

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) StrategyPattern_1262774 Sign in Live Share

Process: [25916] StrategyPattern_1262774.e Lifecycle Events Thread: Stack Frame:

Toolbox Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Form1.cs SortContext.cs QuickSortStrategy.cs ShellSortStrategy.cs Form1.cs [Design] Student.cs IStrategySort.cs

StrategyPattern_1262774 StrategyPattern_1262774.Form1 btnStrategySort_Click(object sender, EventArgs e)

```
1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel;
4 using System.Data;
5 using System.Drawing;
6 using System.Linq;
7 using System.Text;
8 using System.Threading.Tasks;
9 using System.Windows.Forms;
10
11 namespace StrategyPattern_1262774
12 {
13     3 references
14     public partial class Form1 : Form
15     {
16         1 reference
17         public Form1()
18         {
19             InitializeComponent();
20         }
21         1 reference
22         private void btnStrategySort_Click(object sender,
```

99 % No issues found

Locals Search (Ctrl+E) Search Depth: Name Value

Form1

btnStrategySort

Ln: 53 Ch: 28 SPC CRLF

Build + IntelliSense Search Error List

File Line Suppression State

Autos Locals Watch 1

Call Stack Breakpoints Exception Settings Command Window Immediate Window Output Error List

Ready Add to Source Control Select Repository Breaking news 09:15 PM 03-12-2024

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Process: [25916] StrategyPattern_1262774.e Lifecycle Events Thread: Stack Frame:

Toolbox Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel;
4 using System.Data;
5 using System.Drawing;
6 using System.Linq;
7 using System.Text;
8 using System.Threading.Tasks;
9 using System.Windows.Forms;
10
11 namespace StrategyPattern_1262774
12 {
13 3 references
14 public partial class Form1 : Form
15 {
16 1 reference
17 public Form1()
18 {
19 InitializeComponent();
20 }
21 }
22 1 reference
23 private void btnStrategySort_Click(object sender, EventArgs e)
24 {
25 // TODO: Add your code here to handle this event
26 }
27 }
28

99 % No issues found

Locals Search (Ctrl+E) Search Depth: Name Value

Autos Locals Watch 1

Form1

btnStrategy

Bill Baker : 12345 : 85 : 91
Adam Fredericks : 12341 : 82 : 83
Sally Mathews : 12348 : 87 : 93

OK

Ln: 53 Ch: 28 SPC CRLF

Build + IntelliSense Search Error List File Line Suppression State

Call Stack Breakpoints Exception Settings Command Window Immediate Window Output Error List

Ready Add to Source Control Select Repository Breaking news 09:15 PM 03-12-2024

Visual Studio interface showing a C# project named StrategyPattern_1262774. The code editor displays the Form1.cs file, which includes using statements for System, System.Collections.Generic, System.ComponentModel, System.Data, System.Drawing, System.Linq, System.Text, System.Threading.Tasks, and System.Windows.Forms. The code defines a namespace StrategyPattern_1262774 and a partial class Form1. The Form1 class has a constructor public Form1() and a method btnStrategySort_Click(object sender, EventArgs e). The btnStrategySort_Click method contains a list of names and their corresponding IDs: Bill Baker : 12345 : 85 : 91, Adam Fredericks : 12341 : 82 : 83, and Sally Mathews : 12346 : 87 : 93. The btnStrategySort_Click method is currently selected in the Solution Explorer.

The Form1 window is displayed, showing a button labeled btnStrategySort. A message box is shown with the following text:

Bill Baker : 12345 : 85 : 91
Adam Fredericks : 12341 : 82 : 83
Sally Mathews : 12346 : 87 : 93

The message box has an OK button.

The Solution Explorer on the right shows the project structure, including the StrategyPattern_1262774 project and its sub-projects: SortContext.cs, QuickSortStrategy.cs, ShellSortStrategy.cs, Form1.cs [Design], Student.cs, and IStrategySort.cs. The btnStrategySort_Click(object sender, EventArgs e) method is selected in the Solution Explorer.

The Error List on the right shows no errors.

