**Explain the meaning of Inheritance**

Inheritance in programming is a fundamental concept where one class (called the child or derived class) inherits attributes and methods from another (called the parent or base class). This allows the child class to reuse and extend the behavior of the parent class without rewriting common code.

**Highlight a benefit of Inheritance**

One major benefit of inheritance is code reusability. BY inheriting from a base class a derived class can automatically access and use the methods and attributes of the base class without duplicating code.

**Provide an application of Inheritance**

Object-oriented programming commonly uses inheritance to create specialized versions of general subjects. For example, a school system may have a general person class that contains common attributes like name and address.

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

Here is one example of a recent code example:  
using System;

using System.Threading;

public class MindfulnessActivity

{

    protected int \_duration;

    protected string \_activityName;

    protected string \_description;

    public void StartActivity(string activityName, string description)

    {

        \_activityName = activityName;

        \_description = description;

        Console.Clear();

        Console.WriteLine($"Starting {\_activityName}");

        Console.WriteLine(\_description);

        Console.Write("Enter the duration in seconds: ");

        \_duration = int.Parse(Console.ReadLine());

        Console.WriteLine("Prepare to begin...");

        ShowSpinner(3); // Spinner pause before starting the activity

    }

    public void EndActivity()

    {

        Console.WriteLine("Good job!");

        Thread.Sleep(1000);

        Console.WriteLine($"You have completed the {\_activityName} activity for {\_duration} seconds.");

        ShowSpinner(3); // Spinner pause before finishing

    }

    protected void ShowAnimation(int seconds)

    {

        for (int i = 0; i < seconds; i++)

        {

            Console.Write(". ");

            Thread.Sleep(1000); // Pauses for 1 second

        }

        Console.WriteLine();

    }

    protected void ShowSpinner(int seconds)

    {

        string[] spinner = { "|", "/", "-", "\\" };

        for (int i = 0; i < seconds \* 10; i++) // Spinner rotates faster

        {

            Console.Write(spinner[i % 4]);

            Thread.Sleep(100);

            Console.Write("\b \b");

        }

        Console.WriteLine();

    }

}