# PROJECT 3

**MAXIMUM SUBARRAY and DIVIDE-CONQUER ALGORITHM**

(30 +10+10 points)

1. Using recursion method (Theta n lg n):

Using Maximum contiguous sub-array algorithm Implement a Program in Java or Python to find a maximum sub-array in a given array of size N,

1. Input at least 5 – 8 or more sets of randomized unsorted data with N elements in each set. For example, N= 15, 20, 25, 30, 40, 45 49. Your array elements must be of real numbers.
2. Display the original array and the maximum sub-array beginning and ending interval and the sum for each maximum sub-array.
3. Draw graphs by using counter in the program to compare the actual counting of the algorithm time complexity and the theoretical time complexity.
4. **Use brute-force method (Theta n square):**

**Use brute-force method to write program to solve maximum subarray**

**problem and provide output that are same as the above a) and b).**