The Windows taskbar at the bottom shows the Start button, a search bar, and several application icons. The system tray on the right shows the date and time: 09:15 PM, 03-12-2024.

Visual Studio interface showing a C# project named StrategyPattern_1262774. The code in Form1.cs implements the Strategy pattern for sorting students by test scores.

```
1 IStrategySort<Student> ist = new ShellSortStrategy();
2 University u1 = new University(ist);
3 Student s1 = new Student
4 {
5     FirstName = "Bill",
6     LastName = "Baker",
7     Id = 12345,
8     Test1Score = 85,
9     Test2Score = 91
10 };
11 u1.AddStudent(s1);
12 Student s2 = new Student
13 {
14     FirstName = "Sally",
15     LastName = "Mathews",
16     Id = 12348,
17     Test1Score = 87,
18     Test2Score = 93
19 };
```

The application is running, and a dialog box displays the sorted student data:

Bill Baker : 12345 : 85 : 91
Adam Fredericks : 12341 : 82 : 83
Sally Mathews : 12348 : 87 : 93

The interface also shows the Solution Explorer, Locals window, and the Windows taskbar.

Visual Studio interface showing a C# project named StrategyPattern_1262774. The code in Form1.cs [Design] is as follows:

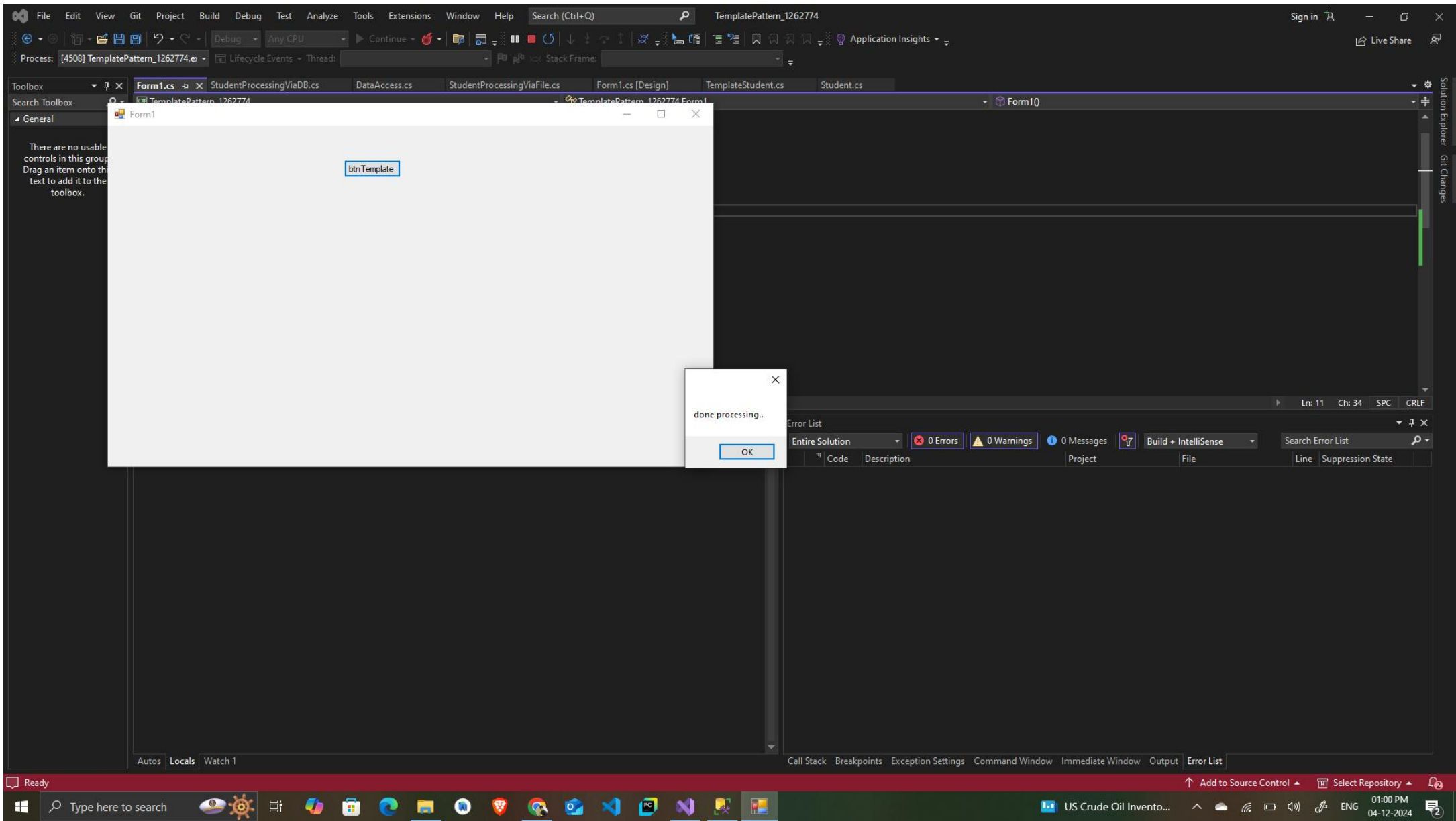
```
1 IStrategySort<Student> ist = new ShellSortStrategy();
2 University u1 = new University(ist);
3 Student s1 = new Student
4 {
5     FirstName = "Bill",
6     LastName = "Baker",
7
8     Id = 12345,
9     Test1Score = 85,
10    Test2Score = 91
11 };
12 u1.AddStudent(s1);
13 Student s2 = new Student
14 {
15     FirstName = "Sally",
16
17     LastName = "Mathews"
18
19     Id = 12348,
20     Test1Score = 87,
21     Test2Score = 93
22 };
23
```

