**Documentation**

**Analysis**

1. Quick sort

T (n) =2T (N) + N

N vs N^log2

Best case = Ω (nlogn)

Worst case= O (n2)

1. Counting sort

T (n) = n-1+n-1+n+K

Average case= ʘ(n+k)

1. Kth element

ʘ(k nlogn)

1. Alpha trim

h-n/2 h=image height

h-n/2

n

n

Using Kth element:

O(kn4) k=trim value

Using Counting sort:

O(n4)

1. Adaptive Median

Using Quick sort:

Worst case: O(n4)

Best case: O(n3 logn)

Using Counting sort:

O((n+k) \* n2)

So it’s better to use adaptive median as it has lower time

And it preserves the edges of the image.

