Marking Scheme

Informatics College Pokhara

informatics
college pokhara

Application Development

CS6004NI

Course Work 1

Submitted By: **Rajendra Adhakari**
London Met ID: Enter ID Here

Submitted To: Ishwor Sapkota
Module Leader

Component Grade and Comments	
A. Implementation of Application	
User Interface and proper controls used for designing	User Interface is complete but not separated and have proper use of controls
Manual data entry or import from csv	appropriate use of data types but missing some properties required or missing CRUD operation
Data Validation	Only basic validation
Enrollment Report & weekly report in tabular format	very poorly executed reports and data not shown accurately
Course wise enrollment report & Chart display	Very poorly designed and only contains one report format with in appropriate data
Algorithm used for sorting & proper sorting of data	Default sorting provided by .net is used
B. Documentation	
User Manual for running the application	User Manual is below average. Is textual only.

Application architecture & description of the classes ad methods sued	average work with very limited explanation of the classes and methods used
Flow chart, algoriathms and data sctructures used	average work with very limited explanation and missing diagramatic representation.
Reflective essay	Very poorly written

C. Programming Style

Clarity of code,Popper Naming convention & comments	Very poor code
System Usability	unusable system

Overall Grade:	**C**	**C**

Overall Comment:

Code should be self explainable with less comments. Need some proper naming of the component and require to add comments on required area.

In overall the code is working and all the functionality seems working and system can be used

Module Code & Module Title

CS6004NP Application Development

Assessment Weightage & Type

30% Individual Coursework

Year and Semester

2019-20 Autumn

Name: Rajendra Adhikari

College ID: NP04CP4A170028

University ID: 17030739

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.

Table of Contents

Table of Figures

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

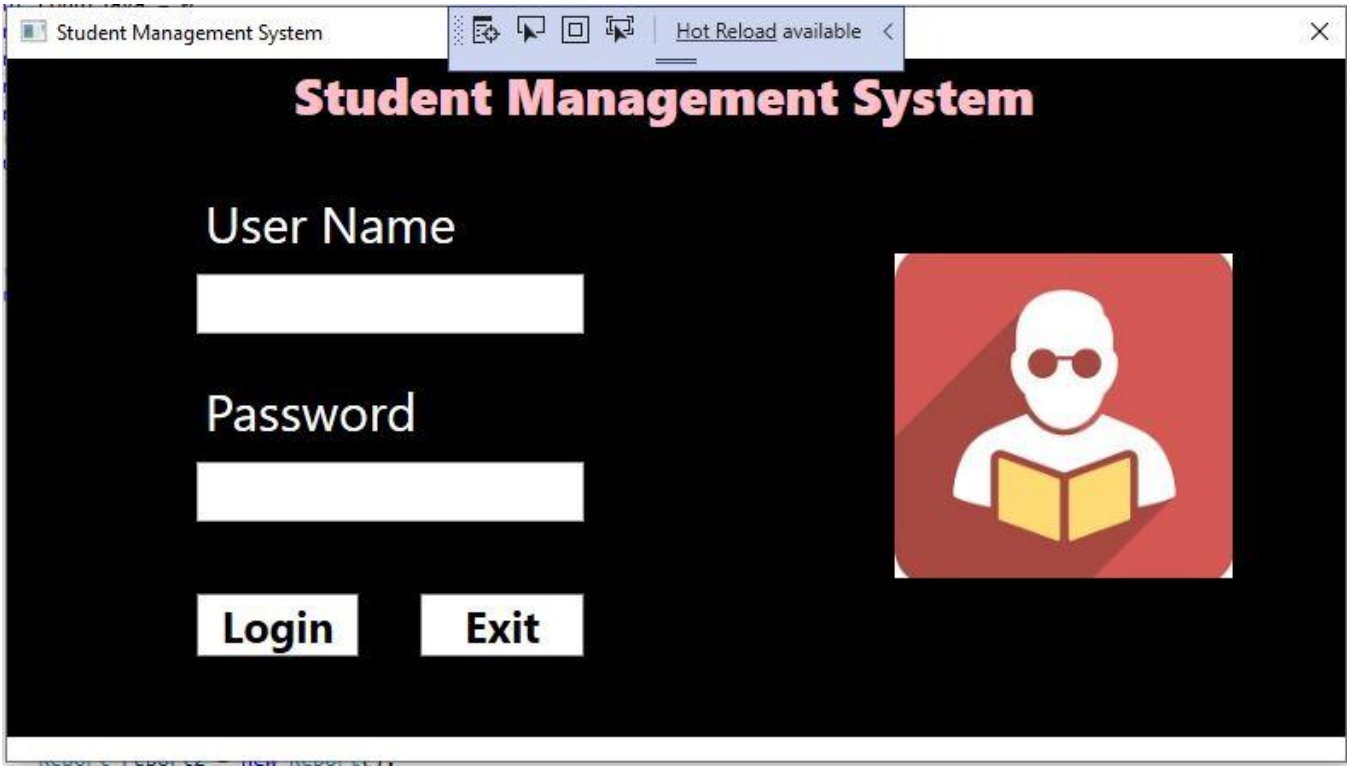

Figure 1: Login Screen.

- 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: -

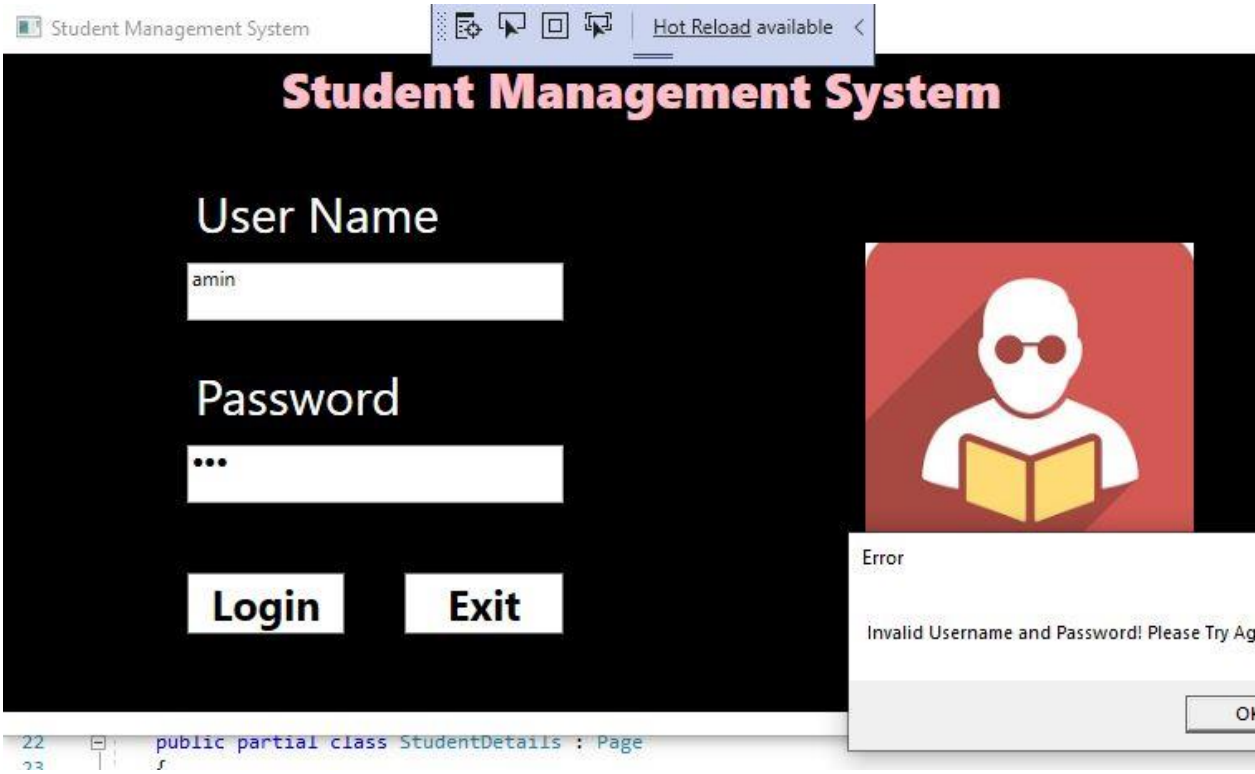

Figure 2: Message displayed if user name or passport is incorrect..