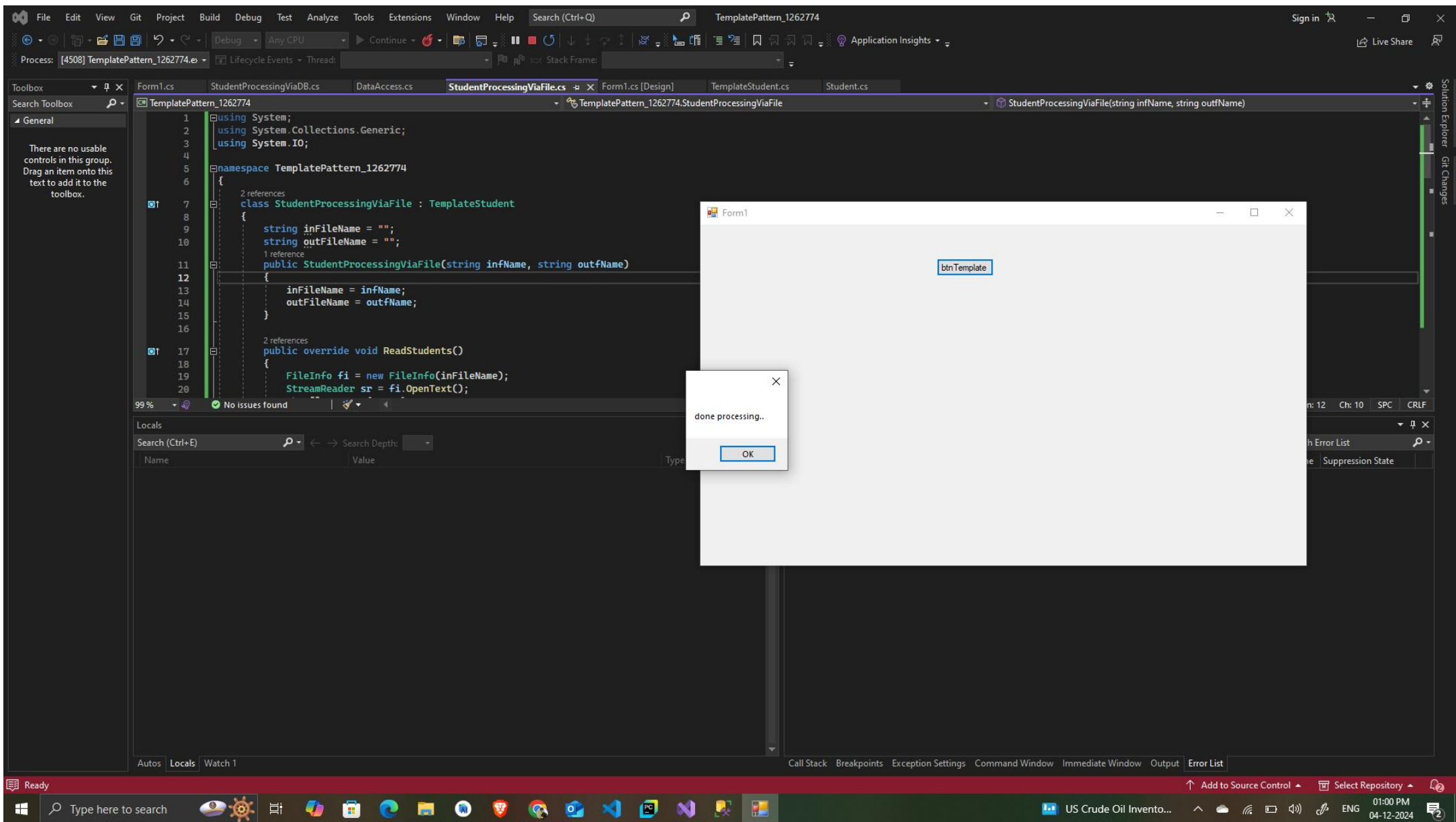
The application is running, and a dialog box displays the following output:

```
Bill Baker: 12345 : 85 : 91
Adam Fredericks : 12341 : 82 : 83
Sally Mathews : 12348 : 87 : 93
```

