LAB NO 2:

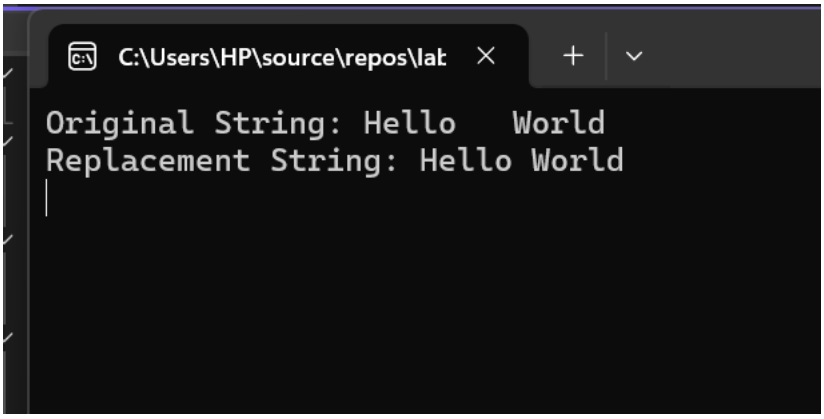
Activity 1:

Program.cs

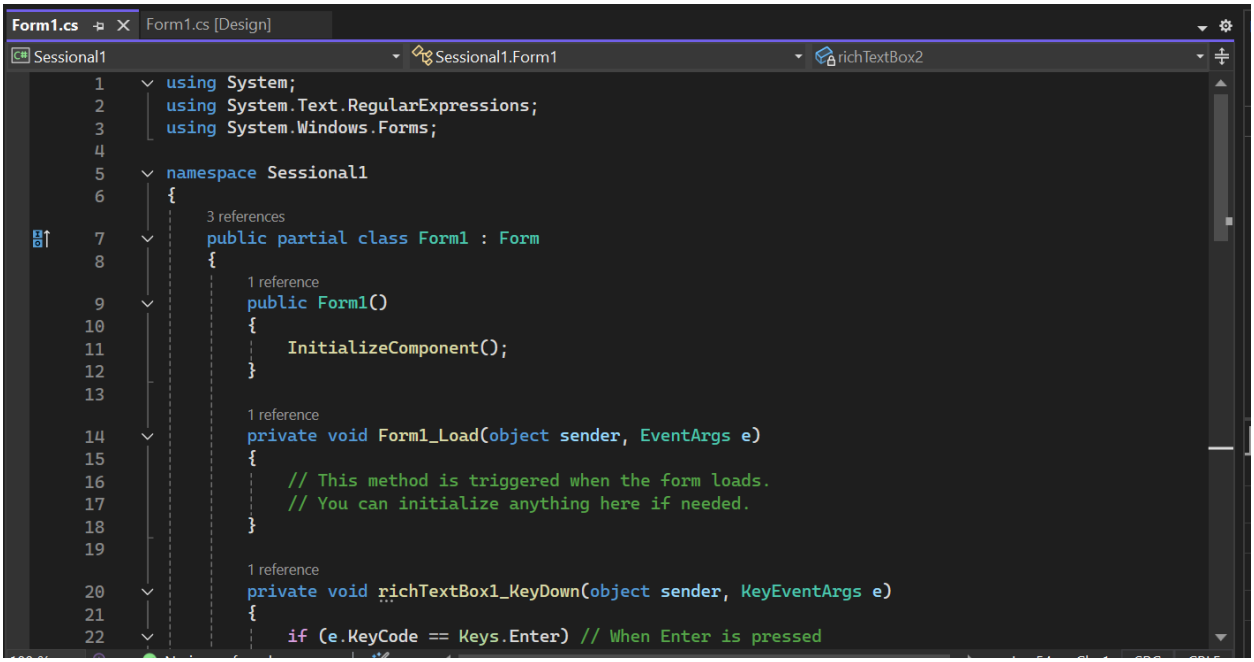
lab2 activity 1 | RegExApplication.Program | Main(string[] args)

```
1  using System;
2  using System.Text.RegularExpressions;
3  namespace RegExApplication
4  {
       0 references
5      class Program
6      {
           0 references
7          static void Main(string[] args)
8          {
9              string input = "Hello   World   ";
10             string pattern = "\\s+";
11             string replacement = " ";
12             Regex rgx = new Regex(pattern);
13             string result = rgx.Replace(input, replacement);
14             Console.WriteLine("Original String: {0}", input);
15             Console.WriteLine("Replacement String: {0}", result); Console.ReadKey();
16         }
17     }
18 }
19
```

