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Abstract

This is an individual course work for the module “Application Development” for Student Management System which is developed using Visual Studio Platform using C# language. The coursework was released in the week 5 and it is supposed to be submitted in the week 11.

With the great contribution of Mr. Rajendra Adhikari the course work was completed within the time frame.

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Introduction

In the age of technological modification, the record keeping system ought to be maintained and will be unbroken safe. So, the normal means of keeping record ought to currently be became digitalized type. As per just in case of repository, the Student Management System ought to currently be modified to digital type. that's why, this project is all concerning. The project is concerning repository record keeping system for daily students. The system will manage and record the daily students and record on what proportion time did they pay within the repository. Moreover, the developed system is capable to trace the record of daily in addition as weekly student report. The system can gift the chart for daily and weekly student report.

Current Scenario

Though it is a technological era, many companies do not use a digital system to store data. The system they use is completely outdated. Companies are not able to grasp the technology and handle them so. They are still not successful to make full use of digital system. To alter, digital systems need to be rooted.

Description

The developed software can be used in institute to keep record of the student. The main objective of the developed system is to keep track of the students, generate daily and weekly report, can sort student by enrolled date of the course. The system is lite and easy to use can a user with little computer knowledge and training can run it.

User Manual

The detailed information to run the program along with proper screenshot is as below: -

When running the program

- Click the “Student Management System.exe” file inside ...

Login Screen

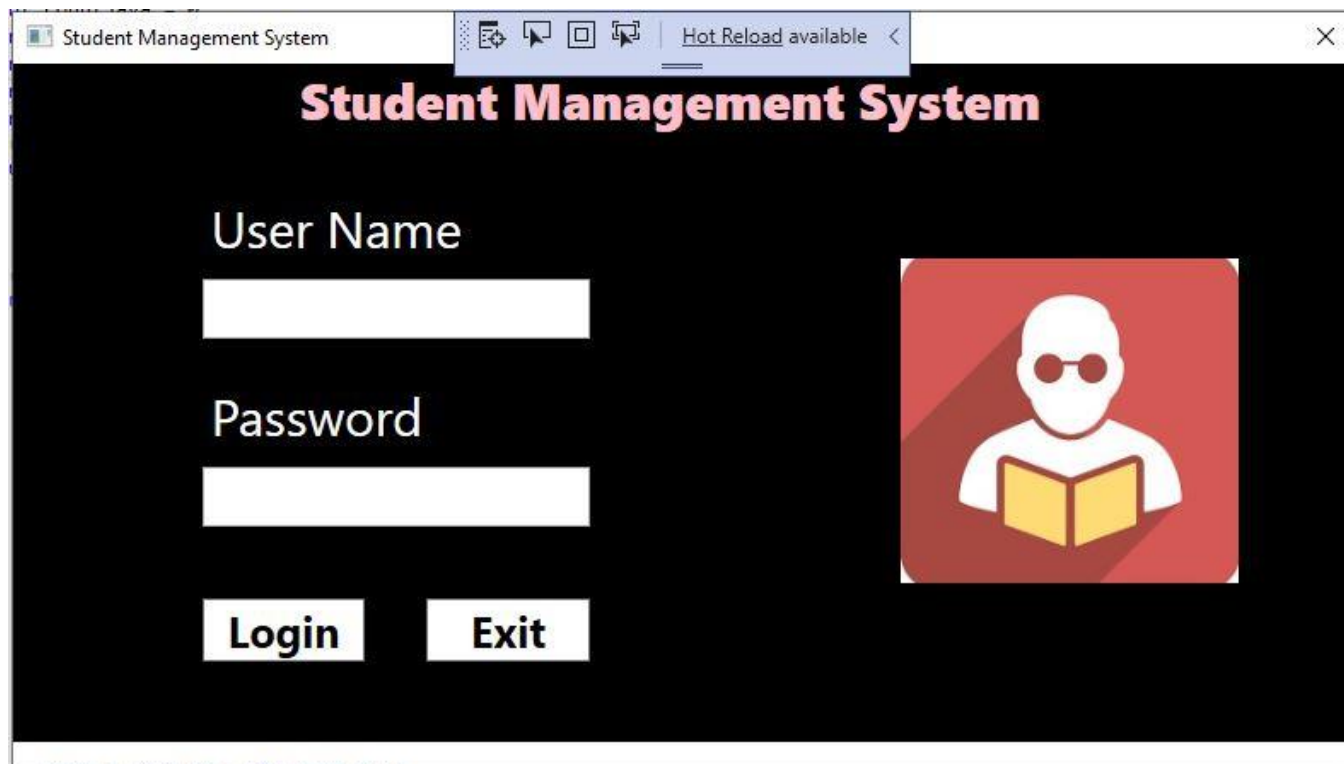


Figure 1: Login Screen.

- The user name and password for the system is admin and admin respectively.
- If you enter invalid username and password then following type of message is displayed: -

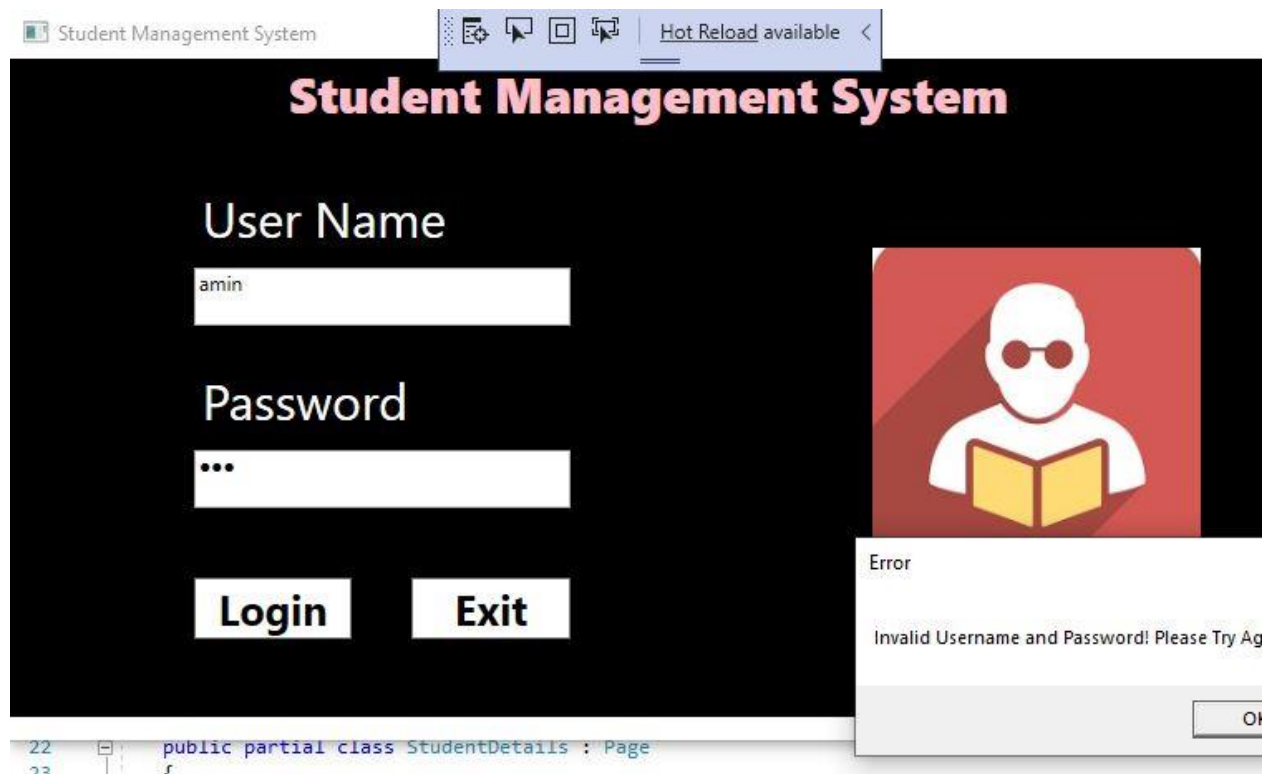


Figure 2: Message displayed if user name or passport is incorrect..

