



AMIT ACADEMY

for Computer Education

SUBJECT – Desktop Application Development-II

Faculty Name – Ankit Rami

Unit-2 - File handling in Desktop Application Development

AMIT ACADEMY FOR COMPUTER EDUCATION

Nr Vardayini Mataji Temple, Rupal, Gandhinagar-382630

Email – amitacademy1117@gmail.com

Mobile No – 8460467193

YouTube Link –

<https://www.youtube.com/@ankitramijoinar>

Instagram Link –

<https://www.instagram.com/amitacademy17/>

Facebook Link –

<https://www.facebook.com/aramitacademy/>

Basic of File Handling in VB.Net

- ✓ A file is a collection of data stored in a disk with a specific name and a directory path. When a file is opened for reading or writing, it becomes a stream.
- ✓ The stream is basically the sequence of bytes passing through the communication path. There are two main streams: the input stream and the output stream. The input stream is used for reading data from file (read operation) and the output stream is used for writing into the file (write operation).
- ✓ A file is a collection of data stored in computer memory with a specific name and a defined folder path. The term File Handling in VB.NET is used to perform various operations like create a file, read a file, write to the file, closing the file, and more. Furthermore, when a file is opened for reading and writing, a stream is created.

File handling in VB.NET with library and importance

✓ **VB.NET I/O Classes**

- ✓ In VB.NET, we use the System.IO namespace, that has different classes to perform various input and output operations with files, such as the File Stream class used to perform any operation like opening a file, closing a file, deleting a files, reading from or writing to a file, etc.
- ✓ The following table shows the I/O classes that are commonly used in VB.NET programming.

I/O Class	Description
File	It is used to perform some changes in files.
FileInfo	It is used to perform any operation on files.
FileStream	It is used to apply read or write operations on any location of a file.
BinaryReader	As the name represents, a Binary reader is used to read primitive data in a binary stream.
BinaryWriter	It is used to write the data in binary format.
Directory	It is used to perform some changes or manipulating a directory structure.
DriveInfo	It helps to provide the necessary information for the drive.
BuffredStream	It is a temporary storage area for the collection of steam bytes.
MemoryStream	It is used to access stored streaming data in memory.
StreamReader	A StreamReader property is used to read characters from the stream byte.
Path	It is used to perform operations on the path of a file.
StreamWriter	A StreamWriter is used to write characters to a stream.
DirectoryInfo	It is used to perform an operation on the directory.
StringReader	It is used to read string from a string buffer.

✓ **File Stream Class**

- ✓ The File Stream class is provided by the System.IO namespace to read, write, close or create files in the file handling.
- ✓ Ex-

```
Dim FS As FileStream = New FileStream("myFile.txt", FileMode.  
Open, FileAccess.ReadWrite)
```

Parameter	Description
FileMode	<p>The FileMode represents the various method for opening or creating a file. Following are the member of FileMode-</p> <p>Append: It is used to open an existing file and put the cursor at the end of the file. And if the file is not existing, it creates a file.</p> <p>Create: As the name defines, a create is uses to create a new file.</p> <p>CreateNew: It specifies the OS to create a new file.</p> <p>Open: It is used to open an existing file.</p> <p>OpenOrCreate: It is used to open an existing file, and if the file is not existing, it creates a new file.</p> <p>Truncate: It is used to open an existing file for shrinking its original size to zero bytes.</p>
FileAccess	It is used to perform any operation such as Read, ReadWrite, Delete and Write, etc.
FileShare	<p>A FileShare has the following members</p> <p>Read: It permits to open a file for reading</p> <p>Write: It permits you to open a file for writing.</p> <p>None: It is used to reject the sharing of the current file.</p>
Obj_name	It represents the object name of the file.

Introduction to Stream writer class and methods.

- ✓ The StreamWriter class inherits from the abstract class TextWriter that represents a writer, which can write a series of character.
- ✓ The StreamWriter class is derived from the TextWriter class and can be used to write text to a stream. You can create an instance of the StreamWriter class by assigning it a Stream object returned by a method call, or by passing a file path to one of its constructors. the first parameter is the file name and second parameter is optional, boolean type. If second parameter is true, an existing file will be appended with new text.

✓ Stream writer methods

Sr.No.	Method Name & Purpose
1	Close Closes the current StreamWriter object and the underlying stream.
2	Flush Clears all buffers for the current writer and causes any buffered data to be written to the underlying stream.
3	Write (value As Boolean) Writes the text representation of a Boolean value to the text string or stream. (Inherited from TextWriter.)
4	Write (value As Char) Writes a character to the stream.
5	Write (value As Decimal) Writes the text representation of a decimal value to the text string or stream.
6	Write (value As Double) Writes the text representation of an 8-byte floating-point value to the text string or stream.
7	Write (value As Integer) Writes the text representation of a 4-byte signed integer to the text string or stream.
8	Write (value As String) Writes a string to the stream.
9	WriteLine Writes a line terminator to the text string or stream.

