

9.12.1 Done in LIS.cpp

9.12.2 Done in SUM.cpp

(b) The time complexity is $\Theta\left(\frac{n(n+1)}{2}\right)$ as it is the

number of time the loop runs. The space complexity for $n \times n$ matrix will also be $\Theta(n^2)$

for brute force the time complexity would be $\Theta(2^n)$ as that is the total number of sets that we would need to create.

(c) A greedy algorithm will always create maximum value left or right to it. But when we do that we get 7, 8, 1, 7, 5 which is not the optimum solution.