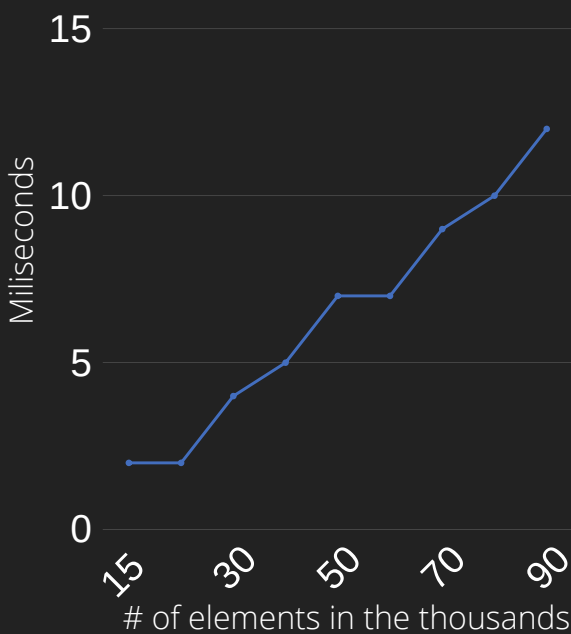


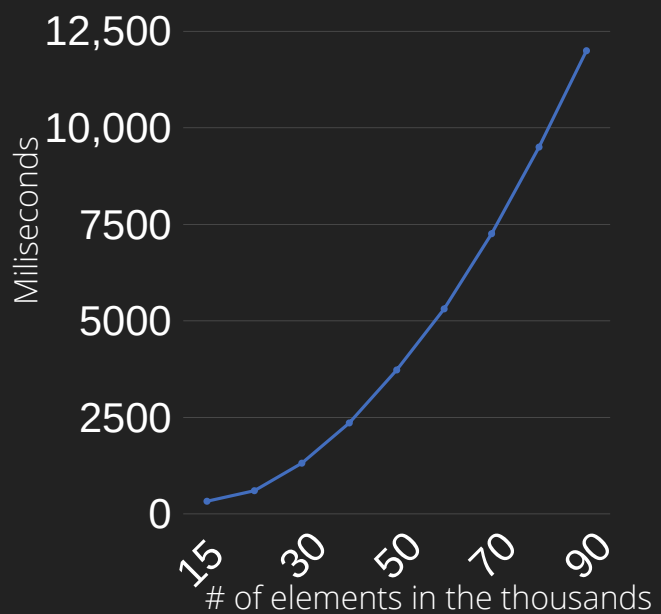
# Sort the array!

## A MERGE AND SELECTION SORT COMPARISON

### MERGE SORT



### SELECTION SORT



## Implementation time?

MERGE > SELECTION  
MERGE IS: RECURSIVE  
SELECTION IS: ITERATIVE



MERGE SORT IS WAY  
FASTER THAN  
SELECTION SORT

## BUT WHY? BIG O CAN EXPLAIN

### Maths

Merge:  $O(n \log n)$   
Selection:  $O(n^2)$

### In english please?

$O(n \log n)$  = Lamborghini  
 $O(n^2)$  = A turtle with 1 leg

## SO, WHICH ONE SHOULD I IMPLEMENT?

DO YOU HAVE  
LARGE AMOUNT OF  
DATA?  
YES: MERGE  
NO: MERGE

$O(N^2)$  ALGORITHMS ARE NOT VERY  
EFFICIENT, TRY ALWAYS USING  
 $O(N \log N)$  OR FASTER



# START SORTING NOW!

