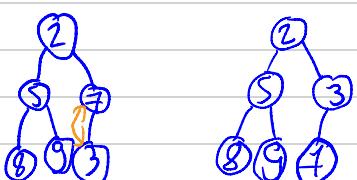
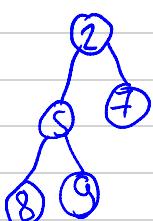
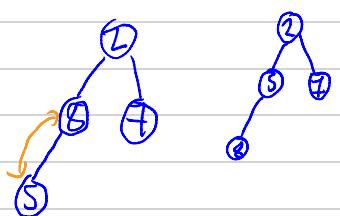
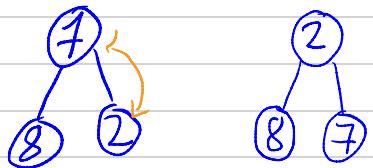
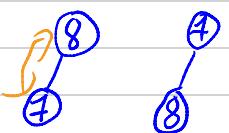


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3.

(8)



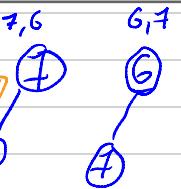
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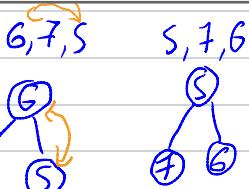
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7

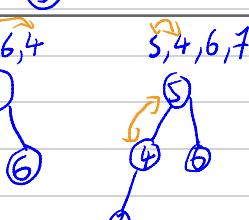
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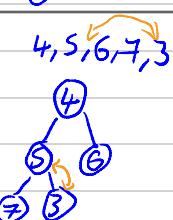
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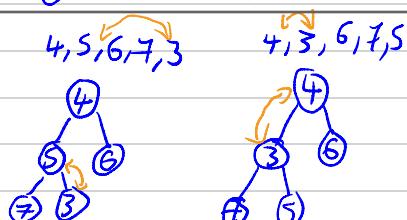
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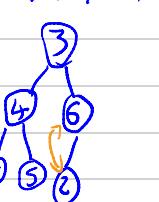
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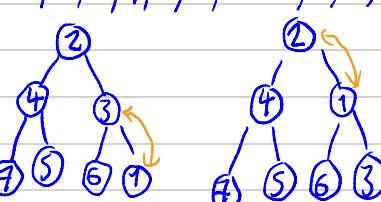


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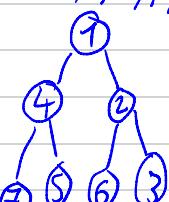
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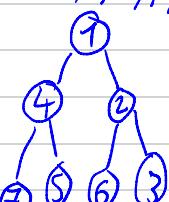


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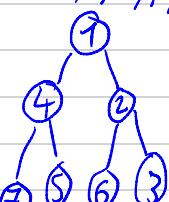


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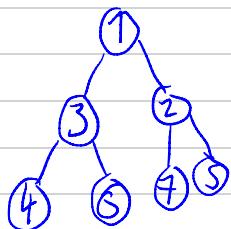
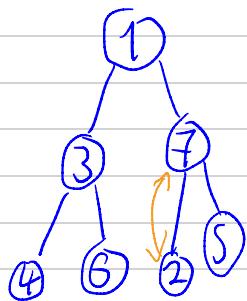
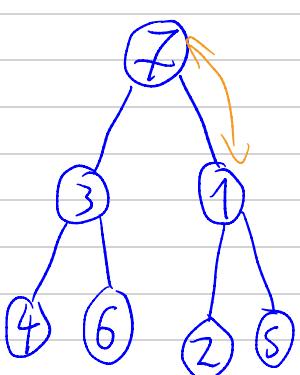
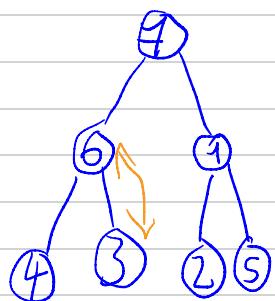
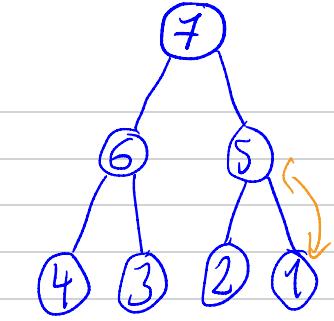
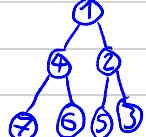
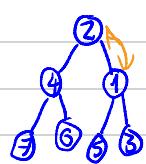
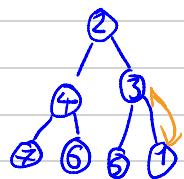
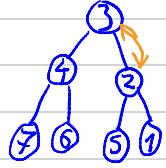
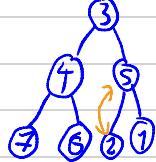
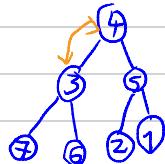
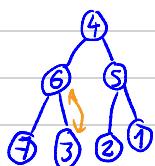
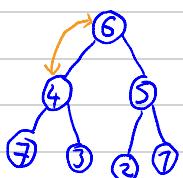
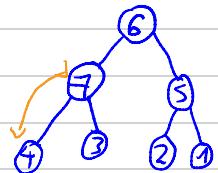
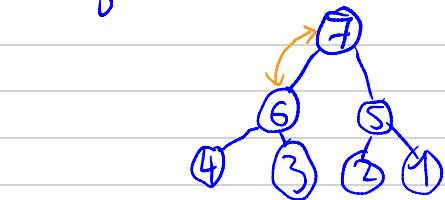
1, 4, 2, 7, 5, 6, 3



+

7, 6, 5, 4, 3, 2, 1

geblökt



insgesamt 9

Vertauschungen