The Form1 window shows a button labeled btnStrategySort.

The bottom status bar indicates the application is Ready. The taskbar shows the time as 09:18 PM on 03-12-2024.





Visual Studio IDE showing a C# project named `TemplatePattern_1262774`. The code in `StudentProcessingViaFile.cs` defines a class `StudentProcessingViaFile` that inherits from `TemplateStudent`. It includes properties `inFileName` and `outFileName`, a constructor `StudentProcessingViaFile(string infName, string outfName)`, and an overridden method `ReadStudents()` that reads data from a file.

The `Form1` window displays a button labeled `btnTemplate`. A small dialog box shows "done processing.." with an OK button.

The SQL Server Enterprise Designer shows the database `DESKTOP-SBHVA7M\SQLEXPRESS.XYZDB_1262774`. The table `Table_1DESKTOP-SBHVA7M\SQLEXPRESS.XYZDB_1262774` is displayed with the following columns:

Column Name	Data Type	Allow Nulls
Id	int	<input type="checkbox"/>
FirstName	varchar(50)	<input checked="" type="checkbox"/>
LastName	varchar(50)	<input checked="" type="checkbox"/>
Test1Score	int	<input checked="" type="checkbox"/>
Test2Score	int	<input checked="" type="checkbox"/>
Grade	varchar(50)	<input checked="" type="checkbox"/>

The Column Properties window shows the properties for the `Id` column:

Property	Value
(Name)	Id
Allow Nulls	No
Data Type	int
Default Value or Binding	

The Windows taskbar shows the system clock at 01:00 PM on 04-12-2024.

Visual Studio IDE showing a C# project named TemplatePattern_1262774. The main window displays the code for StudentProcessingViaFile.cs, which implements a class StudentProcessingViaFile. The code uses System.IO to read a file and process student data.

```
using System;
using System.Collections.Generic;
using System.IO;

namespace TemplatePattern_1262774
{
    2 references
    class StudentProcessingViaFile : TemplateStudent
    {
        9 string inFileName = "";
        10 string outFileName = "";
        11 1 reference
        public StudentProcessingViaFile(string infName, string outfName)
        {
            13 inFileName = infName;
            14 outFileName = outfName;
        }

        2 references
        public override void ReadStudentData()
        {
            18 FileInfo fi = new FileInfo(outFileName);
            19 StreamReader sr = fi.OpenText();
            20 char[] seps = { ',', ' ' };
            21 string sline = sr.ReadLine();
            22 while (sline != null)
            23 {
                25 string[] parts = sline.Split(seps);
                26 Student s1 = new Student();
                27 s1.FirstName = parts[0];
                28 s1.LastName = parts[1];
                29 s1.Id = int.Parse(parts[2]);
                30 s1.Test1Score = int.Parse(parts[3]);
                31 s1.Test2Score = int.Parse(parts[4]);
                32 s1._STList.Add(s1);
                33 sline = sr.ReadLine();
            }
            34 sr.Close();
        }
    }
}
```

