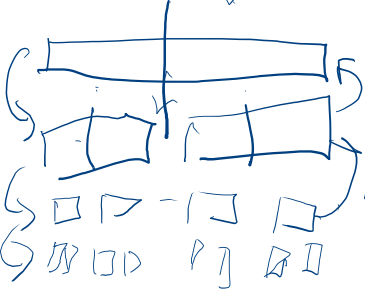


Merge Sort



return

Merge
sorted
lists

over
Allocation
Merge
Sort
Memory

Sorting! Time Complexity

Alg	Best	Worst	Ave
Selection	n^2	n^2	n^2
Insertion	n	n^2	n^2
Bubble	n	n^2	n^2
Quick Sort	$n \log n$	n^2	$n \log n$

divide & conquer
start (start, end)
find the median
partition elements
< { } >
place median
p - pivot

recursion on
the two halves
size - 1, 3, 5, 7, 9

choose 3 rand only

pick
median
of those 3

base case

start = end

else

recurse

QS(start, pivot)

QS(pivot+1, end)

QS(start, end)

Base case check
partition

QS(st, pu)

QS(pu+1, end)