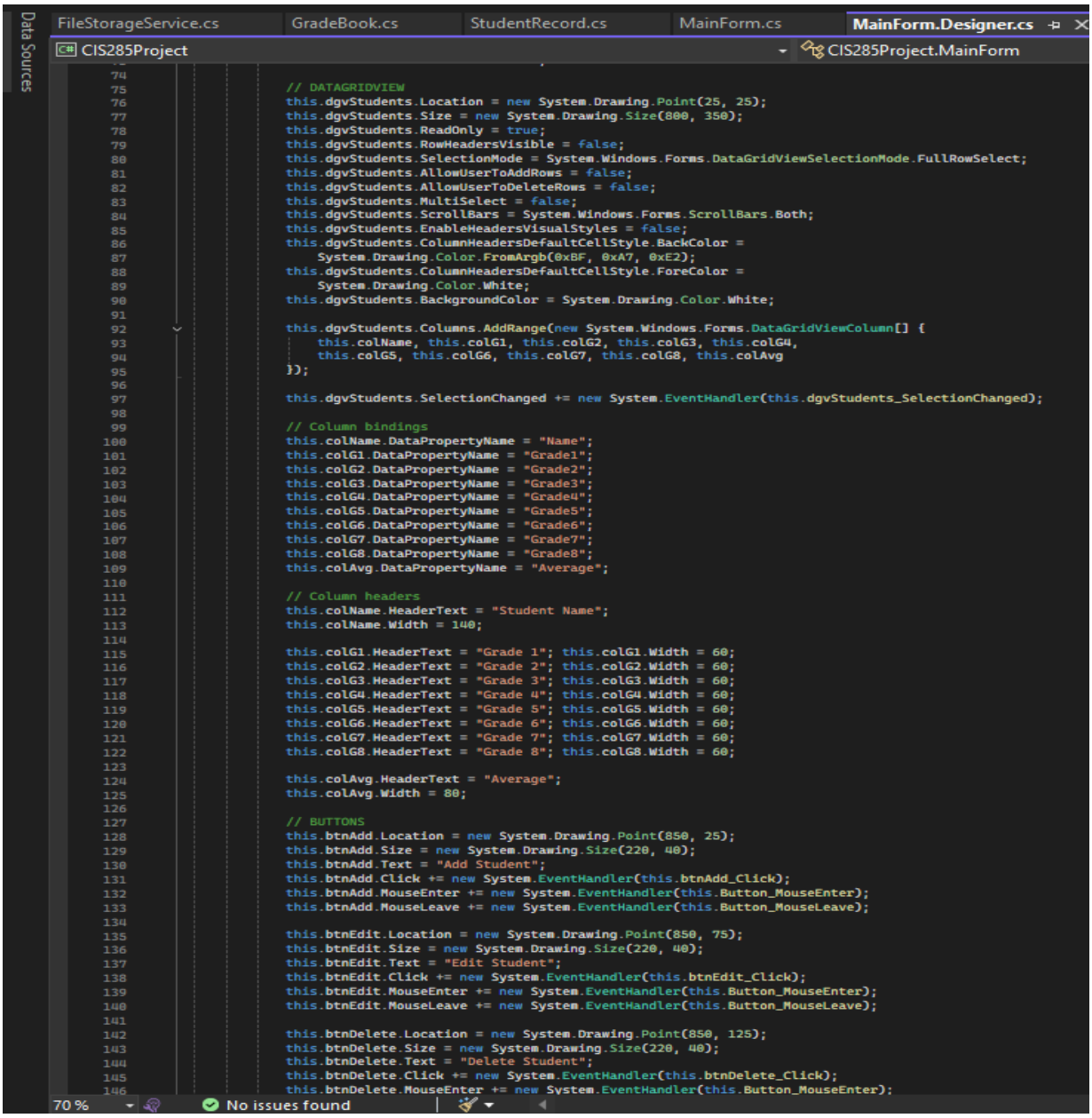
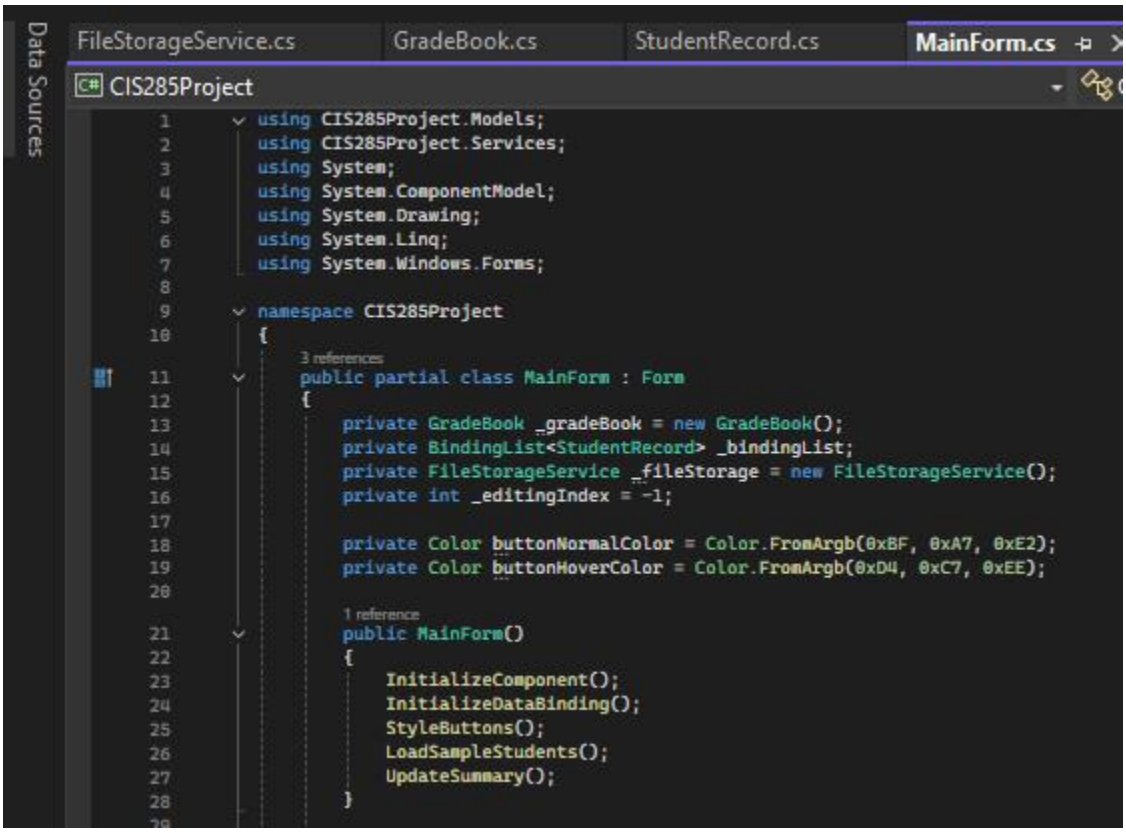
