Intermediate Programing(prg521)

Group activity 5

2020

APRIL 13

Ctu Training Solutions
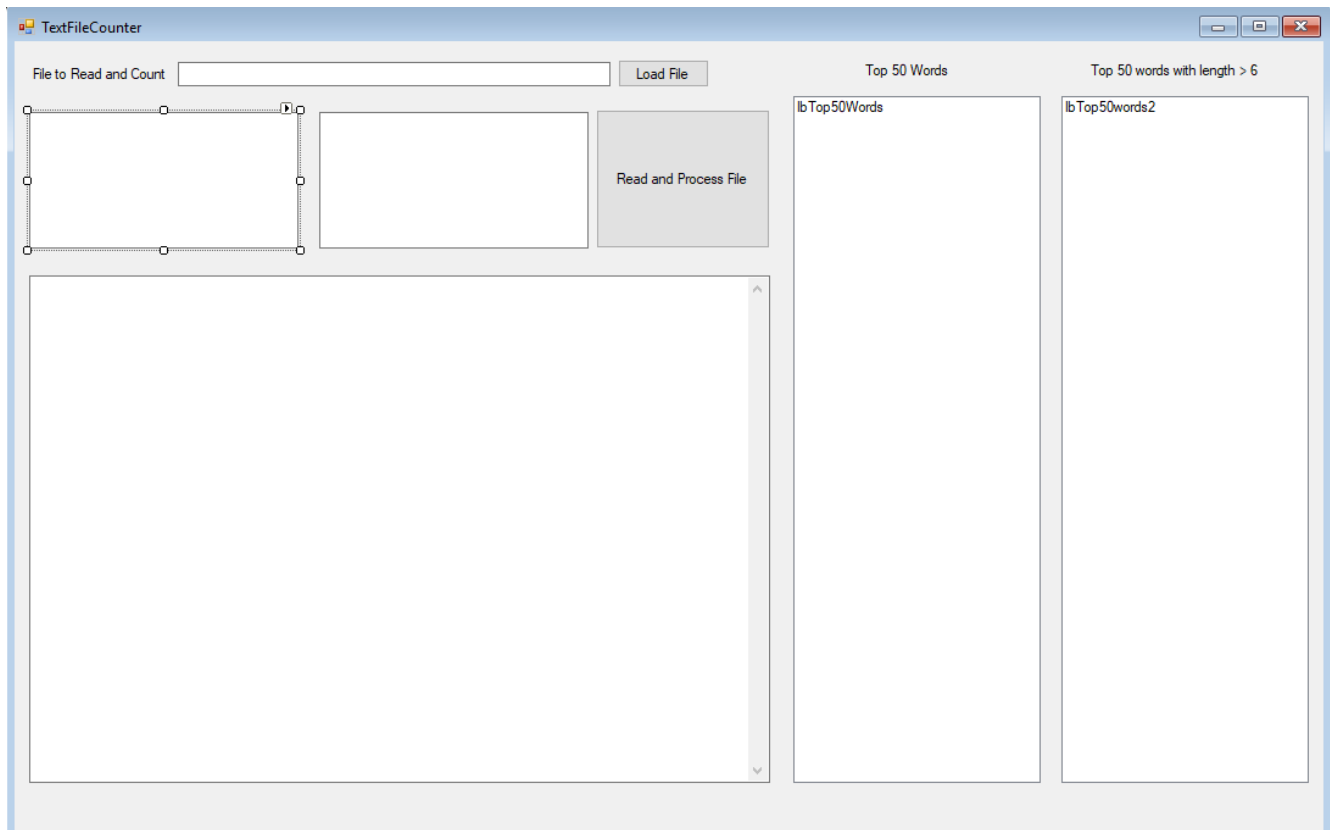**Authored by: Albert Michael Ludick**

Logo
Name

Table of Contents

Program Content

TextFileCounter

File to Read and Count [_____] [Load File]

Read and Process File

Top 50 Words

lbTop50Words

Top 50 words with length > 6

lbTop50words2

Source Code:

