**Lab 9 Question 3 Explanations**

**Ted Smith III**

The main array that is being used for both questions are:

int[] list = {7, 1, 6, 12, -3, 8, 4, 21, 2, 30, -1, 9}

[3.1] Explain the contents of the array after 4 passes of the outermost loop of selectionSort(). Please refer to the following selectionSort() method.

The contents of the array after 4 passes of the outermost loop of selectionSort() are:

[-3, 1, 6, 12, 7, 8, 4, 21, 2, 30, -1, 9]

[-3, -1, 6, 12, 7, 8, 4, 21, 2, 30, 1, 9]

[-3, -1, 1, 12, 7, 8, 4, 21, 2, 30, 6, 9]

[-3, -1, 1, 2, 7, 8, 4, 21, 12, 30, 6, 9]

After every outermost loop is passed, it runs the nested loop to compare the value of the current index to the rest of the array’s values. The lowest number of the comparisons become added to the current index that equals i. For example, when “i” is equal to 0, the lowest number is added to that index (list[0] = lowNum). Next, when “i” is equal to 1, the next number in lowness is added to that index (list[1] = lowNum). ). Then, when “i” is equal to 1, the next number in lowness is added to that index (list[2] = lowNum). ). When “i” is equal to 1, the next number in lowness is added to that index (list[3] = lowNum). In addition, I changed the color of the number that was added after each outermost loop was passed. In conclusion, this is my explanation for this question.

[3.2] Write the contents of the array during each of the the recursive calls of mergeSort(). Please refer to the following mergeSort() method.

**The answer to this question is on the document Question 3.2.docx .**