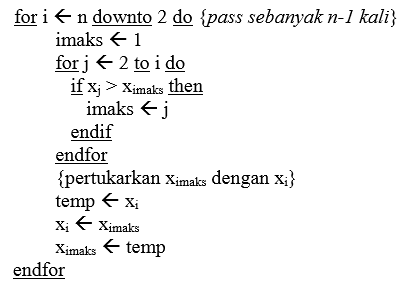
Nama: Benhard David Hamonangan Tampubolon

NPM: 140810170042

Kasus 1:

Ada di file Github dengan nama merge.cpp

Kasus 2



Subproblem = 1

Masalah setiap subproblem = n-1

Waktu proses pembagian = n

Waktu proses penggabungan = n

If n = 1

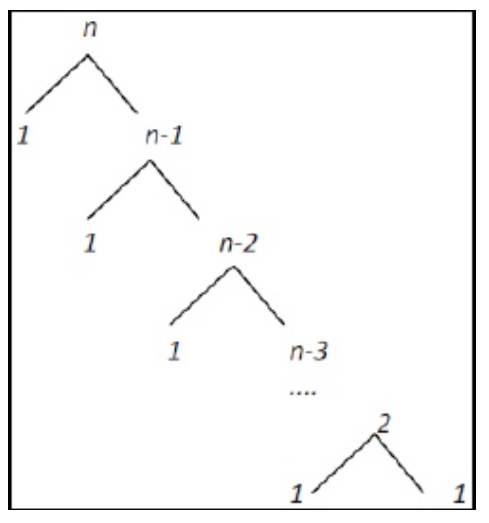
If n = 1

otherwise

otherwise

If n = 1

otherwise



*T(n) = cn + cn-c +cn-2c + ..... + 2c +cn*

*= c((n-1)(n-2)/2) + cn*

*= c((n^2-3n+2)/2) + cn*

*= c((n^2)/2)-(3n/2)+1 + cn*

*=O(n^2)*

*T(n) = cn + cn-c +cn-2c + ..... + 2c +cn*

*= c((n-1)(n-2)/2) + cn*

*= c((n^2-3n+2)/2) + cn*

*= c((n^2)/2)-(3n/2)+1 + cn*

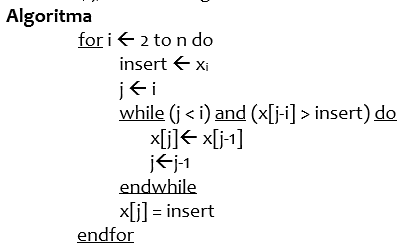
*=* *Ω (n^2)*

*T(n) = cn^2*

*=* *Θ(n^2)*

Codingan ada di github dengan nama file selection.cpp

Kasus 3



Subproblem = 1

Masalah setiap subproblem = n-1

Waktu proses penggabungan = n

Waktu proses pembagian = n

If n = 1

If n = 1

otherwise

otherwise

If n = 1

otherwise

*T(n) = cn + cn-c +cn-2c + ..... + 2c +cn <= 2cn^2 + cn^2*

*= c((n-1)(n-2)/2) + cn<= 2cn^2 + cn^2*

*= c((n^2-3n+2)/2) + cn<= 2cn^2 + cn^2*

*= c((n^2)/2)-c(3n/2)+c+cn <= 2cn^2 + cn^2*

*=O(n^2)*

*T(n) = cn <= cn*

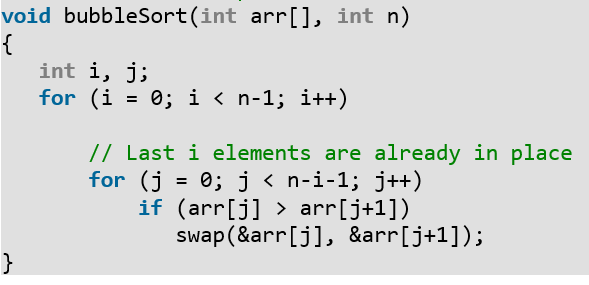
*=* *Ω (n)*

*T(n) = (cn + cn^2)/n*

*=* *Θ(n)*

Codingan ada di github dengan nama file insertion.cpp

Kasus 4



Subproblem = 1

Masalah setiap subproblem = n-1

Waktu proses pembagian = n

Waktu proses penggabungan = n

If n = 1

If n = 1

otherwise

otherwise

If n = 1

otherwise

*T(n) = cn + cn-c +cn-2c + ..... + 2c +c <= 2cn^2 + cn^2*

*= c((n-1)(n-2)/2) + c<= 2cn^2 + cn^2*

*= c((n^2-3n+2)/2) + c<= 2cn^2 + cn^2*

*= c((n^2)/2)-c(3n/2)+2c <= 2cn^2 + cn^2*

*=O(n^2)*

*T(n) = cn + cn-c +cn-2c + ..... + 2c +c <= 2cn^2 + cn^2*

*= c((n-1)(n-2)/2) + c<= 2cn^2 + cn^2*

*= c((n^2-3n+2)/2) + c<= 2cn^2 + cn^2*

*= c((n^2)/2)-c(3n/2)+2c <= 2cn^2 + cn^2*

*=* *Ω (n^2)*

*T(n) = cn^2 + cn^2*

*=* *Θ(n^2)*

Codingan ada di github dengan nama file bubble.cpp