Card Sorting Lab Report

Problem

We are trying to create an algorithm to sort cards making them in order from least to greatest by flipping over two cards at a time and reordering them if one is greater than the other.

Proposed Solution

The way to solve this problem is to flip over the first card and compare it with all other cards starting at card 1 and ending at card 6. Then you compare card 1 with cards 2-6 in order. Then you repeat that process.

Tests and Results

Using the algorithm I just described, I was able to reorder the cards correctly about five or six times. The program even works with duplicates.

Problems Encountered

I never really found any errors when making the algorithm. My first guess on how to complete it ended up working.

Conclusions and Discussion

My way on solving this problem worked very well. However, it could be solved better with a repeated step rather than the way I did it. Mine only works with seven total cards.

Additional Questions

Lab Questions:

1. The algorithm that I wrote only works for a set of seven total cards (0-6). To make the algorithm capable of working with any set of cards, the algorithm could have a loop that repeats steps but with increasing index variables.
2. The order of cards that would take longest to sort would be if the cards started out in order from biggest to greatest. This would require swapping cards every time two cards are flipped using this algorithm.