

Händisches Sortieren

Gegeben sei ein Array a , welches die Werte 5,7,9,3,6,1,2,8 enthält. Sortieren Sie das Array händisch mit:

(a) Bubblesort

erster Durchgang

5	7	9	3	6	1	2	8
---	---	---	---	---	---	---	---

5	7	9	6	3	1	2	8
---	---	---	---	---	---	---	---

5	7	9	6	1	3	2	8
---	---	---	---	---	---	---	---

Zweiter Durchgang

5	7	9	6	1	2	3	8
---	---	---	---	---	---	---	---

5	7	9	1	6	2	3	8
---	---	---	---	---	---	---	---

5	7	9	1	2	6	3	8
---	---	---	---	---	---	---	---

Dritter Durchgang

5	7	9	1	2	3	6	8
---	---	---	---	---	---	---	---

5	7	1	9	2	3	6	8
---	---	---	---	---	---	---	---

5	7	1	2	9	3	6	8
---	---	---	---	---	---	---	---

5	7	1	2	3	9	6	8
---	---	---	---	---	---	---	---

5	7	1	2	3	6	9	8
---	---	---	---	---	---	---	---

Vierter Durchgang

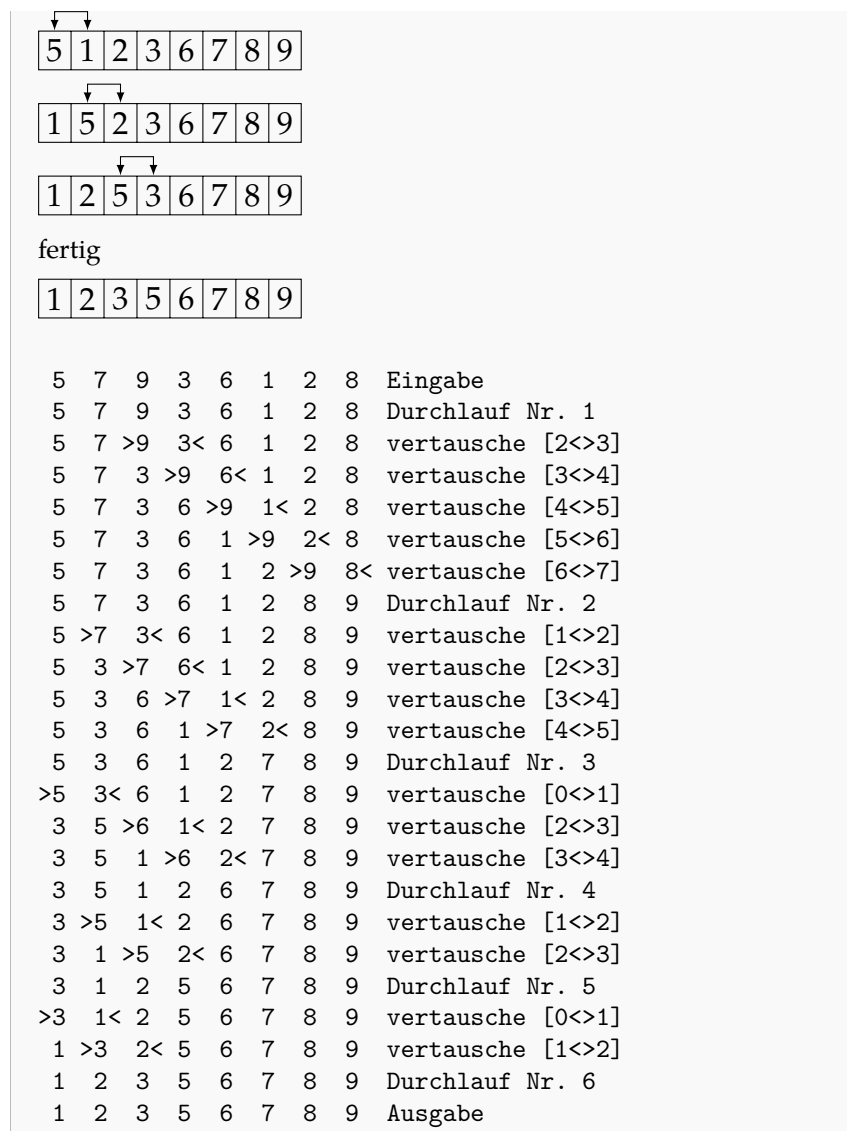
5	7	1	2	3	6	8	9
---	---	---	---	---	---	---	---

