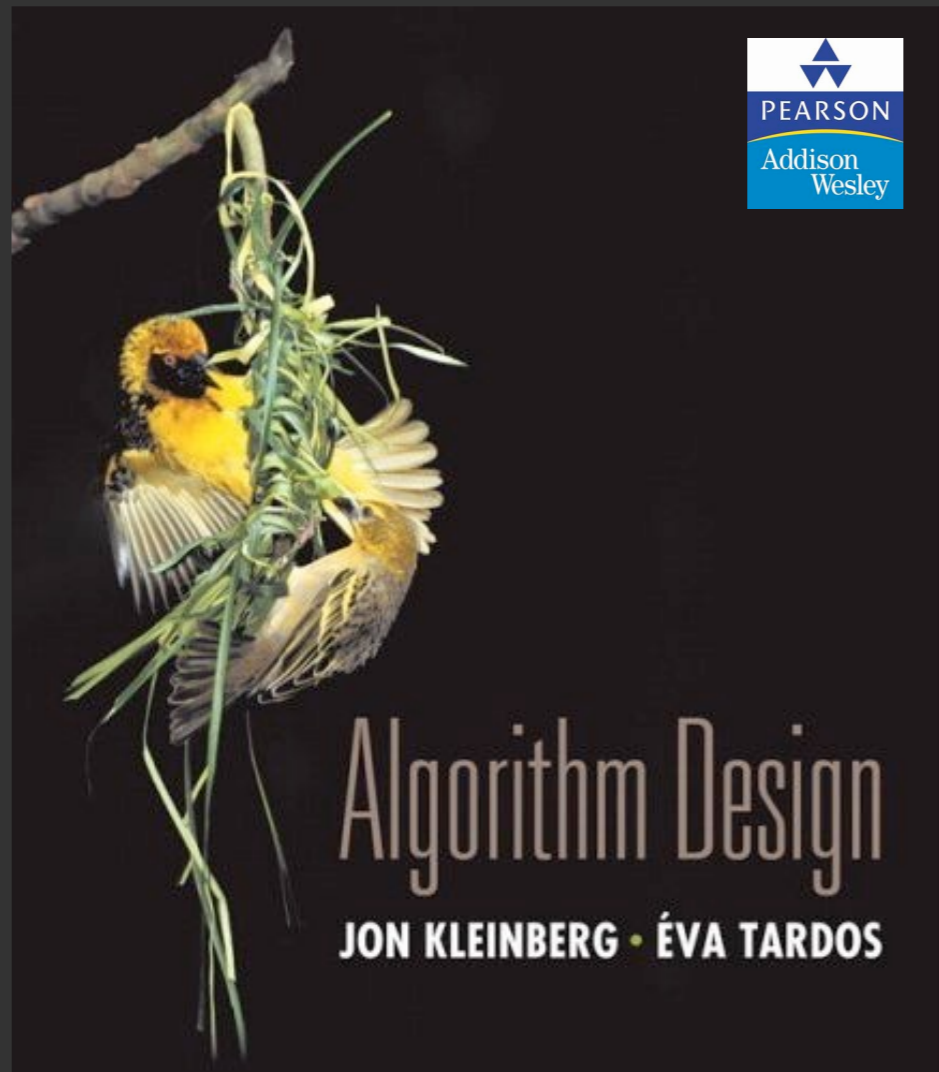


5. DIVIDE AND CONQUER I

▶ *merge demo*



Lecture slides by Kevin Wayne

Copyright © 2005 Pearson–Addison Wesley

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

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	20	23
---	----	----	----	----

Merge demo

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

sorted list A



sorted list B



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

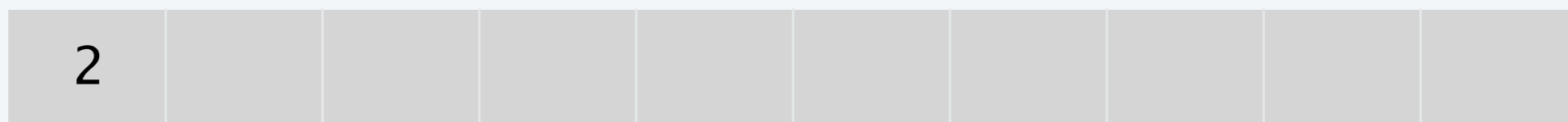


sorted list B



compare minimum entry in each list: copy 3

sorted list C



Merge demo

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

sorted list A

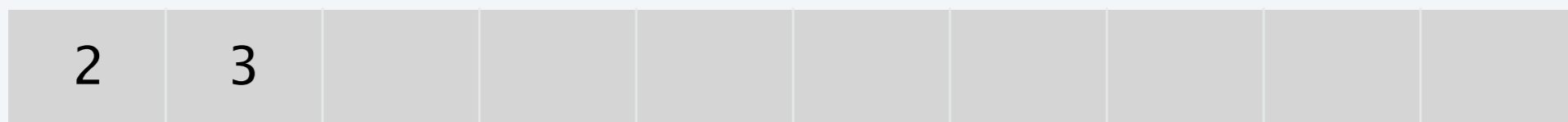


sorted list B



compare minimum entry in each list: copy 7

sorted list C



Merge demo

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

sorted list A



sorted list B



compare minimum entry in each list: copy 10

sorted list C



Merge demo

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

sorted list A

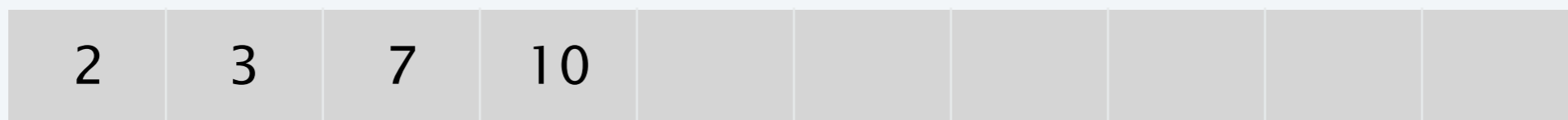


sorted list B



compare minimum entry in each list: copy 11

sorted list C



Merge demo

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

sorted list A



sorted list B



compare minimum entry in each list: copy 14

sorted list C



Merge demo

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

sorted list A



sorted list B



compare minimum entry in each list: copy 16

sorted list C



Merge demo

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

sorted list A



sorted list B



compare minimum entry in each list: copy 18

sorted list C



Merge demo

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

sorted list A



sorted list B



list A exhausted: copy 20

sorted list C



Merge demo

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

sorted list A



sorted list B



list A exhausted: copy 23

sorted list C



Merge demo

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

sorted list A



sorted list B



done

sorted list C