Main page

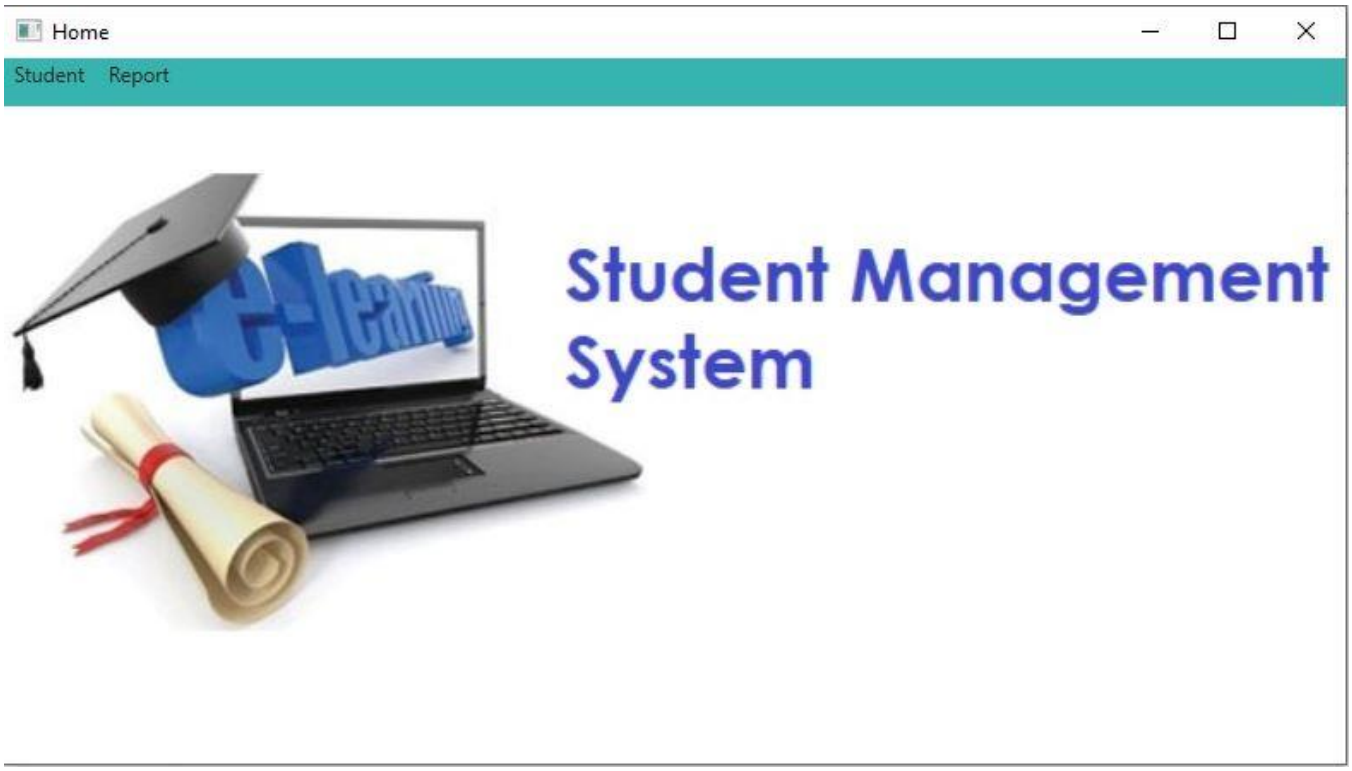

Figure 3: Home page of the System.

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

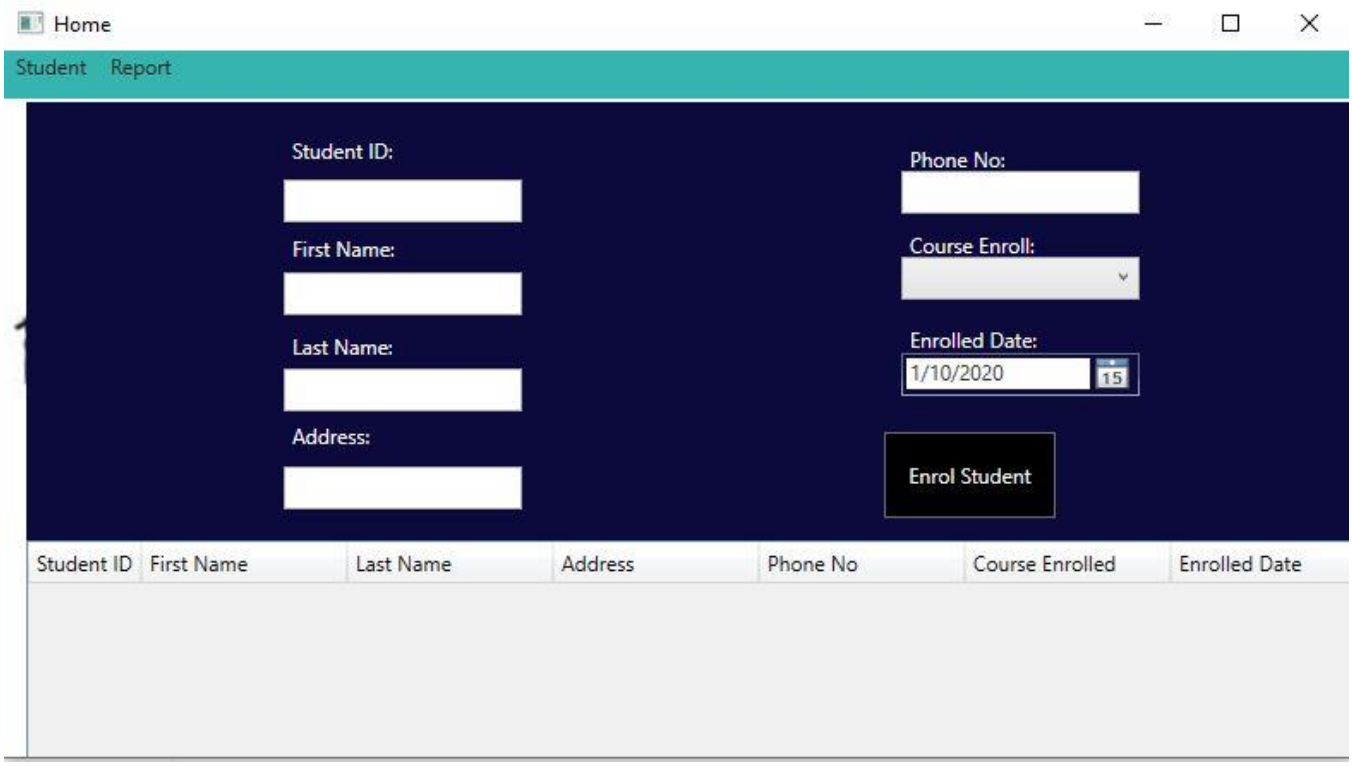

Figure 4: Ui of Add Students.

