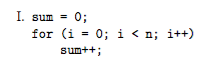
Marci M. McBride

CSE 122

HW 1

#3. Part a)

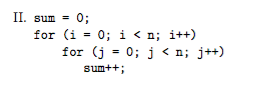


|  |  |  |
| --- | --- | --- |
| Line | Cost | N |
| C1 | 1 | 1 |
| C2 | 2 | N+1 |
| C3 | 1 | n |

T(n)= C1(1) + C2(N+1) + C3(n)

= n(C2+C3)+ C2 + C1

T(n) = 3n+3 = 3(n+1)

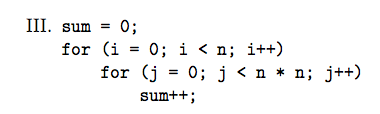


|  |  |  |
| --- | --- | --- |
| Line | Cost | N |
| C1 | 1 | 1 |
| C2 | 2 | N+1 |
| C3 | 2 | N(n+1) |
| C4 | 1 | N2 |

T(n)= C1(1) + C2(N+1) + C3(n(n+1))+C4(N2)

T(n) = 1 + 2n + 2 + 2(n2+n) + n2

=3n2 + 4n + 3

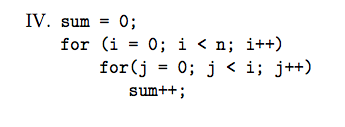


|  |  |  |
| --- | --- | --- |
| Line | Cost | N |
| C1 | 1 | 1 |
| C2 | 2 | N+1 |
| C3 | 2 | N(n2+1) |
| C4 | 1 | N3 |

T(n)= C1(1) + C2(N+1) + C3(n(n2+1))+C4(N3)

T(n) = 1 + 2n + 2 + 2(n3+n) + n3

=3n3 + 4n + 3

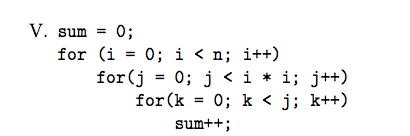


|  |  |  |
| --- | --- | --- |
| Line | Cost | N |
| C1 | 1 | 1 |
| C2 | 2 | N+1 |
| C3 | 2 | N(n+1)/2 |
| C4 | 1 | n(n-1)/2 |

T(n)= C1(1) + C2(N+1) + C3(n(n+1)/2)+C4(n(n-1)/2)

T(n) = 1 + 2n + 2 + n2 + n + (n2 – n)/2

T(n)= (3n2+5n+6)/2



|  |  |  |
| --- | --- | --- |
| Line | Cost | N |
| C1 | 1 | 1 |
| C2 | 2 | N+1 |
| C3 | 2 | (n-1)((n(2n-7)+12)/6 |
| C4 | 2 | (n-1) (n-2) (6n3-27n2+47n-30)/60 |
| C5 | 1 | (n-1) (n-2) (n-3) (2n2-3n)/20 |

T(n)= C1(1) + C2(N+1) + C3((n-1)((n(2n-7)+12)/6))+ C4((n-1) (n-2) (6n3-

27n2+47n-30)/60) + C5((n-1) (n-2) (n-3) (2n2-3n)/20)

T(n) = 1+2n+2+ 2((n-1)((n(2n-7)+12)/6) + 2((n-1) (n-2) (6n3-27n2+47n-30)/60)

+ ((n-1) (n-2) (n-3) (2n2-3n)/20)

T(n)= (6n5-45n4+140n3-225n2+224n-50)/10