**Class and Objects:**

* **Class and Object** are the basic concepts of Object Oriented Programming which revolve around the real-life entities.

**Class:**

* A class is a user-defined blueprint or prototype from which objects are created.
* Basically, a class combines the fields and methods(member function which defines actions) into a single unit.
* In C#, classes support the polymorphism, inheritance and also provide the concept of derived classes and base classes.
* A class enables you to create your own custom types by grouping together variables of other types, methods and events.

**Declaration of class:**

* Generally, a class declaration contains only keyword **class**, followed by an **identifier(name)**of the class and the class body enclosed by a pair of curly braces.
* **The general form of a class is:**

**class** <**class** name>

{

body of the **class**....

}

**class** Main()

{

}

* The body of class can consists of **data members** as well as **methods**.
* **The general form** is expanded below to show the fact that the class body can contain **data members (variables)** as well as **methods (function).**
* The access specifier is optional and if absent then the member is private to the class.
* Members with private access can be used only by the other members of the class.

**Objects:**

* It is a basic unit of Object Oriented Programming and represents the real-life entities
* Object is an instance of a class that is created dynamically

**Declaring Objects (Also called instantiating a class)**

* When an object of a class is created, the class is said to be instantiated.
* All the instances share the attributes and the behavior of the class.
* But the values of those attributes, i.e. the state are unique for each object.
* A single class may have any number of instances.
* **To create object of class we have to  use the following syntax:**

**<classname> <object name> =new <classname( )>**

**Example:**

**class box**

{

double height;

double width;

double length;

**public void setval()** //method to assign values

{

height = 100;

width = 180;

length = 160;

}

**public void show()**

{

Console.WriteLine("Height= " + height);

Console.WriteLine("Width= " + width);

Console.WriteLine("Length= " + length);

}

}

**class boxdemo**

{

**public static void Main(String []args)**

{

**box** obj1 = new **box**();

obj1.**setval()**;

obj1.**show()**;

}

}