Main page

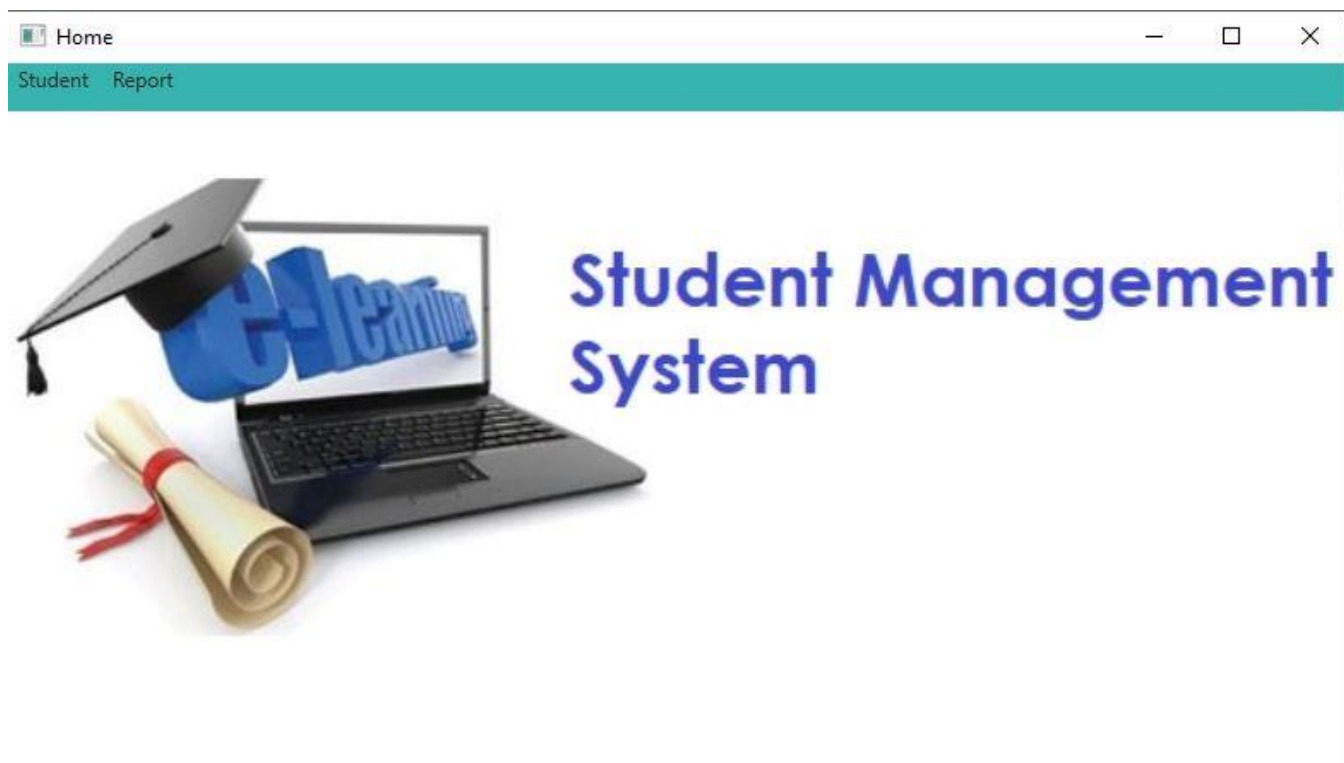


Figure 3: Home page of the System.

After logging into the system with correct username and password, the user has two options in the menu bar to click for. These menus perform different task which are described below: -

➤ **Student**

Student have more two functions they are illustrated below

- Add Students
The add student button help user to save the different detail of a student who want to enroll/register i.e. Student ID, First Name, Last Name, Phone No, etc.
- Import from CSV
The import from CSV button help user to import the data.

➤ **Report**

- View Student Details
The view student details button helps to show the detail information of enrolled student.
- View Weekly Report
The view weekly report button helps user to generate report of weekly enrolled student.
- View Chart
The chart button helps user to view the chart of the total student who enrolled the courses.

Add Students Button

Home

Student Report

Student ID:

First Name:

Last Name:

Address:

Phone No:

Course Enroll:

Enrolled Date:

Enrol Student

Student ID	First Name	Last Name	Address	Phone No	Course Enrolled	Enrolled Date

Figure 4: Ui of Add Students.

Home

Student Report

Hot Reload available <

Student ID:

First Name:

Last Name:

Address:

Phone No:

Course Enroll:

Enrolled Date:

Enrol Student

Student ID	First Name	Last Name	Address	Phone No	Course Enrolled	Enrolled Date
77	Phonus	Karki	OKM	987656789	Wordpress	1/10/2020

Figure 5: Enrolling process.

When the user clicks the student details button from menu stripe, screen will be displayed. You can see the above kind of form. User can enroll which subject they want to study.

- **Enroll Student**

The Enroll Student button on detail form adds the detail of student.

Import from CSV Button

The import from CSV button imports the CSV file from external file.

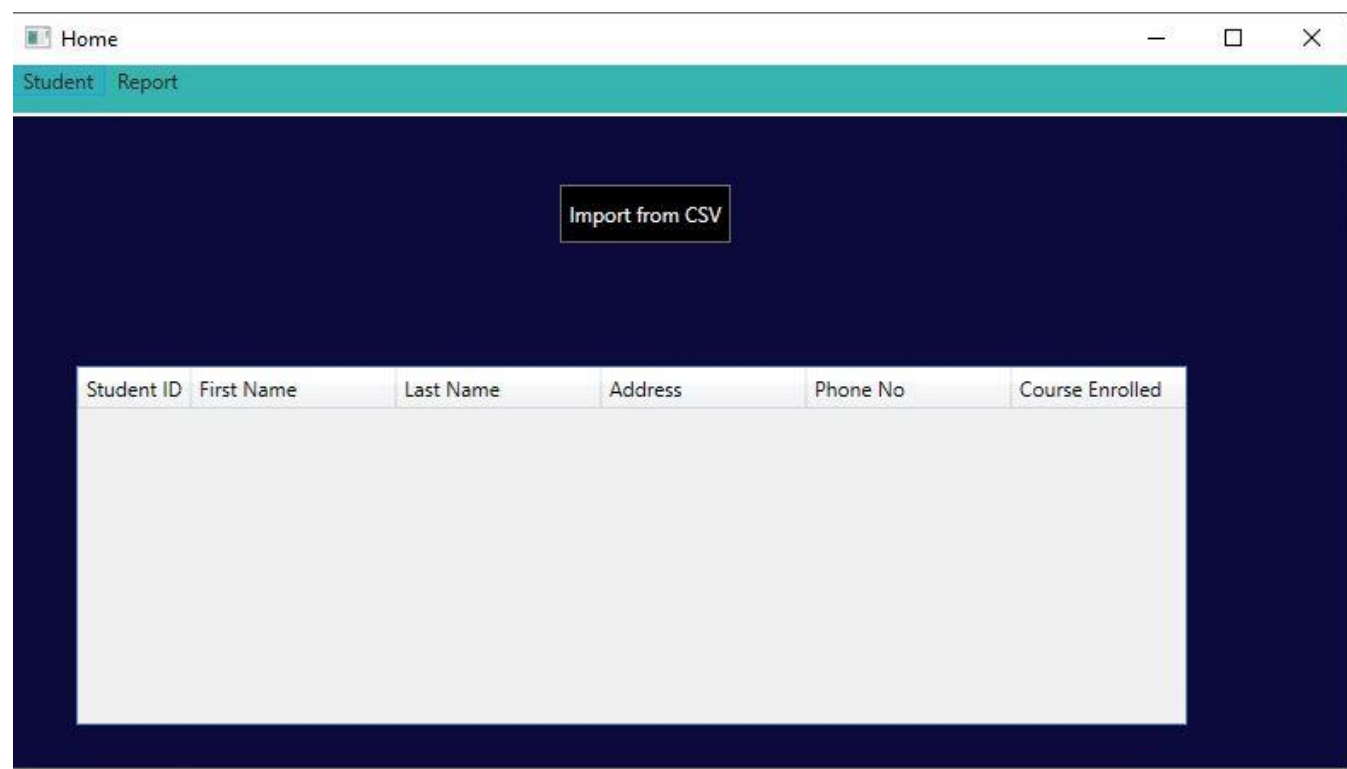


Figure 6: UI of Import from CSV

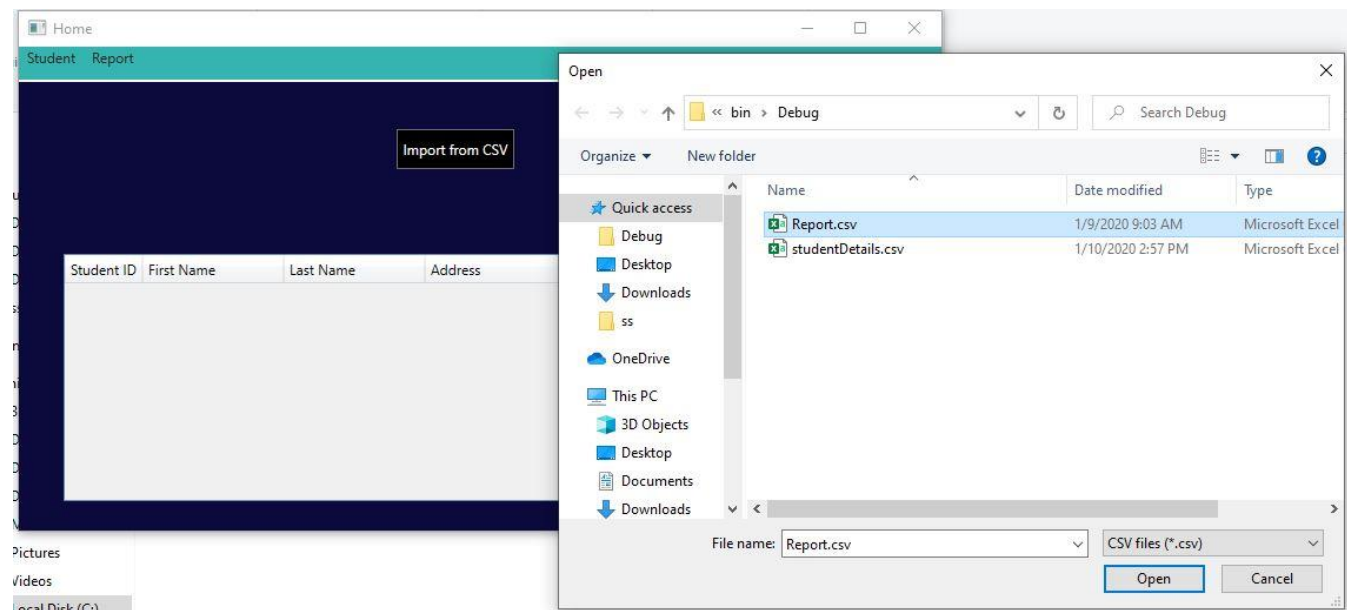


Figure 7: Importing data from CSV file.