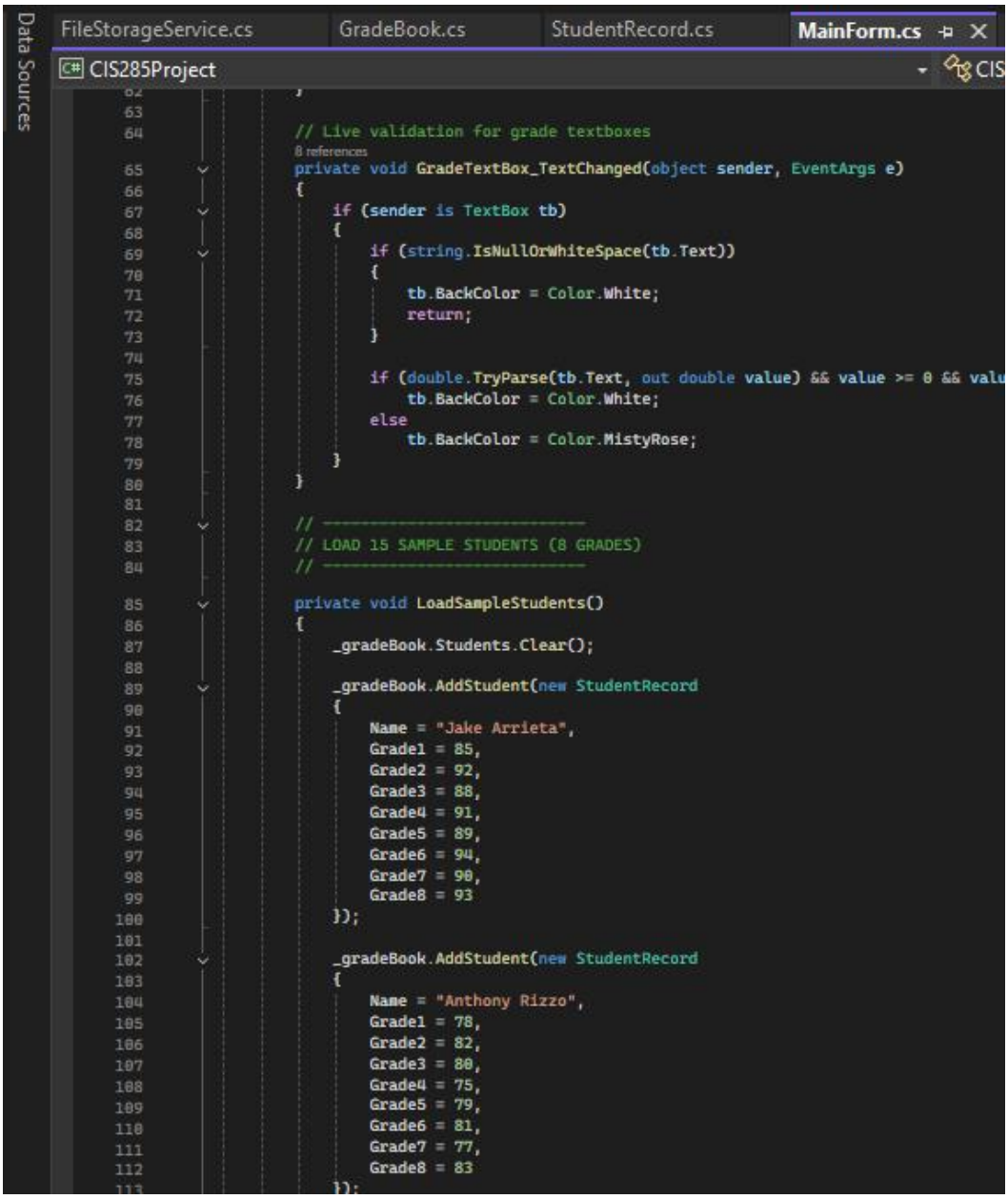