Two Notepad windows are open, displaying the output of the program. The first window, titled StudentDataOut - Notepad, shows a table of student data. The second window, titled StudentData - Notepad, shows the same data as a single line of text.

StudentDataOut - Notepad

File	Edit	Format	View	Help	
Bill	Baker	12347	85	87	A-
Mark	Mathews	12349	89	91	A
Sally	Simpson	12345	88	96	A
John	Williams	12344	80	88	B+

StudentData - Notepad

```
File Edit Format View Help
Bill,Baker,12347,85,87
Sally,Simpson,12345,88,96
Mark,Mathews,12349,89,91
John,Williams,12344,80,88
```

The Solution Explorer on the right shows the project structure, including Form1.cs, StudentProcessingViaDB.cs, DataAccess.cs, StudentProcessingViaFile.cs, Form1.cs [Design], TemplateStudent.cs, and Student.cs. The Properties window at the bottom right shows the properties of the selected file.

Output window (Debug):

```
TemplatePattern_1262774.exe (CLR v4.0.30319: TemplatePattern_1262774.exe)
TemplatePattern_1262774.exe (CLR v4.0.30319: TemplatePattern_1262774.exe)
TemplatePattern_1262774.exe (CLR v4.0.30319: TemplatePattern_1262774.exe)
TemplatePattern_1262774.exe (CLR v4.0.30319: TemplatePattern_1262774.exe)
TemplatePattern_1262774.exe (CLR v4.0.30319: TemplatePattern_1262774.exe)
TemplatePattern_1262774.exe (CLR v4.0.30319: TemplatePattern_1262774.exe)
TemplatePattern_1262774.exe (CLR v4.0.30319: TemplatePattern_1262774.exe)
TemplatePattern_1262774.exe (CLR v4.0.30319: TemplatePattern_1262774.exe)
The program '[4508] TemplatePattern_1262774.exe' has exited.
```

Visual Studio IDE showing a C# project named TemplatePattern_1262774. The main window displays the code for StudentProcessingViaFile.cs, which reads data from a file and processes it. The code includes using statements for System, System.Collections.Generic, and System.IO, and a namespace TemplatePattern_1262774. The class StudentProcessingViaFile has a constructor and a ReadStudentData method.

```
1 using System;
2 using System.Collections.Generic;
3 using System.IO;
4
5 namespace TemplatePattern_1262774
6 {
7     2 references
8     class StudentProcessingViaFile : TemplateStudent
9     {
10         string inFileName = "";
11         string outFileName = "";
12         1 reference
13         public StudentProcessingViaFile(string inFileName, string outFileName)
14         {
15             inFileName = inFileName;
16             outFileName = outFileName;
17         }
18
19         2 references
20         public override void ReadStudentData()
21         {
22             FileInfo fi = new FileInfo(outFileName);
23             StreamReader sr = fi.OpenText();
24             char[] seps = { ',', ' ' };
25             string sline = sr.ReadLine();
26             while (sline != null)
27             {
28                 string[] parts = sline.Split(seps);
29                 Student s1 = new Student();
30                 s1.FirstName = parts[0];
31                 s1.LastName = parts[1];
32                 s1.Id = int.Parse(parts[2]);
33                 s1.Test1Score = int.Parse(parts[3]);
34                 s1.Test2Score = int.Parse(parts[4]);
35                 s1._STList.Add(s1);
36                 sline = sr.ReadLine();
37             }
38             sr.Close();
39         }
40     }
41 }
```

Two Notepad windows are open, displaying the output of the program. The first window, titled "StudentDataOut - Notepad", shows a table of student data. The second window, titled "StudentData - Notepad", shows the same data as a single line of text.

