Experiment 6 Report

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1 Introduction

Printing the given array to the screen and sorting the array with the bubble sort algorithm.

2 Implementation

2.1 PART1

In order to see the array given in part 1 on the screen as output, we defined the array as ARR and synchronized it with A1. D3 keeps the size of the array and decreases by 1 each time it enters the for loop, and exits the for loop when D3 is 0. In the for loop, we set D0 assign to 3, and in the trap operation, the task of 3 is display signed number in D1.L in decimal in smallest field. D0 is moved to 9 at step "HALT" which means terminate the program.

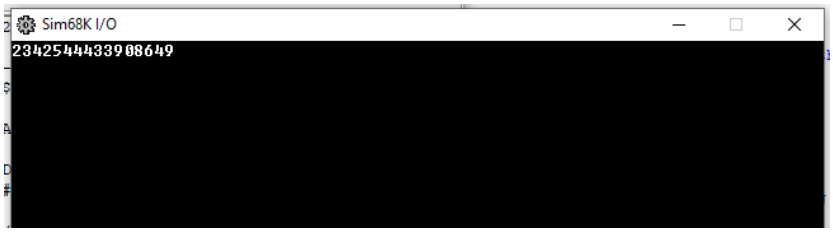

Figure 1: Output of part 1

2.2 PART2

In part 2, what is required of us is to sort the given array from smallest to largest with the bubble sort algorithm. While doing bubble sort, the number of steps in each pass and the number of passes over the array are 1 less than the length of the array. In our code, D6 keeps the number of passes over the array, while D5 keeps the number of steps (iterations) in each pass. According to the bubble sort algorithm, we compare the first 2 elements of the array, and the first element(D0) ¡ the second element(D1) proceeds to the code CHECK

step, otherwise our code performs the SWAP operation. When all the loops were completed and the passing number (D6) reached 7, we started the PRINT process by moving our array, which we assigned to ($2020)FIRST at the beginning of the code, to A1. The following operations are to go through the array step by step, as we did in part 1, and print the values to the screen in decimal type.

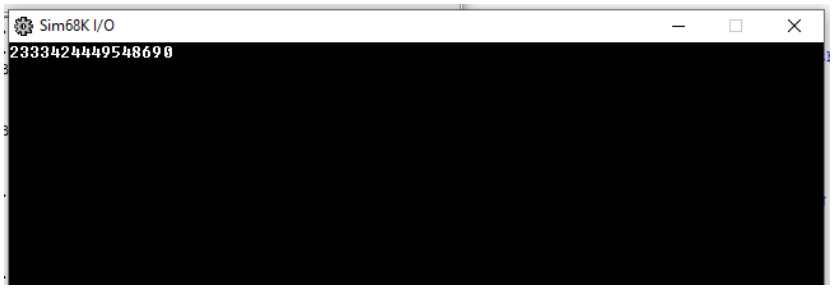

Figure 2: Output of Part 2

3 DISCUSSION

We had a few problems while doing this homework, one of them is we wrote it based on the sample array size you gave us. So we did the sorting and printing for an array is sized with 8. May not give accurate results for larger or smaller arrays. Another is that we could not suppress the numbers in our array by separating them with 1 space or comma.