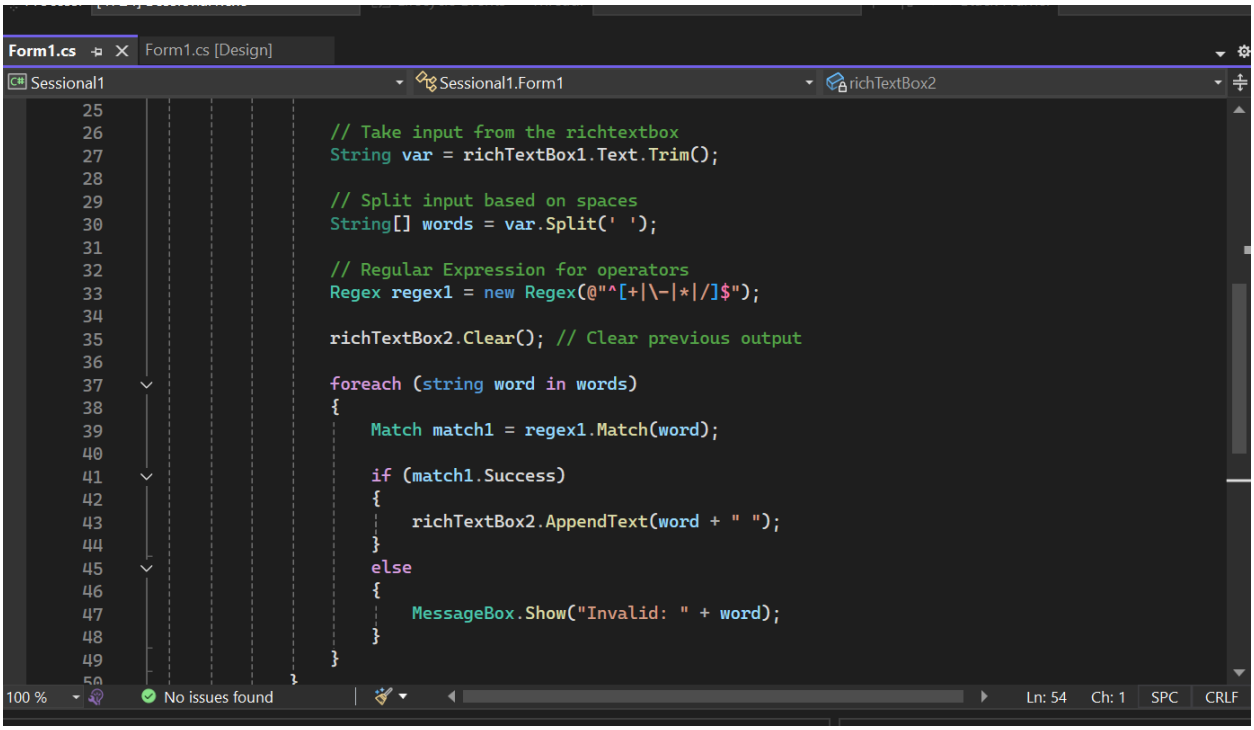
Output:



Activity 2:

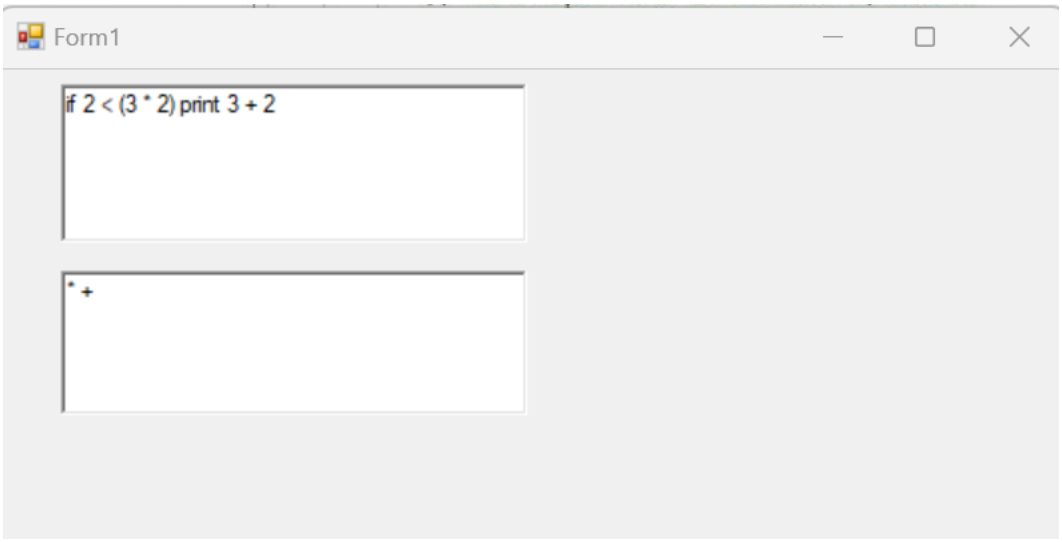


```
Form1.cs | Form1.cs [Design]
Sessional1 | Sessional1.Form1 | richTextBox2

using System;
using System.Text.RegularExpressions;
using System.Windows.Forms;

namespace Sessional1
{
    3 references
    public partial class Form1 : Form
    {
        1 reference
        public Form1()
        {
            InitializeComponent();
        }

        1 reference
        private void Form1_Load(object sender, EventArgs e)
        {
            // This method is triggered when the form loads.
            // You can initialize anything here if needed.
        }

        1 reference
        private void richTextBox1_KeyDown(object sender, KeyEventArgs e)
        {
            if (e.KeyCode == Keys.Enter) // When Enter is pressed
```

