Sorting Algorithms

Nicholas Grogg

January 9, 2020

1 Bubble Sort

Algorithm 1 Bubble Sort Unoptomized

Require: $x[n]$ unsorted
Ensure: $x[n]$ sorted
  $x[n]$ array of n size
  for $i = 0$ to $i = n - 1$ **do**
    $x[i] \leftarrow$ input
  end for
  for $i = 0$ to $i = n - 2$ **do**
    for $j = 0$ to $j = n - 1$ **do**
      if $x[j] > x[j + 1]$ **then**
        temp $\leftarrow x[j + 1]$
        $x[j + 1] \leftarrow x[j]$
        $x[j] \leftarrow$ temp
      end if
    end for
  end for

---

2 Merge Sort

3 Shell Sort

4 Insertion Sort

5 Selection Sort