

Aim: - Write a C# program addition of two numbers by using windows form app

Description: -

Implicit Type Casting:

- It happens when
- The two data types are compatible
- we assign value of a smaller data type to a bigger data type

implicit casting (automatically) - converting a smaller type to larger type size

char  $\rightarrow$  int  $\rightarrow$  long  $\rightarrow$  float  $\rightarrow$  double

Explicit Type Casting:

If we want to assign a value of larger data type to a smaller data type we perform explicit type casting.

- This is useful for incompatible data types where automatic conversion cannot be done.
- Sometimes, it may result into the lossy conversion

Explicit Casting (manually) - converting a larger type to a smaller size type.

double  $\rightarrow$  float  $\rightarrow$  long  $\rightarrow$  int  $\rightarrow$  char.

Type Conversion Methods:

It is also possible to convert data types explicitly by using built-in methods, such as Convert.ToBoolean, Convert.ToDouble, Convert.ToString, Convert.ToInt32 (int) and Convert.ToInt64 (long)



Program:-

```
namespace WindowsFormApp1
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void Label1_Click(object sender, EventArgs e)
        {
        }

        private void Form1_Load(object sender, EventArgs e)
        {
        }

        private void button1_Click(object sender, EventArgs e)
        {
            int str1 = Convert.ToInt32(textBox1.Text);
            int str2 = Convert.ToInt32(textBox2.Text);
            textBox3.Text = Convert.ToString(str1 + str2);
        }
    }
}
```

Output:-

First Number	<input type="text" value="22"/>
Second Number	<input type="text" value="40"/>
Result	<input type="text" value="62"/>
<input type="button" value="ADD"/>	



Experiment No:- 5b

Date:- 18-08-23

Aim:-

Write a program to addition, subtraction, multiplication, and division by using windows form app

Description:-Access Modifiers

By now, you are quite familiar with the public keyword that appears in many of our examples:

public string color;

The public keyword is an access modifier, which is used to set the access level/visibility for classes, fields, methods and properties

C# Access modifiers or specifiers are the keywords that are used to specify accessibility or scope of variables and functions in the C# application

Access SpecifierDescription

Public

It specifies that access is not restricted.

Protected

It specifies that access is limited to the containing class or in derived class

Internal

It specifies that access is limited to the current Assembly.

Protected

It specifies that access is limited to the current assembly or types derived from the containing class

Internal

Private

It specifies that access is limited to the containing type



Program:-

```

namespace WindowsFormApp2 {
    public partial class Form1 : Form {
        public Form1() {
            InitializeComponent();
        }

        private void button1_Click(object sender, EventArgs e) {
            int str1 = Convert.ToInt32(textBox1.Text);
            int str2 = Convert.ToInt32(textBox2.Text);
            textBox3.Text = Convert.ToString(str1 + str2);
        }

        private void button2_Click(object sender, EventArgs e) {
            int str1 = Convert.ToInt32(textBox1.Text);
            int str2 = Convert.ToInt32(textBox2.Text);
            textBox3.Text = Convert.ToString(str1 - str2);
        }

        private void button3_Click(object sender, EventArgs e) {
            int str1 = Convert.ToInt32(textBox1.Text);
            int str2 = Convert.ToInt32(textBox2.Text);
            int str3 = Convert.ToInt32(textBox3.Text);
            textBox3.Text = Convert.ToString(str1 * str2);
        }

        private void button4_Click(object sender, EventArgs e) {
            int str1 = Convert.ToInt32(textBox1.Text);
            int str2 = Convert.ToInt32(textBox2.Text);
            textBox3.Text = Convert.ToString(str1 / str2);
        }
    }
}

```



OUTPUT:-

First Number

40

Second Number

22

Result

18

ADD

SUB

MUL

DIV