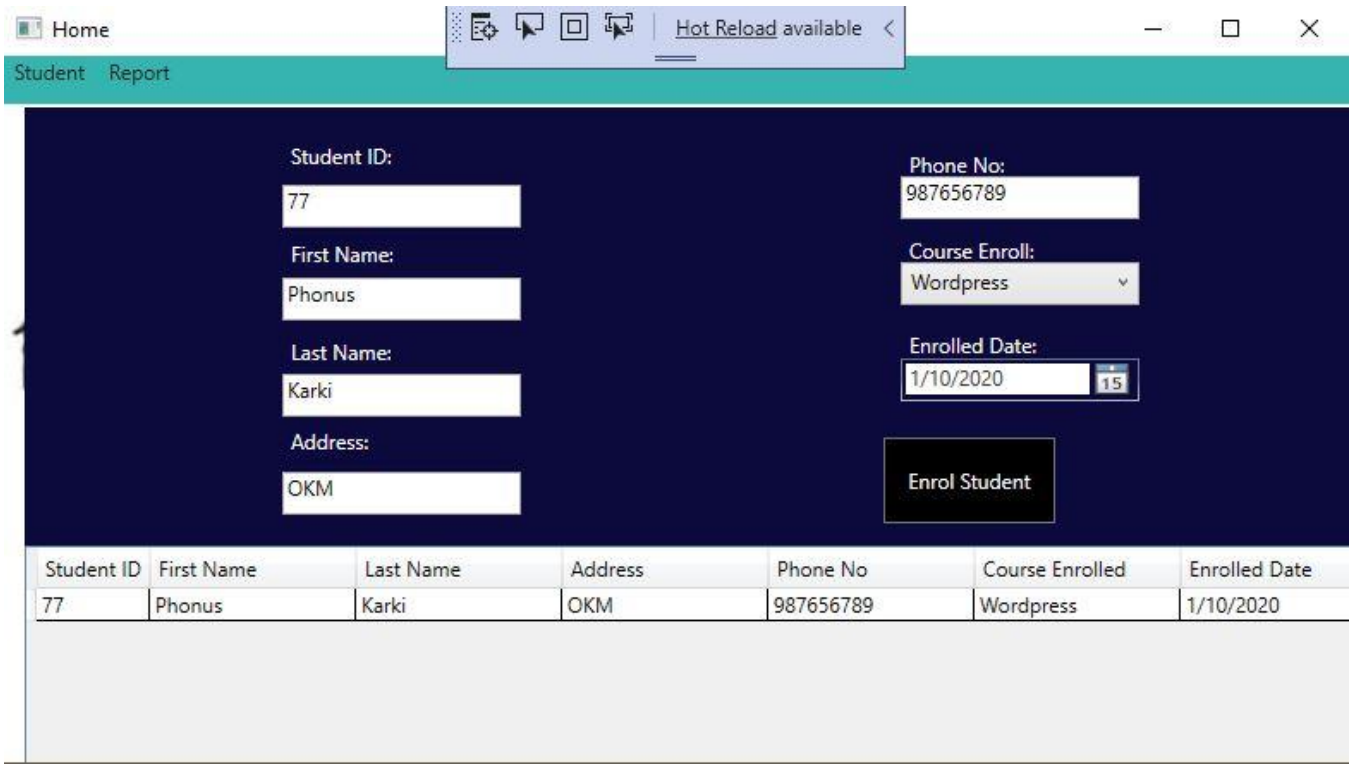

Figure 5: Enrolling process.

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.

