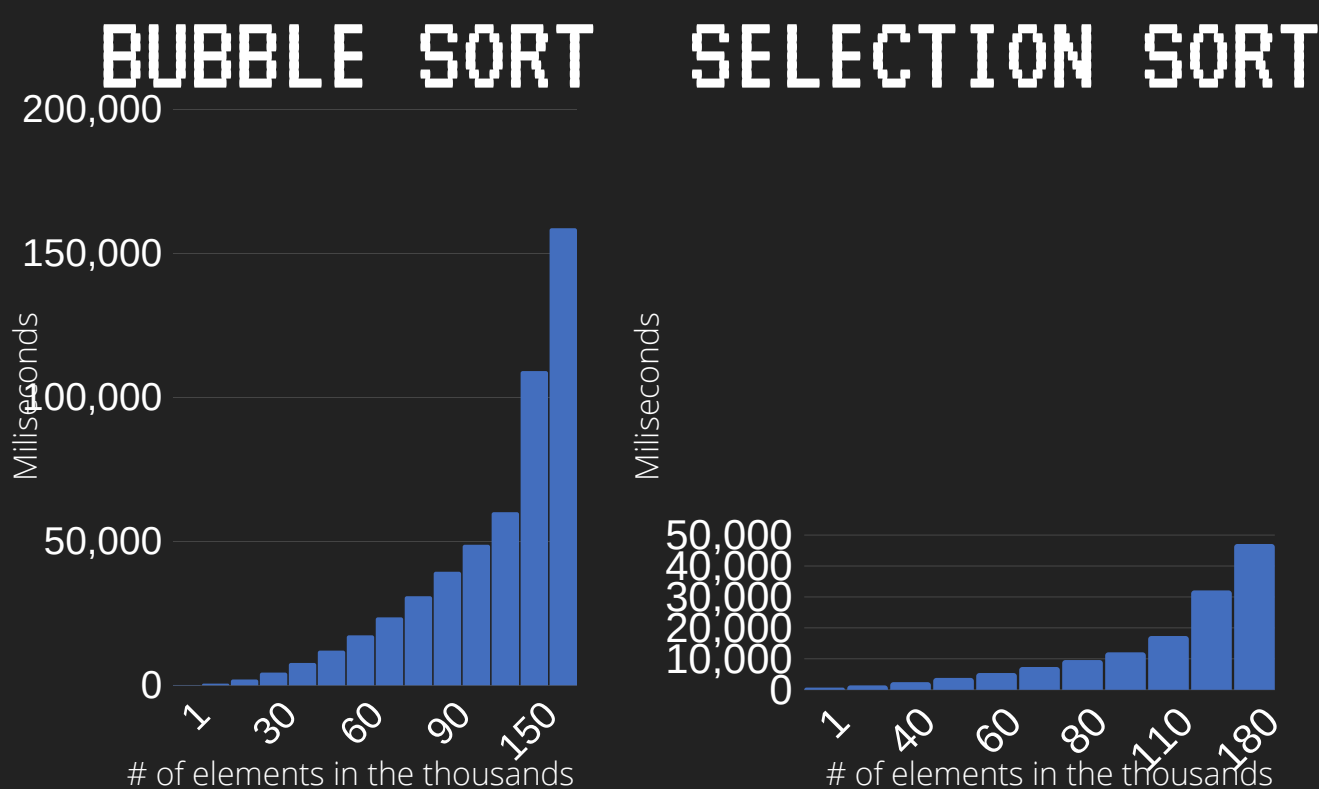


# Iterative sorting!

## WHICH ITERATIVE ALGORITHM IS BETTER?

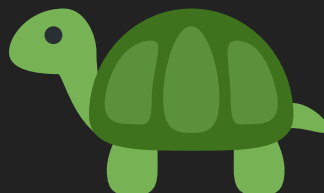
---



**Selection is  
faster**

BUBBLE SORT TOOK  
WAY MORE TIME THAN  
SELECTION SORT

BUBBLE SORT IS VERY  
SLOW COMPARE TO  
SELECTION WHICH IS  
ALREADY SLOW



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### IMPROVING BUBBLE SORT?

#### Adding a flag

You can add a flag for  
the sorting to stop  
when there where no  
swaps

#### Did it work?

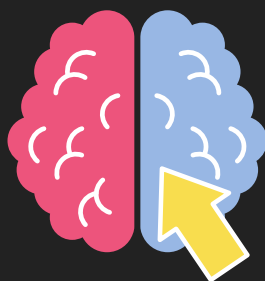
It only really improves if  
the array is already  
sorted.

Becomes:  $O(1)$

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### SO, SHOULD I BE USING BUBBLE SORT?

THERE ARE OTHER EASY TO IMPLEMENT ITERATIVE  
ALGORITHMS, BETTER USE THOSE



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HOPE YOU LEARN  
SOMETHING