

## **Lab IA – 01**

1	Write a program to create a class `Car` with attributes brand and price. Create objects and display details.
2	Write a program to demonstrate constructor and destructor in a class `Laptop`. Show when they are called.
3	Write a program to count the number of objects created using a static data member in class `Student`.
4	Write a program with two classes `ClassA` and `ClassB` and use a friend function to add private data of both.
5	Write a program to overload `+` operator to add two complex numbers.
6	Define a class `Book` with members title, author, and price. Write member functions to input and display details.
7	Define a class `Employee` with a constructor to initialize data and a destructor to display a message when object is destroyed.
8	Define a class `Account` with static member `interestRate`. Provide a static function to change it and display for all accounts.
9	Create a class `Complex` with private members real and imag. Use a friend function to add two complex numbers.
10	Define a class `Vector` and overload `*` operator to calculate dot product of two vectors.
11	Create a class `Student` with roll number and marks. Write functions to read and display details of 3 students.
12	Create a class `Rectangle` with constructor to initialize length and breadth. Calculate and display area.
13	Create a class `Bank` where a static member keeps track of total balance deposited by all objects.
14	Define a class `Box` and use a friend function to compare volumes of two boxes.
15	Create a class `Matrix` and overload `+` operator to add two matrices.

### **❖ Bonus Questions:**

Create a class Number with a private integer member value and a class Roman with a private string member romanValue. Write a friend function convert(Number, Roman&) that converts the decimal number stored in Number into its equivalent Roman numeral and stores it in the Roman object. Demonstrate the conversion for at least two numbers.