1. Abstraction with YouTube videos should have two classes, one of Videos the other of Comments. The Video class should have the author, title and length of the video and the Comment class should have the name and comments made by somebody. This class will also have a method for getting the number of comments made by an individual. The Program should be able to display all its attributes.
2. Encapsulation with online ordering should have four classes: Product, Customer, Address, and Order. The order class should be have a list to keep track of the Product, Customer and Address classes, because it would use them to charge, create packing and shipping IDs etc.
3. Inheritance with Event planning should use inheritance to create a base event that would have the Lecture, Outdoor, and Receptions as derived classes. The base class should have the methods to display information with varying levels of detail e.g., full details, short details, or standard information.
4. Polymorphism with Exercise tracking should use the principles of inheritance, encapsulation, and should also have methods, that would be used by all derived classes, already defined in the base class as virtual or abstract methods in readiness for their being overridden in the derived classes. Each derived class should be placed in the same list regardless of the type of activity and the same GetSummary() method should be called on each class while iterating through the list container.