**Explaining Inheritance:**

Inheritance can simply be defined as a principle of programming that allows one class to be able to gain the attributes and methods of another class directly without the programmer having to type them again. That is it is a principle that follows the idea of a parent to child inheritance. It helps a program gain attributes from a parent program.

The advantage of Inheritance is that it helps to avoid rewriting codes over and over all the time. Once written in the base program, it is easy for the child class to get the attribute from the parent class.

This is a basic example of inheritance shown below:

// Base class

public class Pet

{

public string Name;

public Pet(string name)

{

Name = name;

}

public void Speak()

{

Console.WriteLine($"{Name} makes a sound.");

}

}

// Derived class

public class Horse : Pet

{

public Horse(string name) : base(name) { }

public void Snort()

{

Console.WriteLine($"{Name} snorts: Huff! Huff!");

}

}

// Usage

class Program

{

static void Main()

{

Horse myHorse = new Horse("Buddy");

myHorse.Speak(); // Inherited from Pet

myHorse.Snort(); // Specific to Horse class

}

}