ANALISIS KOMPLEKSITAS ALGORITMA BUBBLE SORT DAN MERGE SORT

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A. Pengertian dan Pseudocode

1. Bubble Sort

```
BubbleSort(array)
    for i=length(array)-1 downto 0 do
for j=1 to i do
            if array[j-1]  > array[j] then
                swap(array[j-1],array[j])
            end if
        end for
    end for
```

A. Pengertian dan Pseudocode

2. Merge Sort

```
MergeSort(array,low,high)
    mid : integer
    if (low<high) then
        mid <- (low+high)/2
        MergeSort(array,low,mid)
        MergeSort(array,mid+1,high)
        Merge(array,low,high,mid)
    endif
```

B. C(n), T(n), Kelas Efisiensi

1. Bubble Sort

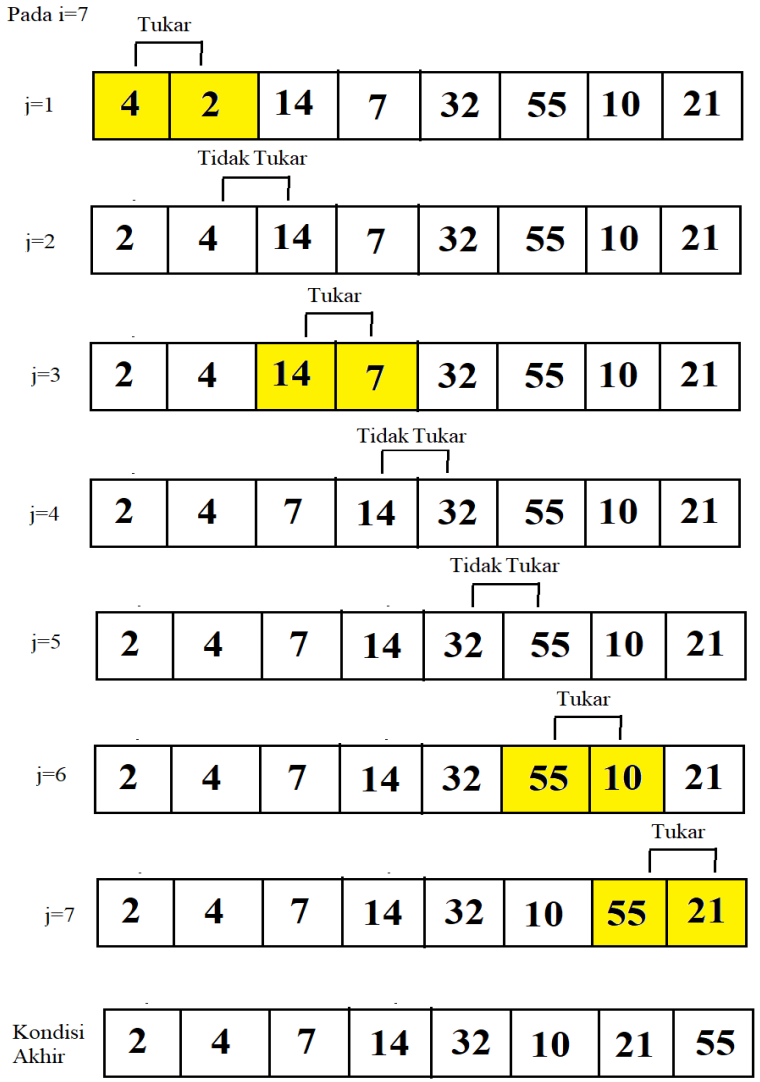
$$T(n) \in O(n^2)$$
$$C(n) = c_{op}n^2$$
$$Kelas\ efisiensi\ Kuadratik$$

