**COT 5405 ANALYSIS OF ALGORITHMS**

**PROGRAMMING PROJECT**

**Spring 2022**

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(For each alg)

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* Mathematical Recursive Formulation expressing optimal substructure property
* Time Complexity
* Space Complexity
* Experimental Comparative Study
* Graphs etc.
* Conclusion

(For each prog task)

* Ease of implementation
* Other potential technical challenges

**Problem 1**

**ALG1 – Brute Force**

Pseudo-code

Array A[0…n]

maxSumSoFar = -INF

for left = 0 to n-1

for right = left to n – 1

currSum = 0

for temp = left to right

currSum = currSum + A[temp]

if currSum > maxSumSoFar

maxSumSoFar = currSum

l = left

r = right

return maxSumSoFar

**ALG2 – Dynamic Programming ( O(n2) )**

Pseudo-code

**ALG3 – Dynamic Programming ( O(n) )**

Pseudo-code