5	1	7	2	3	6	8	9
---	---	---	---	---	---	---	---

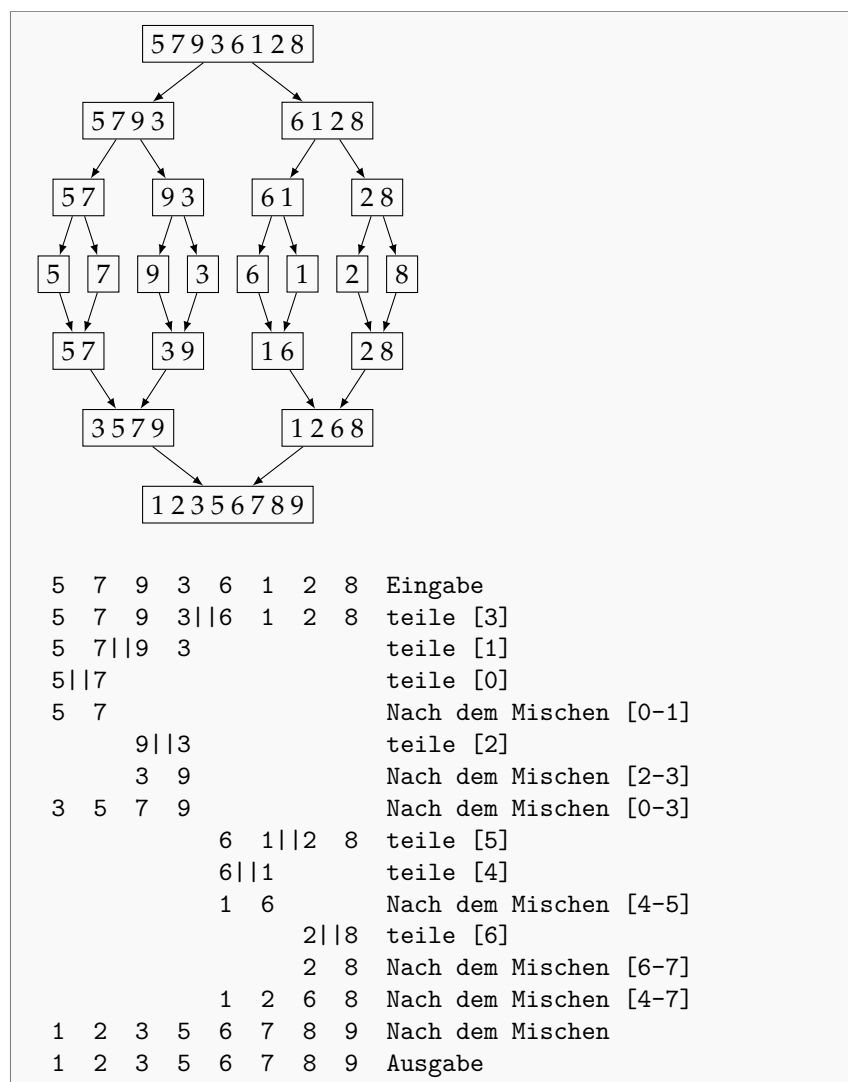
5	1	2	7	3	6	8	9
---	---	---	---	---	---	---	---

5	1	2	3	7	6	8	9
---	---	---	---	---	---	---	---

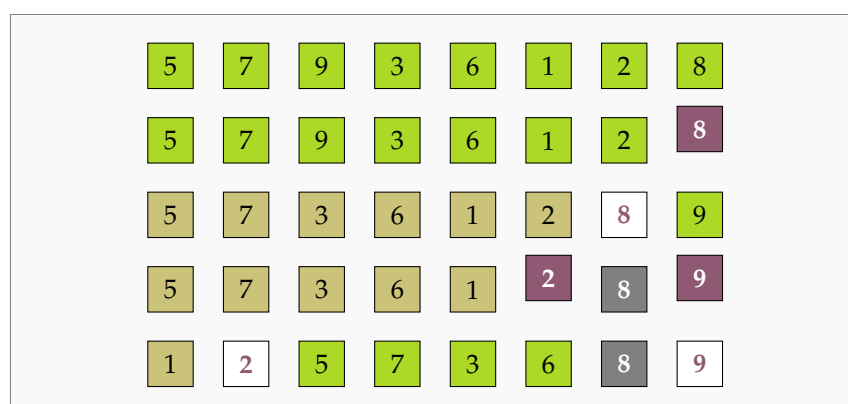
Fünfter Durchgang



(b) Mergesort



(c) Quicksort



1	2	5	7	3	6	8	9
1	2	5	3	6	7	8	9
1	2	5	3	6	7	8	9
1	2	3	5	6	7	8	9
1	2	3	5	6	7	8	9
1	2	3	5	6	7	8	9
1	2	3	5	6	7	8	9

```

5 7 9 3 6 1 2 8 Eingabe
5 7 9 3 6 1 2 8 zerlege
5 7 9 3* 6 1 2 8 markiere [3]
5 7 9 >3 6 1 2 8< vertausche [3<>7]
>5 7 9 8 6 1< 2 3 vertausche [0<>5]
1 >7 9 8 6 5 2< 3 vertausche [1<>6]
1 2 >9 8 6 5 7 3< vertausche [2<>7]
1 2
1* 2 zerlege [0-1]
>1 2< markiere [0]
>2 1< vertausche [0<>1]
      vertausche [0<>1]
      8 6 5 7 9 zerlege [3-7]
      8 6 5* 7 9 markiere [5]
      8 6 >5 7 9< vertausche [5<>7]
>8 6 9 7 5< vertausche [3<>7]
      6 9 7 8 zerlege [4-7]
      6 9* 7 8 markiere [5]
      6 >9 7 8< vertausche [5<>7]
>6< 8 7 9 vertausche [4<>4]
      6 >8< 7 9 vertausche [5<>5]
      6 8 >7< 9 vertausche [6<>6]
      6 8 7 >9< vertausche [7<>7]
      6 8 7 zerlege [4-6]
      6 8* 7 markiere [5]
      6 >8 7< vertausche [5<>6]
>6< 7 8 vertausche [4<>4]
      6 >7< 8 vertausche [5<>5]
      6 7 >8< vertausche [6<>6]
      6 7 zerlege [4-5]
      6* 7 markiere [4]
>6 7< vertausche [4<>5]
>7 6< vertausche [4<>5]

```

1	2	3	5	6	7	8	9	Ausgabe
---	---	---	---	---	---	---	---	---------