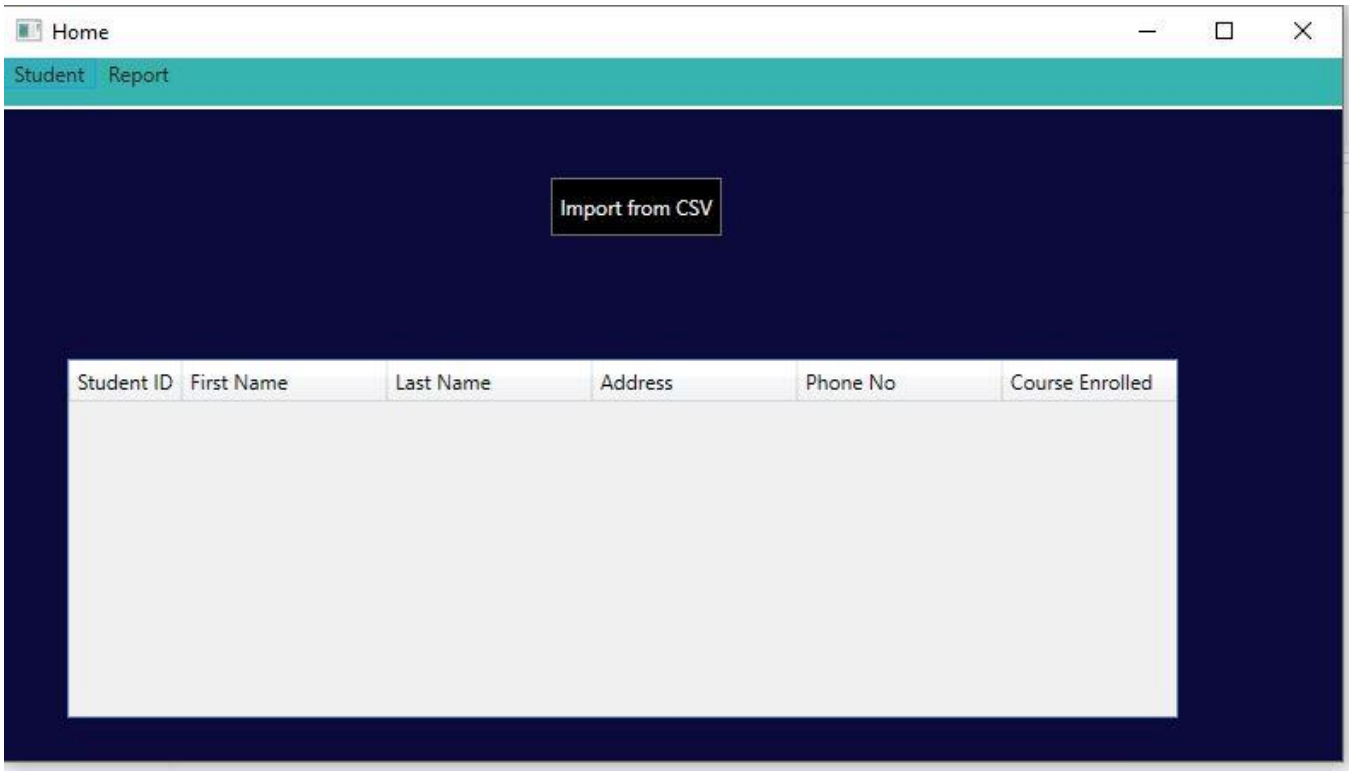

Figure 6: UI of Import from CSV

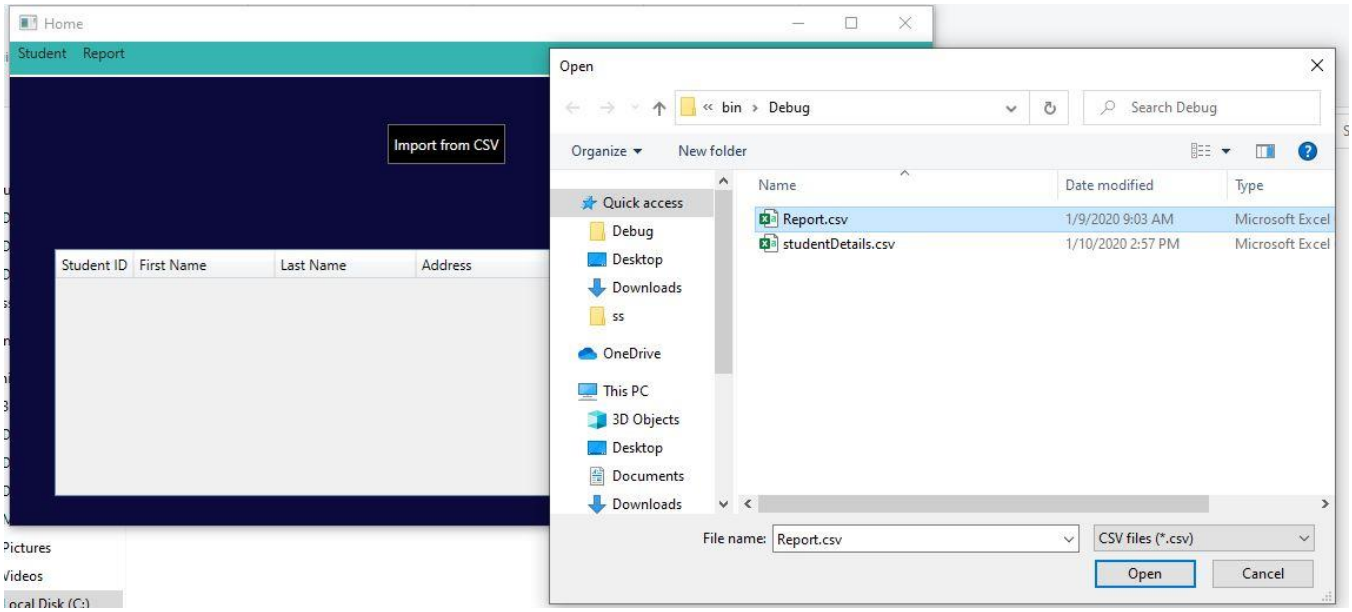

Figure 7: Importing data from CSV file.

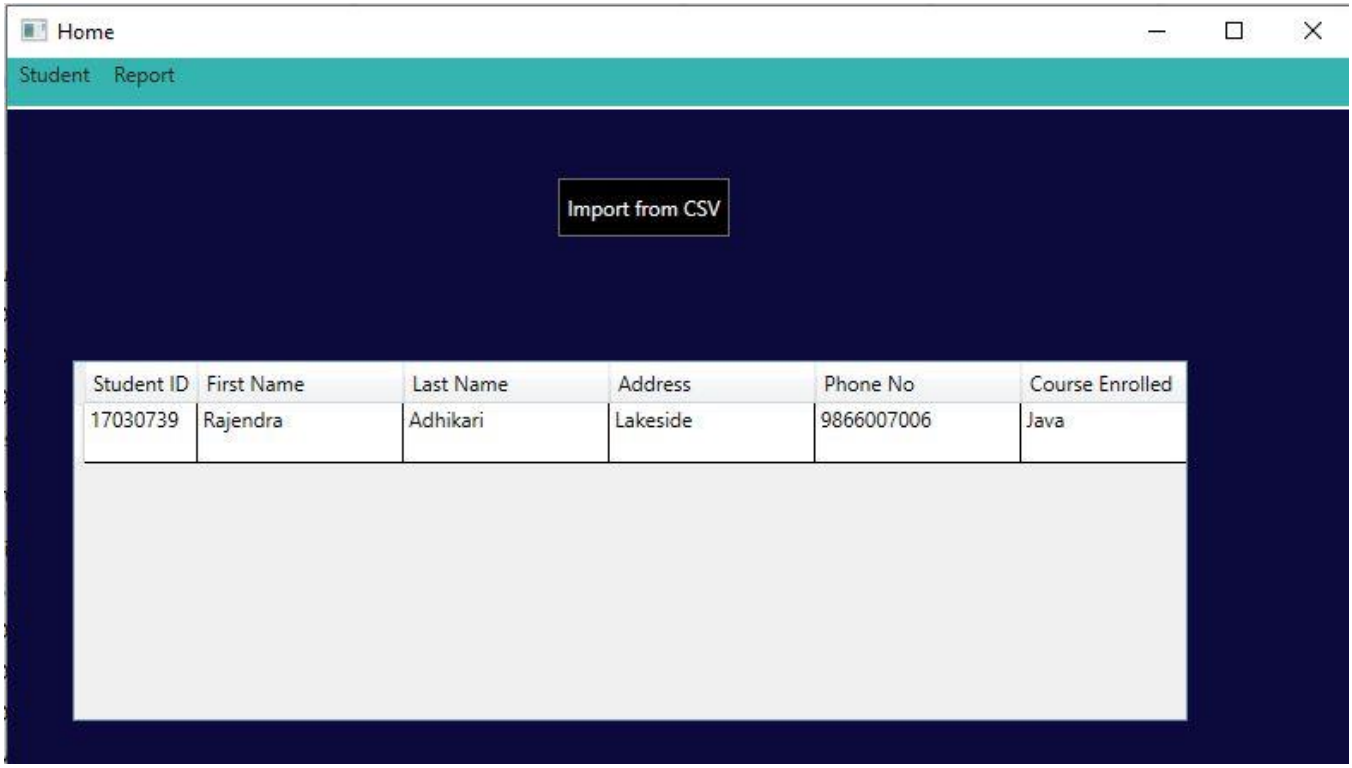

Figure 8: After importing from CSV.

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.