2. Merge Sort

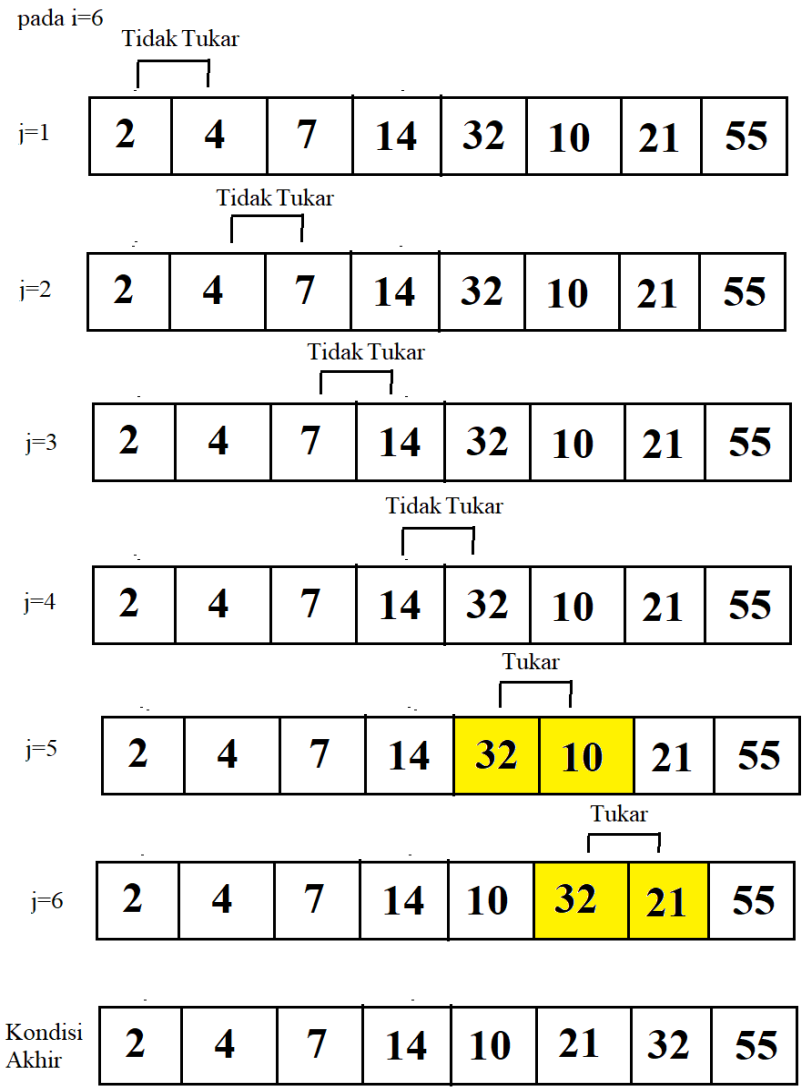
$$T(n) \in O(n \log n)$$
$$C(n) = c_{op}n \log n$$
$$Kelas\ efisiensi\ Logaritmik$$

