

Insertionsort – Beispiel

1	2	3	4	5	6	7	8
C	A	G	D	F	E	B	E'
A	C	G	D	F	E	B	E'
A	C	G	D	F	E	B	E'
A	C	D	G	F	E	B	E'
A	C	D	F	G	E	B	E'
A	C	D	E	F	G	B	E'
A	B	C	D	E	F	G	E'
A	B	C	D	E	E'	F	G

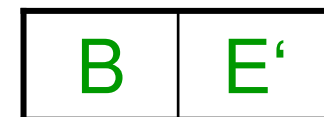
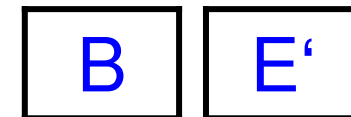
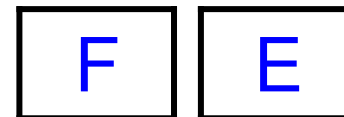
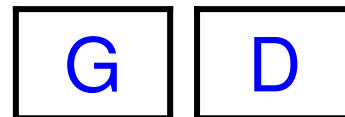
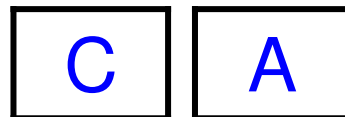
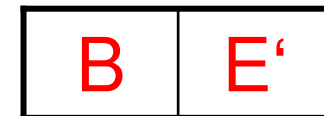
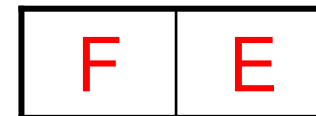
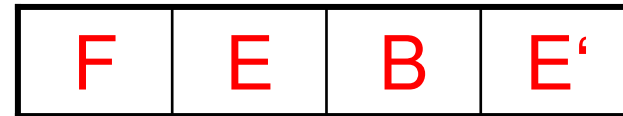
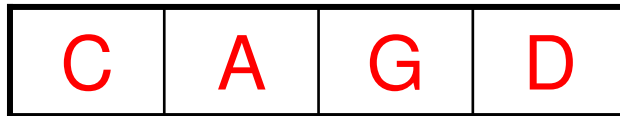
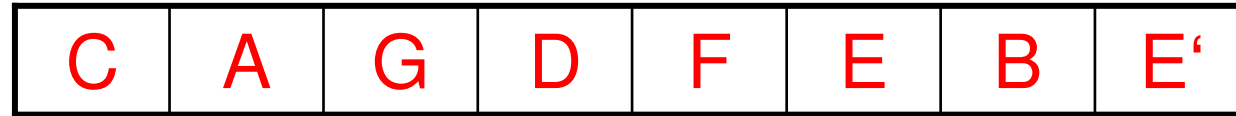
Mergesort – Beispiel Verschmelzen

A	C	D	H
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B	E	F	G
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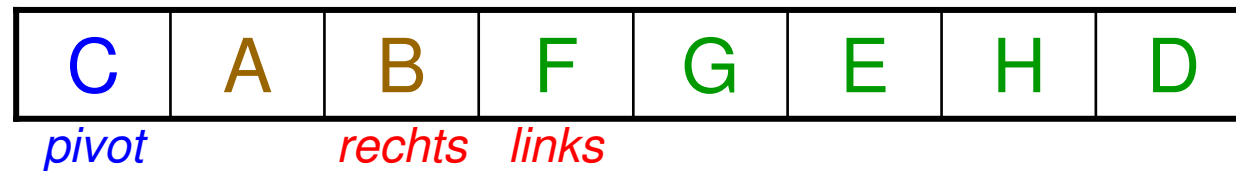
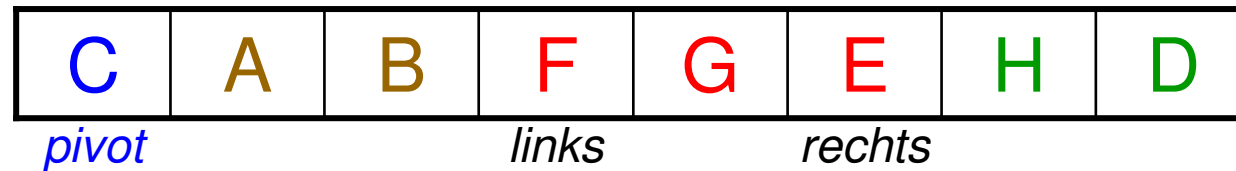
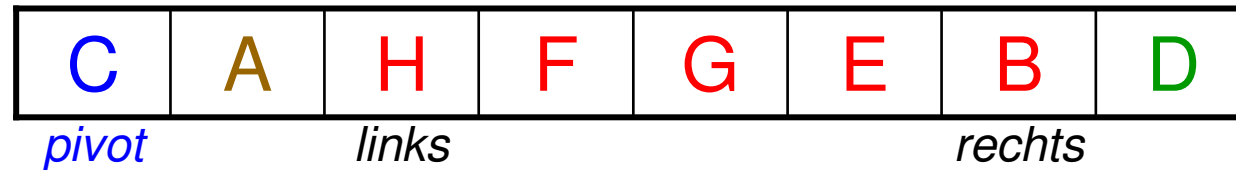
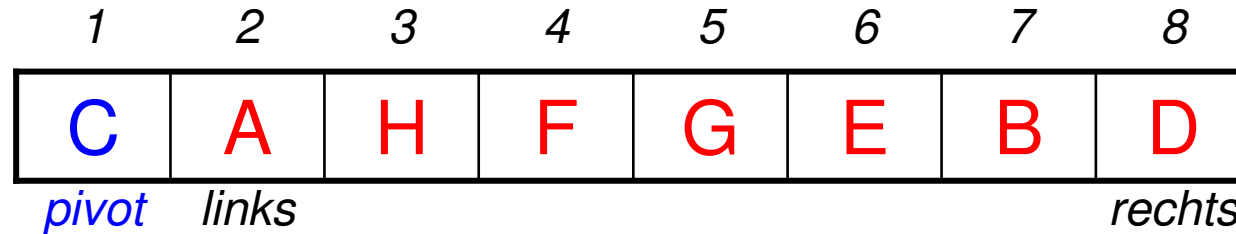
A	B	C	D	E	F	G	H
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Mergesort – Beispiel