Question 1

class ReadandCount:

```csharp
using System;
using System.Collections.Generic;
using System.Data;
using System.Linq;
using System.Windows.Forms;
using System.IO;
using System.Text.RegularExpressions;
```

```csharp
3 references
public partial class ReadandCount : Form
{
    string path;
    //points to the textfile
    1 reference
    public ReadandCount()
    {
        InitializeComponent();
    }
    1 reference
    private void btnLoadFile_Click(object sender, EventArgs e)
```

```csharp
private void btnLoadFile_Click(object sender, EventArgs e)
{
    /*
     * this button open a window to prompt user to find the textfile path
     *basically this is to find the file
     *and adds the path to the txtLoadFile textbox
     *and adds the file path to path field
     */
    try
    {
        OpenFileDialog chooseFile = new OpenFileDialog();
        chooseFile.ShowDialog();
        path = chooseFile.FileName;
        txtLoadFile.Text = path;
    }
    catch (FileNotFoundException ex)
    {
        ErrorHandler(ex);
    }
}

private void btnResults_Click(object sender, EventArgs e)
{
    /*
     * this button readalltext from the text file and display it in the txtTextFile textbox
     * and uses a regular expression to filter out anything that is not a letter or number
     * splist the text from textfile in a string array
     * and counts the words in the textfile totalamount of words in the textfile and
     * display it with the totalamount of lines in file in the txtCountLines textbox
     * and the code also displays the how much a word occured in the file as output in the
     * lbTop50Words listbox as well as greater then 6 in the lbTop50words2 listbox
     * and counts process time of the whole excution of the program
     */
```

```csharp
try
{
    try
    {
        var start = DateTime.Now;
        string Line = File.ReadAllText(path);
        txtTextFile.Text = Line;
        Regex rexex = new Regex("[^a-zA-Z0-9]");
        Line = rexex.Replace(Line, " ");
        var wordsCount = Line.Split(new char[] { ' ' }, StringSplitOptions.RemoveEmptyEntries);
        wordsCount = wordsCount.Where(w => !string.IsNullOrWhiteSpace(w)).ToArray();
