OOP Laboratory

1.	**Write a C++ program to create a class called OCTAL which has the characteristics of an octal number. Implement the following operations by writing an appropriate constructor and an overloaded operator +.** **i) OCTAL h = x; where x is an integer.** **ii) int y= h + k; where h is an OCTAL object and k is an integer.** **iii) Display the OCTAL result by overloading the operator <<.**
2.	**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)**
3.	**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.**