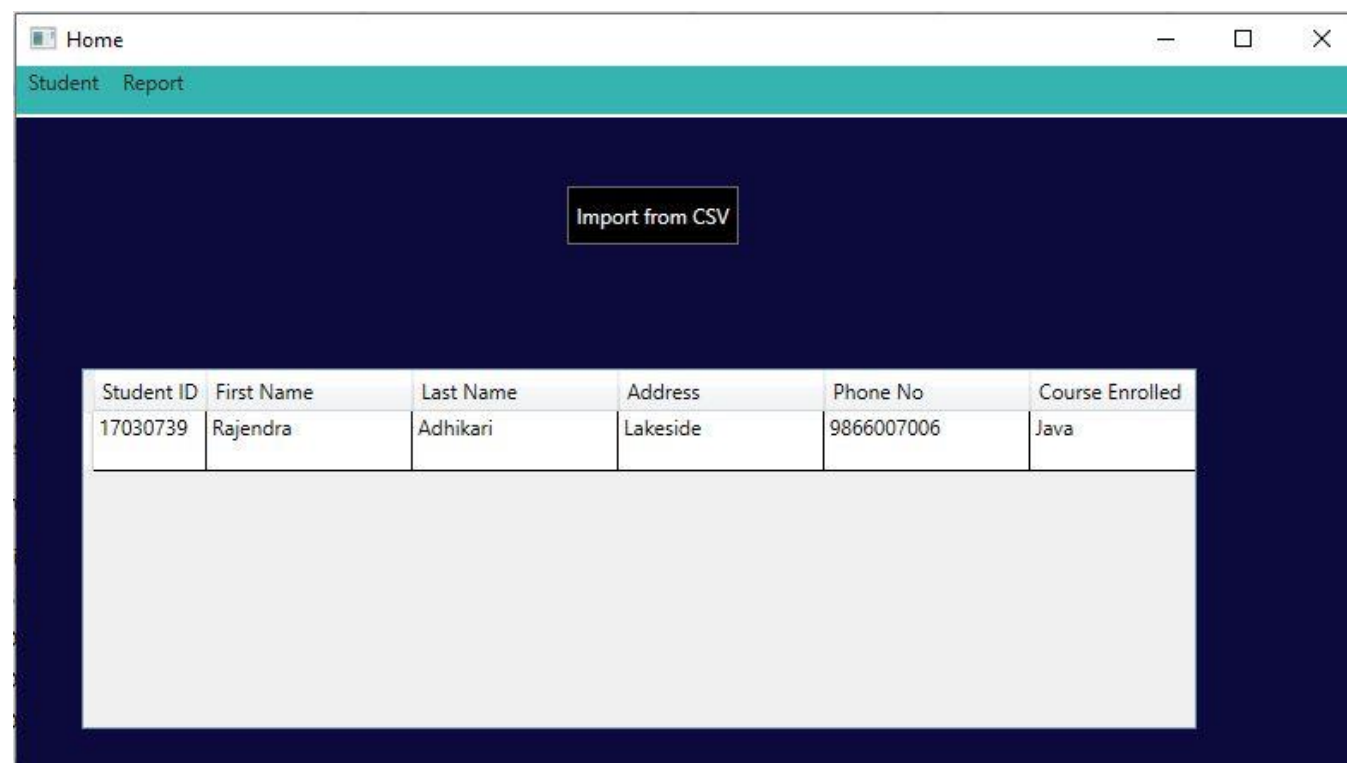


Figure 8: After importing from CSV.

Student Details

Student details displays the all data of the student who have enrolled and it also shows the imported from the CSV file. It has more three buttons, they are: -

- View Student details
This button displays all the detail of the student who have enrolled.
- Sort by First Name
This button displays data according to first name of the student.
- Sort by Enrolled date
This button displays data according to the date.

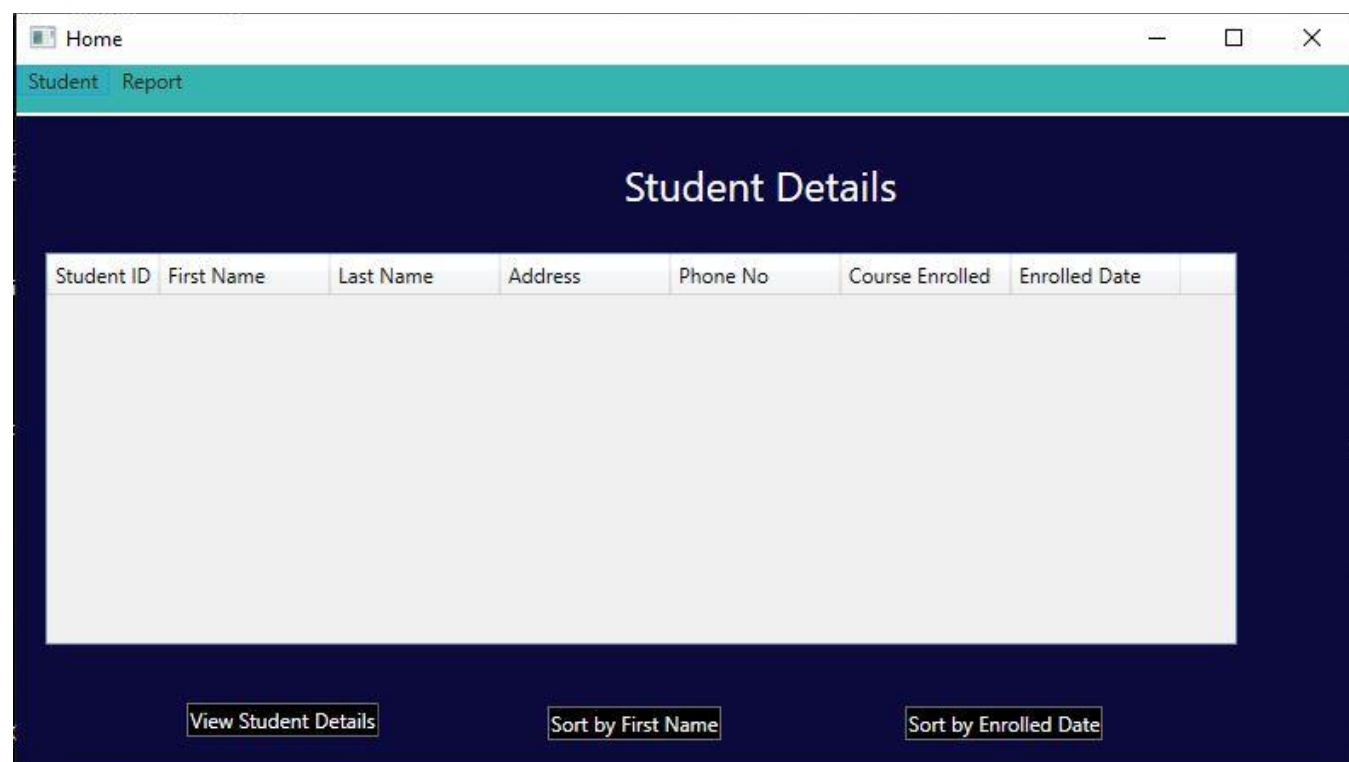


Figure 9: Ui of Student Details.

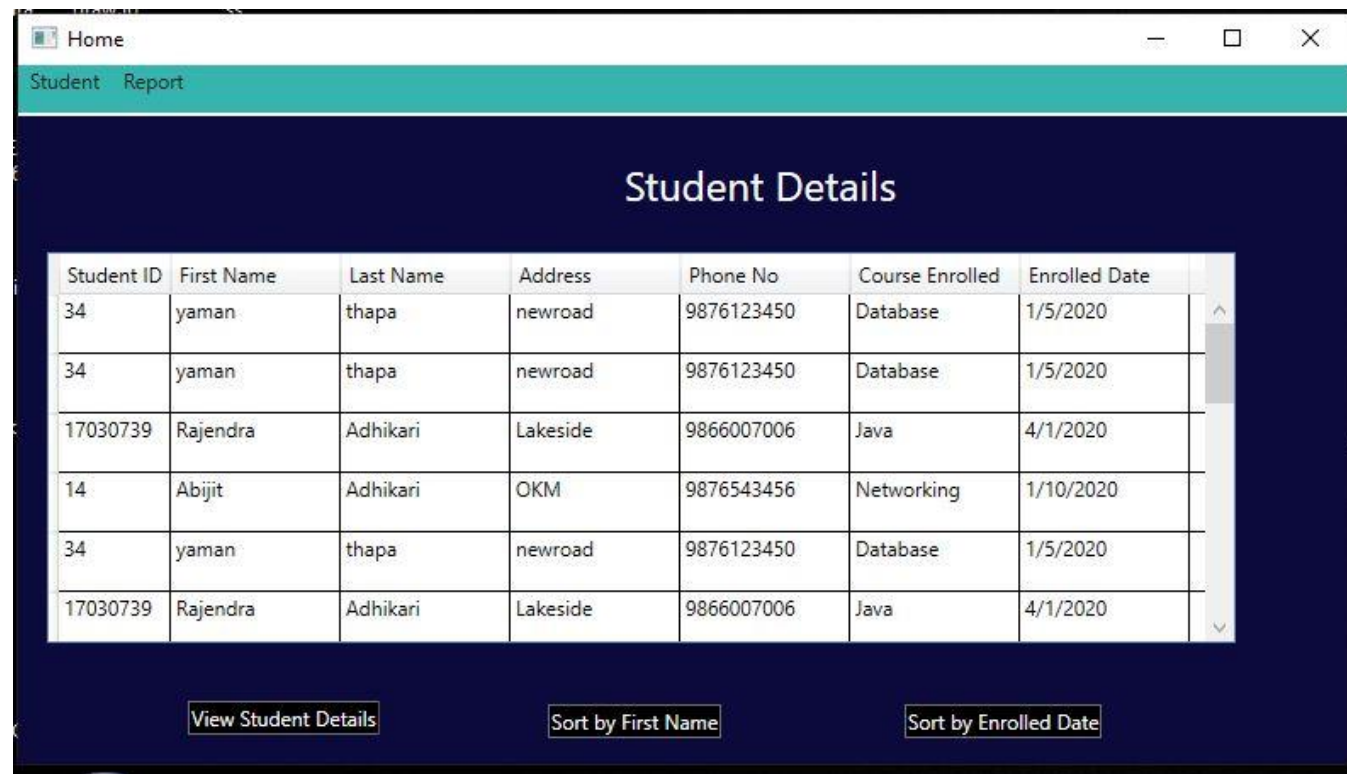


Figure 10: After clicking View Student Details Button.

