

5. DIVIDE AND CONQUER I

► merge demo

Lecture slides by Kevin Wayne

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<http://www.cs.princeton.edu/~wayne/kleinberg-tardos>

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Merge demo

Given two sorted lists A and B , merge into sorted list C .

sorted list A

3	7	10	14	18
---	---	----	----	----

sorted list B

2	11	16	17	23
---	----	----	----	----

Merge demo

Given two sorted lists A and B , merge into sorted list C .

sorted list A

3	7	10	14	18
---	---	----	----	----



sorted list B

2	11	16	17	23
---	----	----	----	----



compare minimum entry in each list: copy 2

sorted list C

--	--	--	--	--	--	--	--	--	--



Merge demo

Given two sorted lists A and B , merge into sorted list C .

sorted list A

3	7	10	14	18
---	---	----	----	----



sorted list B

2	11	16	17	23
---	----	----	----	----



compare minimum entry in each list: copy 3

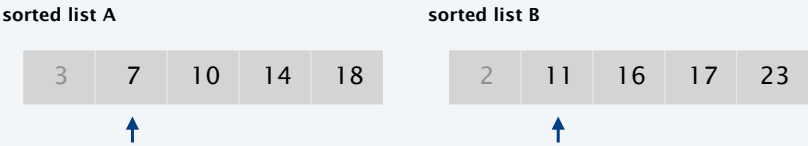
sorted list C

2									
---	--	--	--	--	--	--	--	--	--



Merge demo

Given two sorted lists A and B , merge into sorted list C .

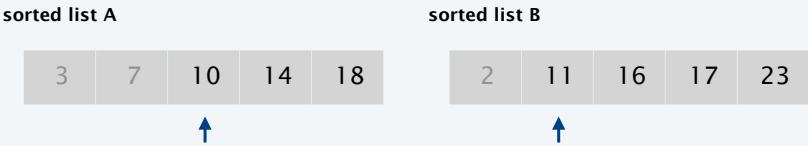


compare minimum entry in each list: copy 7



Merge demo

Given two sorted lists A and B , merge into sorted list C .

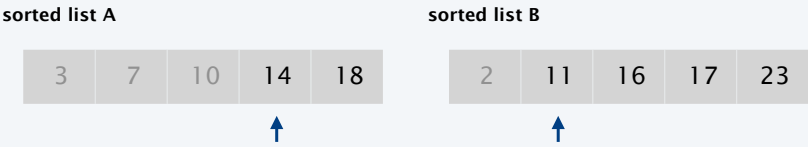


compare minimum entry in each list: copy 10



Merge demo

Given two sorted lists A and B , merge into sorted list C .

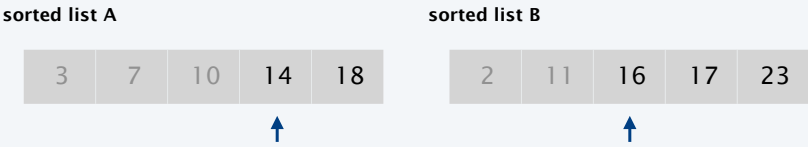


compare minimum entry in each list: copy 11



Merge demo

Given two sorted lists A and B , merge into sorted list C .

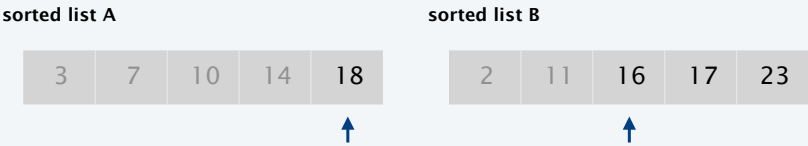


compare minimum entry in each list: copy 14



Merge demo

Given two sorted lists A and B , merge into sorted list C .

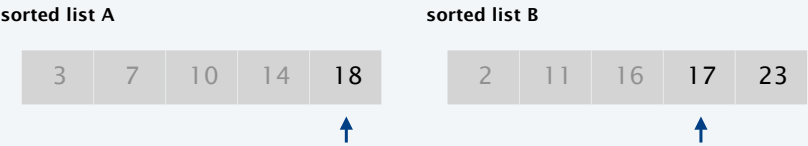


compare minimum entry in each list: copy 16



Merge demo

Given two sorted lists A and B , merge into sorted list C .

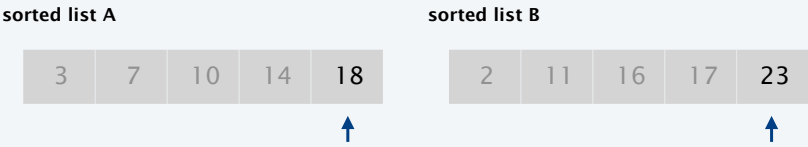


compare minimum entry in each list: copy 17



Merge demo

Given two sorted lists A and B , merge into sorted list C .



compare minimum entry in each list: copy 18



Merge demo

Given two sorted lists A and B , merge into sorted list C .



list A exhausted: copy 23



Merge demo

Given two sorted lists A and B , merge into sorted list C .

sorted list A

3	7	10	14	18
---	---	----	----	----



sorted list B

2	11	16	17	23
---	----	----	----	----



done

sorted list C

2	3	7	10	11	14	16	17	18	23
---	---	---	----	----	----	----	----	----	----

