



WHILE WAITING:
Have you downloaded this
week's lab to your codespace?

*duck of the week
"a very large one"*

CS50 Week 3 Lab

Gabe LeBlanc | 9/21/22

Notes From Pset 2

magic numbers

excess variables

follow the specification!

IMPORTANT PSET PSAs

View inline comments!

MAKE SURE the autograder finishes correctly – Gabe cannot fix this!

<https://cs50.readthedocs.io/style/c/#>

What's an algorithm?

You've already been using them.

Binary Search

Linear Search

(easier when sorted!)

Selection Sort

relocates smallest value each iteration – for each of n items, iterate through list of n

$$O(n^2)$$

$$\Omega(n^2)$$

Bubble Sort

swaps pair by pair until has an iteration where everything is sorted

$$O(n^2)$$

$$\Omega(n)$$

Merge Sort

recursively divides in two and works backward, sorting and merging pairs

$$O(n \log n)$$

$$\Omega(n \log n)$$

Lab 3: Sort

Summary

Selection Sort

Bubble Sort

Merge Sort

$$O(n^2)$$

$$O(n^2)$$

$$O(n \log n)$$

$$\Omega(n^2)$$

$$\Omega(n)$$

$$\Omega(n \log n)$$

Exercise: Average Temperatures

github.com/gblanc25/cs50 → EXTRAPRACTICE.md

tinyurl.com/gabecs50feedback