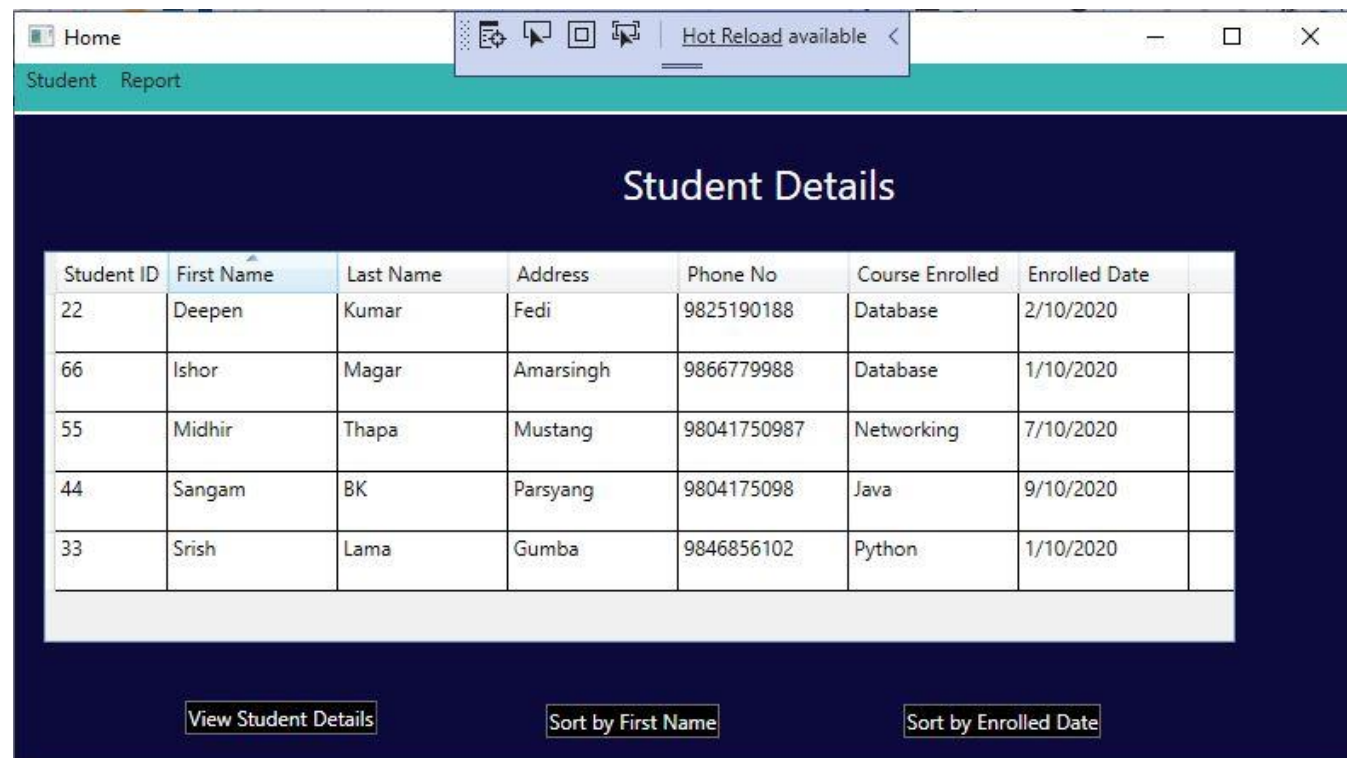
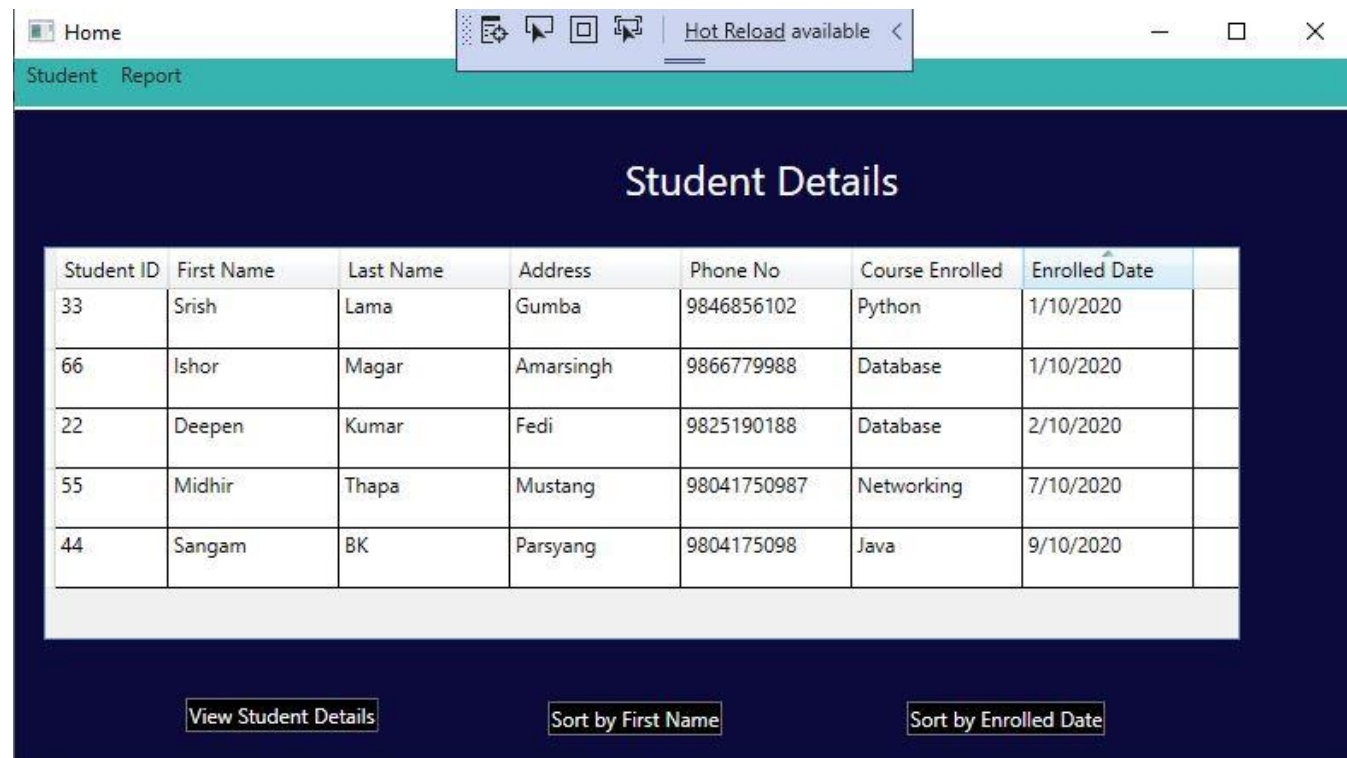


Figure 11: After clicking Sort by First Name Button.



The screenshot shows a web application window with a title bar 'Home' and a navigation bar 'Student Report'. The main content area is titled 'Student Details' and contains a table with 8 columns: Student ID, First Name, Last Name, Address, Phone No, Course Enrolled, Enrolled Date, and an empty column. The table lists 5 students. Below the table are three buttons: 'View Student Details', 'Sort by First Name', and 'Sort by Enrolled Date'.

