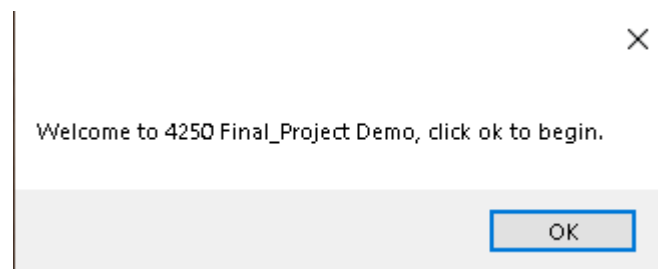


GRADING APPLICATION

Running the application:



4250_Final

Student Name
Student Selected: ?

Select Class:
Class Selected: ?

Homework 1: Grade: 100

Homework 2: Grade: 100

Homework 3: Grade: 100

Test 1: Grade: 100

Test 2: Grade: 100

SAVE

	Assignments	Math	Science	History
Homework 1:				
Homework 2:				
Homework 3:				
Test 1:				
Test 2:				
HW Avg.				
TEST Avg.				
FINAL GRADE				

Export Import

UT
COLLEGE OF ENGINEERING
THE UNIVERSITY OF TOLEDO

Interacting with the database:

4250_Final

Student Name
Student Selected: ?

Select Class:
Science

Class Selected: Science

Grade

Homework 1: Earth 55
Homework 2: Planets 66
Homework 3: Plates 77
Test 1: Midterm 88
Test 2: Final 99

SAVE

	Assignments	Math	Science	History
Homework 1:			Earth = 55	
Homework 2:			Planets = 66	
Homework 3:			Plates = 77	
Test 1:			Midterm = 88	
Test 2:			Final = 99	
HW Avg.			66.00%	
TEST Avg.			93.50%	
FINAL GRADE			77.00% = C	

Export **Import**

UT
COLLEGE OF ENGINEERING
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Inserting grade values for the assignments section and test section:

4250_Final

Student Name
Student Selected: ?

Select Class:
History

Class Selected: History

Grade

Homework 1: USA 45
Homework 2: Europe 78
Homework 3: World 99
Test 1: Midterm 28
Test 2: Final 73

SAVE

	Assignments	Math	Science	History
Homework 1:	Algo = 44		Earth = 55	USA = 45
Homework 2:	Multiply = 33		Planets = 66	Europe = 78
Homework 3:	Divide = 67		Plates = 77	World = 99
Test 1:	Midterm = 90		Midterm = 88	Midterm = 28
Test 2:	Final = 23		Final = 99	Final = 73
HW Avg.	48.00%		66.00%	74.00%
TEST Avg.	56.50%		93.50%	50.50%
FINAL GRADE	51.40% = F		77.00% = C	64.60% = D

Export **Import**

UT
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4250_Final

Student Name

Student Selected: Justin Keating

Select Class: History

Class Selected: History

Homework 1: USA

Homework 2: Europe

Homework 3: World

Test 1: Midterm

Test 2: Final

Grade

45

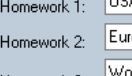
78

99

28

73

SAVE



COLLEGE of ENGINEERING

THE UNIVERSITY OF TOLEDO

Justin Keating

Assignments	Math	Science	History
Homework 1: Algo = 44	Earth = 55	USA = 45	
Homework 2: Multiply = 33	Planets = 66	Europe = 78	
Homework 3: Divide = 67	Plates = 77	World = 99	
Test 1: Midterm = 90	Midterm = 88	Midterm = 28	
Test 2: Final = 23	Final = 99	Final = 73	
HW Avg.	48.00%	66.00%	74.00%
TEST Avg.	56.50%	93.50%	50.50%
FINAL GRADE	51.40% = F	77.00% = C	64.60% = D

Export

Import

Exporting Students Grades:

