OOP Laboratory Test

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 program C++ program to create a class called DATE. Accept two valid dates in the form of dd/mm/yyyy. Implement the following operations by overloading the operator + and -. After every operation display the result by overloading operator <<. i) No_of_days= D1-D2 where D1 and D2 are DATE objects, D1>=D2 and No_of_days is an integer. ii) D2=D1+ No_of_days; where D1 is a DATE object and No_of_days is an integer.
3	**Write a C++ program to create a template function for Quick sort & demonstrate sorting of integer & double.**
4	Write a C++ Program to create a class called LIST (linked list) with the following member functions. L=L+ele; will insert an element from the front to the list L. L=L-ele; Search a node with an element ele in the list L and remove the node with ele from L. L1==L2 ; should return true if both the lists L1 and L2 are same with respect to elements. L1=L1--; To remove the duplicates if any from the list L1. Note that after duplicates removal, all distinct elements of the original list must be still present. Overload >> to display the content of the list after every list operations. In addition to the above functions you can add your own functions if needed.