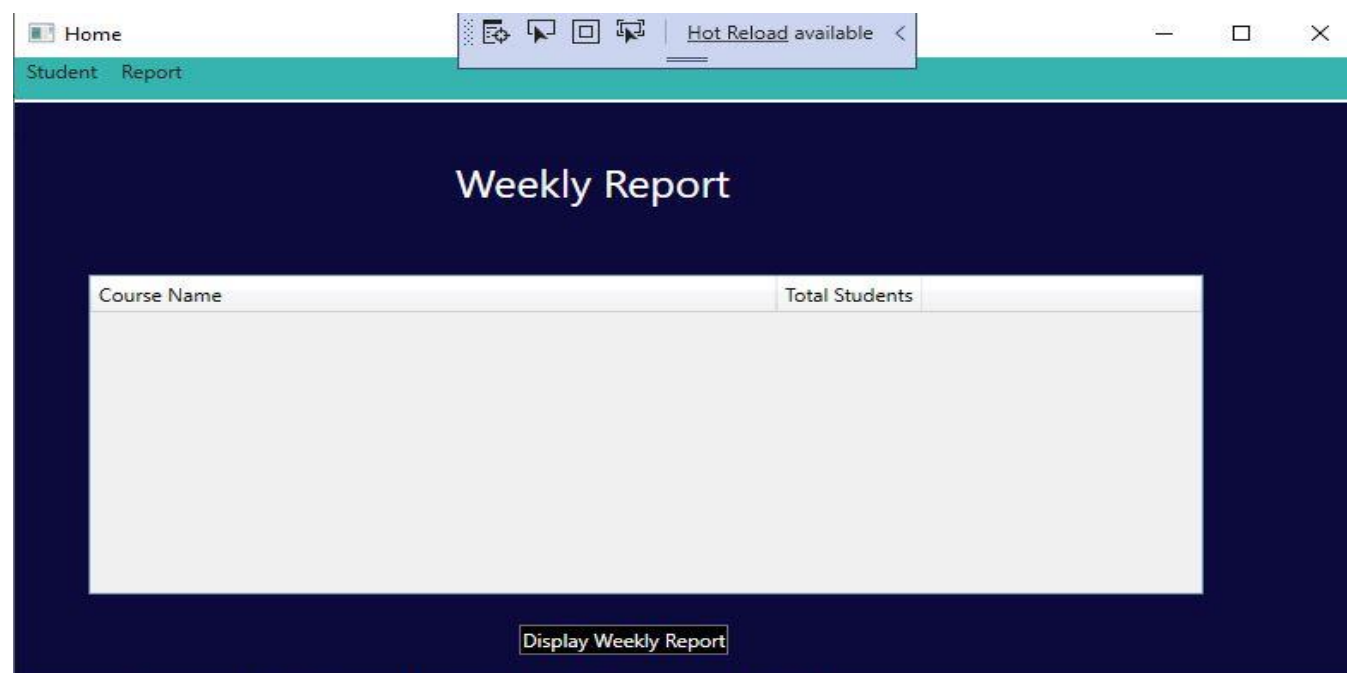
Student ID	First Name	Last Name	Address	Phone No	Course Enrolled	Enrolled Date	
33	Srish	Lama	Gumba	9846856102	Python	1/10/2020	
66	Ishor	Magar	Amarsingh	9866779988	Database	1/10/2020	
22	Deepen	Kumar	Fedi	9825190188	Database	2/10/2020	
55	Midhir	Thapa	Mustang	98041750987	Networking	7/10/2020	
44	Sangam	BK	Parsyang	9804175098	Java	9/10/2020	

Buttons: View Student Details, Sort by First Name, Sort by Enrolled Date

Figure 12: After clicking Sort by Enrolled Date Button.

View Weekly Report

When view weekly report button is clicked, it will display Weekly Report.



The screenshot shows a web application window with a title bar 'Home' and a navigation bar 'Student Report'. The main content area is titled 'Weekly Report' and contains a table with 2 columns: Course Name and Total Students. The table is currently empty. Below the table is a button labeled 'Display Weekly Report'.

Course Name	Total Students

Button: Display Weekly Report

Figure 13: U of View Weekly Report.

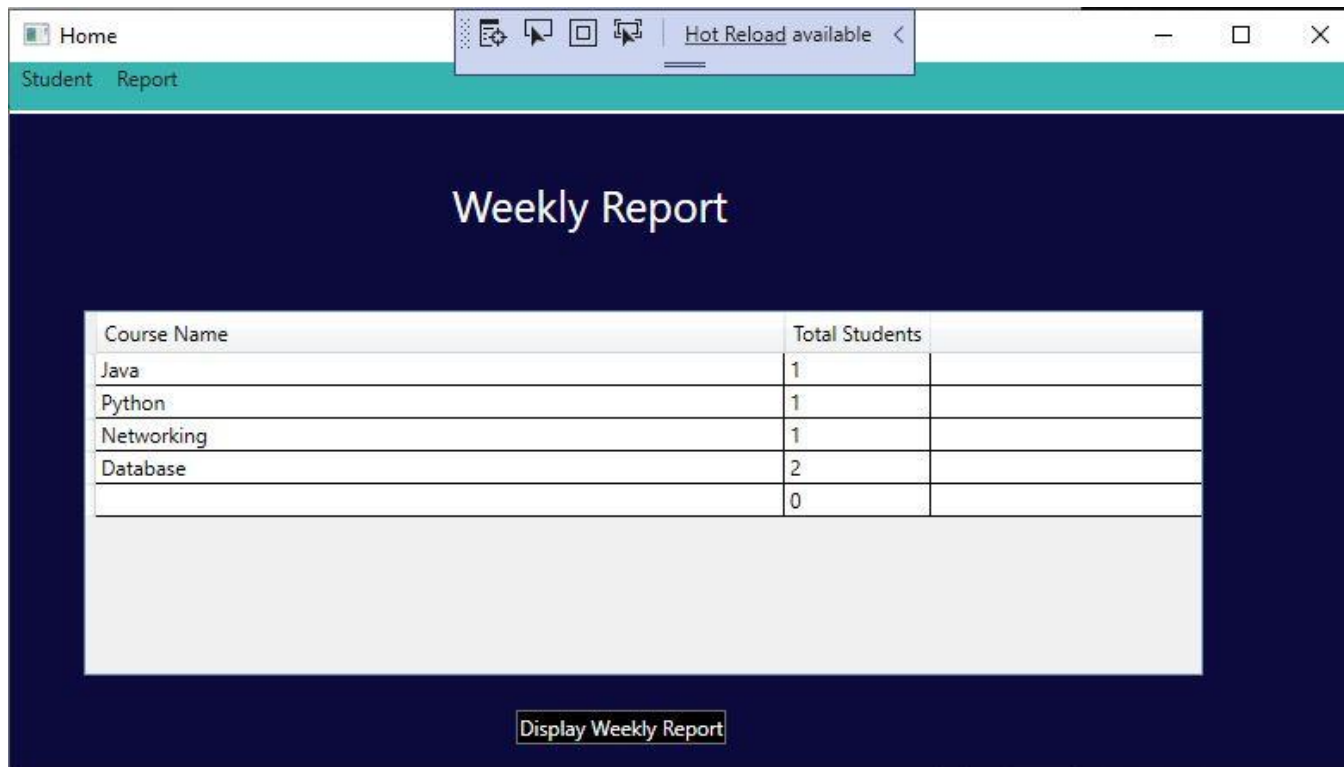


Figure 14: After clicking Display weekly report.

View Chart Button

Once the view chart button is clicked on, it displays a chart. This chart shows the total students in minutes which is based on weekly report.