Save As

← → ↑ ↓

📁 > This PC > Local Disk (C:) > 4250_FINAL > 4250_FINAL > Student_Data

🔍 Search Student_Data

Organize ▾ New folder

Name	Date modified	Type	Size
📄 test	4/27/2020 1:38 PM	Microsoft Excel W...	7 KB

📁 CSET4750

📁 CSET4850

📁 FINAL

💻 This PC

📁 3D Objects

🖥 Desktop

📁 Documents

⬇ Downloads

🎵 Music

🖼 Pictures

📺 Videos

🖥 Local Disk (C:)

🖥 Third (F:)

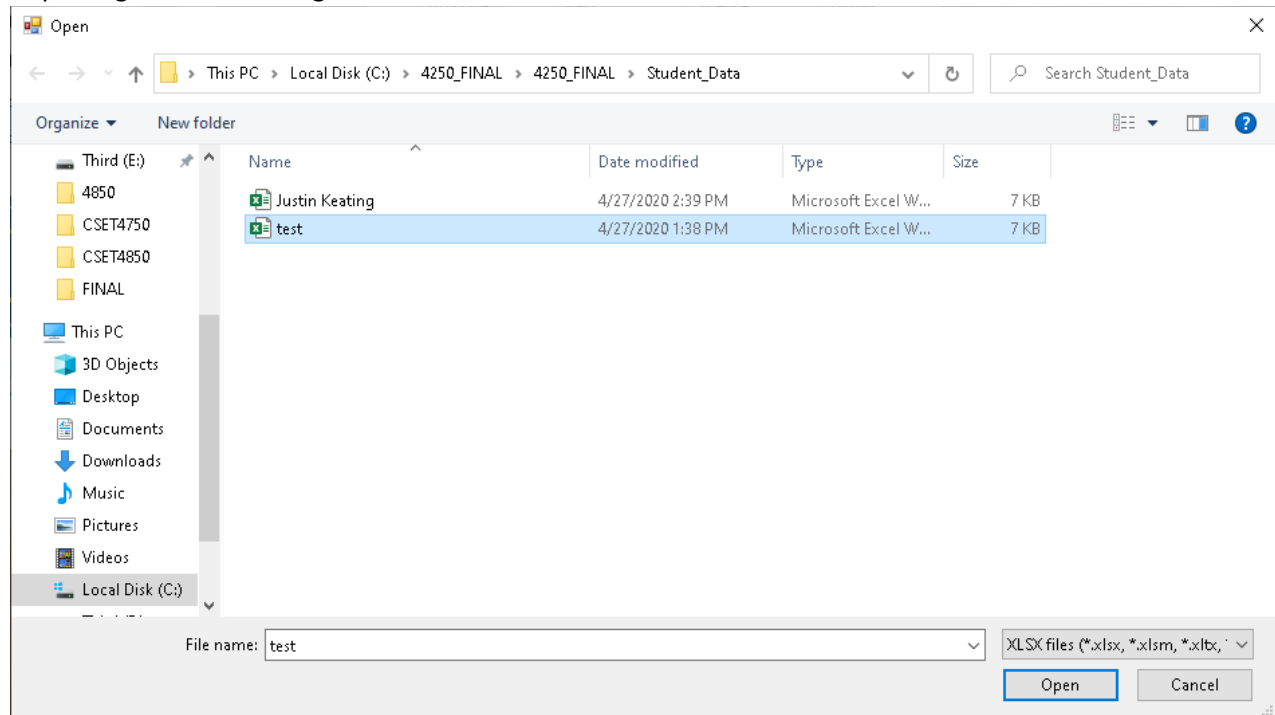
File name: Justin Keating

Save as type: XLSX files (*.xlsx)

⬆ Hide Folders

Save Cancel

Importing Student “test” grades:



The screenshot shows the '4250_Final' application window. It features a 'Student Name' section with a dropdown menu showing 'test'. Below this is a 'Select Class:' dropdown menu showing 'History'. To the right, there are input fields for 'Homework 1: USA', 'Homework 2: Europe', 'Homework 3: World', 'Test 1: Midterm', and 'Test 2: Final'. A 'Grade' column shows corresponding values: 45, 78, 99, 28, and 73. A 'SAVE' button is located next to the grade inputs. Below the input fields is the University of Toledo logo and the text 'COLLEGE OF ENGINEERING' and 'THE UNIVERSITY OF TOLEDO'. On the right side, there is a table titled 'test' with columns for 'Assignments', 'Math', 'Science', and 'History'.