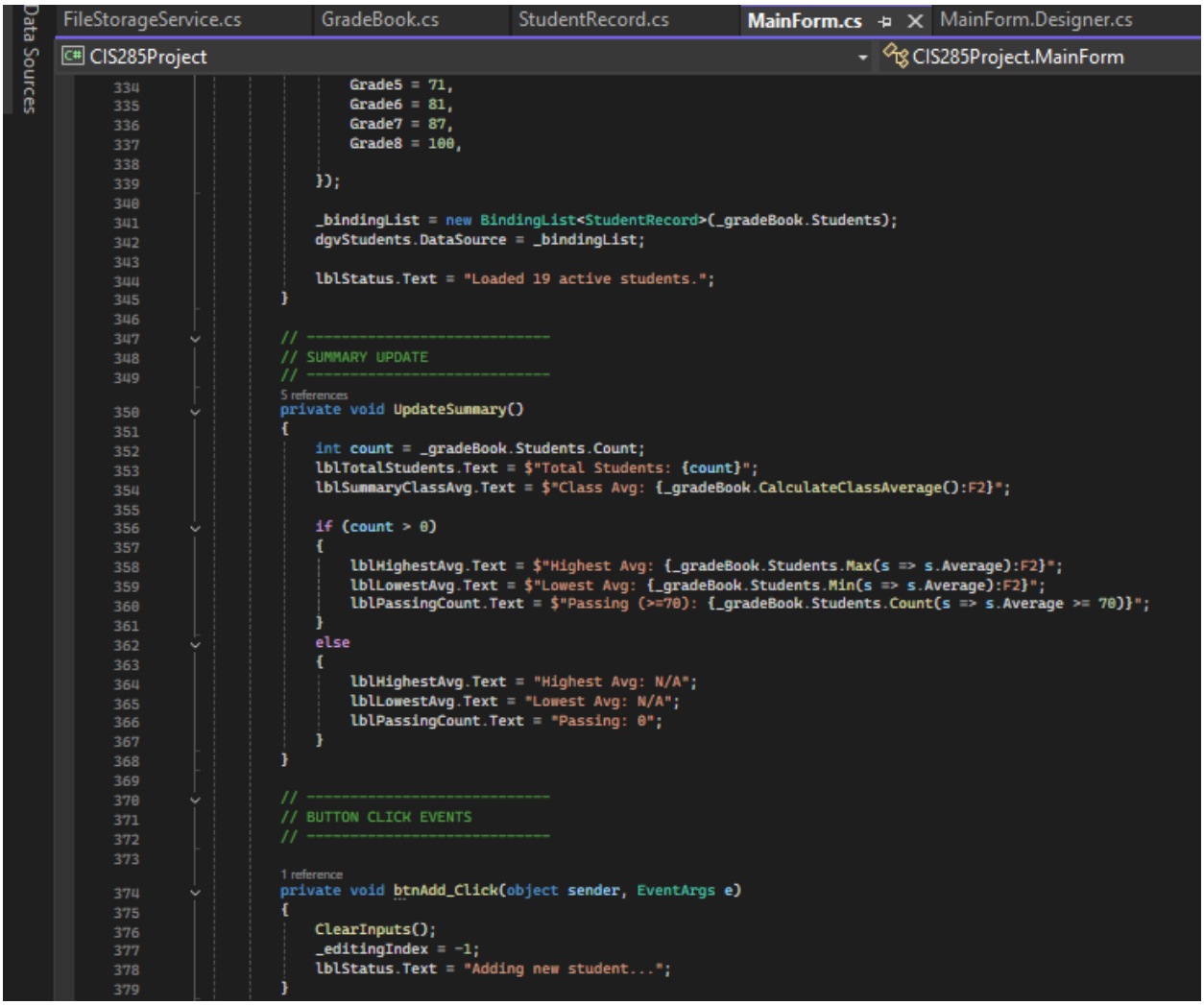
MAINFORMDESIGNER.cs