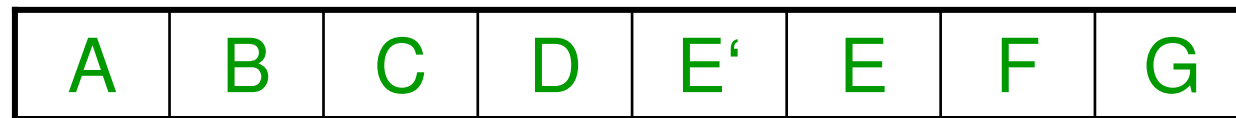
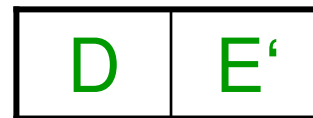
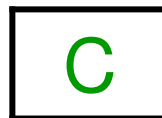
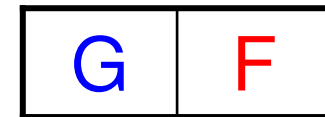
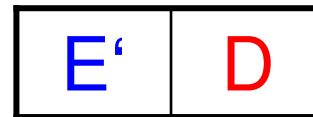
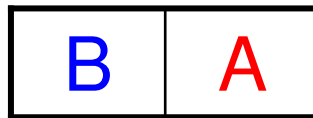
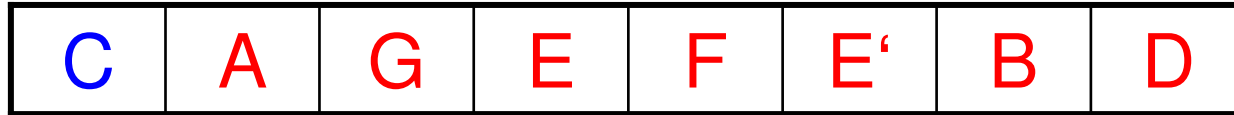


Quicksort – Beispiel Aufteilen

Gewähltes Pivot-Element nicht ganz links? →
am Anfang Pivot mit linkestem Element vertauschen



Quicksort – Beispiel



Quicksort (klassisch)

```
quicksort(l,r) {  
  if(r>l) {  
    p := partition(l,r)  
    quicksort(l,p-1)  
    quicksort(p+1,r)  
  }  
}
```

```
quicksort(l,r) {  
  while(r>l) {  
    p := partition(l,r)  
    quicksort(l,p-1)  
    l := p+1  
  }  
}
```

Zwischenschritt:
Endrekursion aufgelöst

Klein-vor-Groß – Quicksort
→ Speicherbedarf **immer** $O(\log n)$

```
quicksort(l,r) {  
  while(r>l) {  
    p := partition(l,r)  
    if(p-l < r-p) {  
      quicksort(l,p-1)  
      l := p+1  
    } else {  
      quicksort(p+1,r)  
      r := p-1  
    }  
  }  
}
```