	Assignments	Math	Science	History
2	Homework 1:	= 0		
3	Homework 2:	= 0		
4	Homework 3:	= 0		
5	Test 1:	= 0		
6	Test 2:	= 0		
7				
8	HW Avg.	0.00%		
9	TEST Avg.	0.00%		
10	FINAL GRADE	0.00% = F		

At the bottom right, there are 'Export' and 'Import' buttons.

Application Cosmetic Details:

Overall, the grading application I have created works all around. The Student Name button display the name of Student you are grading. Class selection is a drop-down box, you need to make sure a class is selected. Then I give the opportunity to insert in names of the three HW assignments and the two test that are given out. These tests can also be names anything you want, whatever they are named will correspond to the excel data sheet.

The last few thing I display as cosmetic is the Save, Export, Import and data spreadsheet. The save needs to be used every time information wants to be inserted into the spread sheet. The export and import work cordially with the data sheet. If you want to export a student's grade to any folder on device that will work. This will also work with importing as well, importing data from any spreadsheet form.

The last thing Incorporated was better GUI implementations. It has a nicer background color and font to take less strain then using a default white background and weird text.

I tried to keep user-friendly priority at the top of the list when creating my application to make sure everything was correct and runs smooth. It is important that it looks good as well to me.

PowerShell Script

This is just a simple batch file to move my folder that is downloaded to the C drive of the user and starts the install process of the application from the C drive.

It is very simple and easy to just click and have it work. Here it is:

```
mkdir C:\4250_FINAL  
move 4250_FINAL C:\4250_FINAL\4250_FINAL  
START C:\4250_FINAL\4250_FINAL\Setup\Debug\setup.exe  
move installer.bat C:\4250_FINAL
```

I create a directory, move my application folder to that directory, start the install process that I created within C# application. After that is all done the install process will start and then I tell the Installer batch file to move back to original folder in C drive.

