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COMPUTER PROGRAMMING

FILE INPUT / OUTPUT

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File Input / Output in VB

What is File Input / Output?

- File Input/Output a.k.a file I/O
- Storage of data in variables and arrays is temporary
- For permanent retention of data, file are used
- All of us are familiar with files. We save our work (e.g.: documents, graphics, VB project) in a file
- If we want to read/edit our work, we need to retrieve the file

What is File Input / Output?

- Files are normally stored in hard disk / other disks
- A file is just a collection of related data stored in one unit (under one name) on a disk
- Programs use files for several reasons:
 - 1. Data generated by one program can be read by other program
 - 2. Data used in one run of a program will be available the next time the program is executed
 - 3. Reports can be generated and saved in the form of a file. The report can be viewed at anytime by displaying or printing the file



Exercise 34 – Open File: Input (Creating File)

Create a file in notepad sample - Notepad П \times File Edit Format View Help Test VB Open File and save the file in any Well done location of your computer ~ ₹ Projects File Home Share View Search Projects C:\Users\HP\Documents\Visual Studio 2010\Projects Q States.txt Test1 Mark sample 📌 Quick access Exercise32-Array of Structure Exercise 32-Query Properties Exercise 31 - Array Query Desktop Exercise28-Array-Load Form Exercise30-Array Split Method Ecerxise29-Array Methods Downloads Exercise26-Funtion with several Para Exercise27-Array Exercise25-OneParaFunction BAA2012-Computer Programming Exercise24-NumerListBox-Selected Exercise23-NumerListBox Exercise22-String ListBox Exercise21-Nested For Next Loop Exercise20-Repitition Neg Step Exercise19-For Next Loop Documents Exercise18-For Next Loop Exercise17-Repetition Financial Exercise16-Do Loop Until PowerPoint Exercise 15 - Do While Loop Exercise14-Check Box Exercise13-Radio Box Projects Exercise12-Listbox Exercise11-Select Case Exercise10-Elself Clause 😂 Dropbox Exercise9-Nested If Exercise8-If block Exercise7-Logical Operator Exercise 5-ANSI Exercise6-Rational operator Trial Decision 🙈 OneDrive Exercise4_Simply Supported Beam Exercise3_BMI Calculator Exercise2_Pythagoras Theorem This PC Exercise 1

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Exercise 34 – Open File: Input (Form and Output)

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Read File ListBox1 Label1	Read File Test VB Open FileWell done Test VB Open File Well done Test VB Open File Well done

Form

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Exercise 34 – Open File: Input (Code)

Public Class FrmOpenFile

```
Private Sub Button1 Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
        Dim fileNum As Integer = 1
        Dim TemS As String = ""
        Dim TemL As String
        FileOpen(1, "C:\Users\HP\Documents\Visual Studio 2010\Projects\sample.txt",
OpenMode.Input)
        Do Until EOF(1)
            TemL = LineInput(1)
            TemS += TemL + vbCrLf
        Loop
        FileClose(1)
        ListBox1.Items.Add(TemS)
        Label1.Text = TemS
        TextBox1.Text = TemS
    End Sub
End Class
```





- Every file open will have a file number, in this case, we assigned #1 as file number
- General syntax for FileOpen is:

FileOpen(file_number, "filepath", Mode)

- FileOpen(1, "C:\Users\HP\Documents\Visual Studio 2010\Projects\sample.txt", OpenMode.Input)
- EOF stands for End of File
- vbCrLf represent a line-break
 - This line-break command is not function when using listbox
 - Try to delete vbCrLf in your program and see the difference

Exercise 35 – Write to File: Output (Modify Exercise 34)

- The existing data in file "sample.txt"
- Now we want to write new information (add data) into this file using VB
- First open Exercise 34 that you have saved and rename (give any name you like)
- Then add 2 new buttons (refer next slide)