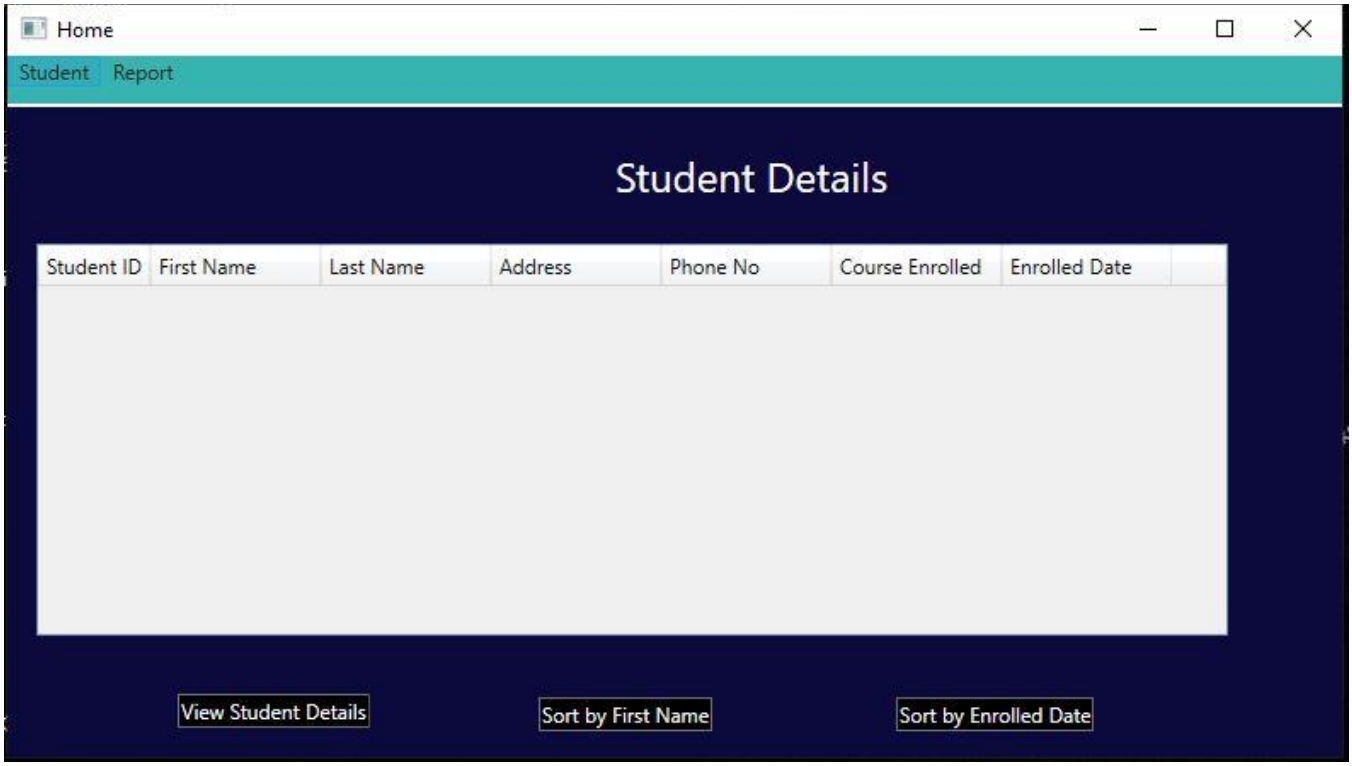

Figure 9: Ui of Student Details.

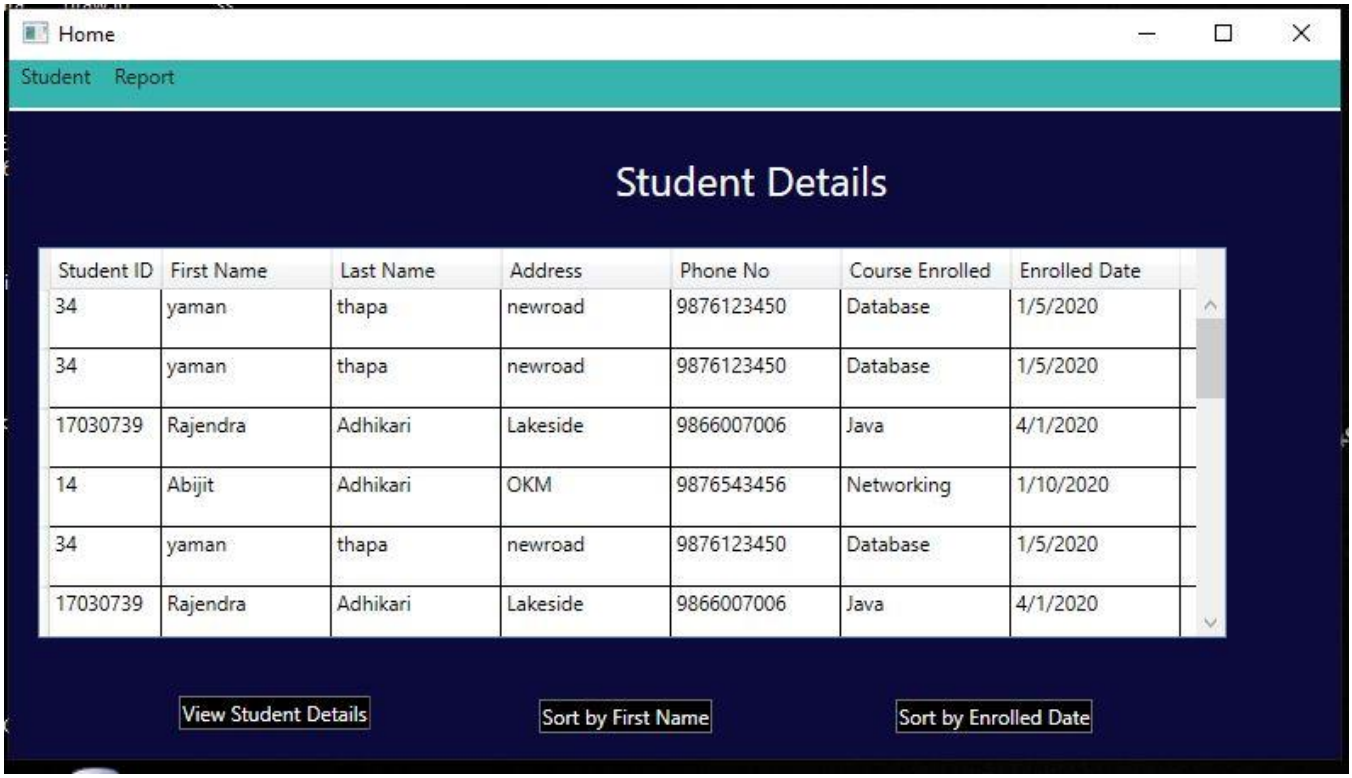

Figure 10: After clicking View Student Details Button.

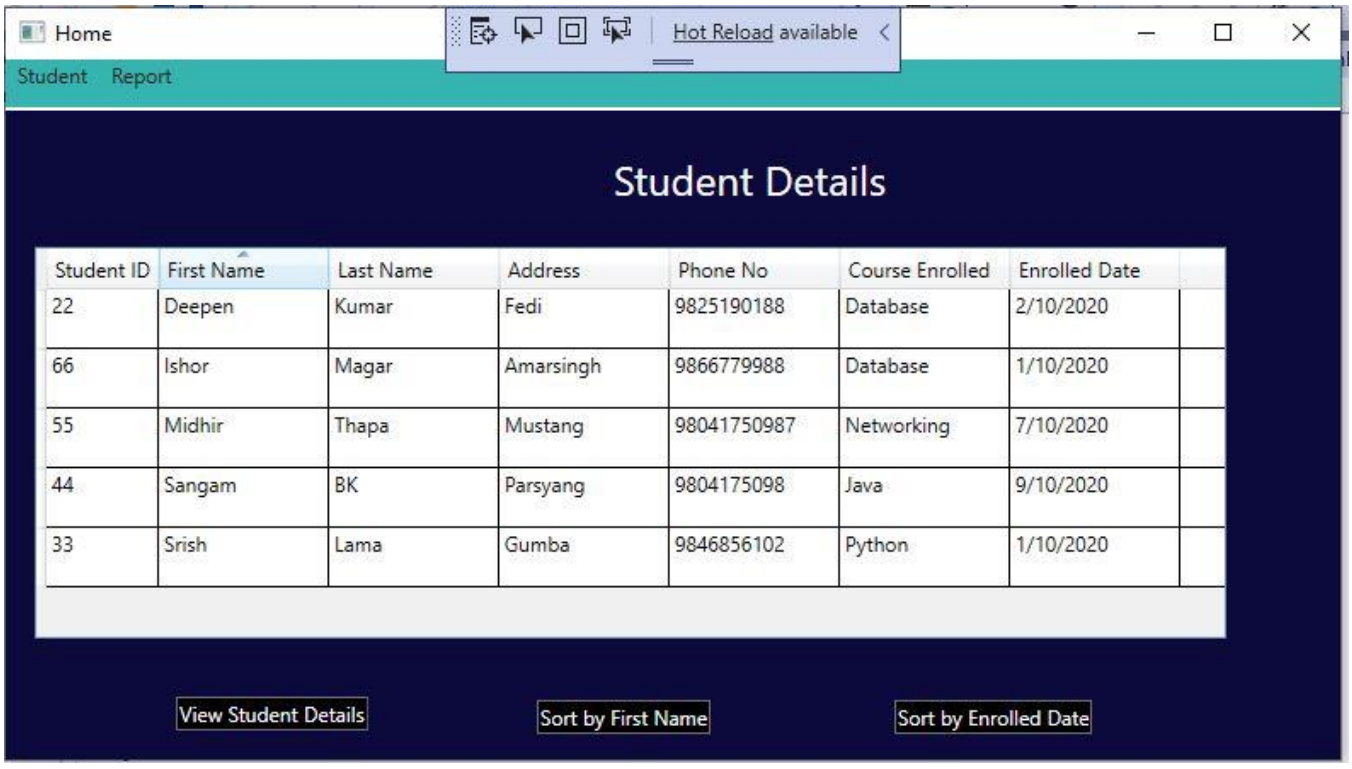

Figure 11: After clicking Sort by First Name Button.

