This program was designed to test how well we learned vectors and the way to sort them, this code produced a unique challenge as I didn’t feel as I grasped the full extent of this lesson and there are somethings in which I’m still unsure about, when I would have issues I would try and look back into the notes I took during the participation activities I also made sure not to pull my hair out when it came to some issues I couldn’t solve at the time when I started I made sure to comment about whatever I was having trouble with in the time and focused on the later portions of the program, for instance in this case I did the menu before completing all of the sorting steps as I was already comfortable with working with menus. I feel that I have a decent grasp of vectors and the way that we can sort them but there are things that I still don’t feel I understood with this assignment, vectors in general aren’t very easy for me to understand unlike arrays or linked lists which I would try to use before vectors even if they aren’t perfect for the situation given.

Pseudocode

**Declaring variables**Declare integer partition (vector, begin, end) , integer minimum = to begin, integer maximum = to end  
Declare integer pivot = (begin + end) divide by two  
Boolean done is false  
  
While not done  
 While bids title is minimum compare to pivot if less than 0  
 Increase minimum variable  
 While bids title is maximum compare to pivot if less than 0  
 Decrease maximum variable

If min is greater than or equal to max  
 done = true

Else  
 swap min and max  
 increase min  
 Decrease max

Return max

**Declaring integer selection sort**Declare integer selection sort (vector)  
 Declare integer minimum  
 Declare integer maximum equal to bids size  
 Declare integer place  
 for place = 0, place < bid size, increase place

Minimum = place

For variable j = place + 1, j < bids size, increase j

If bids at variable j compare with bids at minimum, if < 0  
 Minimum = j

If minimum != place

Swap bids and minimum

Declare integer ticks = clock()

Call function selection sort (bids)  
Displays bids size(), bids read  
Calculating time  
Int ticks = clock() – ticks  
Display time, ticks and, clock ticks  
Display time, ticks \* 1.0 and clocks per second  
Break

Declare integer ticks = clock()  
Call function quicksort(bids at 0, bids size – 1)  
Display bids size, bids read  
Display time, ticks \* 1.0 and clocks per second  
break