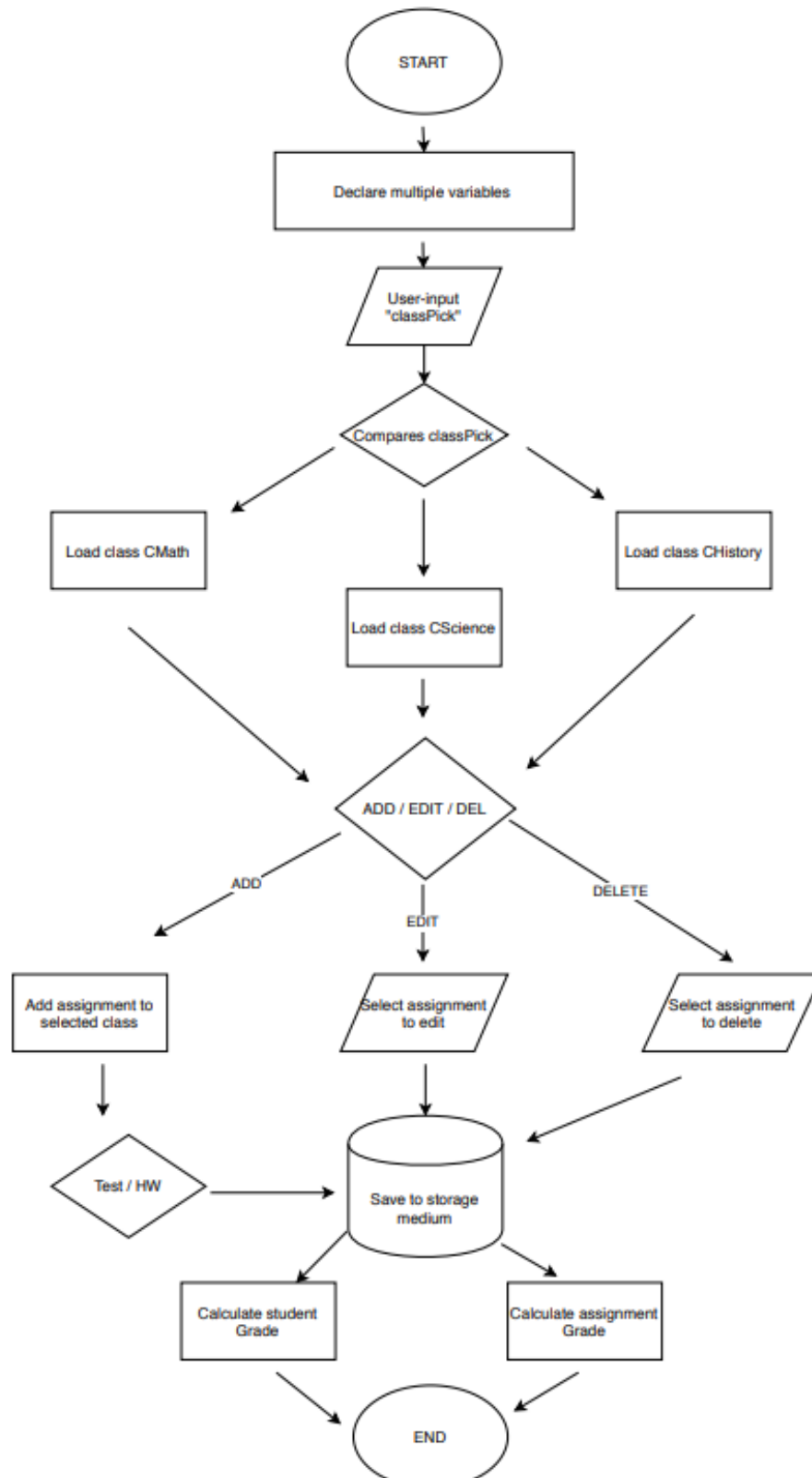
Once my ZIP file is downloaded go ahead and extract the file and run the installer.bat file and it will do all the work for you.

Manual

Welcome to this Grading Application, here are a few steps to begin

1. Download the ZIP file attached
2. Extract the file and run the "Installer.bat"
3. Open the desktop application now called "CSET_4250" that was installed
4. Click "Ok" after the prompt shows
5. The Grading Application is now running
6. Student Name button allows you to insert Student Name
7. A drop-down box will be displayed to select the class for the student
 - a. Make sure a class is selected
8. Insert in Homework and test names for the student
9. Give them the grade that they have received from 0-100
10. Every time you want to insert data into the spreadsheet click on "SAVE"
11. After data is inserted in
 - a. Export button will export student's data to be saved (Save as students' name)
 - b. Import can load in students' grades
 - c. They can also be altered and saved overwritten

FlowChart



There is one language being used in my project, which is Visual Studio C#. Along with that code I was able to create an application with C# and installer with it as well. To have my application installed I created a .BAT that makes sure my program can be easily installed onto a user's device

Visual Studio C#.is an Object-Oriented Programming language. There are beneficial features such as encapsulation, polymorphism, abstraction, and inheritance. Visual Studio C# is useful because it is a .net. This means that Visual Studio C# runs on the .net framework. The .net framework contains a variety of libraries for the user to implement.

For the project I decided to use Visual Studio C#, I felt this was the better choice because it is easy to create and setup the GUI interface with forms. Visual Studio C# is readable, almost like reading plain English, Easy to make changes and not get lost while coding. Visual Studio C# is reliable, you are given database functionality and tools to help format a GUI. Other languages you must specify size within the code.

C++ is readable. I would say that it isn't as readable as Visual Studio C#, and it is writeable similar to C#. There is a lot of functionality with C++. It is generally used more for these reasons. It is also reliable; this language is widely used and if it were not reliable it would not be used as much. C++ does not use too many resources, so it is very friendly. Pointers might need a few, but it is not like this language is inefficient.