StudentDataOut - Notepad

File	Edit	Format	View	Help	
Bill	Baker	12347	85	87	A-
Mark	Mathews	12349	89	91	A
Sally	Simpson	12345	88	96	A
John	Williams	12344	80	88	B+

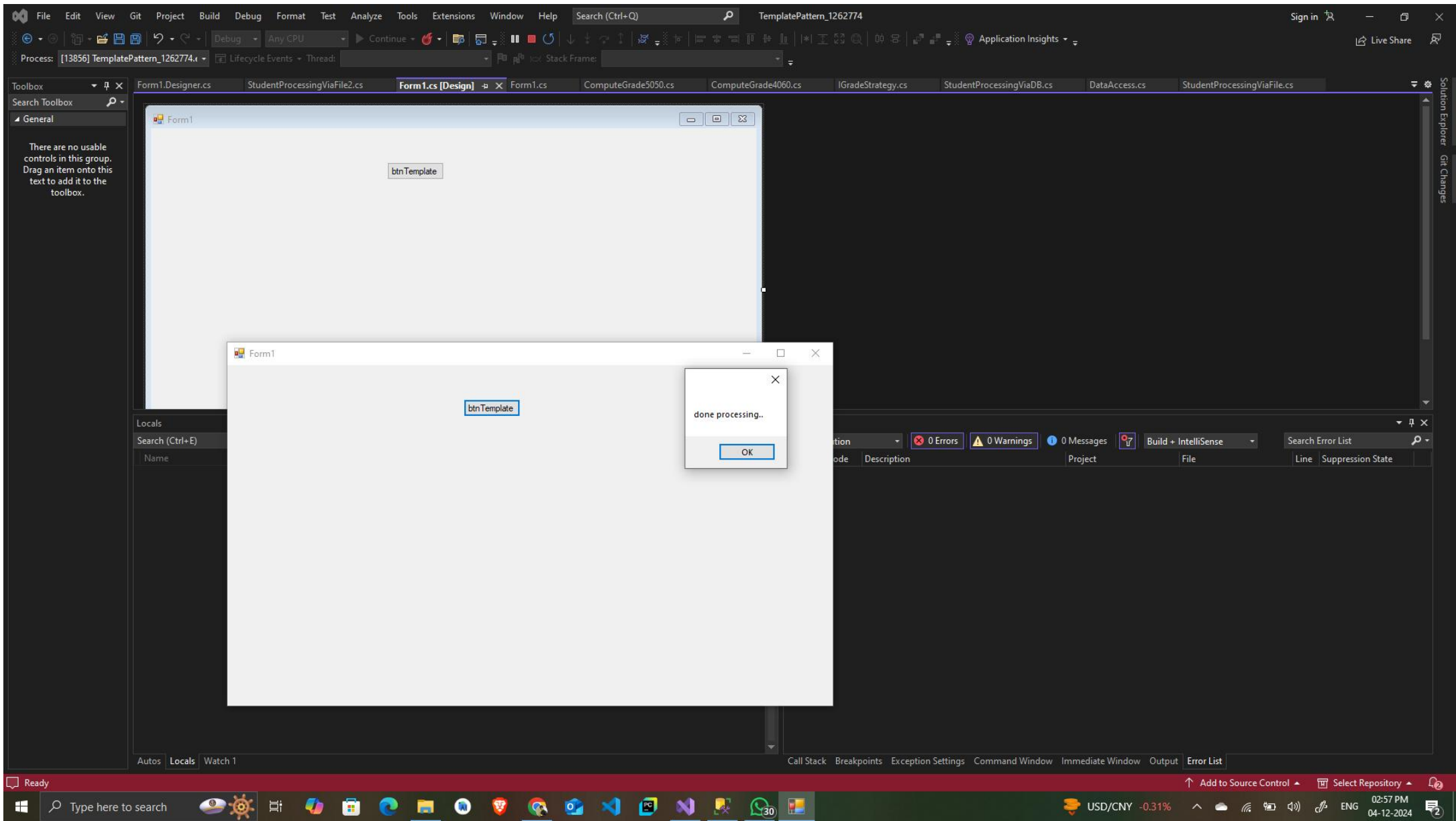
StudentData - Notepad

```
File Edit Format View Help
Bill,Baker,12347,85,87
Sally,Simpson,12345,88,96
Mark,Mathews,12349,89,91
John,Williams,12344,80,88
```