✓ Ex-

Imports System

Imports System.Data

Imports System.IO

Module Module1

Sub Main()

Dim write1 As StreamWriter = New StreamWriter("Textfile.txt")

write1.Write("This is the text file ")

write1.WriteLine("This file contain some text")

write1.WriteLine("-----")

write1.Write("The date is: ")

write1.WriteLine(DateTime.Now)

write1.Close()

End Sub

End Module

✓ Output-Data Write in Text File using Stream Writer Class

Introduction to Stream Reader class and methods.

✓ StreamReader is used to read characters to a stream in a specified encoding. StreamReader.Read method reads the next character or next set of characters from the input stream. StreamReader is inherited from TextReader that provides methods to read a character, block, line, or all content.

✓ **StreamReader is defined in the System.IO namespace.**

StreamReader provides the following methods:

1. Peak – Returns if there is a character or not. Read - Reads the next character or next set of characters from the input stream.
2. ReadAsync - Reads a specified maximum number of characters from the current stream asynchronously and writes the data to a buffer, beginning at the specified index.
3. ReadBlock - Reads a specified maximum number of characters from the current stream and writes the data to a buffer, beginning at the specified index.
4. ReadBlockAsync - Reads a specified maximum number of characters from the current stream asynchronously and writes the data to a buffer, beginning at the specified index.
5. ReadLine - Reads a line of characters from the current stream and returns the data as a string.

Desktop Application Development-II

6. ReadLineAsync - Reads a line of characters asynchronously from the current stream and returns the data as a string.
7. ReadToEnd - Reads all characters from the current position to the end of the stream.
8. ReadToEndAsync - Reads all characters from the current position to the end of the stream asynchronously and returns them as one string.

✓ Ex-

Imports System.IO

Public Class WebForm1

Inherits System.Web.UI.Page

Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs) Handles Me.Load

Dim path As String = "c:\temp\MyTest.txt"

Dim sr As New StreamReader(path)

While(sr.Peek() >= 0)

Textbox1.text=sr.readline()

End While

End Sub

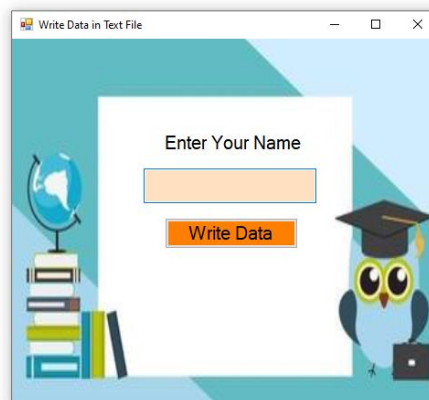
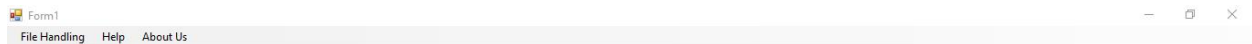
End Class

✓ Output-Read Data in Text File using Stream Reader Class

✚ **Store data and Read in / from the File from VB.NET Form.**

✓ **Write Data in Text File**

✓ **Design View**

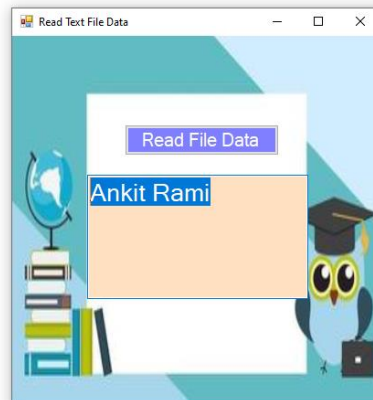
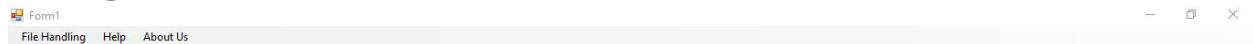


✓ **Code View**

```
Imports System
Imports System.IO
Public Class writeform
Private Sub Button1_Click(sender As Object, e As EventArgs) Handles Button1.Click
    Dim sw As StreamWriter = New StreamWriter("p1.txt", FileMode.OpenOrCreate)
    sw.WriteLine(TextBox1.Text)
    MsgBox("Data Write in p1.txt File Successfull", MsgBoxStyle.Information)
    sw.Close()
End Sub
End Class
```

