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2-3 Pseudocode

Start

Define a Structure to declare variable bidId as string, title as string, fund as string, amount as double.

Set amount = 0.0

Display the whole Structure.

Take input from user for bidId, title, fund, amount.

Display the values of bidId, title, fund, amount.

Load CSV file using CSV path.

Define a vector data structure using given CSV path.

Initialize the CSV parser using given CSV path.

For i from 0 to (no. of rows in the file)

Declare a variable bid.

Set bid.bidId=file[i][1],

bid.title=file[i][0],

bid.fund=file[i][8],

bid.amount=strToDouble(file[i][4], 'S').

Display Item by bid.title, Fund by bid.fund, Amount by bid.amount.

Push the bid to the end.

End for.

Partition the vector of bids into two parts, low and high.

Set low= begin,

high= end.

Calculate the Pivot element by

pivot=(begin + ( end - begin)/2)

Set finished= false.

While there is no finished

compare title<0

increment low by 1.

decrement high by 1.

End while.

If low>=high

Set finished = true.

Else

increment low by 1.

decrement high by 1.

End if.

Return high.

Perform Quick sort on bid.title.

Perform Selection sort on bid.title.

Declare variable smallest and largest as unsigned int, and place and j as unsigned.

Store the bid.size() in largest.

For place from 0 to largest

Set smallest = place.

For j from (place + 1) to largest

If smallest<0

Set smallest = j.

End if.

End for.

If smallest not equals to place

Swap place and smallest

End if.

End for.

End Selection sort.

Convert a string to a double.

Return the string.

Define main method.

Declare csvPath as string.

Use a Switch case on argc

case1: csvPath = argv[1]

default: show message.

End switch case.

Define a vector to hold all the bids.

Define a timer variable ticks as clock\_t.

Set an integer variable choice.

Set choice = 0.

While choice not equals to 9

Print Menu.

Print Option1: Load bids.

Print Option2: Display All Bids.

Print Option3: Selection sort all bids.

Print Option4: Quick sort all bids.

Print Option9:exit.

Take input from user for the variable choice.

Apply Switch case on choice

case1: set timer variable as ticks = clock()

complete the method call to load the bids.

display the size of the bids.

calculate ticks = clock() - ticks

display time in clock ticks.

display time in seconds.

case2: for i from 0 to bids.size

display bids[i].

end for.

call Selection sort function.

display bids.size.

calculate elapsed time ticks = clock() - ticks.

display time in clock ticks.

display time in seconds.

End of Switch case.

Display "good bye" message.

End.

For my reflection I am a bit confused on what to write. I did not find this assignment to be particularly challenging, but I am not sure how the pseudocode and reflection could have been kept to 1-2 pages in length. I enjoyed working through the FIXME portions of the code. I established the pivot and then used while loops and if/else statements to increment and decrement in the portion implementing the quicksort. For the selection sort portion, I used for loops and if statements to implement the selection sort on the Bid. This assignment was mostly straightforward and I hope that my code modifications are clear and the comments readable. Thank you!