

# Group 3: 2015 sorting comp

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# Quicksort

- ◆ Times:
  - ◆ small data - 712ms
  - ◆ large data - 2899ms
- ◆ Quicksort
- ◆ Java's `string compareTo()`



# Process

$x \% 10 = 0$	$x \% 10 = 1$	$x \% 10 = 2$	$x \% 10 = 3$	$x \% 10 = 4$	$x \% 10 = 5$	$x \% 10 = 6$	$x \% 10 = 7$	$x \% 10 = 8$	$x \% 10 = 9$
									
									
									
									
									

- ◆ Bucket system: Data put, as strings, into Array of ArrayList
- ◆ Each ArrayList is sorted using quick sort
  - ◆ Pivot as median of 3
- ◆ ArrayLists emptied back into the initial Array



# Analysis

- ◆ Worst case  $\theta(n^2)$
- ◆ Extra memory - memory taken up by Array of ArrayLists



# What could've changed?

- ◆ A lot
- ◆ Bucket system terrible
- ◆ Overall could've been better