While more data to read

Read input

If input is <= the head pointer’s data, then

Insert at head of queue

Else if input is >= the tail pointer’s data then

Insert at tail of queue

Else

If input < the mid pointer’s data, then

Insert somewhere in the 1st half of the queue

Else

Insert somewhere in the second half of the queue

End if

End if, end else if,end else

End while