335 Project 1

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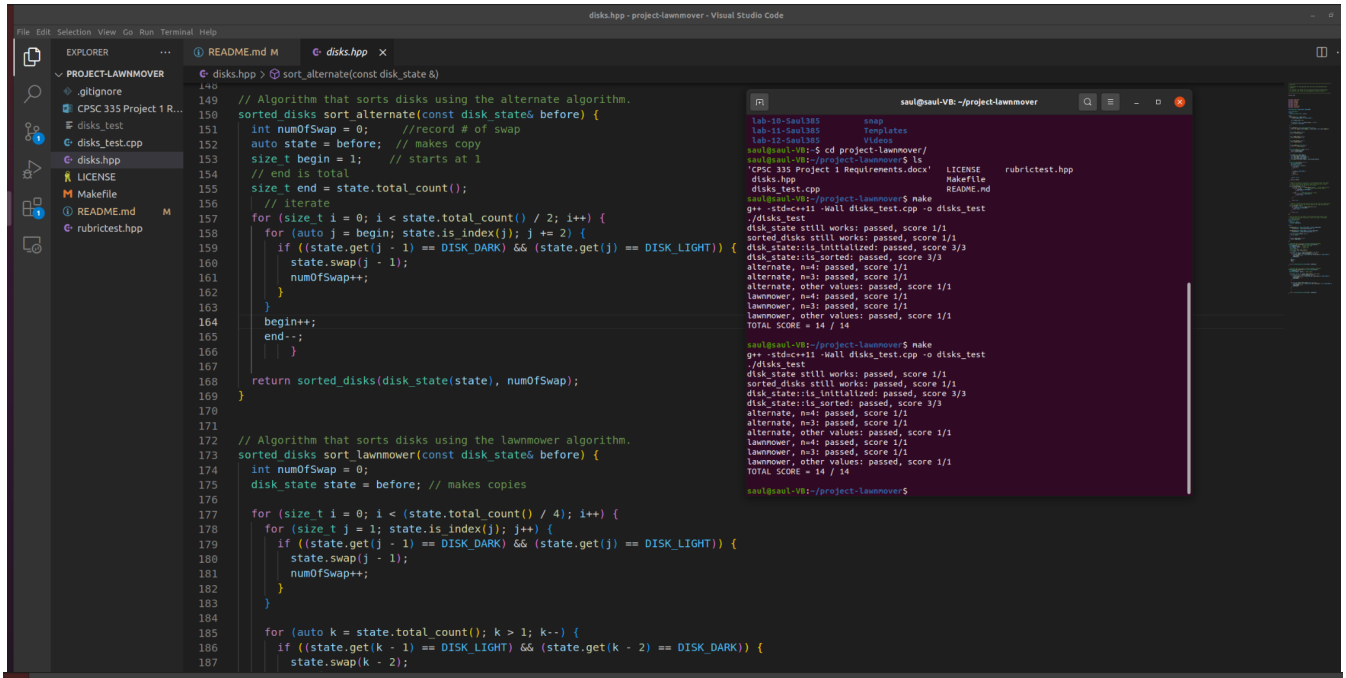
1.

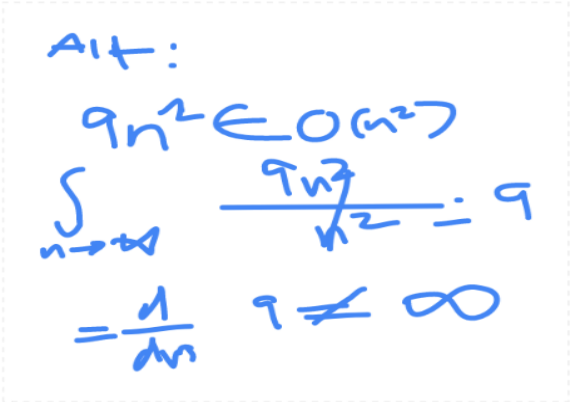


ALT ALGO PSEUDO CODE:

Int swapped= 0	1tu
State = before	1tu
Begin = 1	1tu
End = total	1tu
For begin to end/2 do	1-1+ n/2= n/2
For begin to index j, j+=2 do	1-1 + 2n= 2n
If state j-1 = dark and state j == light do	3tu
Swap	1tu
Swapped++	1tu
Endif	
Endfor	
Return state and swapped	
Endfor	

SC=(n/2) *(2n)*9=(n^2)* 9= 9n^2

Using Limit theorem:



LAWNMOWER PSEUDO CODE:

Int Swapped = 0	1tu
Diskstate = before	1tu
For i=0 to total_count/4 do	1+0+ n/4 = n/4+1
For j=1 to index do	1-1+ n = n
If state j-1 = dark and state j == light do	3tu
Swap	1tu
Swapped++	1tu
Endif	
Endfor	
For k = totalcount to 1 do	(1-n)/-1 + 1= n
If state k-1 = light and state k-2 == dark do	4tu
Swap	1tu
Swapped++	1tu
Endif	
Endfor	
Endfor	
Return state and swapped	

SC=(n/4+1) *(n) *7 =7n^2/4 + 7n