# **TASK ON ALGORITHMS**

1. **Write an algorithm for finding a palindrome**

Step 1: start

Step 2: Declare num1 num2

Step 3: Read variable value num1 from user

Step 4: store the value in some temp variable (temp =num1)

Step 5: Calculate remainder (r=r%10)

Step 6: Calculate num2=num2\*10+r

Step 6: Repeat step 5 till palindrome(n/10)

Step 7: When condition fails check for equality

if(num2==num1)

return true

else

reture false

step 8: end

1. **Write an algorithm for generating anagrams for user entered inputs**

Step 1: start

Step 2: input str

Step 3: calling a function with parameters beginning string and ending string

Step 4: checking condition endingstring.length()<=1

Step 5: if step 4 is false it will go to else condition

Step 6: Iterating for loop 0 to endingString.length() (i.e 0 to 2)

Step 7: Creates a string object called new String by computing

newString = endingString.substring(0,i) + endingString(i+1)

Step 8: Recursively call the function (repeat step 3 to 6)

Step 9: Print result

Step 10: End

1. **Write an algorithm for binary search**

Step 1: Start

Step 2: Initialize an ordered array, search array, searchno, length

Step 3: initialize low=0 and high=length

Step 4: repeat step 5 till row<=high

Step 5: Middle = (low+high)/2

Step 6: if searcharray[middle]=searchno

Search is successful

Return middle

Else if searcharray[middle]>searchno[high]

High=middle-1

Else

Low=middle+1.

Step 7: End