1 Insertion

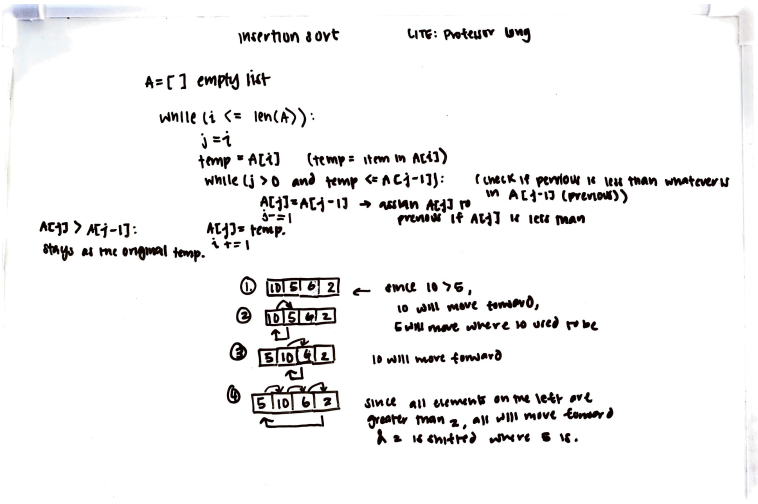

Figure 1: Insertion Sort
This is the most basic sorting, by going through each element in the list to check whether the current element is larger or smaller than the next element.Sudo code was provided by Professor Long.

2 Shell Sort

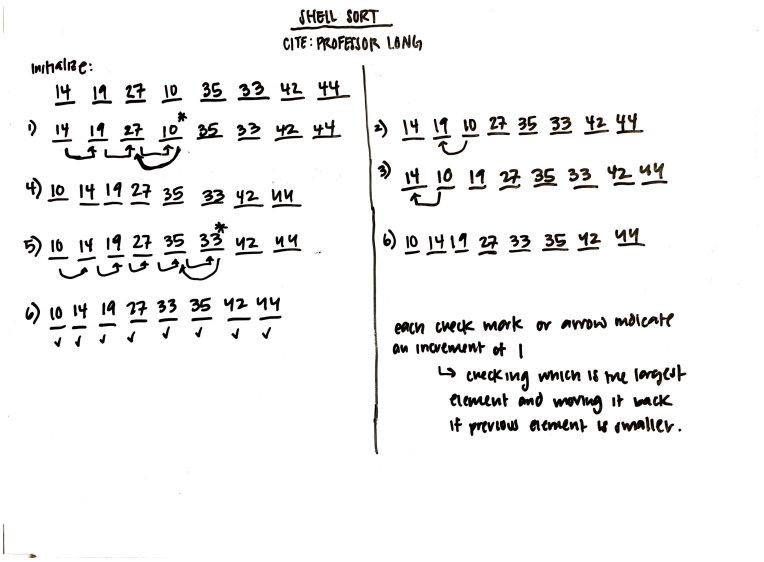

Figure 2: Shell sort

Shell sort relies on gaps to sort a certain number of elements. Then the gap decrease each time in a for loop. If the gap reaches to 1, it looks like it's doing insertion sort.

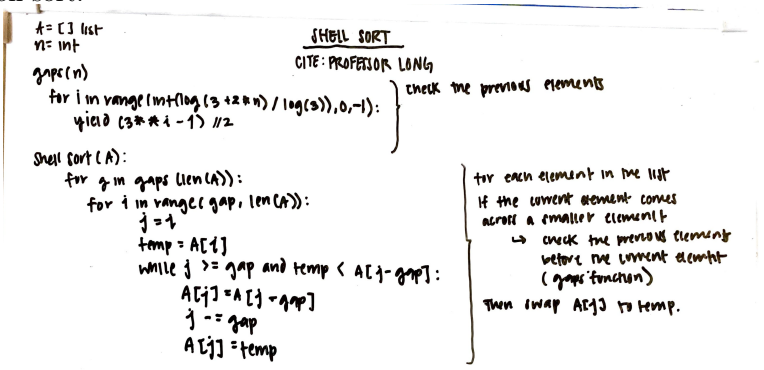

Figure 3: The sudo code is provided by Professor Long.

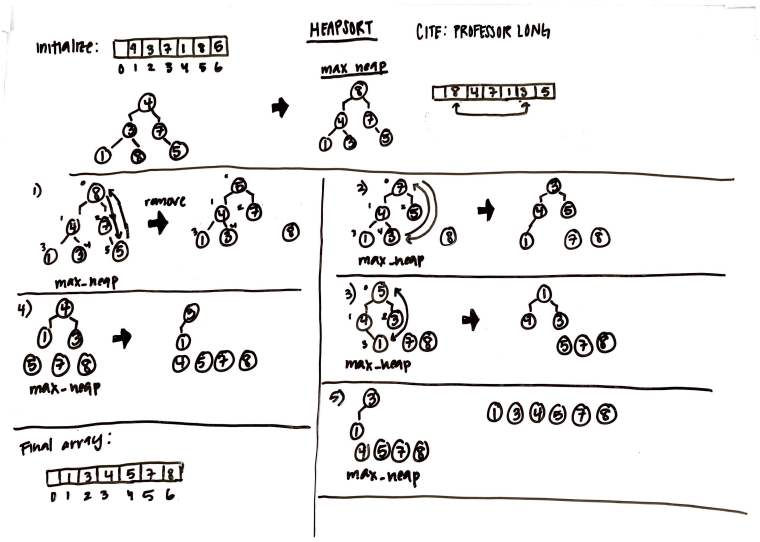

Figure 4: Heap Sort
Heap sort makes sense in a tree (kinda like a family tree). Max heap finds the largest parent element while the min heap finds the smallest parent element. The parent will always be the largest than the child elements.

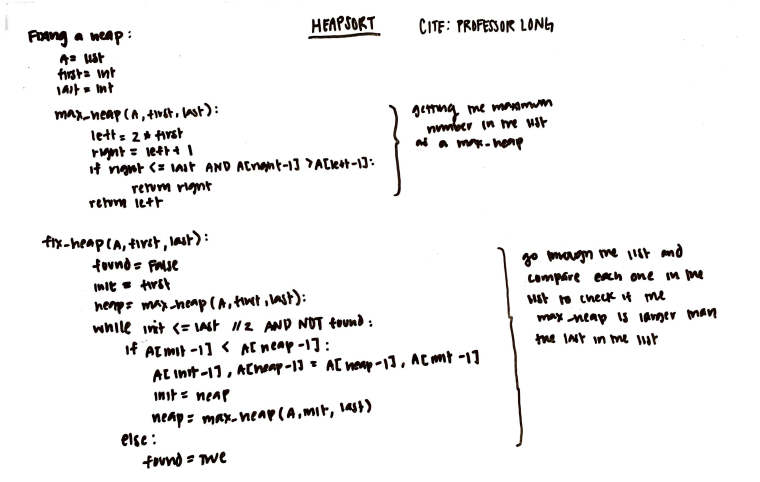

Figure 5: But, the sorting creates a new list with the sorted elements. (Sudo code was provided by Professor Long)