The Solution Explorer on the right shows the project structure, including Form1.cs, StudentProcessingViaDB.cs, DataAccess.cs, StudentProcessingViaFile.cs, Form1.cs [Design], TemplateStudent.cs, and Student.cs. The Properties window at the bottom right shows the properties of the selected file.

Output

```
Show output from: Debug
'TemplatePattern_1262774.exe' (CLR v4.0.30319: TemplatePattern_1262774.exe)
'TemplatePattern_1262774.exe' (CLR v4.0.30319: TemplatePattern_1262774.exe)
'TemplatePattern_1262774.exe' (CLR v4.0.30319: TemplatePattern_1262774.exe)
'TemplatePattern_1262774.exe' (CLR v4.0.30319: TemplatePattern_1262774.exe)
'TemplatePattern_1262774.exe' (CLR v4.0.30319: TemplatePattern_1262774.exe)
'TemplatePattern_1262774.exe' (CLR v4.0.30319: TemplatePattern_1262774.exe)
'TemplatePattern_1262774.exe' (CLR v4.0.30319: TemplatePattern_1262774.exe)
'TemplatePattern_1262774.exe' (CLR v4.0.30319: TemplatePattern_1262774.exe)
The program '[4508] TemplatePattern_1262774.exe' has exited.
```



Visual Studio interface showing a C# project named TemplatePattern_1262774. The main window displays the code for Form1.cs, which is a partial class Form1. The code includes a constructor and a method. The Solution Explorer on the right shows the project structure, including Form10 and Form1. The Error List at the bottom right shows 0 Errors and 0 Warnings.

Form1.cs

```
12 {
13     3 references
14     public partial class Form1 : Form
15     {
16         1 reference
17         public Form1()
18     }
```