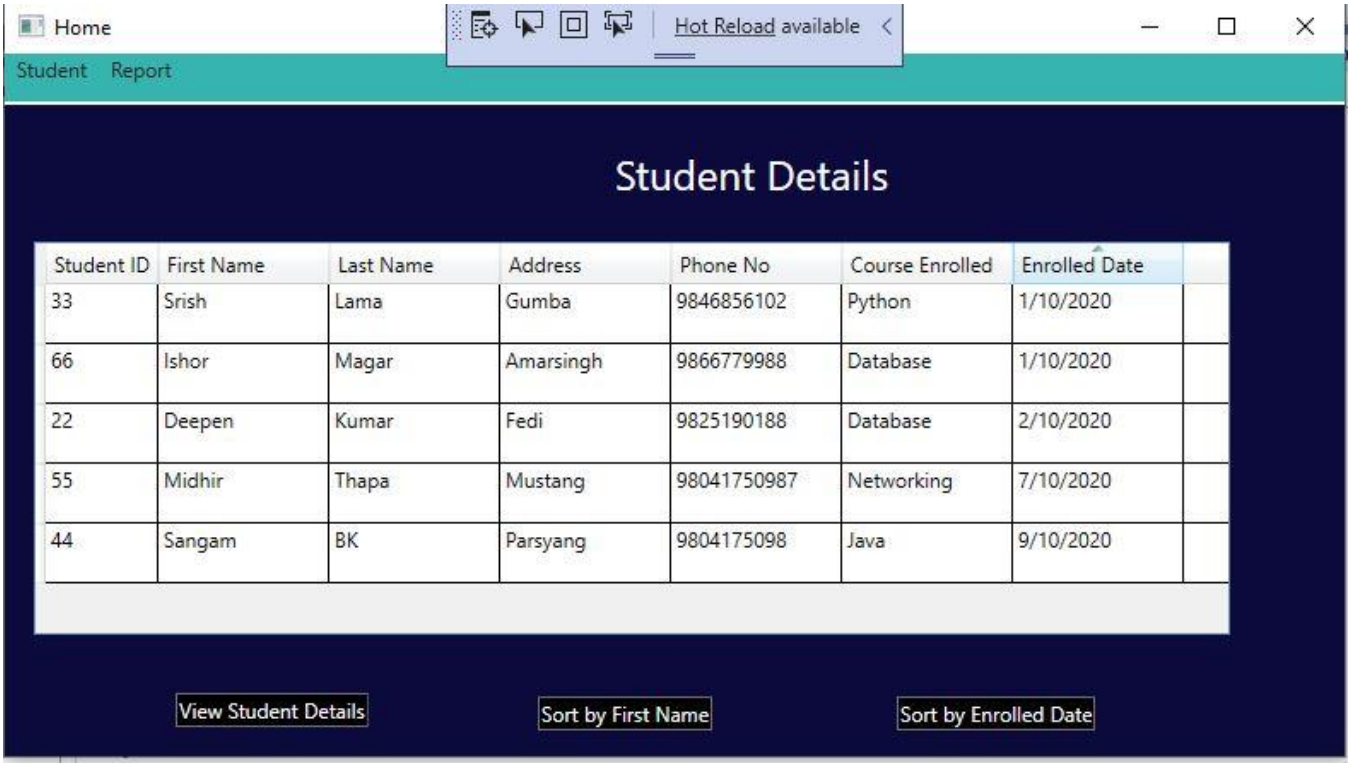

Figure 12: After clicking Sort by Enrolled Date Button.

View Weekly Report

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

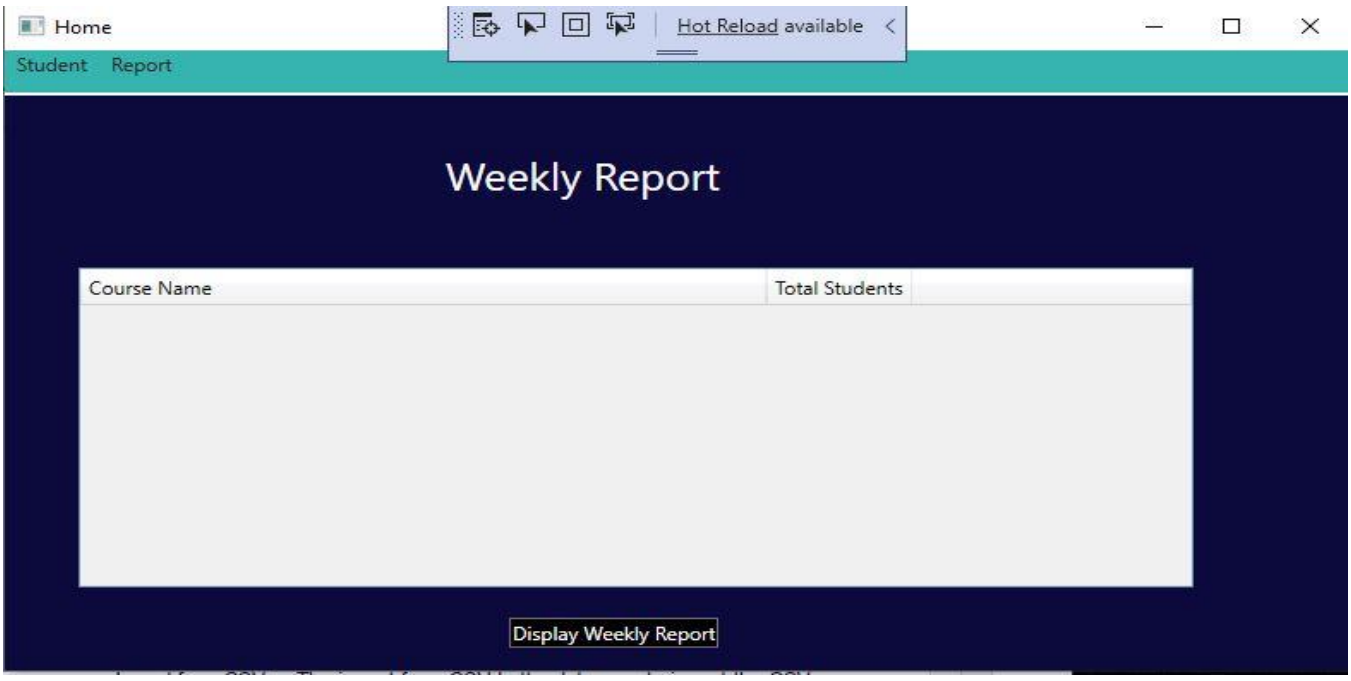

Figure 13: U of View Weekly Report.