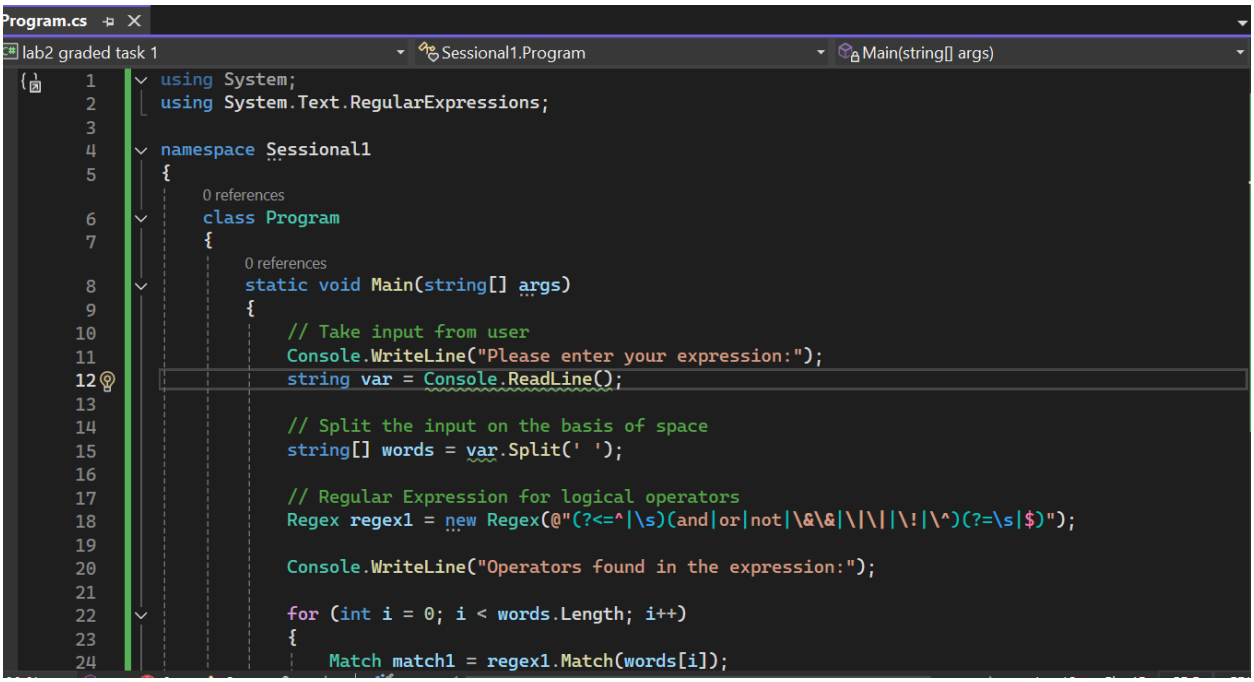


```
Form1.cs | Form1.cs [Design]
Sessional1 | Sessional1.Form1 | richTextBox2

            // Take input from the richtextbox
            String var = richTextBox1.Text.Trim();

            // Split input based on spaces
            String[] words = var.Split(' ');

            // Regular Expression for operators
            Regex regex1 = new Regex(@"^[+|\-|*|/]$");

            richTextBox2.Clear(); // Clear previous output

            foreach (string word in words)
            {
                Match match1 = regex1.Match(word);

                if (match1.Success)
                {
                    richTextBox2.AppendText(word + " ");
                }
                else
                {
                    MessageBox.Show("Invalid: " + word);
                }
            }
        }

100 % | No issues found | Ln: 54 | Ch: 1 | SPC | CRLF
```