Java is more readable and less writeable. Java is a reliable Object-Oriented Program because it is widely used. This language uses several resources when applicable.

The language C is not very readable, but it is writeable. This is the reason it is not very reliable in some cases. And it does not use many resources, therefore the cost is down for this language.

Visual Studio C# is easy to use, the syntax is not overly complicated. It is almost like writing English. All the syntax is displayed down below for the application. Data structures are present with the loop for adding more users with each entry into the assignment and test classes. Input and outputs are present with the assignment and test classes, the database spreadsheet, and the if statements between displaying a numerical value or a letter grade. Scope rules are present, nothing oversteps its bounds and is contained within the scope. The stack can be visualized with the database spreadsheet. Having entries added and removed from the table simulates a stack. Error handling procedures are implemented within the properties of the tools used in Visual Studio C#. Like the text boxes, buttons, and spreadsheet.

Program Source Code

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;
using System.IO;
using System.Diagnostics;
using Microsoft.VisualBasic;
using GemBox.Spreadsheet;
using GemBox.Spreadsheet.WinFormsUtilities;
```

```
namespace WindowsFormsApp1
{
```

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

```
    public void Form1_Load(object sender, EventArgs e)
    {
        MessageBox.Show("Welcome to 4250 Final_Project Demo, click ok to begin.");

        dataGridView1.Rows.Add(label6.Text);
        dataGridView1.Rows.Add(label7.Text);
        dataGridView1.Rows.Add(label8.Text);
        dataGridView1.Rows.Add(label10.Text);
        dataGridView1.Rows.Add(label13.Text);
        dataGridView1.Rows.Add();
        dataGridView1.Rows.Add("HW Avg.");
        dataGridView1.Rows.Add("TEST Avg.");
        dataGridView1.Rows.Add("FINAL GRADE");

        SpreadsheetInfo.SetLicense("FREE-LIMITED-KEY");

    }
```

```
    public string studentName;
```

```

private void button2_Click(object sender, EventArgs e)
{

    string message, title;

    message = "Enter in Student Name: ";
    title = "Student";

    studentName = Interaction.InputBox(message, title);
    label3.Text = studentName;
    label11.Text = studentName;

}

public void button3_Click(object sender, EventArgs e)
{

    if (comboBox1.Text == "Math")
    {
        StreamWriter txt = new StreamWriter("C:\\4250_FINAL\\studentDetailsMath.txt");
        txt.Write("Student: " + studentName + "\n" + "Class: " + comboBox1.Text
            + "\n" + "Homework 1: " + textBox1.Text + "\n" + "Homework 2: " + textBox2.Text + "\n" +
"Homework 3: " + textBox3.Text
            + "\n" + "Test 1: " + textBox4.Text + "\n" + "Test 2: " + textBox5.Text);
        txt.Close();

        dataGridView1.Rows[0].Cells[1].Value = (textBox1.Text + " = " + textBox6.Text);
        dataGridView1.Rows[1].Cells[1].Value = (textBox2.Text + " = " + textBox7.Text);
        dataGridView1.Rows[2].Cells[1].Value = (textBox3.Text + " = " + textBox8.Text);
        dataGridView1.Rows[3].Cells[1].Value = (textBox4.Text + " = " + textBox9.Text);
        dataGridView1.Rows[4].Cells[1].Value = (textBox5.Text + " = " + textBox10.Text);

        double Mhw1 = Int32.Parse(textBox6.Text);
        double Mhw2 = Int32.Parse(textBox7.Text);
        double Mhw3 = Int32.Parse(textBox8.Text);
        double Mtst1 = Int32.Parse(textBox9.Text);
        double Mtst2 = Int32.Parse(textBox10.Text);

        double Mhwavg = (Mhw1 + Mhw2 + Mhw3) / 300 * 100;
        double Mtstavg = (Mtst1 + Mtst2) / 200 * 100;

        string mhwcalc = Mhwavg.ToString("0.00");
        string mtstcalc = Mtstavg.ToString("0.00");

        dataGridView1.Rows[6].Cells[1].Value = mhwcalc + "%";
        dataGridView1.Rows[7].Cells[1].Value = mtstcalc + "%";
    }
}

```