        txtCountLines.Text = $"Lines in file:{File.ReadAllLines(path).Count() + 1}" +
            $"{Environment.NewLine}words in file:{wordsCount.Count() + 1}";
        Dictionary<string, int> frequancies = new Dictionary<string, int>();
        foreach (string word in wordsCount)
        {
            if (frequancies.ContainsKey(word))
```

```csharp
foreach (string word in wordsCount)
{
    if (frequancies.ContainsKey(word))
    {
        frequancies[word] += 1;
    }
    else
    {
        frequancies[word] = 1;
    }
}
foreach (KeyValuePair<string, int> entry
```

```csharp
    }
    foreach (KeyValuePair<string, int> entry in frequancies)
    {
        string word = entry.Key;
        int frequency = entry.Value;
    }
var List = frequancies.OrderByDescending(x => x.Value).Take(50);
foreach (var word in List)
{
    lbTop50Words.Items.Add($"{word.Key} occured {word.Value} Times");
```

```csharp
    lbTop50Words.Items.Add($"{word.Key} occured {word.Value} Times");
}
var List2 = frequancies.OrderByDescending(x => x.Value).Where(x => x.Key.Length > 6).Take(50);
foreach(var word in List2)
{
    lbTop50words2.Items.Add($"{word.Key} occured {word.Value} Times");
}
```

```csharp
        var stop = DateTime.Now;
        var TotalTime = stop - start;
        txtTime.Text =$"Start Time:{start.ToString("HH:mm:ss")}{Environment.NewLine}" +
            $"End Time:{stop.ToString("HH:mm:ss")}{Environment.NewLine}" +
            $"Overal Process Time: {TotalTime.TotalSeconds} seconds";
        MessageBox.Show($"Processing and counts Completed! " +
            $"{Environment.NewLine}{TotalTime.TotalSeconds} Seconds");
    }
```

```csharp
        catch (FileNotFoundException ex)
        {
            ErrorHandler(ex);
        }
    }
    catch (IOException ex)
    {
        ErrorHandler(ex);
    }
}
```
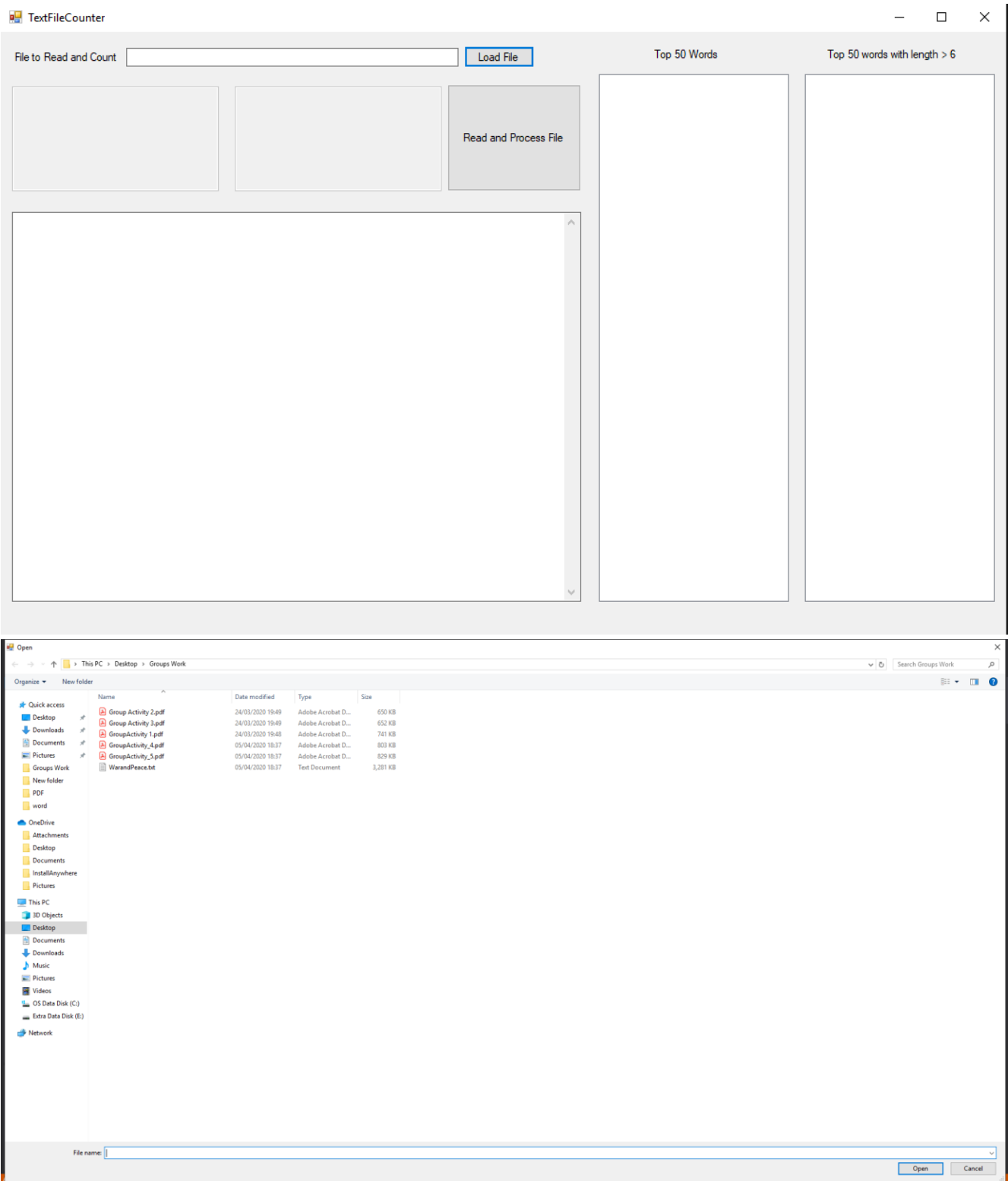
```csharp
    public void ErrorHandler(Exception ex)
    {
        //to handel all exception that can occure
        //at compile or runtime
        MessageBox.Show($"you have encounterd{ex}",
            "Error Message",
            MessageBoxButtons.OK,
            MessageBoxIcon.Error);
    }
}
```