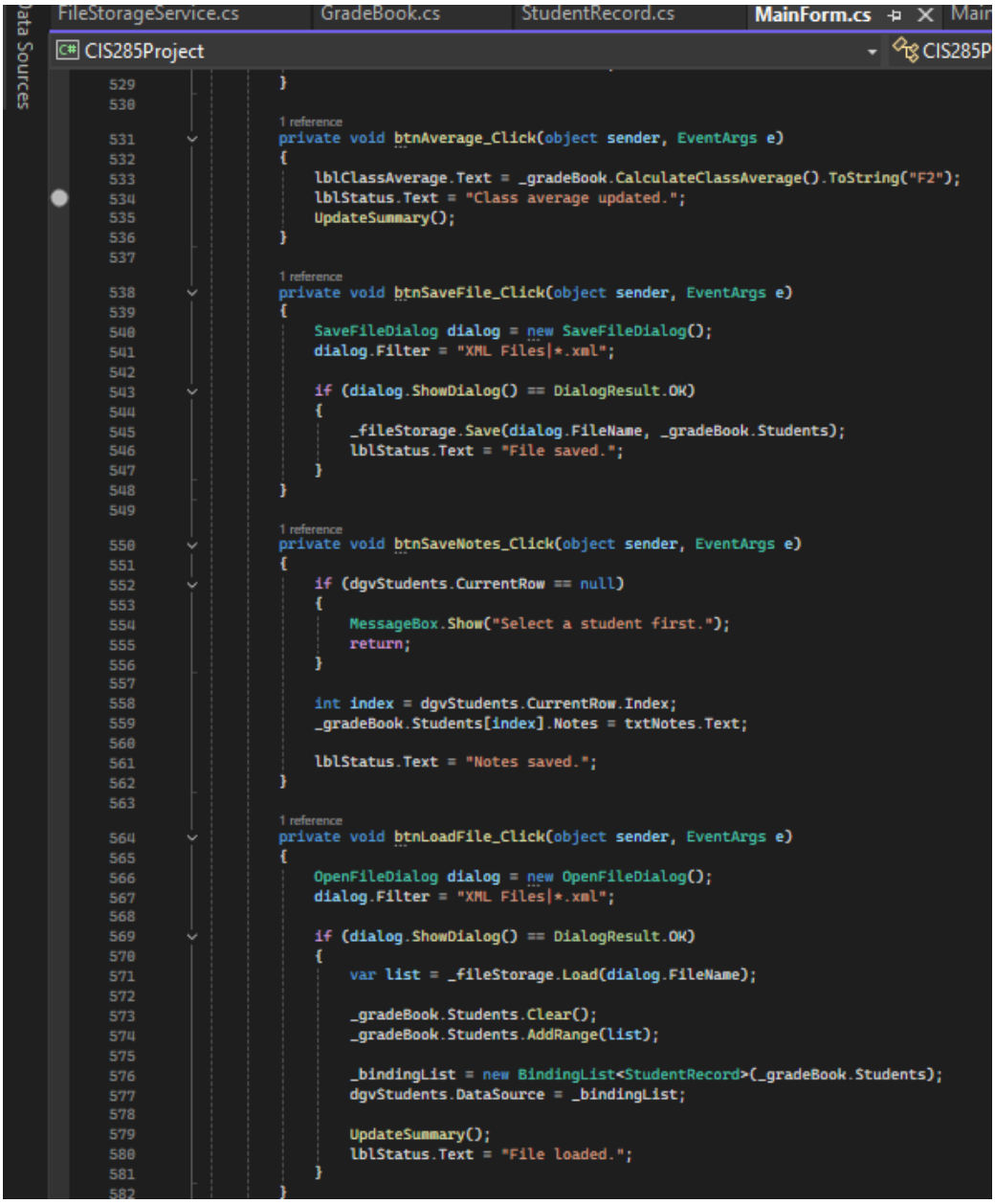


MAINFORM.cs (MULTIPLE SCREENSHOTS)