```
double Moverall = (Mhw1 + Mhw2 + Mhw3 + Mtst1 + Mtst2) / 500 * 100;
```

```
string mFinal = Moverall.ToString("0.00");
```

```
if (Moverall >= 90 && Moverall <= 100)
{
    dataGridView1.Rows[8].Cells[1].Value = mFinal + "%" + " = A";
}
else
```

```
if (Moverall >= 80 && Moverall <= 89)
{
    dataGridView1.Rows[8].Cells[1].Value = mFinal + "%" + " = B";
}
else
```

```
if (Moverall >= 70 && Moverall <= 79)
{
    dataGridView1.Rows[8].Cells[1].Value = mFinal + "%" + " = C";
}
```

```
else
```

```
if (Moverall > 60 && Moverall <= 69)
{
    dataGridView1.Rows[8].Cells[1].Value = mFinal + "%" + " = D";
}
```

```
else
```

```
if (Moverall >= 0 && Moverall <= 59)
{
    dataGridView1.Rows[8].Cells[1].Value = mFinal + "%" + " = F";
}
```

```
}
```

```
if (comboBox1.Text == "Science")
{
    StreamWriter txt = new StreamWriter("C:\\4250_FINAL\\studentDetailsScience.txt");
    txt.Write("Student: " + studentName + "\n" + "Class: " + comboBox1.Text
        + "\n" + "Homework 1: " + textBox1.Text + "\n" + "Homework 2: " + textBox2.Text + "\n" +
"Homework 3: " + textBox3.Text
        + "\n" + "Test 1: " + textBox4.Text + "\n" + "Test 2: " + textBox5.Text);
}
```

```
txt.Close();
```

```
dataGridView1.Rows[0].Cells[2].Value = (textBox1.Text + " = " + textBox6.Text);  
dataGridView1.Rows[1].Cells[2].Value = (textBox2.Text + " = " + textBox7.Text);  
dataGridView1.Rows[2].Cells[2].Value = (textBox3.Text + " = " + textBox8.Text);  
dataGridView1.Rows[3].Cells[2].Value = (textBox4.Text + " = " + textBox9.Text);  
dataGridView1.Rows[4].Cells[2].Value = (textBox5.Text + " = " + textBox10.Text);
```

```
double Shw1 = Int32.Parse(textBox6.Text);  
double Shw2 = Int32.Parse(textBox7.Text);  
double Shw3 = Int32.Parse(textBox8.Text);  
double Stst1 = Int32.Parse(textBox9.Text);  
double Stst2 = Int32.Parse(textBox10.Text);
```

```
double Shwavg = (Shw1 + Shw2 + Shw3) / 300 * 100;  
double Ststavg = (Stst1 + Stst2) / 200 * 100;
```

```
string Shwcalc = Shwavg.ToString("0.00");  
string Ststcalc = Ststavg.ToString("0.00");
```

```
dataGridView1.Rows[6].Cells[2].Value = Shwcalc + "%";  
dataGridView1.Rows[7].Cells[2].Value = Ststcalc + "%";
```

```
double Soverall = (Shw1 + Shw2 + Shw3 + Stst1 + Stst2) / 500 * 100;
```

```
string SFinal = Soverall.ToString("0.00");
```

```
if (Soverall >= 90 && Soverall <= 100)  
{  
    dataGridView1.Rows[8].Cells[2].Value = SFinal + "%" + " = A";  
}  
else
```

```
if (Soverall >= 80 && Soverall <= 89)  
{  
    dataGridView1.Rows[8].Cells[2].Value = SFinal + "%" + " = B";  
}  
else
```

```
if (Soverall >= 70 && Soverall <= 79)  
{  
    dataGridView1.Rows[8].Cells[2].Value = SFinal + "%" + " = C";  
}
```