C. Contoh dan Ilustrasi

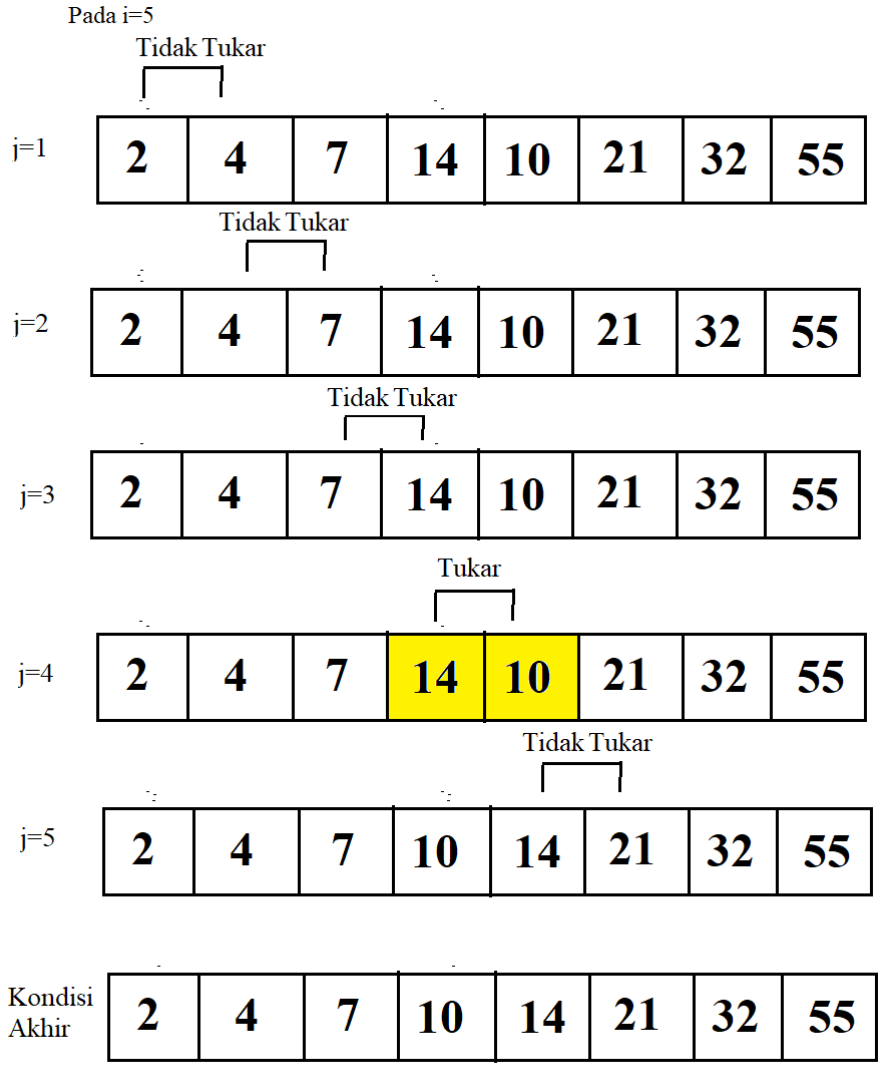
1. Bubble Sort



C. Contoh dan Ilustrasi

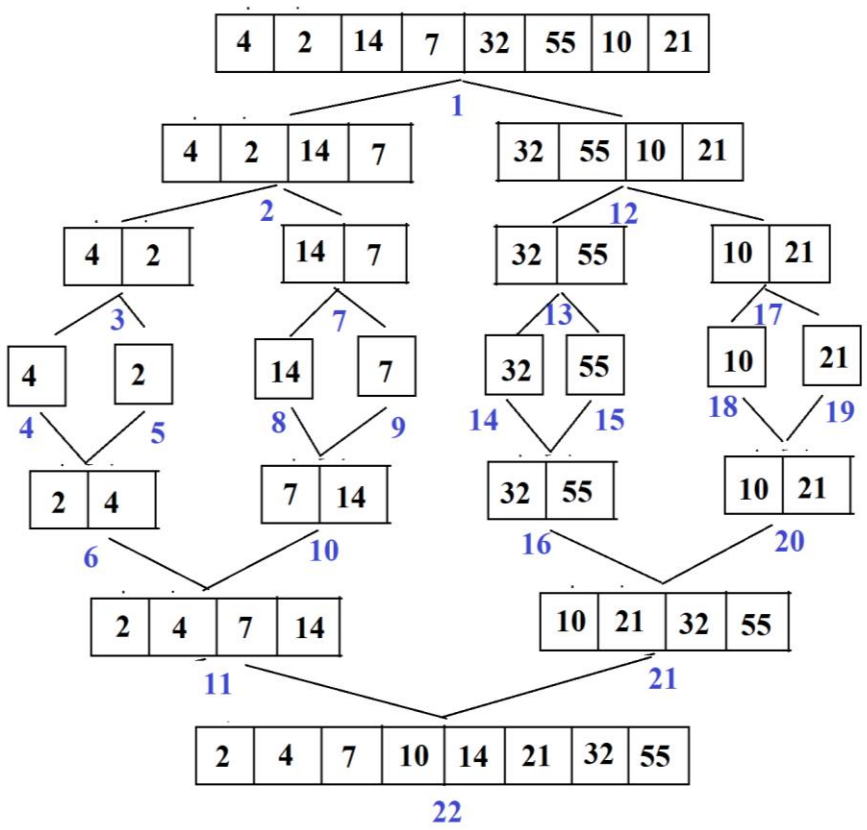


C. Contoh dan Ilustrasi



