

Operator overloading with Member and Friend functions:

1. Design a Number class with three private members: Ones, Tens, Hundreds. Write member functions for overloading ++ and - - operators in the prefix and postfix form. For example, when (ones, tens, hundreds) tuple is (1,2,9), an increment will lead to (1,3,0); similarly, an increment in (1,9,9) will lead to (2,0,0). Write a main function to use the objects of Number class with ++ and - - operators in arithmetic expressions.
2. Repeat the above program with Friend functions
3. Write a program to convert the Number class object to corresponding integer type, and integer type values to the Number class object.
4. Design Time Class with hh, mm, ss as private members. Write member functions for overloading the comparison operators < , > , == to compare the two time objects.
5. Repeat the above program with Friend functions.
6. Write a DateTime class with members year, month, day, hh, mm, ss. Write a program to convert the DateTime class object to Unix epoch time (number of seconds since 1 January 1970) and vice versa. Write all the supporting functions
7. Design Complex class with real and imaginary parts. Write member functions for overloading the arithmetic operators +, -, *, / to perform, addition, subtraction, multiplication and division on a pair of Complex type objects.
8. Repeat the above program with Friend functions.