```
else
```

```
if (Soverall > 60 && Soverall <= 69)
```

```

{
    dataGridView1.Rows[8].Cells[2].Value = SFinal + "%" + " = D";
}

else

if (Soverall >= 0 && Soverall <= 59)
{
    dataGridView1.Rows[8].Cells[2].Value = SFinal + "%" + " = F";
}

}

if (comboBox1.Text == "History")
{
    TextWriter txt = new StreamWriter("C:\\4250_FINAL\\studentDetailsHistory.txt");
    txt.Write("Student: " + studentName + "\n" + "Class: " + comboBox1.Text
        + "\n" + "Homework 1: " + textBox1.Text + "\n" + "Homework 2: " + textBox2.Text + "\n" +
"Homework 3: " + textBox3.Text
        + "\n" + "Test 1: " + textBox4.Text + "\n" + "Test 2: " + textBox5.Text);
    txt.Close();

    dataGridView1.Rows[0].Cells[3].Value = (textBox1.Text + " = " + textBox6.Text);
    dataGridView1.Rows[1].Cells[3].Value = (textBox2.Text + " = " + textBox7.Text);
    dataGridView1.Rows[2].Cells[3].Value = (textBox3.Text + " = " + textBox8.Text);
    dataGridView1.Rows[3].Cells[3].Value = (textBox4.Text + " = " + textBox9.Text);
    dataGridView1.Rows[4].Cells[3].Value = (textBox5.Text + " = " + textBox10.Text);

    double Hhw1 = Int32.Parse(textBox6.Text);
    double Hhw2 = Int32.Parse(textBox7.Text);
    double Hhw3 = Int32.Parse(textBox8.Text);
    double Htst1 = Int32.Parse(textBox9.Text);
    double Htst2 = Int32.Parse(textBox10.Text);

    double Hhwavg = (Hhw1 + Hhw2 + Hhw3) / 300 * 100;
    double Htstavg = (Htst1 + Htst2) / 200 * 100;

    string Hhwcalc = Hhwavg.ToString("0.00");
    string Htstcalc = Htstavg.ToString("0.00");

    dataGridView1.Rows[6].Cells[3].Value = Hhwcalc + "%";
    dataGridView1.Rows[7].Cells[3].Value = Htstcalc + "%";

    double Hoverall = (Hhw1 + Hhw2 + Hhw3 + Htst1 + Htst2) / 500 * 100;

```

```

string HFinal = Hoverall.ToString("0.00");

if (Hoverall >= 90 && Hoverall <= 100)
{
    dataGridView1.Rows[8].Cells[3].Value = HFinal + "%" + " = A";
}
else

if (Hoverall >= 80 && Hoverall <= 89)
{
    dataGridView1.Rows[8].Cells[3].Value = HFinal + "%" + " = B";
}
else

if (Hoverall >= 70 && Hoverall <= 79)
{
    dataGridView1.Rows[8].Cells[3].Value = HFinal + "%" + " = C";
}

else

if (Hoverall > 60 && Hoverall <= 69)
{
    dataGridView1.Rows[8].Cells[3].Value = HFinal + "%" + " = D";
}

else

if (Hoverall >= 0 && Hoverall <= 59)
{
    dataGridView1.Rows[8].Cells[3].Value = HFinal + "%" + " = F";
}

}

}

public void OPEN_Click(object sender, EventArgs e)
{
    var openFileDialog = new OpenFileDialog();
    openFileDialog.Filter = "XLS files (*.xls, *.xlt)|*.xls;*.xlt|XLSX files (*.xlsx, *.xlsm, *.xltx, *.xltm)|*.xlsx;*.xlsm;*.xltx;*.xltm|ODS files (*.ods, *.ots)|*.ods;*.ots|CSV files (*.csv, *.tsv)|*.csv;*.tsv|HTML files (*.html, *.htm)|*.html;*.htm";
    openFileDialog.FilterIndex = 2;

    if (openFileDialog.ShowDialog() == DialogResult.OK)
    {

```

```

        var workbook = ExcelFile.Load(openFileDialog.FileName);