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• Test VB Open File Well done			~
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🖳 Form1 📃 🗖 💌	
Read File Write File ListBox1 Label1	<pre>Private Sub BtnWrite_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles BtnWrite.Click Dim fileNum As Integer = 1 FileOpen(1, "C:\Users\HP\Documents\Visual Studio 2010\Projects\sample.txt", OpenMode.Output) PrintLine(1, TextBox1.Text) FileClose(1) End Sub</pre>



Form1		
Read File Write File	Clear	
ListBox1 Label1		<pre>Private Sub BtnClear_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles BtnClear.Click ListBox1.Items.Clear() Label1.Text = "" TextBox1.Clear()</pre>
		End Sub



• Click at "Read File" Button – the output is similar to Exercise 34

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File Input, Outp	ut			- /	Commun	itising Techno

Click at "Clear" Button – the output for listbox, lable and textbox are all cleared

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Label1							
File Input, Out	Form		0	C	Dutput	Communit	ising Technolo

Click at "Read File" Button AGAIN for 2-3 times and observe the difference

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Label1		Test VB Open File Well done	Test VB Op Well done	en File	

Form

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- Now try to write some new information in listbox, lable, textbox
 - You will notice only textbox allows you to write/add info

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 Now click the "Write File" Button

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- Then click the "Read File" Button AGAIN
- New data is added

	🚽 Form1	_		×
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	Test VB Open File Well done Try to add new info	Test VB (Well done Try to add)pen File e d new info	
2	Try to add new info	Try to add	d new info	

Exercise 35 – Write to File: Output (Check the modified file)

• Now open the file in your computer and see the difference

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File Edit Format View Help		
Test VB Open File Well done		<u>^</u>
		× 1
<		≥



Original file

Modified file



Exercise 36 – Write to File: (Modify from Existing Exercises)

- Assuming we have developed a VB program for solving a problem and we want the results to be written in a file (e.g: notepad)
- We can create a file (notepad) and add button to write the output file for the program
- Let's modify for one of the existing program, says Exercise 4 (Simply support beam)

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Exercise 36 – Write to File: (Codes for Exercise 4)

• For Calculate button (btnCal)

Private Sub btnCal_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnCal.Click

```
Dim Load, Span, A, Ra, Rb As Single
Load = Val(txtF.Text)
A = Val(txta.Text)
Span = Val(txtL.Text)
Ra = Load * (Span - A) / Span
Rb = Load - Ra
IbIRa.Text = Ra
IbIRb.Text = Rb
End Sub
```

Exercise 36 – Write to File: (Codes for Exercise 4)

• For Clear button (btnClear)

Private Sub btnClear_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnClear.Click

lblRa.Text = "Ra"
lblRb.Text = "Rb"
txtF.Text = ""
txta.Text = ""
txtL.Text = ""

End Sub

Exercise 36 – Write to File: (Codes for Exercise 4)

• For Exit button (btnExit)

Private Sub btnExit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnExit.Click

End End Sub



Exercise 36 – Write to File: (Code for "Write to File" button)

Private Sub BtnWrite_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs)
Handles BtnWrite.Click

Dim fileNum As Integer = 1

FileOpen(1,

"C:\Users\HP\Documents\Visual Studio
2010\Projects\Beam.txt", OpenMode.Output)

- Once you have done the coding, start the debugging process
- First click at "Write to File" button and the data/info have been written into your file

Beam - Notepad	—	×	🗐 Beam - Notepad — 🛛) X
File Edit Format View Help			File Edit Format View Help	
		^	When a = , F = , L = , Ra = Ra, Rb = Rb	^
		\vee		~
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Original file (empty)

Modified file



• Now input values for a, F and L then click at "Write to File" button





• Now input values for a, F and L then click at "Write to File" button



 Now input values for a, F and L, click at "Calculate" button before click at "Write to File" button





Now input values for a, F and L , click at "Calculate" button before click at "Write to File" button





Now input values for a, F and L, click at "Calculate" button
 Followed by click at "Write to File" button



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File Input, Output

Now input values for a, F and L , click at "Calculate" button before click at "Write to File" button





Lets try to write the output file with other existing program