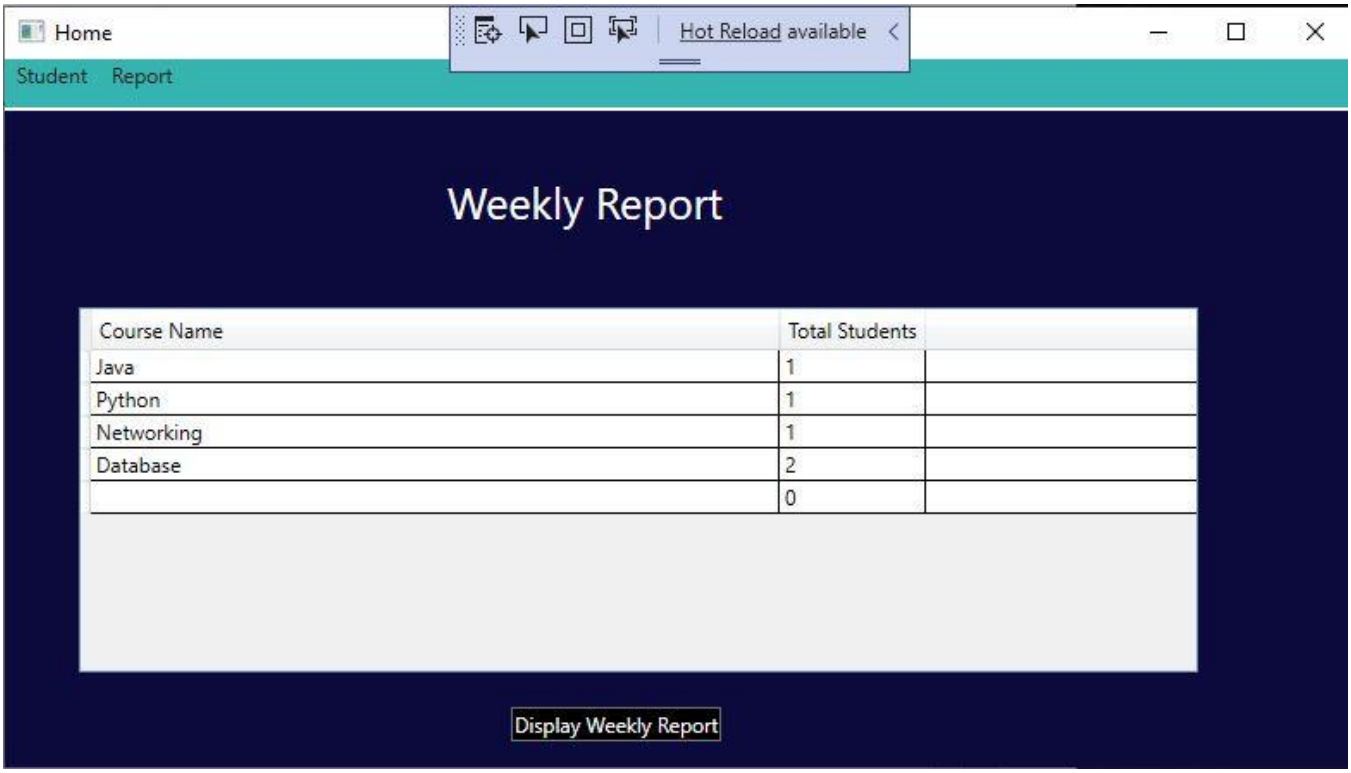

Figure 14: After clicking Display weekly report.

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.

