# Part 1

* Store the three list of students into 3 separate arrays
* Using merge sort algorithm
* 1. If n < 2
* 2. Return
* 3. Else
* 4. mid = (low+high)/2
* 5. Merge\_Sort(A, low, mid)
* 6. Merge\_Sort(A, mid+1, high)
* 7. Merge(A, low, mid, high)
* Merge any first two arrays then store into one
* Then merge the remaining array and the temp array
* Once you have only one array containing all students
* Sort using bubble sort algorithm
* for (i = 1; i < num; i++)
* {
* for (j = 1; j < num; j++)
* {
* if (strcmp(student[j - 1], student[j]) > 0)
* {
* //bubble sort algorithm
* strcpy(temp, student[j - 1]);
* strcpy(student[j - 1], student[j]);
* strcpy(student[j], temp);
* }//end bubble sort if
* }//end in for
* }//end out for
* The big O for this is O(n^2)
* Because there are two loops and each loop is doing O(n) amount of work.

# Part 2

I said that I still had the dit students in certain parts of the array and then compared the name entered to the names in the array.

# Part 3

Again just checked the surname entered against the surnames that were in the the array and if one matched printed out the name.