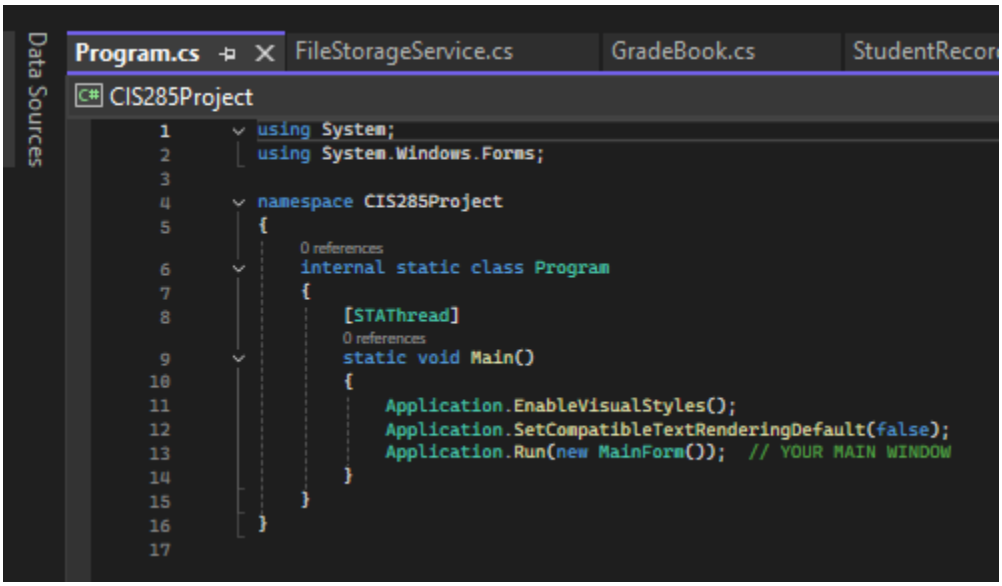

Data Sources
FileStorageService.cs
GradeBook.cs
StudentRecord.cs
MainForm.cs
CIS285Project
CIS
// Live validation for grade textboxes
8 references
private void GradeTextBox_TextChanged(object sender, EventArgs e)
{
if (sender is TextBox tb)
{
if (string.IsNullOrWhiteSpace(tb.Text))
{
tb.BackColor = Color.White;
return;
}
if (double.TryParse(tb.Text, out double value) && value >= 0 && valu
tb.BackColor = Color.White;
else
tb.BackColor = Color.MistyRose;
}
}
// ----------------------------
// LOAD 15 SAMPLE STUDENTS (8 GRADES)
// ----------------------------
private void LoadSampleStudents()
{
_gradeBook.Students.Clear();
_gradeBook.AddStudent(new StudentRecord
{
Name = "Jake Arrieta",
Grade1 = 85,
Grade2 = 92,
Grade3 = 88,
Grade4 = 91,
Grade5 = 89,
Grade6 = 94,
Grade7 = 90,
Grade8 = 93
});
_gradeBook.AddStudent(new StudentRecord
{
Name = "Anthony Rizzo",
Grade1 = 78,
Grade2 = 82,
Grade3 = 80,
Grade4 = 75,
Grade5 = 79,
Grade6 = 81,
Grade7 = 77,
Grade8 = 83
});


Data Sources
FileStorageService.cs
GradeBook.cs
StudentRecord.cs
MainForm.cs
MainForm.Designer.cs
CIS285Project
CIS285Project.MainForm
Grade5 = 71,
Grade6 = 81,
Grade7 = 87,
Grade8 = 100,
});
_bindingList = new BindingList<StudentRecord>(_gradeBook.Students);
dgvStudents.DataSource = _bindingList;
lblStatus.Text = "Loaded 19 active students.";
}
// ----------------------------
// SUMMARY UPDATE
// ----------------------------
5 references
private void UpdateSummary()
{
int count = _gradeBook.Students.Count;
lblTotalStudents.Text = $"Total Students: {count}";
lblSummaryClassAvg.Text = $"Class Avg: {_gradeBook.CalculateClassAverage():F2}";
if (count > 0)
{
lblHighestAvg.Text = $"Highest Avg: {_gradeBook.Students.Max(s => s.Average):F2}";
lblLowestAvg.Text = $"Lowest Avg: {_gradeBook.Students.Min(s => s.Average):F2}";
lblPassingCount.Text = $"Passing (>=70): {_gradeBook.Students.Count(s => s.Average >= 70)}";
}
else
{
lblHighestAvg.Text = "Highest Avg: N/A";
lblLowestAvg.Text = "Lowest Avg: N/A";
lblPassingCount.Text = "Passing: 0";
}
}
// ----------------------------
// BUTTON CLICK EVENTS
// ----------------------------
1 reference
private void btnAdd_Click(object sender, EventArgs e)
{
ClearInputs();
_editingIndex = -1;
lblStatus.Text = "Adding new student...";
}