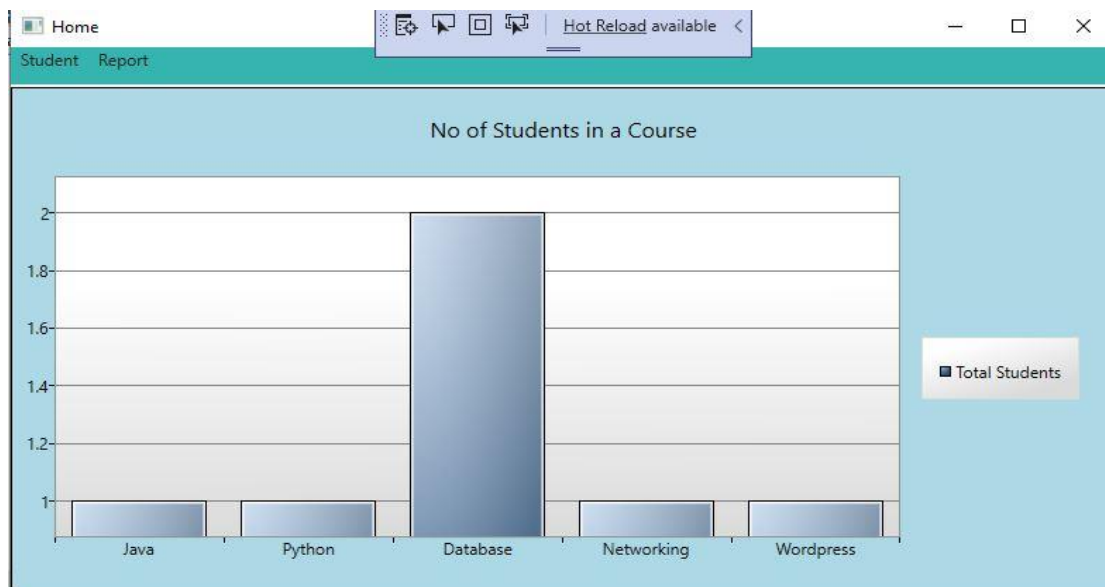


Figure 15: Chart

System Architecture

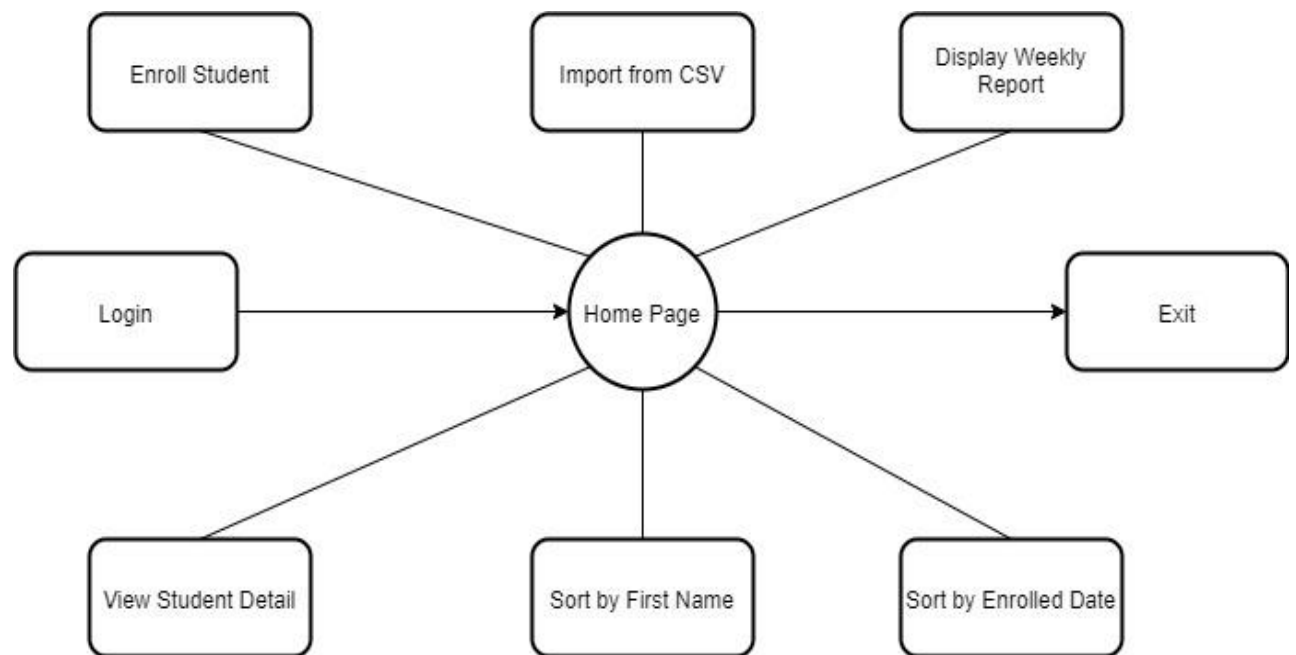


Figure 16: Architecture Diagram

The system requires a correct username and password to login. The user gets access to the main page only after a successful login. Main page holds student information student and report and there are further more functions which can be manipulated. Admin can update the information and then log out of the system.

Class Diagram

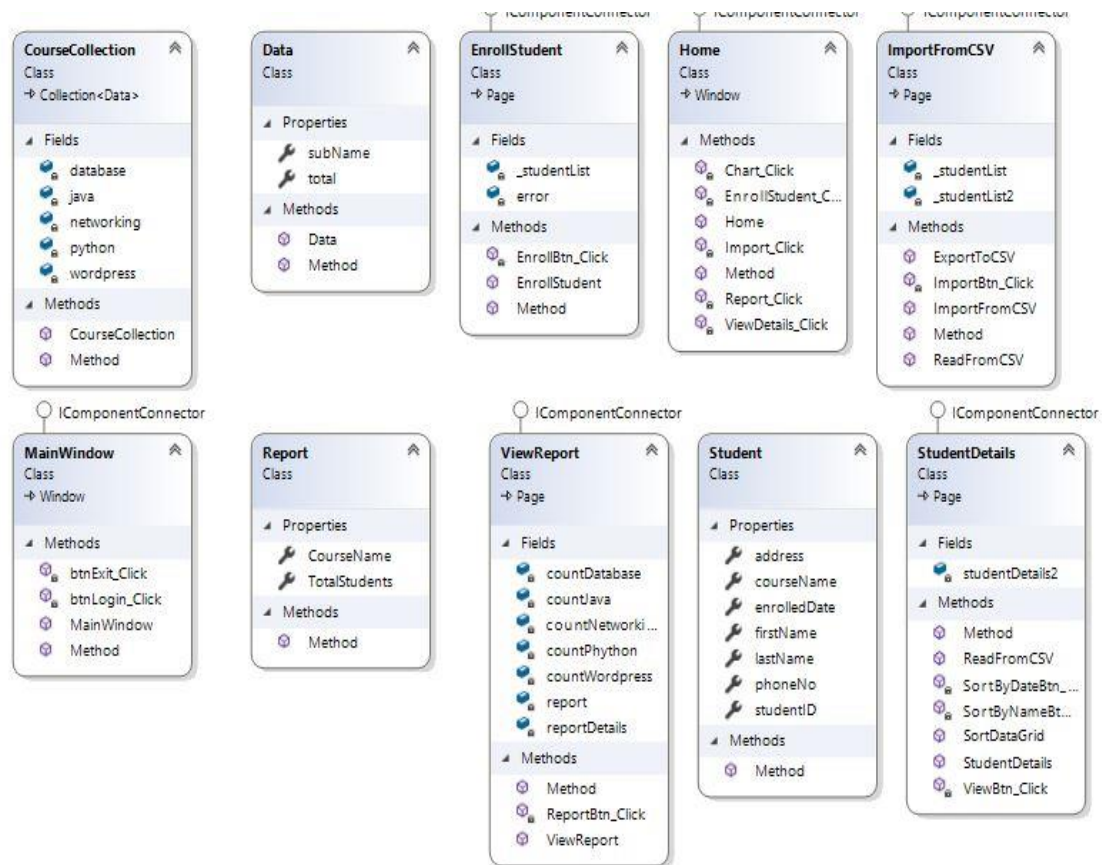
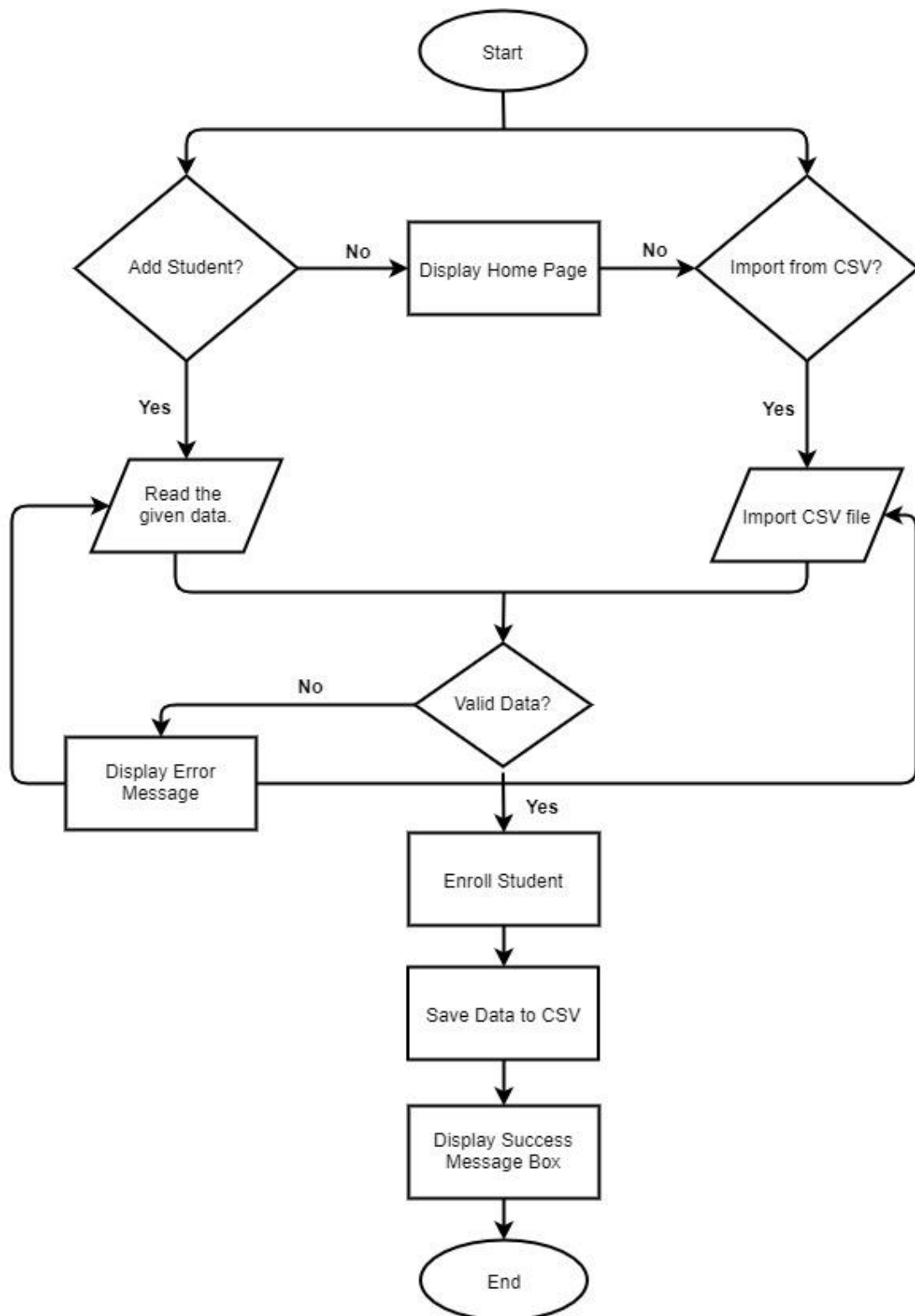


Figure 17: Class Diagram.

Flowchart*Figure 18: Flow Chart.*

Data Structure

A data structure is a specialized format for organizing, processing, retrieving and storing data. While there are several basic and advanced structure types, any data structure is designed to arrange data to suit a specific purpose so that it can be accessed and worked with in appropriate ways.

List: A list is a collection of different variables. A list may empty too.

For example:

```
myList = [1,3,5,7,9]
```

Bubble Sort

In this program, for sorting, bubble sort is used. The bubble sort stores data in array by swapping those added data repeatedly unless the order is correct.

Example:

First Phase

(6 2 5 3 9) >> (2 6 5 3 9) The first two data are swap 6 > 2.

(2 6 5 3 9) >> (2 5 6 3 9) Swapped 6 > 5.

(2 5 6 3 9) >> (2 5 3 6 9) Swapped 6 > 3.