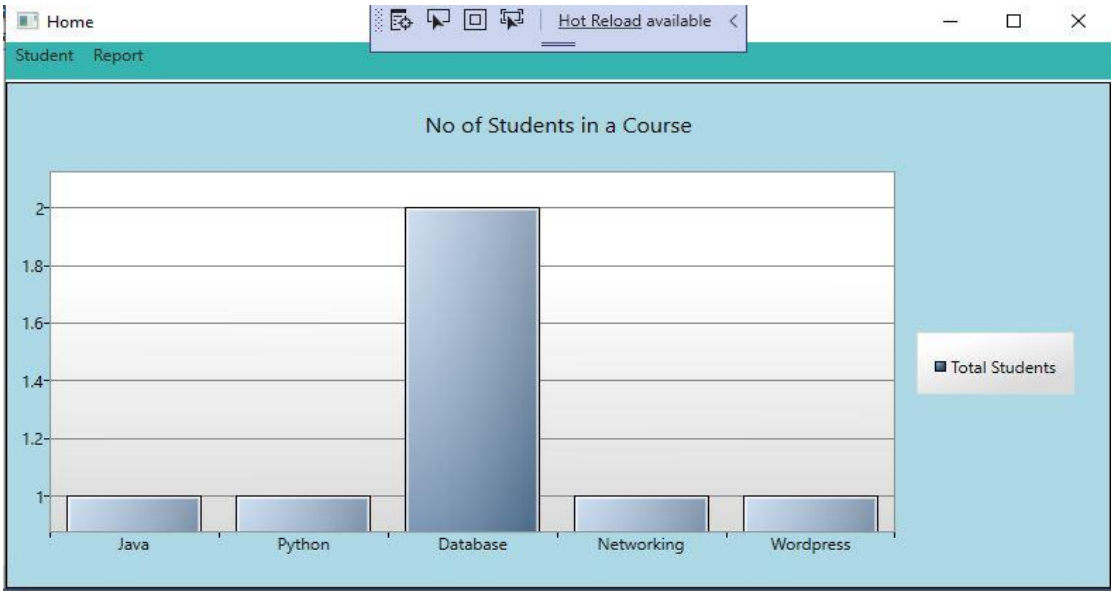

Figure 15: Chart

System Architecture

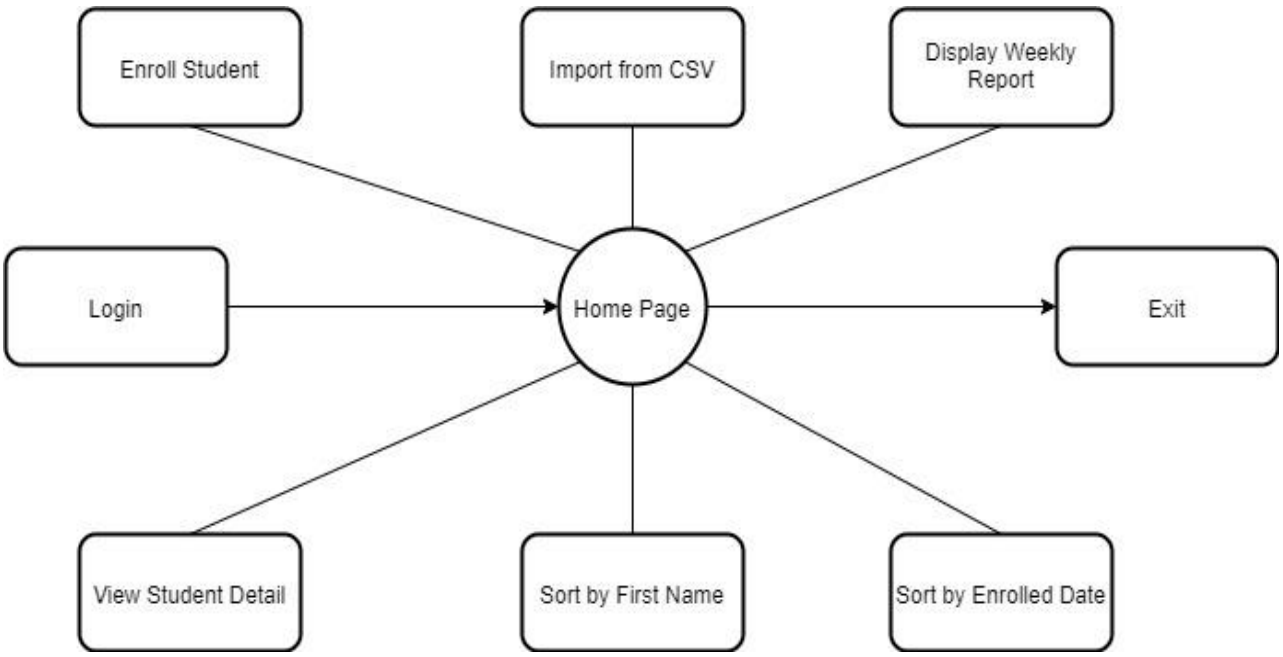

Figure 16: Architecture Diagram

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

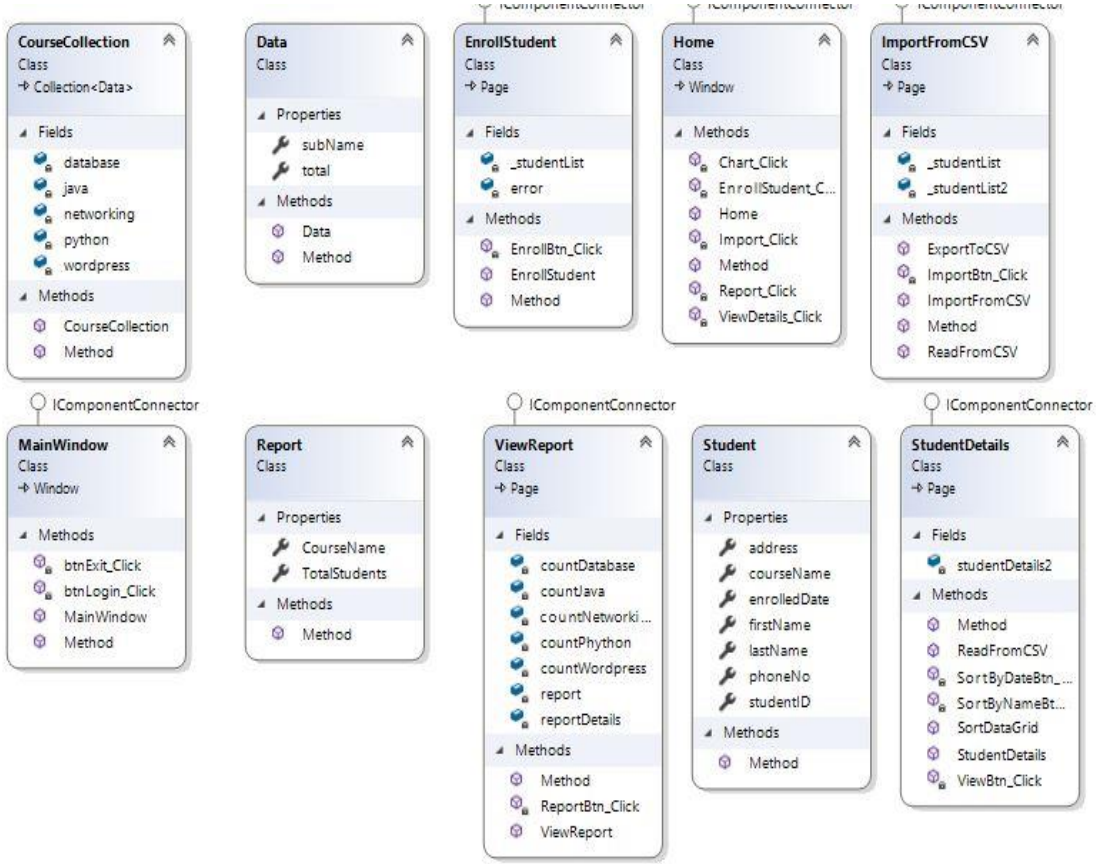

Figure 17: Class Diagram.

Flowchart

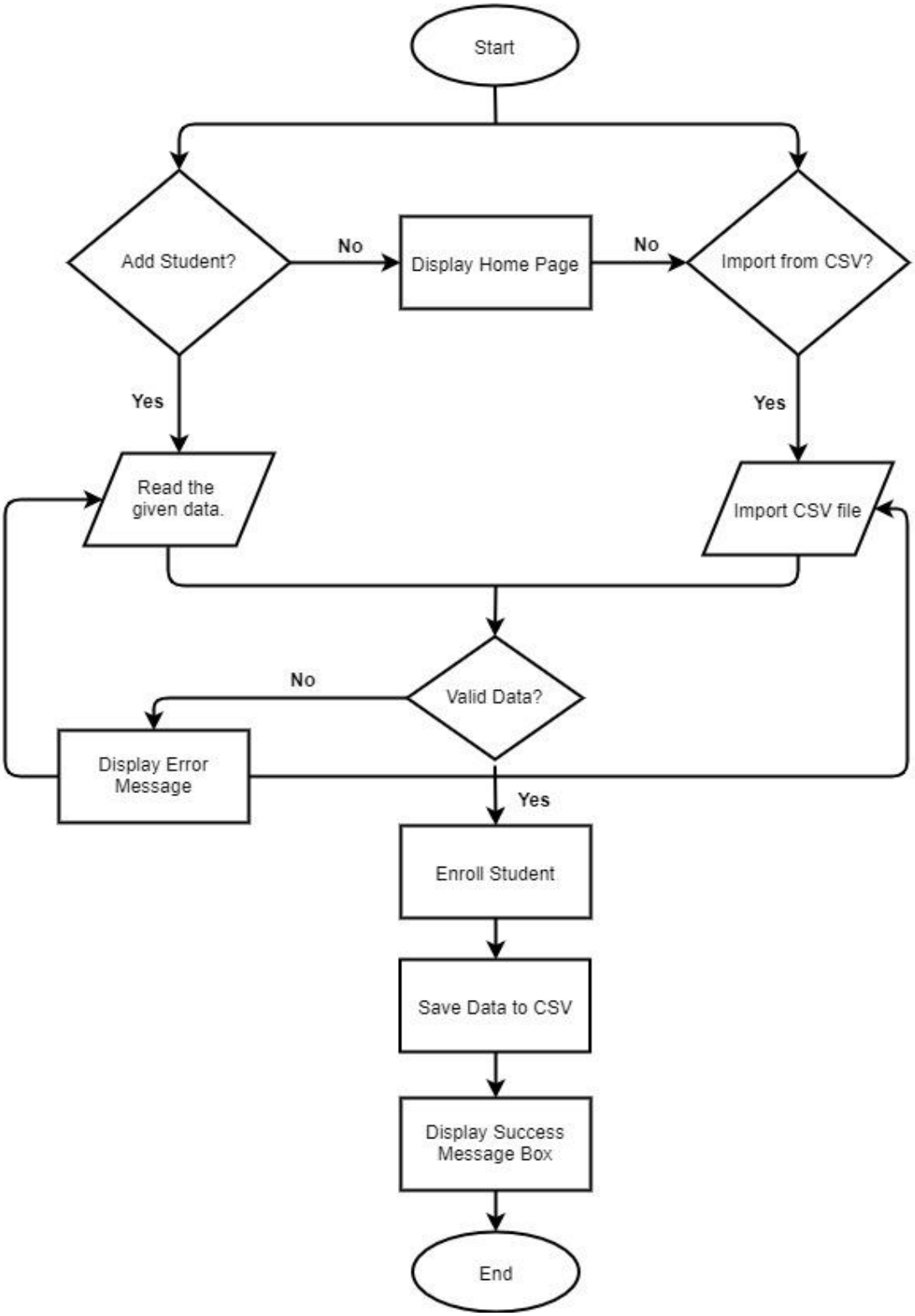

Figure 18: Flow Chart.

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 System.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 System.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 System.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);
                }
```

```
                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 countPhython = 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")
                {
                    countPhython++;
```

```
                    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 System.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 System.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();
        }
    }
}
```