This is the pseudocode for the 3 sorting algorithms that I made with Ruby.

I decided to choose these as they cover some important aspects of the language.

Sorting algorithm 1 Bubble sort

The first sorting algorithm I chose was bubble sort. I picked it as it is usually the first sorting algorithm taught. Personally, I think selection sort is a better first sort though. Bubble sort works by bubbling up the larger values. We compare each value to the neighbor to its right and if it is bigger, we swap their places. After the first run we have found the largest element. We then keep doing this until there are no more swaps.

There is also a smarter solution to this where we have the outer loop depend on if any swaps have happened.

This is because if there are no swaps in any run of the array it means we are done.

Swap = true

While (swap = true)

Swap = false

For (I = 0; I < array.size - 1; I ++)

Go through all indexes that have a right neighbour

if array[I] < array[I+1]

compare the index to its right neighbour

swap if it is bigger than the right neighbour

temp = array[I]

array[I] = array[I+1]

array[I+1] =temp

swap = true

Return array

Sorting algorithm 2 insertion sort

Insertion sort is a good sorting algorithm for when you want to add elements to a list that is already sorted.

For (I = 1; I < array.size(); I++)

We start from 1 as opposed to 0 because an array of size 1 is trivially sorted.

Value = array[I]

J = I

While (J>=0 and array[j-1] > key)

temp = array[j-1]

array[j-1] = array[j]

array[j] = temp

Return array

Sorting algorithm number 3 Selection sort

In my opinion selection sort is the simplest sorting algorithm. The idea is you go through the array and look for the smallest item in the array. You then swap it with the item in the first spot.

You then search the remainder of the array for the new smallest item and swap it into the second spot and you go on.

For ( I = 0; I < arraysize - 2; I ++)

Min = I

For (j=I+1; j < arraysize - 1; j++)

if array[j] < array[min]

min = j

Temp = array[min]

Array[min] = array[I]

Array[I] = array[temp]

Return array