Adam Rolek

2/7/2020

**Section 1.1, Exercise 2:**

Void find\_m\_max\_numbers(int n, int S[], int m) {

int i, j;

for (i = 0; i < m; i++) { //only run this m times, not sorting the array

for (j = 0; j < n-i-1; j++) { // the last items will be sorted

if (arr[j] > arr[j+1]) {

swap arr[j] and arr[j+1]

}

}

}

Print the last m elements

}

**Section 1.3 Exercise 10:**

The Basic Operation performed by this algorithm is the comparison of numbers at different array indexes. This algorithm would have a worse case time complexity of O(n\*m). This is because the algorithm will search every index of the array for the largest number M times. At the end of the algorithm the largest numbers should be at the end of the given array. So, at the very worst the algorithm should check every index M times.