Output of all questions

Output of Question 1:

📄 Group Activity 2.pdf	24/03/2020 19:49	Adobe Acrobat D...	650 KB
📄 Group Activity 3.pdf	24/03/2020 19:49	Adobe Acrobat D...	652 KB
📄 GroupActivity 1.pdf	24/03/2020 19:48	Adobe Acrobat D...	741 KB
📄 GroupActivity_4.pdf	05/04/2020 18:37	Adobe Acrobat D...	803 KB
📄 GroupActivity_5.pdf	05/04/2020 18:37	Adobe Acrobat D...	829 KB
📄 WarandPeace.txt	05/04/2020 18:37	Text Document	3,281 KB

TextFileCounter

File to Read and Count   C:\Users\MIchael Ludick\Desktop\Groups Work\WarandPeace.txt   [Load File]

Top 50 Words   Top 50 words with length > 6

Read and Process File

File to Read and Count   C:\Users\MIchael Ludick\Desktop\Groups Work\WarandPeace.txt   [Load File]

TextFileCounter

File to Read and Count: `C:\Users\MIchael Ludick\Desktop\Groups Work\WarandPeace.txt` [Load File]

Lines in file:66056
words in file:586917

Start Time:16:03:21
End Time:16:03:22
Overall Process Time: 1.714048 seconds

[Read and Process File]

The Project Gutenberg EBook of War and Peace, by Leo Tolstoy

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Language: English

Character set encoding: UTF-8

*** START OF THIS PROJECT GUTENBERG EBOOK WAR AND PEACE ***

An Anonymous Volunteer, and David Widger

Top 50 Words

the occured 31954 Times
and occured 21214 Times
to occured 16514 Times
of occured 14939 Times
a occured 10129 Times
in occured 8499 Times
he occured 8140 Times
that occured 7816 Times
his occured 7677 Times
was occured 7344 Times
with occured 5571 Times
had occured 5333 Times
it occured 4717 Times
s occured 4716 Times
her occured 4642 Times
him occured 4615 Times
not occured 4593 Times
I occured 4540 Times
at occured 4235 Times
as occured 3797 Times
on occured 3698 Times
for occured 341...
is occured 3245...
you occured 32...
but occured 293...
said occured 28...
The occured 27...
she occured 27...
from occured 25...
all occured 2534...
be occured 242...
were occured 2...
by occured 2408 Times
who occured 2084 Times
which occured 2053 Times
Pierre occured 1963 Times
one occured 1934 Times
have occured 1924 Times
He occured 1867 Times
this occured 1820 Times
they occured 1787 Times
so occured 1722 Times
what occured 1707 Times

Top 50 words with length > 6

himself occured 1017 Times
thought occured 766 Times
CHAPTER occured 730 Times
without occured 642 Times
Nicholas occured 633 Times
Emperor occured 625 Times
something occured 586 Times
Princess occured 586 Times
Napoleon occured 575 Times
another occured 571 Times
because occured 469 Times
Russian occured 456 Times
officer occured 437 Times
nothing occured 432 Times
general occured 423 Times
looking occured 404 Times
suddenly occured 385 Times
countess occured 368 Times
everything occured 364 Times
through occured 362 Times
understand occured 348 Times
...343 Times
...330 Times
...26 Times
...324 Times
...323 Times
...19 Times
...01 Times
...ed 301 Times
...296 Times
...293 Times
commander occured 293 Times
Petersburg occured 245 Times
shouted occured 244 Times
between occured 233 Times
officers occured 228 Times
regiment occured 223 Times
Anatole occured 222 Times
against occured 222 Times
entered occured 220 Times
question occured 219 Times
sitting occured 218 Times
evening occured 215 Times

Processing and counts Completed!
1.714048 Seconds

[OK]

×

Processing and counts Completed!
1.714048 Seconds

[OK]

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words in file:586917

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I occured 4540 Times	countess occured 368 Times
at occured 4235 Times	everything occured 364 Times
as occured 3797 Times	through occured 362 Times
on occured 3698 Times	understand occured 348 Times
for occured 3412 Times	soldiers occured 343 Times
is occured 3245 Times	princess occured 330 Times
you occured 3236 Times	herself occured 326 Times
but occured 2939 Times	evidently occured 324 Times
said occured 2842 Times	already occured 323 Times
The occured 2767 Times	feeling occured 319 Times
she occured 2735 Times	replied occured 301 Times
from occured 2544 Times	expression occured 301 Times
all occured 2534 Times	position occured 296 Times
be occured 2428 Times	anything occured 293 Times
were occured 2419 Times	commander occured 293 Times
by occured 2408 Times	Petersburg occured 245 Times
who occured 2084 Times	shouted occured 244 Times
which occured 2053 Times	between occured 233 Times
Pierre occured 1963 Times	officers occured 228 Times
one occured 1934 Times	regiment occured 223 Times
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Bibliography & References:

Websites:

GeeksforGeek : https://www.geeksforgeeks.org/
C-Sharp corner: https://www.c-sharpcorner.com/
Books:

Microsoft Visual C# Step by Step, 9th Edition

Appendix

No Extra files or media.
Except for the project itself