Output:



Graded Task 1:



```
Program.cs
lab2 graded task 1          Sessional1.Program          Main(string[] args)
19
20              Console.WriteLine("Operators found in the expression:");
21
22              for (int i = 0; i < words.Length; i++)
23              {
24                  Match match1 = regex1.Match(words[i]);
25
26                  if (match1.Success)
27                  {
28                      Console.Write("Valid: " + words[i] + "\n ");
29                  }
30                  else
31                  {
32                      Console.WriteLine("Invalid operator: " + words[i] + "\n");
33                  }
34              }
35
36              // Pause so the user can see the result before exiting
37              Console.WriteLine("\nPress any key to exit...");
38              Console.ReadKey();
39          }
40      }
```

Output:

```
C:\Users\HP\source\repos\lat
Please enter your expression:
a and b
Operators found in the expression:
Invalid operator: a

Valid: and
 Invalid operator: b


Press any key to exit...
```

Graded Task 2:

Program.cs

lab 2 graded task 2 | Sessional1.Program | Main(string[] args)

```
1   using System;
2   using System.Text.RegularExpressions;
3
4   namespace Sessional1
5   {
        0 references
6       class Program
7       {
            0 references
8           static void Main(string[] args)
9           {
10              // Take input from user
11              Console.WriteLine("Please enter your expression:");
12              string var = Console.ReadLine();
13
14              // Split the input on the basis of space
15              string[] words = var.Split(' ');
16
17              // Regular Expression for Relational operators
18              Regex regex = new Regex(@"(==|!=|>=|<=|>|<)");
19
20
21              Console.WriteLine("Operators found in the expression:");
22
23              for (int i = 0; i < words.Length; i++)
24              {
```

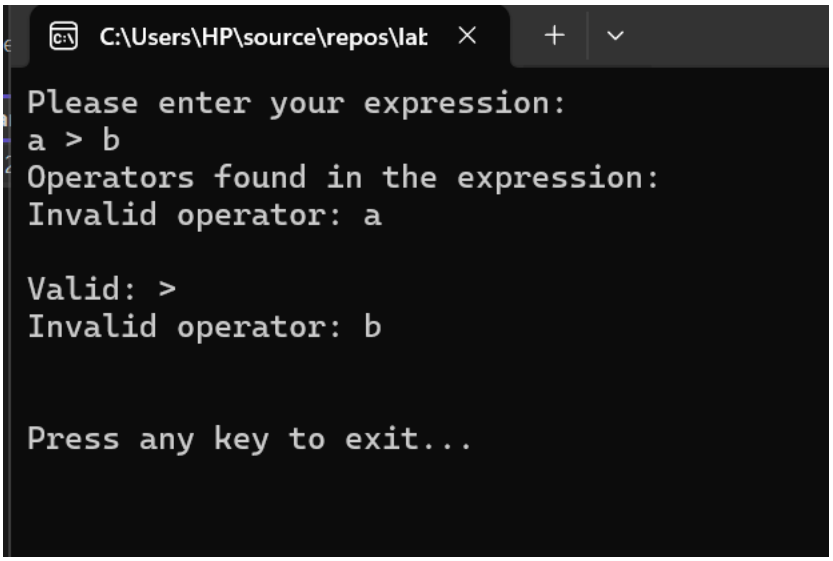
100 % | 0 | 2 | Ln: 42 | Ch: 2 | SPC | CRLF

Program.cs

lab 2 graded task 2 | Sessional1.Program | Main(string[] args)

```
23              for (int i = 0; i < words.Length; i++)
24              {
25                  Match match1 = regex.Match(words[i]);
26
27                  if (match1.Success)
28                  {
29                      Console.Write("Valid: " + words[i] + "\n");
30                  }
31                  else
32                  {
33                      Console.WriteLine("Invalid operator: " + words[i] + "\n");
34                  }
35              }
36
37              // Pause so the user can see the result before exiting
38              Console.WriteLine("\nPress any key to exit...");
39              Console.ReadKey();
40          }
41      }
42  }
43
```

Output:


C:\Users\HP\source\repos\lab
Please enter your expression:
a > b
Operators found in the expression:
Invalid operator: a
Valid: >
Invalid operator: b
Press any key to exit...