(2 5 3 6 9) >> (2 5 3 6 9) Since these all elements are already in order (9 > 6). So, the algorithm stops.

Second Phase

(2 5 3 6 9) >> (2 5 3 6 9)

(2 5 3 6 9) >> (2 3 5 6 9) Swapped 5 > 3.

(2 3 5 6 9) >> (2 3 5 6 9)

(2 3 5 6 9) >> (2 3 5 6 9)

The array is already sorted; however, algorithm needs one whole phase without any swap to know it is sorted.

Third Phase

(2 3 5 6 9) >> (2 3 5 6 9)

(2 3 5 6 9) >> (2 3 5 6 9)

(2 3 5 6 9) >> (2 3 5 6 9)

(2 3 5 6 9) >> (2 3 5 6 9)

Conclusion

Developing the system in Microsoft Visual Studios 2019 keeping C# as primary programming language isn't new experience for me. However, developing in C# environment is new for me. Developing a record keeping system for depository is actually a troublesome task tho'. serialization and deserialization area unit another new issue whereas developing the system. Though, making new categories and strategies helps to pace the event task. Importing of CSV file is a brand-new task. With the growing of technology, the visual studio and its community helps newbie developer like us to pace our development speed.

Finally, I finished my coursework in time. It was little challenging for me. I learn C# programming and WPF form the coursework.

Appendix

Login.CS/MainWindow.CS

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows;
using System.Windows.Controls;
using System.Windows.Data;
using System.Windows.Documents;
using System.Windows.Input;
using System.Windows.Media;
using System.Windows.Media.Imaging;
using System.Windows.Navigation;
using System.Windows.Shapes;

namespace Student_Management_System
{
    /// <summary>
    /// Interaction logic for MainWindow.xaml
    /// </summary>
    public partial class MainWindow : Window
    {
        public MainWindow()
        {
            InitializeComponent();
        }

        private void btnLogin_Click(object sender, RoutedEventArgs e)
        {
            string username = txtUserName.Text;
            string password = txtPassword.Password;

            if (username == "")
            {
                MessageBox.Show("Username is Empty!", "Error");
            }
            else if (password == "")
            {
                MessageBox.Show("Password is Empty", "Error");
            }
            else if (password == "admin" && username == "admin")
            {
                this.Hide();
                Home home = new Home();
                home.Show();
            }

            else
            {
                MessageBox.Show("Invalid Username and Password! Please Try Again", "Error");
            }
        }

        private void btnExit_Click(object sender, RoutedEventArgs e)
        {
            if (MessageBox.Show("Do you want to close this window?",
```

```

        "Confirmation", MessageBoxButton.YesNo) ==
        MessageBoxResult.Yes)
        {
            this.Close();
        }
        else
        {
            this.Show();
        }
    }

    public void Method()
    {
        throw new System.NotImplementedException();
    }
}

```

Home.CS

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows;
using System.Windows.Controls;
using System.Windows.Data;
using System.Windows.Documents;
using System.Windows.Input;
using System.Windows.Media;
using System.Windows.Media.Imaging;
using System.Windows.Shapes;

namespace Student_Management_System
{
    /// <summary>
    /// Interaction logic for Home.xaml
    /// </summary>
    ///
    public partial class Home : Window
    {
        public Home()
        {
            InitializeComponent();
        }

        private void EnrollStudent_Click(object sender, RoutedEventArgs e)
        {
            Main.Content = new EnrollStudent();
        }

        private void Import_Click(object sender, RoutedEventArgs e)
        {
            Main.Content = new ImportFromCSV();
        }
    }
}

```

```

        private void ViewDetails_Click(object sender, RoutedEventArgs e)
        {
            Main.Content = new StudentDetails();
        }

        private void Report_Click(object sender, RoutedEventArgs e)
        {
            Main.Content = new ViewReport();
        }

        private void Chart_Click(object sender, RoutedEventArgs e)
        {
            Main.Content = new ViewChart();
        }

        public void Method()
        {
            throw new NotImplementedException();
        }
    }
}

```

EnrollStudent.CS

```

using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows;
using System.Windows.Controls;
using System.Windows.Data;
using System.Windows.Documents;
using System.Windows.Input;
using System.Windows.Media;
using System.Windows.Media.Imaging;
using System.Windows.Navigation;
using System.Windows.Shapes;
using System.Xml.Serialization;

namespace Student_Management_System
{
    /// <summary>
    /// Interaction logic for EnrollStudent.xaml
    /// </summary>
    public partial class EnrollStudent : Page
    {
        private List<Student> _studentList = new List<Student>();
        private Boolean error;
        public EnrollStudent()
        {
            InitializeComponent();
        }

        private void EnrollBtn_Click(object sender, RoutedEventArgs e)

```

```
{
    error = false;

    Student student = new Student();
    student.studentID = txtID.Text.ToString();
    student.firstName = txtFirstName.Text.ToString();
    student.lastName = txtLastName.Text.ToString();
    student.address = txtAddress.Text.ToString();
    student.phoneNo = txtContact.Text.ToString();
    student.courseName = cbCourse.Text.ToString();

    if (student.studentID == "")
    {
        error = true;
    }

    if (student.firstName == "")
    {
        error = true;
    }

    if (student.lastName == "")
    {
        error = true;
    }

    if (student.address == "")
    {
        error = true;
    }

    if (student.phoneNo == "")
    {
        error = true;
    }

    if (student.courseName == "")
    {
        error = true;
    }

    if (error)
    {
        MessageBox.Show("All fields must be filled", "Error");
    }

    else
    {
        try
        {
            if (File.Exists("studentDetails.csv"))
            {
                student.enrolledDate =
dpRegister.SelectedDate.Value.Date.ToShortDateString();
                dg1st.Items.Clear();
                dg1st.Items.Add(student);
                dg1st.SelectAllCells();
                dg1st.ClipboardCopyMode =
DataGridClipboardCopyMode.ExcludeHeader;
                ApplicationCommands.Copy.Execute(null, dg1st);
                dg1st.UnselectAllCells();
            }
        }
    }
}
```



```
        String result2 =  
(string)Clipboard.GetData(DataFormats.CommaSeparatedValue);  
        File.AppendAllText("studentDetails.csv", result2,  
UnicodeEncoding.UTF8);  
    }  
    else  
    {  
        student.enrolledDate =  
dpRegister.SelectedDate.Value.Date.ToShortDateString();  
        dg1st.Items.Add(student);  
        dg1st.SelectAllCells();  
        dg1st.ClipboardCopyMode =  
DataGridClipboardCopyMode.ExcludeHeader;  
        ApplicationCommands.Copy.Execute(null, dg1st);  
        dg1st.UnselectAllCells();  
        String result =  
(string)Clipboard.GetData(DataFormats.CommaSeparatedValue);  
        File.AppendAllText("studentDetails.csv", result,  
UnicodeEncoding.UTF8);  
    }  
}   
catch (Exception er)  
{  
    MessageBox.Show(er.Message.ToString(), "Error");  
}  
}  
  
}   
  
public void Method()  
{  
    throw new NotImplementedException();  
}  
}  
}
```

Import from CSV.CS

```
using System;
using System.Collections;
using System.Collections.Generic;
using System.Diagnostics;
using System.IO;
using System.Linq;
using System.Reflection;
using System.Text;
using System.Threading.Tasks;
using System.Windows;
using System.Windows.Controls;
using System.Windows.Data;
using System.Windows.Documents;
using System.Windows.Input;
using System.Windows.Media;
using System.Windows.Media.Imaging;
using System.Windows.Navigation;
using System.Windows.Shapes;

namespace Student_Management_System
{
    /// <summary>
    /// Interaction logic for ImportFromCSV.xaml
    /// </summary>
    public partial class ImportFromCSV : Page
    {
        List<Student> _studentList = new List<Student>();
        List<Student> _studentList2 = new List<Student>();
        public ImportFromCSV()
        {
            InitializeComponent();
        }

        private void ImportBtn_Click(object sender, RoutedEventArgs e)
        {
            ReadFromCSV();
        }

        public List<Student> ReadFromCSV()
        {
            List<Student> studentList = new List<Student>();
            try
            {
                Microsoft.Win32.OpenFileDialog dlg = new
Microsoft.Win32.OpenFileDialog();
                dlg.Filter = "CSV files|*.csv";

                Nullable<bool> result = dlg.ShowDialog();

                if (result == true)
                {
                    var lines = File.ReadLines(dlg.FileName);

                    foreach (var line in lines)
                    {
```

```

        var res = line.Split(new char[] { ',' },
StringSplitOptions.RemoveEmptyEntries);
        Student student = new Student();
        student.studentID = Convert.ToString(res[0]);
        student.firstName = Convert.ToString(res[1]);
        student.firstName = Convert.ToString(res[2]);
        student.address = Convert.ToString(res[3]);
        student.phoneNo = Convert.ToString(res[4]);
        student.courseName = Convert.ToString(res[5]);
        student.enrolledDate = Convert.ToString(res[6]);
        studentList.Add(student);
    }
    _studentList = studentList;

    if (File.Exists("studentDetails.csv"))
    {
        dg2nd.ItemsSource = _studentList2;
        this.dg2nd.ItemsSource = _studentList;
        //ExportToCSV(studentList, "studentDetails.csv");

        dg2nd.SelectAllCells();
        dg2nd.ClipboardCopyMode =
DataGridClipboardCopyMode.ExcludeHeader;
        ApplicationCommands.Copy.Execute(null, dg2nd);
        dg2nd.UnselectAllCells();
        String result2 =
(string)Clipboard.GetData(DataFormats.CommaSeparatedValue);
        File.AppendAllText("studentDetails.csv", result2,
UnicodeEncoding.UTF8);

    }
    else
    {
        this.dg2nd.ItemsSource = _studentList;
        //ExportToCSV(studentList, "studentDetails.csv");
        dg2nd.SelectAllCells();
        dg2nd.ClipboardCopyMode =
DataGridClipboardCopyMode.ExcludeHeader;
        ApplicationCommands.Copy.Execute(null, dg2nd);
        dg2nd.UnselectAllCells();
        String result3 =
(string)Clipboard.GetData(DataFormats.CommaSeparatedValue);
        File.AppendAllText("studentDetails.csv", result3,
UnicodeEncoding.UTF8);

    }

    }
    catch (Exception ex)
    {
        MessageBox.Show(ex.Message.ToString(), "Error");
    }

    return studentList;

