Day4: Task 2

**Research the .NET Class Library and compile a list of five commonly used classes along with their namespaces. For one of these classes, write a short C# code snippet that demonstrates a common use case, including inline comments to explain the code.**

1. **System.String** (Namespace: System):

Used for representing text as a sequence of Unicode characters.

1. **System.IO.File** (Namespace: System.IO):

Provides static methods for working with files, such as reading from and writing to files.

1. **System.Math** (Namespace: System):

Provides constants and static methods for trigonometric, logarithmic, and other common mathematical functions.

1. **System.DateTime** (Namespace: System):

Represents an instant in time, typically expressed as a date and time of day.

1. **System.Console** (Namespace: System):

Provides methods and properties for interacting with the console.

**C# code snippet:**

using System;

class Program

{

static void Main(string[] args)

{

*// Get the current date and time*

DateTime currentDateTime = DateTime.Now;

*// Print the current date and time*

Console.WriteLine("Current Date and Time: " + currentDateTime);

*// Add 1 day to the current date*

DateTime tomorrow = currentDateTime.AddDays(1);

*// Print the date of tomorrow*

Console.WriteLine("Tomorrow's Date: " + tomorrow.ToShortDateString());

}

}

**DateTime.Now:** This is a static property of the **DateTime** struct. It returns a **DateTime** object representing the current date and time. It's called inline within the declaration of the **currentDateTime** variable to immediately assign the current date and time to that variable.

**currentDateTime.AddDays(1):** This is a method call on the **currentDateTime** object. The **AddDays** method is an instance method of the **DateTime** struct. It takes a double parameter representing the number of days to add to the current **DateTime** object and returns a new **DateTime** object representing the resulting date and time. This method call is used inline within the assignment to the tomorrow variable to calculate tomorrow's date.

**Console.WriteLine("Current Date and Time: " + currentDateTime);:** This line uses the **Console.WriteLine** method to output a string to the console. The + operator is used inline to concatenate the string "Current Date and Time: " with the string representation of the **currentDateTime** object.

**Console.WriteLine("Tomorrow's Date: " + tomorrow.ToShortDateString());:** Similarly, this line uses the **Console.WriteLine** method to output a string to the console. It concatenates the string "Tomorrow's Date: " with the short date string representation of the tomorrow object obtained using the **ToShortDateString** method.