OOP Laboratory Test

1	Write a **C++ program** to create a class called **STRING** and implement the following operations. Display the results after every operation by **overloading** the operator **<<**. **i)** STRING s1 = "NIT" **ii)** STRING s2 = "GOA" **iii)** STRING s3 = s1 + s2 (Use **copy constructor**)
2	Write a C++ program to create a class called STACK using an array of integers. Implement the following operations by overloading the operators '+' and '-'. i) s1 = s1 + element; where s1 is an object of the class STACK and element is an integer to be pushed on the top of the stack. ii) s1 = s1- ; where s1 is an object of the class STACK. '-' operator pops the element. Handle the STACK empty and full conditions. Also display the contents of the stack after each operation by overloading << operator.

3	**Define a class SET with Data members: array of int, int variable to indicate number of elements in a SET object; and Member functions: to read element of a SET object, to print elements of a SET object, to find union of 2 objects of SET using operator overloading (S3=S1+S2), to find intersection of 2 objects of SET using operator overloading (S4= S1*S2). S1, S2, S3 and S4 are objects of SET. Use this class in a main function to show the above operations.**