Form1

btnTemplate

btnTemplateAndStrategy

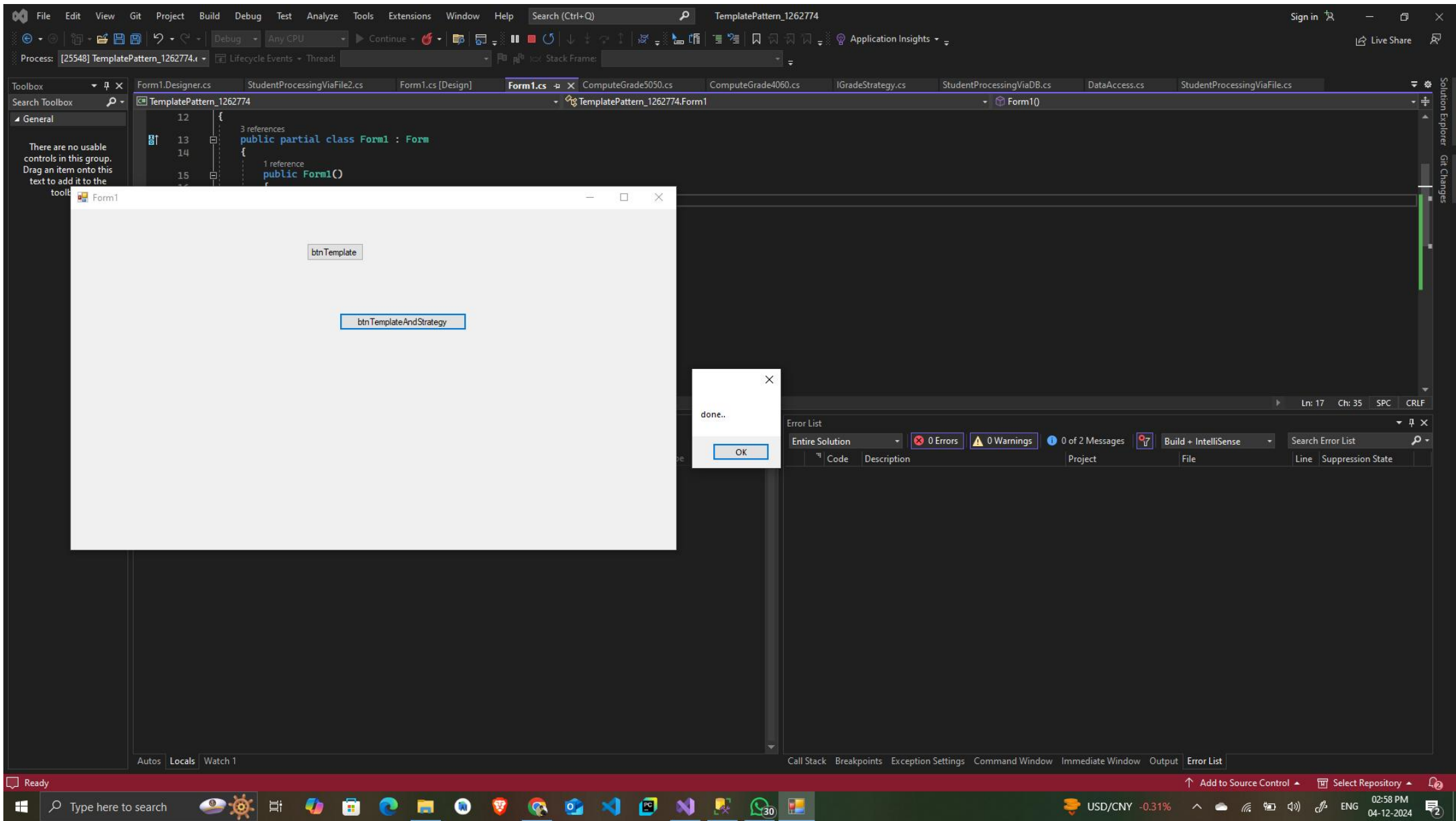
Error List

Code	Description	Project	File	Line	Suppression State
------	-------------	---------	------	------	-------------------

Ready

USD/CNY -0.31%

02:58 PM 04-12-2024



FileEditViewGitProjectBuildDebugTestAnalyzeToolsExtensionsWindowHelpSearch (Ctrl+Q)TemplatePattern_1262774Sign inLive Share

Process: [25548] TemplatePattern_1262774.x Lifecycle Events Thread: Stack Frame:

Form1.Designer.csStudentProcessingViaFile2.csForm1.cs [Design]Form1.csComputeGrade5050.csComputeGrade4060.csIGradeStrategy.csStudentProcessingViaDB.csDataAccess.csStudentProcessingViaFile.cs

TemplatePattern_1262774TemplatePattern_1262774.Form1Form10

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Form1

12 {
13 3 references
14 public partial class Form1 : Form
15 {
16 1 reference
17 public Form1()
18 {
19 }
20 }
21 }

btnTemplate
btnTemplateAndStrategy

*StudentDataOut - NotepadFile Edit Format View Help
Bill Baker 12347 85 87 A-
Mark Mathews 12349 89 91 A
Sally Simpson 12345 88 96 A
John Williams12344 80 88 B+

Ln 4, Col 28100%Windows (CRLF)UTF-8

StudentData - NotepadFile Edit Format View Help
Bill,Baker,12347,85,87
Sally,Simpson,12345,88,96
Mark,Mathews,12349,89,91
John,Williams,12344,80,88

Ln 1, Col 1100%Windows (CRLF)UTF-8

0 Warnings

AutosLocalsWatch 1Call StackBreakpointsException SettingsCommand WindowImmediate WindowOutputError List

ReadyType here to search4°C Cloudy02:59 PM04-12-2024