Lab-3

task - 3

Taking input and output files then reads numbers and number of cases stored in T. Then in the first file it reads and store it in a list named h. Then method is used to count the numbers of pairs of allson where 1st alien is taller than 2nd alien. Then it called function and store the result in the count variable and close it

Task - 4

The time complexity of the findmaxval function is $O(n)$ as n is the number of element in the list. The function iterate the list once and time complexity

of need () and write function is
0 (n). Others the total time complexity
will be O(n log n)

Task-5

The quick sort () is a method
to sort the list using quick sort
algorithm. it partition the list
into two part and the 2nd part
function is a function used by quick
-sort () to divide the list and
the code calls quick sort () function
to sort the list then close the
file.

Task - 6

Opening the input and output
file and reading the number of
cases. and stored number of then

again read the number of cases and stored it in k then read and stored it in 12, partition function is used to sort the list using quick sort algorithm and then find smallest is used to find the kth smallest element in the X array then call the method and close it.

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