

Objects are self-contained data structures that consist of properties, methods, and events

- Properties - specify the data represented by the object

- Methods - specify an object's behavior

- Events - provided communication between objects

Objects are created by classes

## Encapsulation

An information hiding mechanism. A mechanism to restrict access to a class or class member.

Classes are self-contained units are an example of encapsulation

### Class Access Modifiers

- Public - Access is not restricted

- Private - Access is restricted to the containing class

- Protected - Access is restricted to the containing class and to any class that is derived from

- Internal - Access is restricted to the code in the same assembly

- Protected Internal - Access is restricted to any code in the same assembly and only to a derived class in another assembly

## Inheritance

Allows to reuse class as the basis of a new class

Base class or super class is the class whose functionality is inherited

The derived class is a class that inherits the base functionality from the super/base class

## Polymorphism

The ability of the derived class to share common functionality from the super class but still defines unique behavior.

## Interfaces

Used to establish contracts