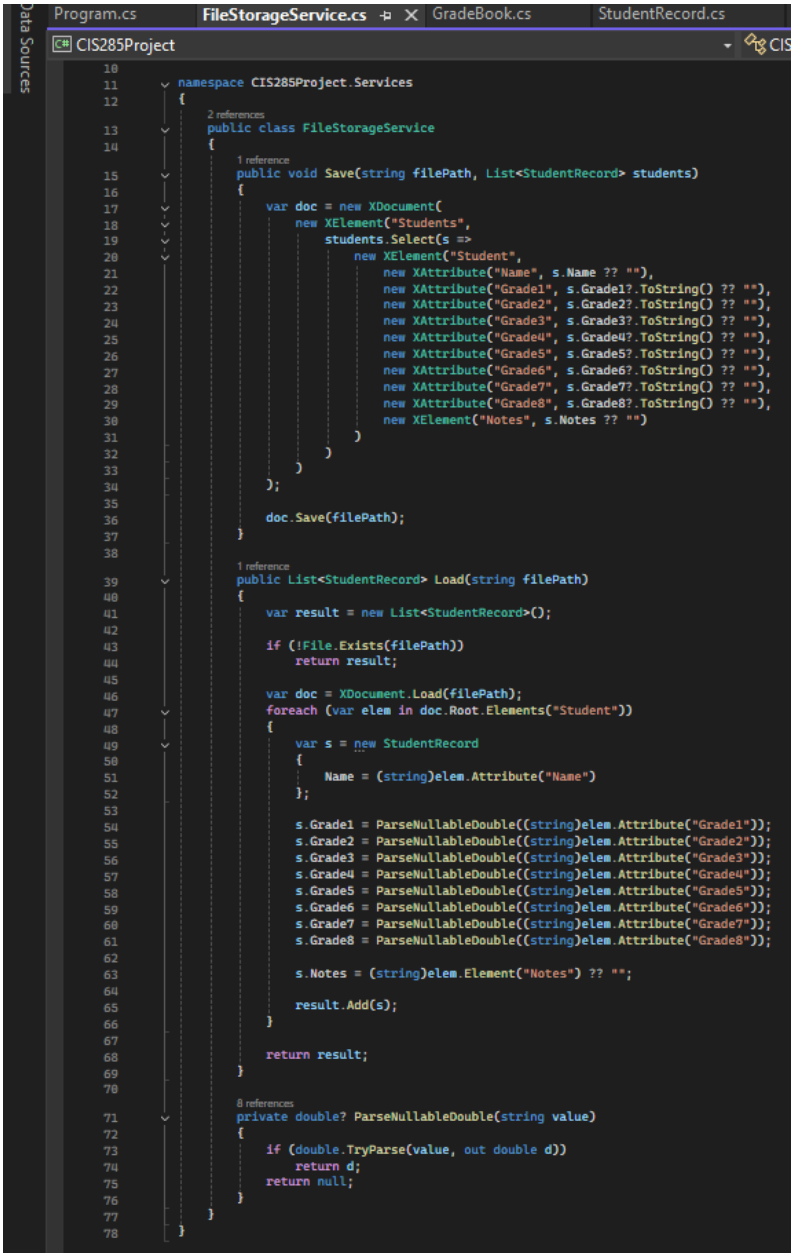



```
529         }
530
            1 reference
531         private void btnAverage_Click(object sender, EventArgs e)
532         {
533             lblClassAverage.Text = _gradeBook.CalculateClassAverage().ToString("F2");
534             lblStatus.Text = "Class average updated.";
535             UpdateSummary();
536         }
537
            1 reference
538         private void btnSaveFile_Click(object sender, EventArgs e)
539         {
540             SaveFileDialog dialog = new SaveFileDialog();
541             dialog.Filter = "XML Files|*.xml";
542
543             if (dialog.ShowDialog() == DialogResult.OK)
544             {
545                 _fileStorage.Save(dialog.FileName, _gradeBook.Students);
546                 lblStatus.Text = "File saved.";
547             }
548         }
549
            1 reference
550         private void btnSaveNotes_Click(object sender, EventArgs e)
551         {
552             if (dgvStudents.CurrentRow == null)
553             {
554                 MessageBox.Show("Select a student first.");
555                 return;
556             }
557
558             int index = dgvStudents.CurrentRow.Index;
559             _gradeBook.Students[index].Notes = txtNotes.Text;
560
561             lblStatus.Text = "Notes saved.";
562         }
563
            1 reference
564         private void btnLoadFile_Click(object sender, EventArgs e)
565         {
566             OpenFileDialog dialog = new OpenFileDialog();
567             dialog.Filter = "XML Files|*.xml";
568
569             if (dialog.ShowDialog() == DialogResult.OK)
570             {
571                 var list = _fileStorage.Load(dialog.FileName);
572
573                 _gradeBook.Students.Clear();
574                 _gradeBook.Students.AddRange(list);
575
576                 _bindingList = new BindingList<StudentRecord>(_gradeBook.Students);
577                 dgvStudents.DataSource = _bindingList;
578
579                 UpdateSummary();
580                 lblStatus.Text = "File loaded.";
581             }
582         }
```

