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Module 2 Assignment – Vector Sorting

In this assignment, the goal was to try and arrange a CSV file with bid information from low to high using two different sorting algorithms: the slowest being selection sort and the fastest being quicksort. Selection sort is much slower than quicksort due to the fact that it repeatedly searches through a list and compares each element with each other, resulting in more operations being performed which increases the amount of time it takes to complete. On the contrary, quicksort divides the elements into smaller pieces, making sorting more efficient and decreasing the time needed to complete.

I didn’t really run into any issues with this assignment, since the instructions and the comments were fairly straightforward. However, I ran into an issue where the program was throwing an unhandled exception. It took me a little while to find it but it was just that I passed in a value that was out of range. I managed to solve that problem and my program ran smoothly.

**Pseudocode**

START

Display Menu

Option 1: Load Bids

Option 2: Display All Bids

Option 3: Selection Sort All Bids

Option 4: QuickSort All Bids

Option 9: Exit

Prompt user to make a selection

IF choice is 1:

Load bids from CSV file by calling function loadBids(csvPath)

Record start time using clock() function

Display the number of bids read

Use clock() to record the total time it takes to read all bids

Display elapsed time in clock ticks and seconds

ELSE IF choice is 2:

Loop through each bid in the bids vector

Print bid’s information to the console by calling function displayBid(bid)

ELSE IF choice is 3:

Record start time using clock() function

Sort bids by title by calling selectionSort(bids) function (selection sort algorithm)

Record elapsed time using clock() function

Display total number of bids sorted

Calculate and display elapsed time in both clock ticks and seconds

ELSE IF choice is 4:

Record start time using clock() function

Sort bids by title by calling quickSort() function (quicksort algorithm)

Record elapsed time using clock() function

Display total number of bids sorted

Calculate and display elapsed time in both clock ticks and seconds

ELSE IF choice is 9:

Exit the program

END