* Explain the meaning of Inheritance

Inheritance is the ability for one class to obtain the attributes and methods of another class directly, without having to type them. It follows the same idea of people inheriting certain characteristics from their parents.

* Highlight a benefit of Inheritance

There are base and derivd or super and bus classes. The syntax for specifying an inheritance relationship is different from language to language but is always found in the declaration of the child class. In C# when defining the name of the class, you use a colon followed by the name of the parent class. No other special syntax is required. The real benefit of inheritance is you are able to call a method on an instance of others even thought it is not defined in that class. The class automatically go it by virtue of the inheritance relationship with.

* Provide an application of Inheritance

write classes to represent different kinds of homework assignments with parent class the Inheritance

* Use a code example of Inheritance from the program you wrote

public class Assignment

{

private string \_studentName;

private string \_topic;

public Assignment(string studentName, string topic)

{

\_studentName = studentName;

\_topic = topic;

}

public string GetStudentName()

{

return \_studentName;

}

public string GetTopic()

{

return \_topic;

}

public string GetSummary()

{

return \_studentName + "-" + \_topic;

}

}

public class MathAssignment : Assignment

{

private string \_textbookSection;

private string \_problems;

public MathAssignment(string studentName, string topic, string textbookSection, string problems) : base(studentName, topic)

{

\_textbookSection = textbookSection;

\_problems = problems;

}

public string GetHomeworkList()

{

return $"Section {\_textbookSection} Problems {\_problems}";

}

}

using System;

class Program

{

static void Main(string[] args)

{

Assignment a1= new Assignment("Samuel Bennett", "Multiplication");

Console.WriteLine(a1.GetSummary());

MathAssignment a2 = new MathAssignment("Roberto Rodriguez", "Fractions", "7.3", "8-19");

Console.WriteLine(a2.GetSummary());

Console.WriteLine(a2.GetHomeworkList());

}

}