        // From ExcelFile to DataGridView.
        DataGridViewConverter.ExportToDataGridView(workbook.Worksheets.ActiveWorksheet,
this.dataGridView1, new ExportToDataGridViewOptions() { ColumnHeaders = true });
    }

}

private void button1_Click(object sender, EventArgs e)
{
    string message, title;
    object numberGrade; message = "Enter in Grade Value: ";
    title = "Grade Calculator";

    numberGrade = Interaction.InputBox(message, title);

    if ((string)numberGrade == "")
    {
        numberGrade = 0; //was created if nothign was inserted into the number input
    }
    int numberGradeint = int.Parse(string.Format("{0}", numberGrade)); //casting object to
intenger

    if(numberGradeint >= 90 && numberGradeint <= 100)
    {
        Interaction.MsgBox("Great job, you got an A");
    }
    else

    if(numberGradeint >= 80 && numberGradeint <= 89)
    {
        Interaction.MsgBox("Good Work, you got a B ");
    }
    else

        if (numberGradeint >= 70 && numberGradeint <= 79)
        {
            Interaction.MsgBox("Ok, you got a C ");
        }

        else

            if(numberGradeint > 0 && numberGradeint <= 69)
            {
                Interaction.MsgBox("Better Luck Next Time ");
            }
}

```

```
        else

            if(numberGradeint == 0)
            {
                Interaction.MsgBox("Nothing was inserted ");
            }

        }

private void comboBox1_SelectedIndexChanged(object sender, EventArgs e)
{
    label1.Text = comboBox1.Text;
}

private void label1_Click(object sender, EventArgs e)
{
}

private void label2_Click(object sender, EventArgs e)
{
}

private void label3_Click(object sender, EventArgs e)
{
}

private void label4_Click(object sender, EventArgs e)
{
}

private void label6_Click(object sender, EventArgs e)
{
}

private void label7_Click(object sender, EventArgs e)
{
}

private void textBox4_TextChanged(object sender, EventArgs e)
{
}

private void textBox1_TextChanged(object sender, EventArgs e)
{
}
```



```

private void textBox3_TextChanged(object sender, EventArgs e)
{

}

private void textBox2_TextChanged(object sender, EventArgs e)
{

}

private void textBox5_TextChanged(object sender, EventArgs e)
{

}

private void dataGridView1_CellContentClick(object sender, DataGridViewCellEventArgs e)
{

}

private void button1_Click_1(object sender, EventArgs e)
{
    string studentFile = studentName;

    var saveFileDialog = new SaveFileDialog();
    saveFileDialog.Filter = "XLS files (*.xls)|*.xls|XLT files (*.xlt)|*.xlt|XLSX files (*.xlsx)|*.xlsx|XLSM
files (*.xism)|*.xism|XLTX (*.xltx)|*.xltx|XLTM (*.xltm)|*.xltm|ODS (*.ods)|*.ods|OTS
(*.ots)|*.ots|CSV (*.csv)|*.csv|TSV (*.tsv)|*.tsv|HTML (*.html)|*.html|MHTML
(.mhtml)|*.mhtml|PDF (*.pdf)|*.pdf|XPS (*.xps)|*.xps|BMP (*.bmp)|*.bmp|GIF (*.gif)|*.gif|JPEG
(*.jpg)|*.jpg|PNG (*.png)|*.png|TIFF (*.tif)|*.tif|WMP (*.wdp)|*.wdp";
    saveFileDialog.FilterIndex = 3;

    if (saveFileDialog.ShowDialog() == DialogResult.OK)
    {
        var workbook = new ExcelFile();
        var worksheet = workbook.Worksheets.Add("Sheet1");

        // From DataGridView to ExcelFile.
        DataGridViewConverter.ImportFromDataGridView(worksheet, this.dataGridView1, new
ImportFromDataGridViewOptions() { ColumnHeaders = true });

        workbook.Save(saveFileDialog.FileName);
    }
}
}

```