

## **CSE 1202 (Object Oriented Programming Lab)**

### **Lab 4 - Class Constructor**

1. Create a class named Car with private data members color, model, and year. Include public methods to:
  - Set the car's color, model, and year.
  - Display the car's details.
  - Check if the car is considered a vintage car (older than 25 years).
2. Create a class Box with private data members length, width, and height. Implement a default constructor to initialize these members to 0. Write a program to create an object of the Box class and display the values of its members.
3. Create a class Circle with a private data member radius. Implement a parameterized constructor that initializes radius with the given value. Write a program that calculates and displays the area of the circle.
4. Create a class Point with private data members x and y coordinates. Implement:
  - A default constructor that initializes both x and y to 0.
  - A parameterized constructor that initializes x and y with specific values. Write a program to create objects using both constructors and display the coordinates of each point.
5. Create a class Student with private data members name and grade. Implement a constructor with default arguments where:
  - name is initialized to "Unknown".
  - grade is initialized to 0. Write a program that creates multiple Student objects, some with given names and grades and others with default values.