

README

Concept

This program calculates the average number of comparisons required to sort a random number of permutations of a list of first n positive integers.

The list is stored in a vector object, on which the *next_permutation* function is used for a random number of times to generate a random permutation.

After the permutation has been generated, it is passed to the *bubbleSort* function which sorts the list and counts the number of comparisons, and returns the value of the count.

The returned value is summed up in previous count values generated from the random permutations of the given list.

Then the average is calculated from the overall generated sum of number of comparisons in the bubble sort algorithm.

Usage

1. Run the cpp file.
2. A prompt will open reading, "Enter n".
3. Enter the number of first positive integers that are needed to be sorted.
4. A prompt will open reading, "Enter number of permutations(m): "
5. Enter the number of permutations needed to be sorted.
6. The output will display the average comparison count.