Programming Paradigms Lab Assignment (CS 2273)

Assignment Sheet 4 (Part 2) : Inheritance and Polymorphism using C++

Time : 1 week

Continuation from Assignment 4 (Part 1)

Attempt the following ONLY when Assignment-4-Part-1 problems are completed

4. Reuse the code from program # 3 above and implement below program -

   Design a class `ShapeStack` that can store various kinds of geometric shapes like `Triangle`, `Rectangle` and `Circle`. Make sure `Push(...)` and `Pop(...)` operations are not overloaded (such as single interface per operation). Also provide `Display(...)` and `TotalAreaCovered(...)` method under `ShapeStack` class.

5. Create a class `Cricketer` with required data members. Inherit the class and create two derived classes `Batsman` and `Bowler` with required data members and member functions. Create a class `Allrounder` wich is derived from both `Batsman` and `Bowler` classes. Implement the following functions in `Allrounder` class:

   a. Insert records match wise records
   b. Count batting average
   c. Count total wickets
   d. Find highest wickets score against which country
   e. Find highest runs score against which country