

# **Programming Laboratory-I**

## **Assignment No-5**

**(Namespace and virtual function)**

**Due date-03/10/2023**

1. You are provided with two libraries. Both libraries have a class called LibraryClass and both have a function called show(). Your task is to utilize both of these classes in a main program without any naming conflicts.
2. You are developing software for a robotic company. The company manufactures ground robots and drones. Each type of robot has different components. Your task is to define nested namespaces that categorize these robots and their components.
3. You have to design a basic system where different animals make sounds. The base class Animal will have a function makeSound(), which should be overridden by derived classes to make specific sounds.
4. You are to design a system where different shapes calculate their areas. The base class Shape will have a function area(), which should be overridden by derived classes to calculate specific areas.

Group Task:

Building a Modular Library System with Namespaces

Objective: Design a library management system using namespaces to organize various features.

Background: A library management system has various modules - book management, member management, and staff management.

Instructions:

Divide task:

Book Management: Manages adding, deleting, and searching for books.

Member Management: Manages member registrations, deletions, and searching for members.

Staff Management: Manages staff hiring, firing, and searching for staff.

Develop Namespace Structured Header Files:

book\_management.h by Book Management Team