

# CS205 - LAB6

Design a class named Box whose dimensions are integers and private to the class. The dimensions are labelled: length l, breadth b, and height h.

The default constructor of the class should initialize l, b, and h to 0.

The parameterized constructor Box (int length, int breadth, int height) should initialize Box's l, b and h to length, breadth and height.

The copy constructor Box (Box b) should set l, b and h to B's l, b and h, respectively.

Apart from the above, the class should have 4 functions:

- int getLength() - Return box's length
- int getBreadth() - Return box's breadth
- int getHeight() - Return box's height
- long long CalculateVolume() - Return the volume of the box

Overload the operator < for the class Box. Box A < Box B if:

1.  $A.l < B.l$
2.  $A.b < B.b$  and  $A.l == B.l$
3.  $A.h < B.h$  and  $A.b == B.b$  and  $A.l == B.l$

Overload operator << for the class Box().

If B is an object of class Box:

cout << B should print B.l, B.b and B.h on a single line separated by spaces.

## Constraints:

l, b and h are in the range of [0, 100000].

Two boxes being compared using the operator will not have all three dimensions equal.