Quicksort Algorithm

I learned the concept of this sorting algorithm few days ago. I’ve decided to implement it without looking at the actual implementation.

The recursion took me a few days to implement since I had a hard time to think about how to recur code until a condition has been fulfilled. It turns out that I just have to nest the functions together and surround them with proper conditions to execute.

Although my code could work sometimes, it means that there is still something wrong with the recursion. Especially for the right recursion function calls.

Here are the samples of successful recursion and failed ones (green and red respectively):

[ 67, 23, 92, 18, 17, 83, 90, 94, 62, 86,  ] - initial

[ 17, 18, 23, 62, 83, 67, 86, 94, 92, 90,  ]

[ 20, 40, 62, 6, 41, 47, 70, 76, 44, 60,  ] - initial

[ 6, 40, 20, 41, 44, 47, 60, 76, 62, 70,  ]

[ 57, 57, 59, 83, 12, 23, 54, 60, 59, 36, ] – initial

Pivot value is 59----

[ 12, 23, 36, 54, 57, 57, 59, 59, 60, 83, ]

[ 4, 15, 19, 36, 94, 70, 55, 91, 21, 18, ] – initial

[ 4, 15, 18, 19, 21, 55, 70, 91, 94, 36, ]

I’m thinking of working out this samples based on the algorithmic concept tree I made in the xmind file so that I am able to follow through based on the code I wrote…

Some lists of flaws I’ve seen while deducting those samples:

Pivot minused – 1 when the partitioning had already minused the variable by one, thus, pointer would reach and swap the wrong element of the array