DSA

Linear Data Structure
1. Array
2. stack(LIFO)
3.Queue(FIFO)
4. Linked List
   1. singly Linked List
      A. Insert new Node at Starting of Singly Linked List
      B. Insert New Node at ending of SIngly Linked List
      C. Insert New Node at specific Position in Singly linked List
      D. Delete First Node of Singly Linked List
      E. Delete Last Node of Singly Linked List
      F. Delete specific Node of Singly Linked List
   2. Doubly Linked List
   3. Circular Linked List

Non Linear Data Structure
1. Tree
2. Graph
   1. DFS(Que)
   2.BFS(Stack)

Sorting
1. bubble sort
2. Insertion Sort
3. Select Sort
4. Quick Sort
5. Merge Sort

Searching
1. Linear Search
2. Binary Search

Complexities
1. Time complexity
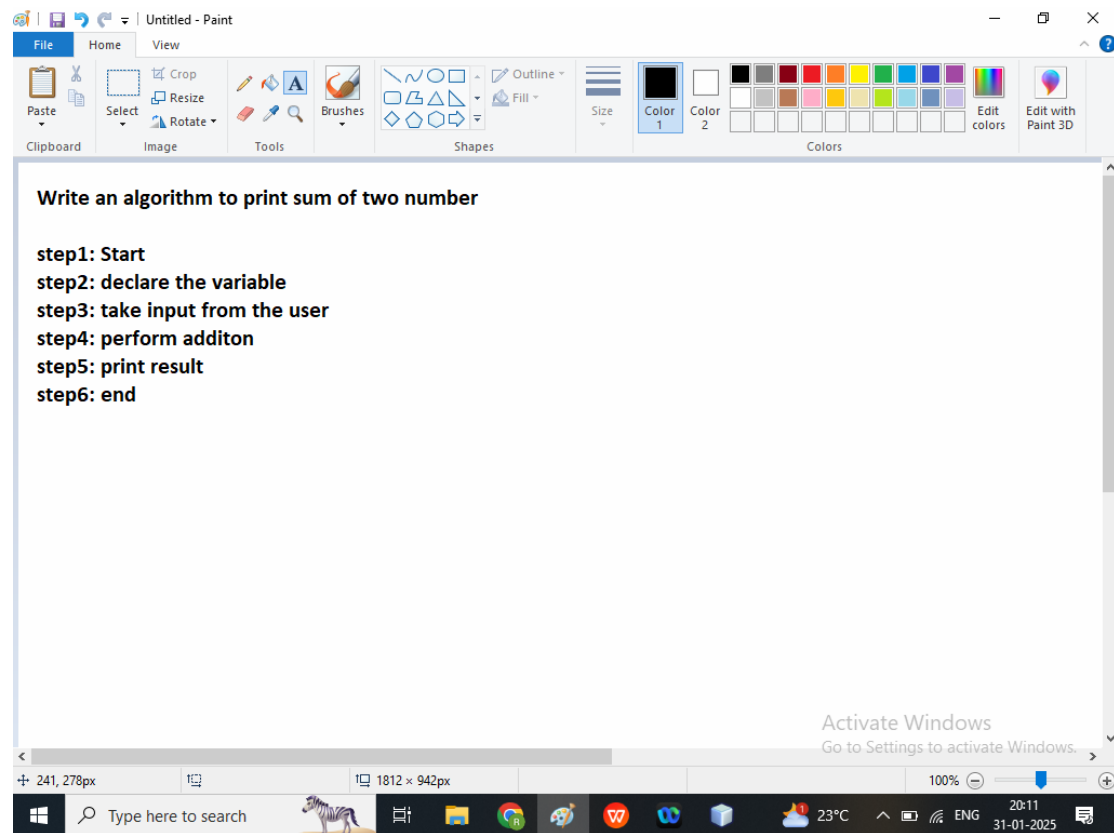2. Space Complexity

Collection Framework

Q1. Explain algorithm in data Structure?

Ans: An Algorithm is a step by step procedure or set of rules to perfrom some specific task or to solve a particular problem. It consist of a number of finite state of well defined instructions that take inputs , proccess it, and produce some output

Write an algorithm to print sum of two number

step1: Start
step2: declare the variable
step3: take input from the user
step4: perform additon
step5: print result
step6: end

Q2. Write an algorithm to check given number is Perfect number?

Step1: Start
Step2: input a number
Step3: initialize fsum=0
Step4: Loop from 1 to <=n/2
     If i is divisor of(n%I==0) then add i to fsum
Step5:Check if fsum is equal to original number(n)
    If n==fsum then print it is Perfect Number
    Else ,print this is not a perfect number
Step6: end