```

```

    }

    public void ExportToCSV(List<Student> students, string filePath)
    {
        try
        {
            if (students.Count > 0)
            {
                var propList =
students[0].GetType().GetProperties().Select(prop => prop.Name).ToList();
                //TextWriter is used to create outputand StreamWriter is
used to read file location

                using (TextWriter TW = new StreamWriter(filePath, append:
true))
                {
                    //writes header

                    //writes values
                    foreach (var val in students)
                    {
                        foreach (PropertyInfo prop in
val.GetType().GetProperties())
                        {
                            TW.Write(prop.GetValue(val, null).ToString() +
",");
                        }
                        TW.WriteLine();
                    }
                }

                Process.Start(filePath);
            }
        }
        catch (Exception)
        {
        }
    }

    public void Method()
    {
        throw new NotImplementedException();
    }
}

```

StudentDetails.CS

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows;
using System.Windows.Controls;
using System.Windows.Data;
using System.Windows.Documents;
using System.Windows.Input;
using System.Windows.Media;
using System.Windows.Media.Imaging;
using System.Windows.Navigation;
using System.Windows.Shapes;

namespace Student_Management_System
{
    /// <summary>
    /// Interaction logic for StudentDetails.xaml
    /// </summary>
    public partial class StudentDetails : Page
    {
        List<Student> studentDetails2 = new List<Student>();
        public StudentDetails()
        {
            InitializeComponent();
        }
        private void ViewBtn_Click(object sender, RoutedEventArgs e)
        {

            var csvData = System.IO.File.ReadAllText("studentDetails.csv");
            ReadFromCSV(csvData);

        }

        public List<Student> ReadFromCSV(string csvData)
        {
            List<Student> studentDetails = new List<Student>();
            try
            {
                var lines = csvData.Split(new char[] { '\n' },
StringSplitOptions.RemoveEmptyEntries);

                foreach (var item in lines)
                {
                    var values = item.Split(',');
                    Student student = new Student();
                    student.studentID = Convert.ToString(values[0]);
                    student.firstName = Convert.ToString(values[1]);
                    student.lastName = Convert.ToString(values[2]);
                    student.address = Convert.ToString(values[3]);
                    student.phoneNo = Convert.ToString(values[4]);
                    student.courseName = Convert.ToString(values[5]);
                    student.enrolledDate = Convert.ToString(values[6]);
                    studentDetails.Add(student);
                }
            }
            catch { }
        }
    }
}
```

```
        dg3rd.ItemsSource = studentDetails2;
        this.dg3rd.ItemsSource = studentDetails;
    }
    catch (Exception ex)
    {
        MessageBox.Show(ex.Message.ToString());
    }

    return studentDetails;
}

private void SortByNameBtn_Click(object sender, RoutedEventArgs e)
{
    SortDataGrid(dg3rd, 1);
}

public static void SortDataGrid(DataGrid dataGrid, int columnIndex = 0,
ListSortDirection sortDirection = ListSortDirection.Ascending)
{
    var column = dataGrid.Columns[columnIndex];
    dataGrid.Items.SortDescriptions.Clear();

    dataGrid.Items.SortDescriptions.Add(new
SortDescription(column.SortMemberPath, sortDirection));

    foreach (var col in dataGrid.Columns)
    {
        col.SortDirection = null;
    }
    column.SortDirection = sortDirection;

    dataGrid.Items.Refresh();
}

private void SortByDateBtn_Click(object sender, RoutedEventArgs e)
{
    SortDataGrid(dg3rd, 6);
}

public void Method()
{
    throw new System.NotImplementedException();
}
}
```

Report.cs

```
using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows;
using System.Windows.Controls;
using System.Windows.Data;
using System.Windows.Documents;
using System.Windows.Input;
using System.Windows.Media;
using System.Windows.Media.Imaging;
using System.Windows.Navigation;
using System.Windows.Shapes;

namespace Student_Management_System
{
    /// <summary>
    /// Interaction logic for ViewReport.xaml
    /// </summary>
    public partial class ViewReport : Page
    {
        Report report = new Report();
        List<Report> reportDetails = new List<Report>();
        int countJava = 0;
        int countPython = 0;
        int countNetworking = 0;
        int countDatabase = 0;
        int countWordpress = 0;
        public ViewReport()
        {
            InitializeComponent();
        }
        private void ReportBtn_Click(object sender, RoutedEventArgs e)
        {
            List<string> resLines = new List<string>();
            var lines = File.ReadLines("studentDetails.csv");
            Report report = new Report();
            foreach (var line in lines)
            {
                var res = line.Split(new char[] { ',' },
StringSplitOptions.RemoveEmptyEntries);
                if (res[5] == "Java")
                {
                    countJava++;
                    report.CourseName = "Java";
                    report.TotalStudents = Convert.ToInt32(countJava);
                }
            }
            reportDetails.Add(report);

            Report report2 = new Report();
            foreach (var line in lines)
            {
                var res = line.Split(new char[] { ',' });
                if (res[5] == "Python")
                {
                    countPython++;
                }
            }
        }
    }
}
```

```
        report2.CourseName = "Python";
        report2.TotalStudents = Convert.ToInt32(countPhython);
    }
}
reportDetails.Add(report2);

Report report3 = new Report();
foreach (var line in lines)
{
    var res = line.Split(new char[] { ',' });
    if (res[5] == "Networking")
    {
        countNetworking++;
        report3.CourseName = "Networking";
        report3.TotalStudents = Convert.ToInt32(countNetworking);
    }
}
reportDetails.Add(report3);

Report report4 = new Report();
foreach (var line in lines)
{
    var res = line.Split(new char[] { ',' });
    if (res[5] == "Database")
    {
        countDatabase++;
        report4.CourseName = "Database";
        report4.TotalStudents = Convert.ToInt32(countDatabase);
    }
}
reportDetails.Add(report4);

Report report5 = new Report();
foreach (var line in lines)
{
    var res = line.Split(new char[] { ',' });
    if (res[5] == "Wordpress")
    {
        countWordpress++;
        report5.CourseName = "Wordpress";
        report5.TotalStudents = Convert.ToInt32(countWordpress);
    }
}
reportDetails.Add(report5);
dg4th.ItemsSource = reportDetails;
}

public void Method()
{
    throw new NotImplementedException();
}
}
}
```


Chart.CS

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows;
using System.Windows.Controls;
using System.Windows.Data;
using System.Windows.Documents;
using System.Windows.Input;
using System.Windows.Media;
using System.Windows.Media.Imaging;
using System.Windows.Navigation;
using System.Windows.Shapes;

namespace Student_Management_System
{
    /// <summary>
    /// Interaction logic for ViewChart.xaml
    /// </summary>
    public partial class ViewChart : Page
    {
        public ViewChart()
        {
            InitializeComponent();
        }
    }
}
```

CourseCollection.CS

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

namespace Student_Management_System
{
    public class CourseCollection : Collection<Data>
    {
        int java, python, networking, database, wordpress = 0;
        public CourseCollection()
        {
            var getData = System.IO.File.ReadAllText("studentDetails.csv");
            var text = getData.Split(new char[] { '\n' },
StringSplitOptions.RemoveEmptyEntries);

            foreach (var newText in text)
            {
                var newData = newText.Split(',');
                if(newData[5] == "Java")
                {
                    java++;
                }
                else if (newData[5] == "Python")
                {
                    python++;
                }
                else if (newData[5] == "Networking")
                {
                    networking++;
                }
                else if (newData[5] == "Database")
                {
                    database++;
                }
                else if (newData[5] == "Wordpress")
                {
                    wordpress++;
                }
            }
            Add(new Data("Java", java));
            Add(new Data("Python", python));
            Add(new Data("Database", database));
            Add(new Data("Networking", networking));
            Add(new Data("Wordpress", wordpress));
        }

        public void Method()
        {
            throw new NotImplementedException();
        }
    }
}
```

Data.CS

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

namespace Student_Management_System
{
    public class Data
    {
        public Data(string subName, int total)
        {
            this.subName = subName;
            this.total = total;
        }

        public string subName { get; set; }

        public int total { get; set; }

        public void Method()
        {
            throw new System.NotImplementedException();
        }
    }
}
```

Student.CS

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

namespace Student_Management_System
{
    public class Student
    {
        public string studentID { get; set; }
        public string firstName { get; set; }
        public string lastName { get; set; }
        public string address { get; set; }
        public string phoneNo { get; set; }
        public string courseName { get; set; }
        public string enrolledDate { get; set; }

        public void Method()
        {
            throw new System.NotImplementedException();
        }
    }
}
```

Report.CS

```
namespace Student_Management_System
{
    internal class Report
    {
        public string CourseName { get; internal set; }
        public int TotalStudents { get; internal set; }

        public void Method()
        {
            throw new System.NotImplementedException();
        }
    }
}
```