✓ **Read Data in Text File**

✓ **Design View**

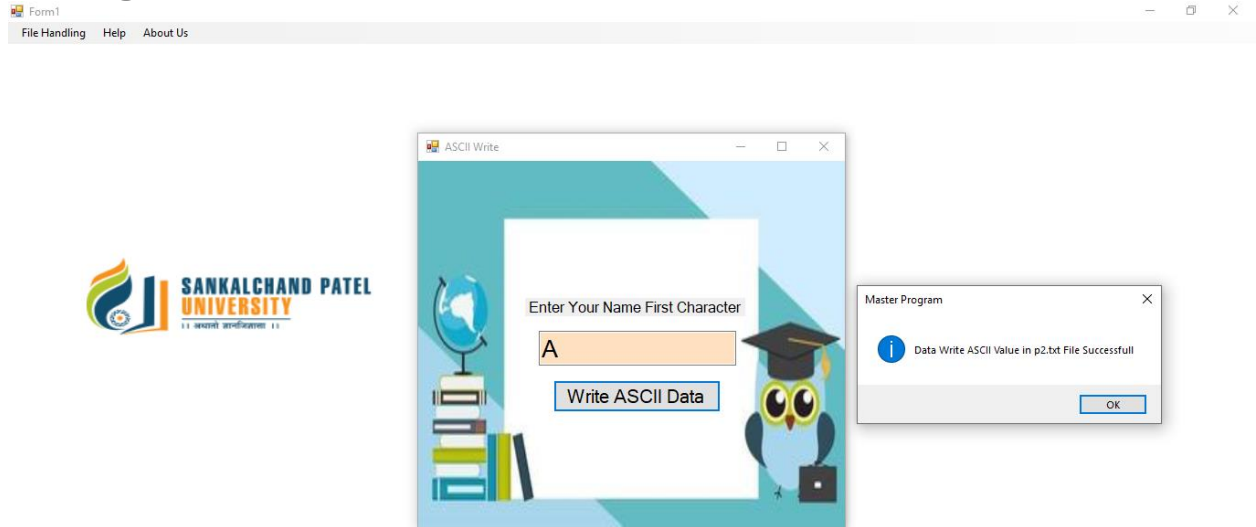


✓ **Code View**

```
Imports System
Imports System.IO
Public Class readform
Private Sub Button1_Click(sender As Object, e As EventArgs) Handles Button1.Click
    Dim sr As StreamReader = New StreamReader("p1.txt", FileMode.OpenOrCreate)
    While (sr.Peek() >= 0)
        Dim r As String = sr.ReadLine()
        TextBox1.Text = r
    End While
End Sub
End Class
```


Encryption Data Store and Data Read in / from the File from VB.NET Form.

- ✓ Write Encryption Data in Text File
- ✓ Design View Introduction data store in



✓ Code View

Imports System

Imports System.IO

Public Class acwrite

Private Sub Button1_Click(sender As Object, e As EventArgs) Handles Button1.Click

Dim sw As StreamWriter = New StreamWriter("p2.txt", FileMode.OpenOrCreate)

Dim s As String = Asc(TextBox1.Text)

sw.WriteLine(s)

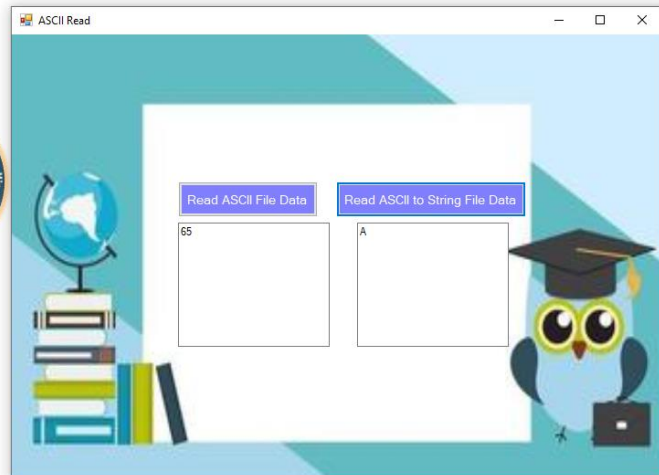
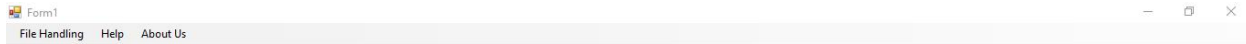
MsgBox("Data Write ASCII Value in p2.txt File Successfull", MsgBoxStyle.Information)

sw.Close()

End Sub

End Class

- ✓ Read Data in Encryption Text File
- ✓ Design View



✓ Code View

```
Imports System
Imports System.IO
Public Class acream
    Private Sub Button1_Click(sender As Object, e As EventArgs) Handles Button1.Click
        Dim sr As StreamReader = New StreamReader("p2.txt", FileMode.OpenOrCreate)
        While (sr.Peek() >= 0)
            Dim r As String = sr.ReadLine
            TextBox1.Text = r
        End While
        sr.Close()
    End Sub
    Private Sub Button2_Click(sender As Object, e As EventArgs) Handles Button2.Click
        Dim sr1 As StreamReader = New StreamReader("p2.txt", FileMode.OpenOrCreate)
        While (sr1.Peek() >= 0)
            Dim r As Integer = Convert.ToInt32(sr1.ReadLine())
            Dim s As Char = Chr(r)
            TextBox2.Text = s
        End While
        sr1.Close()
    End Sub
End Class
```

Reference Link

1. https://www.tutorialspoint.com/vb.net/vb.net_file_handling.htm
2. <https://www.c-sharpcorner.com/article/working-with-c-sharp-streamreader/>
3. https://www.tutorialspoint.com/vb.net/vb.net_text_files.htm

 **Any Query Contact Us**

Faculty Name- Ankit Rami

Email – ankitramiblog@gmail.com

Contact No – +91 8460467193

Website - amit.arinfoaway.com



Subscribe Our YouTube Channel

<https://www.youtube.com/channel/UCWbJh2iQ8w-8nrU0Xpjpw7g>