TASK - 4

1. Write a C++ program to create a class point with three private members x, y and z. Implement function to calculate Euclidean distance between two points and display the result.
2. Write a C++ program for demonstrating the concept of function overloading. Create class shape with function surfacearea(). Overload function surfacearea() for calculating the surface area sphere, cylinder and cube.
3. Write a program to create class point with members angle and radius. Create two constructors for initializing object with values and object. Create function convert() to convert polar coordinates to x-y coordinates. In main() take the value from user and dynamically allocate the value to objects. Create copy constructor and display the results of both.
4. Write a program to create class Distance with members feet and inches. Overload the unary operator decrementor(--) where it will decrement the value of feet and inches by 1 by both (i) operator overloading and (ii) Friend function . Write a display() function to print valid measure of feet and inches.
5. Write a program to create class Time with members hour, minutes and seconds. Overload the binary operator plus(+) where two objects of time are added using (i) operator overloading and (ii) Friend function . Write a display() function to print valid time in 12 hours format.
6. Create a class complex with members real and imaginary. Overload the binary operator for multiplication(*) and division (/) of two complex numbers.
7. Demonstrate the concept of type conversion from basic type to class type. Create class temperature with member Fahrenheit. Create constructor with one argument for type conversion to celcius. In main() call with basic type.
8. Write a program for creating friend function for the concatenation to two strings.