PROGRAM.cs

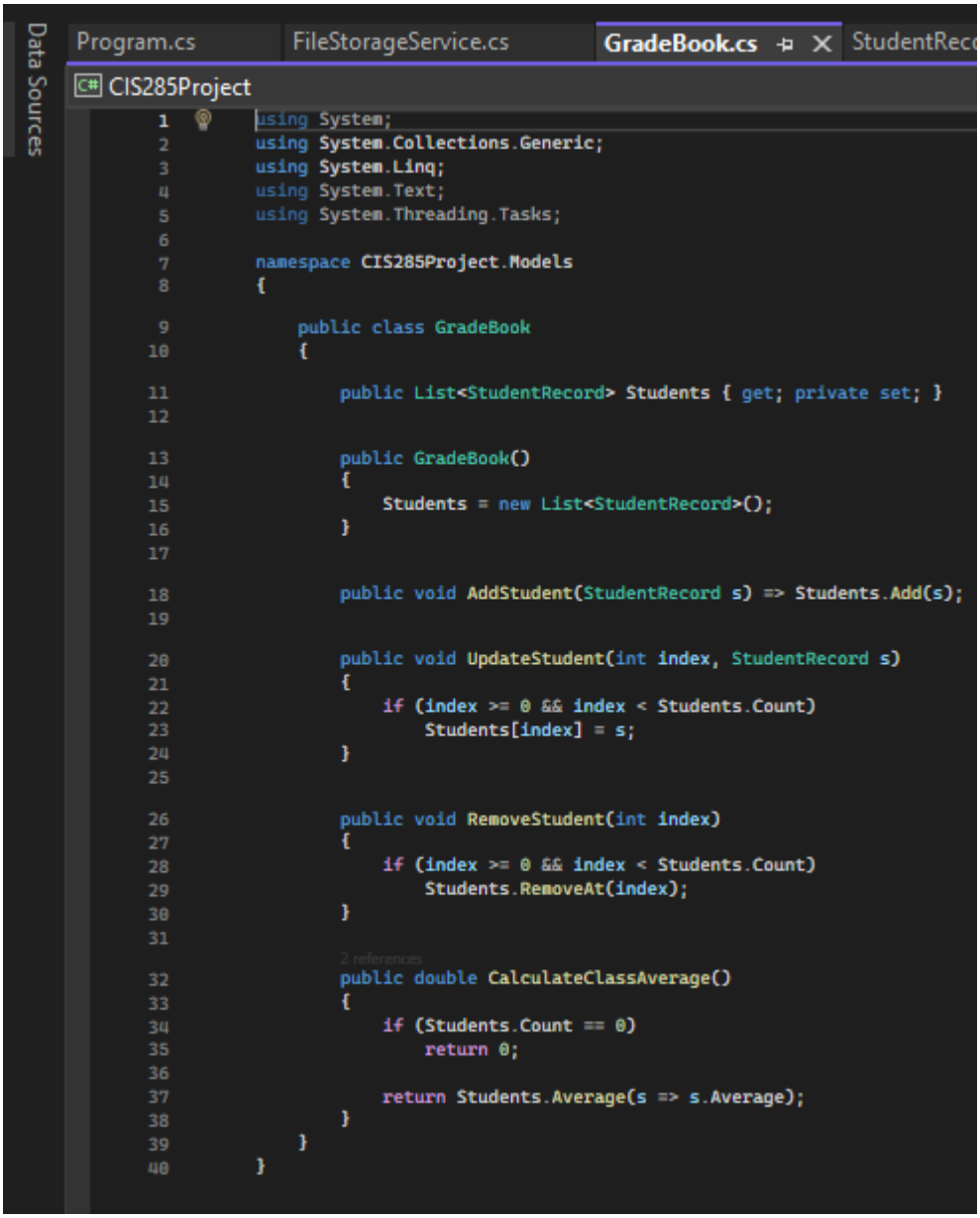

Data Sources
Program.cs
FileStorageService.cs
GradeBook.cs
StudentRecor
CIS285Project
using System;
using System.Windows.Forms;
namespace CIS285Project
{
0 references
internal static class Program
{
[STAThread]
0 references
static void Main()
{
Application.EnableVisualStyles();
Application.SetCompatibleTextRenderingDefault(false);
Application.Run(new MainForm()); // YOUR MAIN WINDOW
}
}
}

