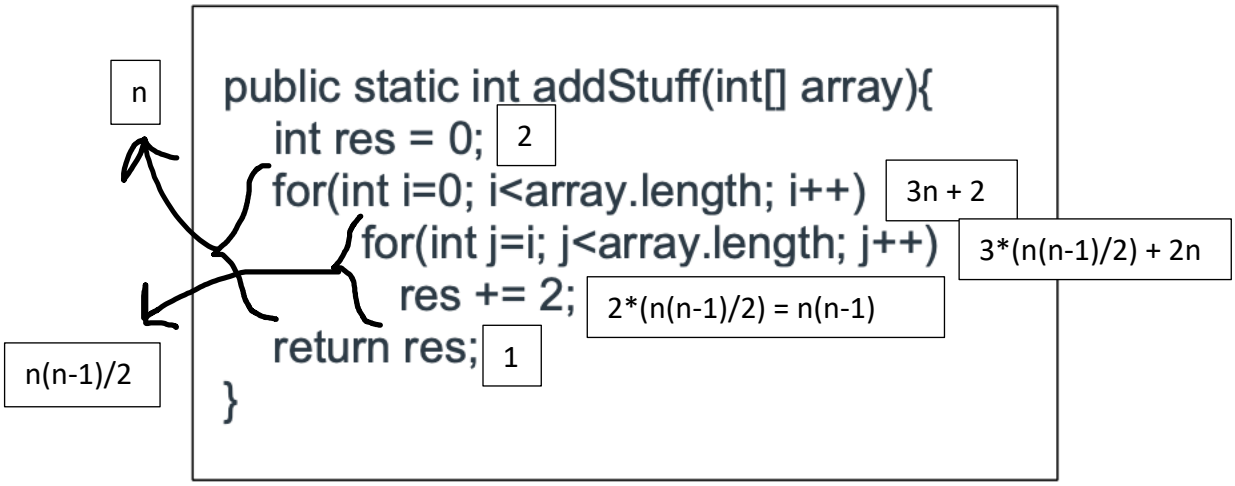
Karim R. Sammouri
Dr. Philippe Giabbanelli
CSE 374 – A
4 March 2021

Assignment 3 Part IV



The exact time complexity is:
$2 + 3n + 2 + 3*(n(n-1)/2) + 2n + n(n-1) + 1 = 2.5n^2 + 2.5n + 5$

So, the Θ complexity of addStuff is is $\Theta(n^{2})$ and the ~ complexity is $2.5n^2$

If I had to choose between addStuff and another solution with a complexity of $\Theta(n^3)$, I would choose addStuff because it has a better time complexity as per its $\Theta(n^2)$ time complexity. I'll simply compare their theta's.

If I had to choose between addStuff and another solution with a complexity of $\Theta(n^2)$, I would need to compare addStuff's and that solution's tilde values as their thetas would be equivalent and would not be sufficient to make a decision. If their tilde values are also equivalent, I'll need to compare their exact time complexities. Since I don't know the tilde complexity of the other solution, I can't make a decision on which one I would choose.