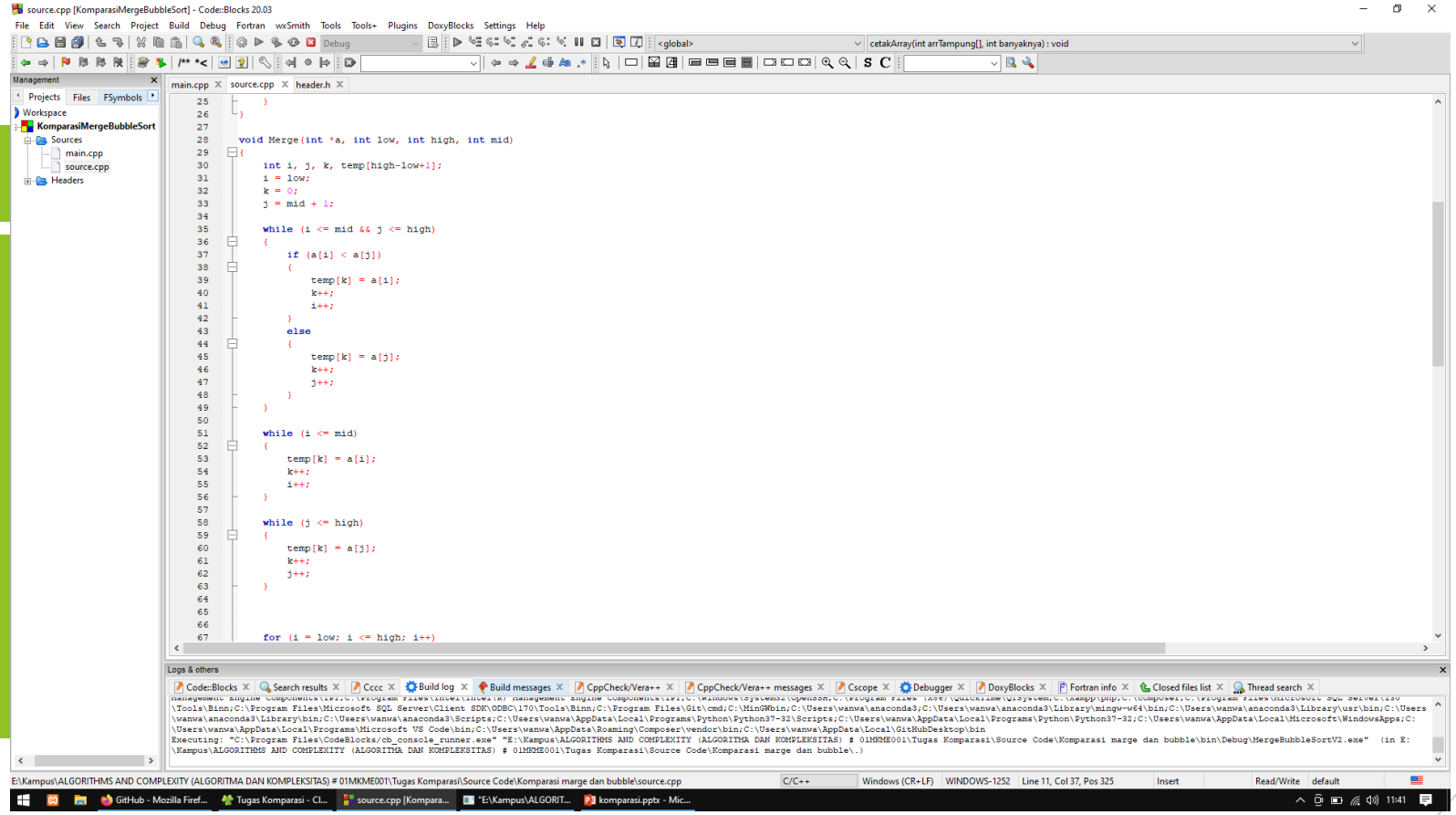
C. Contoh dan Ilustrasi

2. Merge Sort

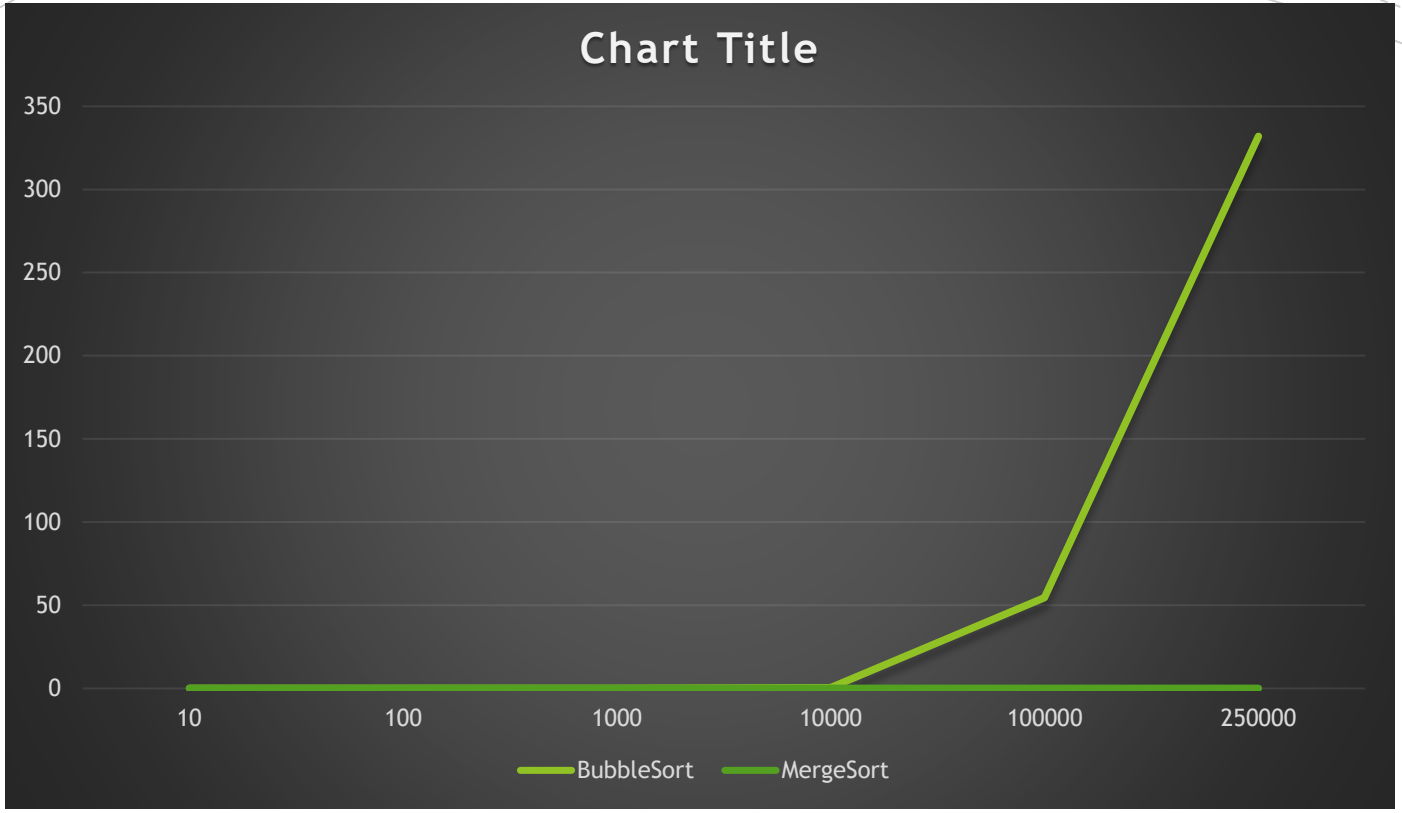


D. Source

Nanti Akan ditampilkan langsung



E. Tabel dan Grafik



Input (n)	10	100	1000	10000	100000	250000
BubbleSort	0	0	0.015	0.527	54.457	332
MergeSort	0	0	0	0	0.033	0.078

F. VISUALISASI

Nanti Akan ditampilkan langsung