

**Name: Aqsa Ishfaq**

**Reg No: Fa20-bcs-002**

**Submitted to: Sir Bilal Bukhari**

**Lab Mid Terminal**

**LAB Mid Terminal**

**Question No # 1**

**Briefly describe the regex library of C#.**

In C#, the .NET Framework provides a powerful regular expression library through the **System.Text.RegularExpressions** namespace. This library allows you to work with regular expressions in your C# code

**Definition:**

A regular expression, often referred to as a regex, is a series of characters that serves as a blueprint for identifying patterns within text. By applying this pattern, regex enables the precise detection of particular text strings within a larger body of text. Regular expressions are widely utilized in programming languages like C#, Java, JavaScript, and Python for a multitude of purposes, including data validation, the manipulation of strings, and text processing tasks.

**Uses of Regex Library:**

The .NET C# Regular Expressions Library can be used for various tasks. Some of the most common uses include:

•**Data validation** - You can use regexes to verify that user-supplied data is valid and conforms to the required format.

•**String manipulation** - You can use regexes to extract certain parts of a string, replace parts, or even split a string into multiple parts.

•**Text processing** - You can use regexes to search for specific patterns in a text document or manipulate the text itself.

**Steps :**

**Step 1:**

Utilizing the .NET C# Regular Expressions Library is a straightforward process. To begin, you'll need to incorporate a reference to the System.Text.RegularExpressions namespace. You can achieve this by adding the following line of code at the beginning of your source file:

using System.Text.RegularExpressions;

**Step 2:**

Once you've included the namespace reference, you can proceed to create regular expressions. For instance, if you want to devise a regex to determine whether a string comprises exclusively alphabetic characters, you can accomplish this using the subsequent line of code:

**Regex regex = new Regex("^[a-zA-Z]+$");**

**Step 3:**

After establishing your regex, you can employ it to assess whether a given string complies with your criteria. To do this, you can utilize the IsMatch method, as demonstrated in the following example:

**bool isValid = regex.IsMatch("abc123");**

**Examples :**

**Following are the example of REGX**