FILESTORAGESERVICE.cs



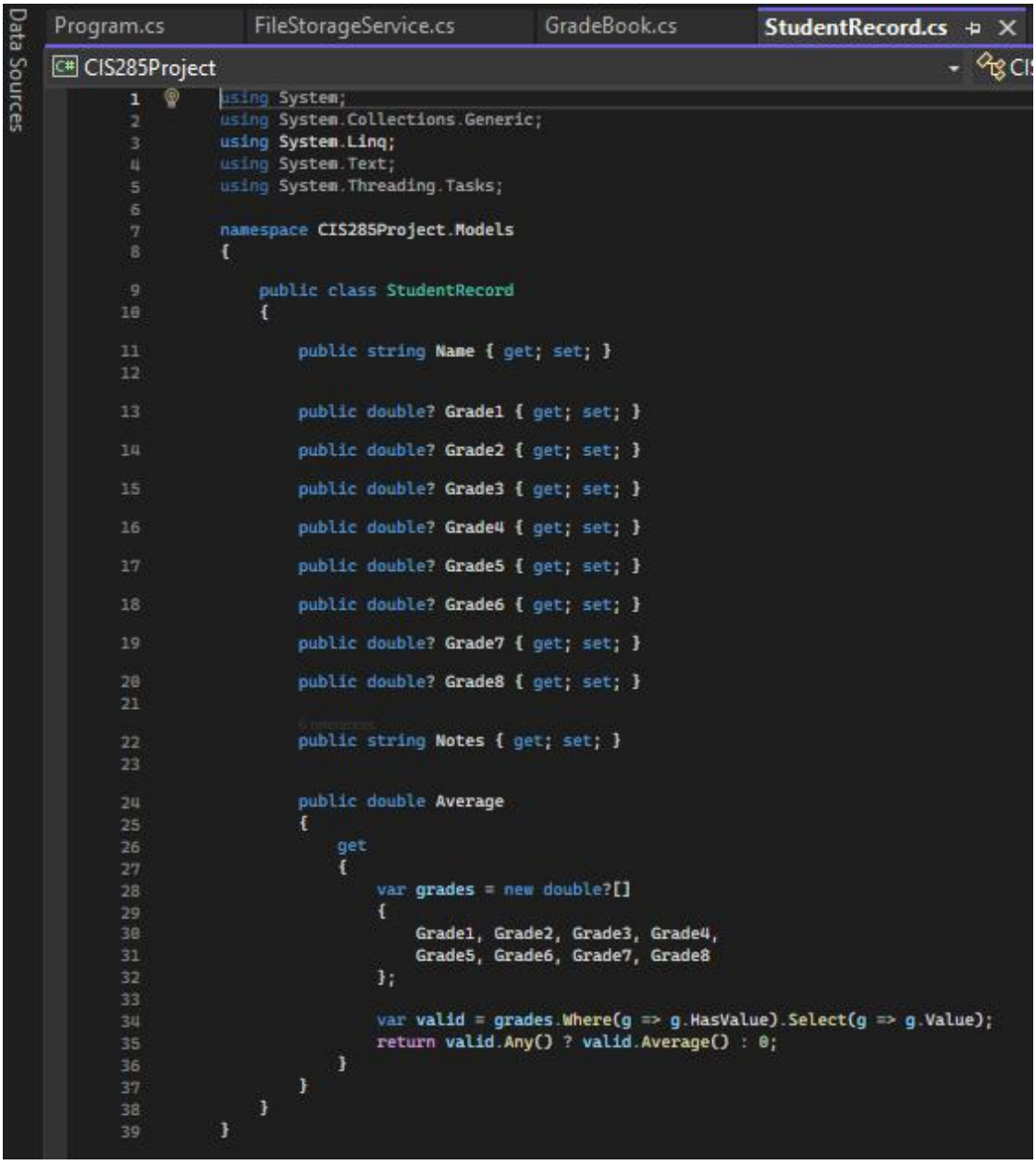

```
namespace CIS285Project.Services
{
    2 references
    public class FileStorageService
    {
        1 reference
        public void Save(string filePath, List<StudentRecord> students)
        {
            var doc = new XDocument(
                new XElement("Students",
                    students.Select(s =>
                        new XElement("Student",
                            new XAttribute("Name", s.Name ?? ""),
                            new XAttribute("Grade1", s.Grade1?.ToString() ?? ""),
                            new XAttribute("Grade2", s.Grade2?.ToString() ?? ""),
                            new XAttribute("Grade3", s.Grade3?.ToString() ?? ""),
                            new XAttribute("Grade4", s.Grade4?.ToString() ?? ""),
                            new XAttribute("Grade5", s.Grade5?.ToString() ?? ""),
                            new XAttribute("Grade6", s.Grade6?.ToString() ?? ""),
                            new XAttribute("Grade7", s.Grade7?.ToString() ?? ""),
                            new XAttribute("Grade8", s.Grade8?.ToString() ?? ""),
                            new XElement("Notes", s.Notes ?? "")
                        )
                    )
                )
            );

            doc.Save(filePath);
        }

        1 reference
        public List<StudentRecord> Load(string filePath)
        {
            var result = new List<StudentRecord>();

            if (!File.Exists(filePath))
                return result;

            var doc = XDocument.Load(filePath);
            foreach (var elem in doc.Root.Elements("Student"))
            {
                var s = new StudentRecord
                {
                    Name = (string)elem.Attribute("Name")
                };

                s.Grade1 = ParseNullableDouble((string)elem.Attribute("Grade1"));
                s.Grade2 = ParseNullableDouble((string)elem.Attribute("Grade2"));
                s.Grade3 = ParseNullableDouble((string)elem.Attribute("Grade3"));
                s.Grade4 = ParseNullableDouble((string)elem.Attribute("Grade4"));
                s.Grade5 = ParseNullableDouble((string)elem.Attribute("Grade5"));
                s.Grade6 = ParseNullableDouble((string)elem.Attribute("Grade6"));
                s.Grade7 = ParseNullableDouble((string)elem.Attribute("Grade7"));
                s.Grade8 = ParseNullableDouble((string)elem.Attribute("Grade8"));

                s.Notes = (string)elem.Element("Notes") ?? "";

                result.Add(s);
            }

            return result;
        }

        8 references
        private double? ParseNullableDouble(string value)
        {
            if (double.TryParse(value, out double d))
                return d;
            return null;
        }
    }
}
```

GRADEBOOK.cs




```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CIS285Project.Models
{

    public class GradeBook
    {

        public List<StudentRecord> Students { get; private set; }


        public GradeBook()
        {
            Students = new List<StudentRecord>();
        }


        public void AddStudent(StudentRecord s) => Students.Add(s);


        public void UpdateStudent(int index, StudentRecord s)
        {
            if (index >= 0 && index < Students.Count)
                Students[index] = s;
        }


        public void RemoveStudent(int index)
        {
            if (index >= 0 && index < Students.Count)
                Students.RemoveAt(index);
        }

        2 references
        public double CalculateClassAverage()
        {
            if (Students.Count == 0)
                return 0;

            return Students.Average(s => s.Average);
        }
    }
}
```

STUDENTRECORD.cs



Source Code Reference:

This project was developed by our group and was not adapted from any external repository or tutorial project.