Marking Scheme

Informatics College Pokhara

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Application Development

CS6004NI

Course Work 1

Submitted By: **Suman Bhandari**
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	not properly saved or imported data
Data Validation	missing most of the 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.

Marking Scheme

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	very poorly developed application

Overall Grade:	**E+**	**E+**

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

Informatics College Pokhara

Application Development

CS6004NP

Coursework 1

Submitted By:
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London Met ID: 17030755
Group: L1C3
Date: 10-Jan-2020

Submitted To:
Mr. Ishwor Sapkota

Application Development

Abstract

This is the documentation for the individual coursework of module Application Development. Task assigned in the coursework is to develop a Student Registration system using Visual Studio Platform. The program is developed in C# programming language using WPF(Windows Presentation Foundation). The program will help educational institute to get rid from daily paperwork's and shift to digital platform .

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Introduction

Today, the world Is heading toward digital system and almost all institute are shifting to digital system. Student Registration System is a desktop-based application designed primarily for educational institute. Unlike the traditional way of deploying the manpower to and different registers to keep record of students and teachers in hardcopy, this system simplifies the working efficiency of the institute in more efficient way. This system will allow any educational institute in a real time environment to increase the scope of business by reducing the labour cost and other paperwork cost.

Here I have developed a GUI based Student Registration system with the sequential aid of C# components, and finally to the detailed description of reports with the aid of different resources and tons of research. The system has functionality of login by employee and adding students and courses filling the registration form present in the system. Also, employee can register student by importing the data from Excel in csv format. Similarly, employee can view daily and weekly report also graphical report.

Current Scenario

Whenever, we go for registration in any educational institute we have to fill printed form and our information is managed in register. In this method more staff, more time and manual effort is required. Moreover, there is difficulties in searching data and chance of unusual modification by other people. Many educational institutes today also keep record of student data and other data in this traditional way which is totally paper-based. In addition to this there are some institute who uses digital system but lacks some important features.

Proposed System

The system I have developed is digitized system that can be used by educational institutes to enrol student, keep record of courses and view graphical as well as daily and weekly report. This system is the best alternative for those institute which are using traditional way of recording data. Also security is also ensured as it has login section. The GUI is present in simple and user friendly manner.

User Manual

The process of operating the system are described below with screenshot and proper explanation.

Login Screen

For the security purpose so that other unknown user modifies or delete any data the system consists of login screen. As end user operates the system the initial screen after program open is security screen. User have to provide valid username and password inorder to login successfully. The username and password of the system is both “admin”. After successful login user is redirected to home page.

Figure 1:Login screen

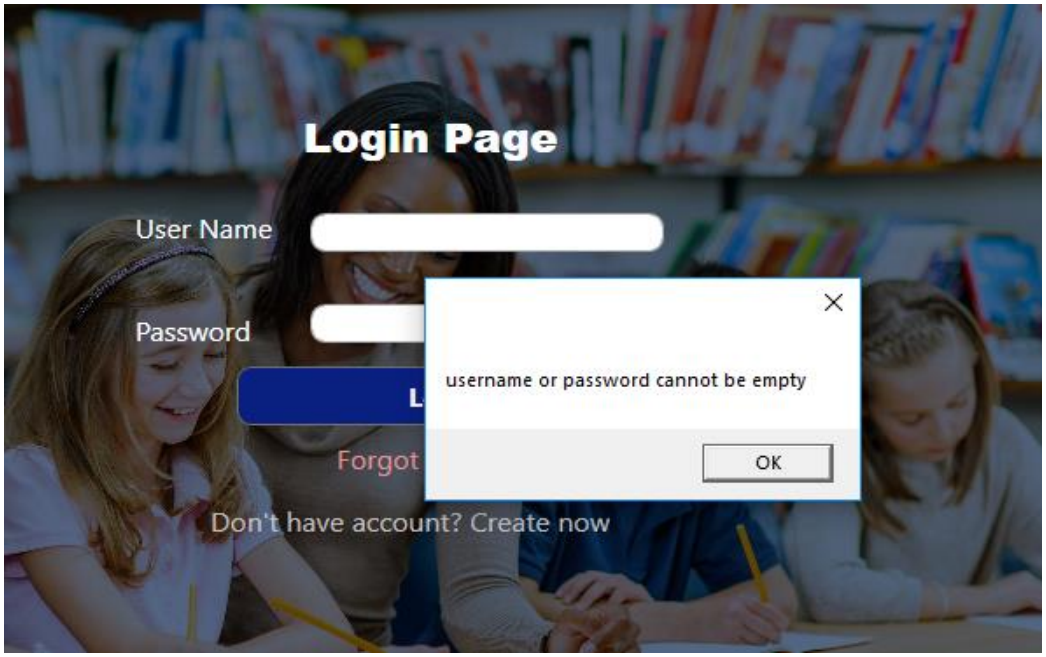


Figure 2:Login screen alert message when username and password is blank

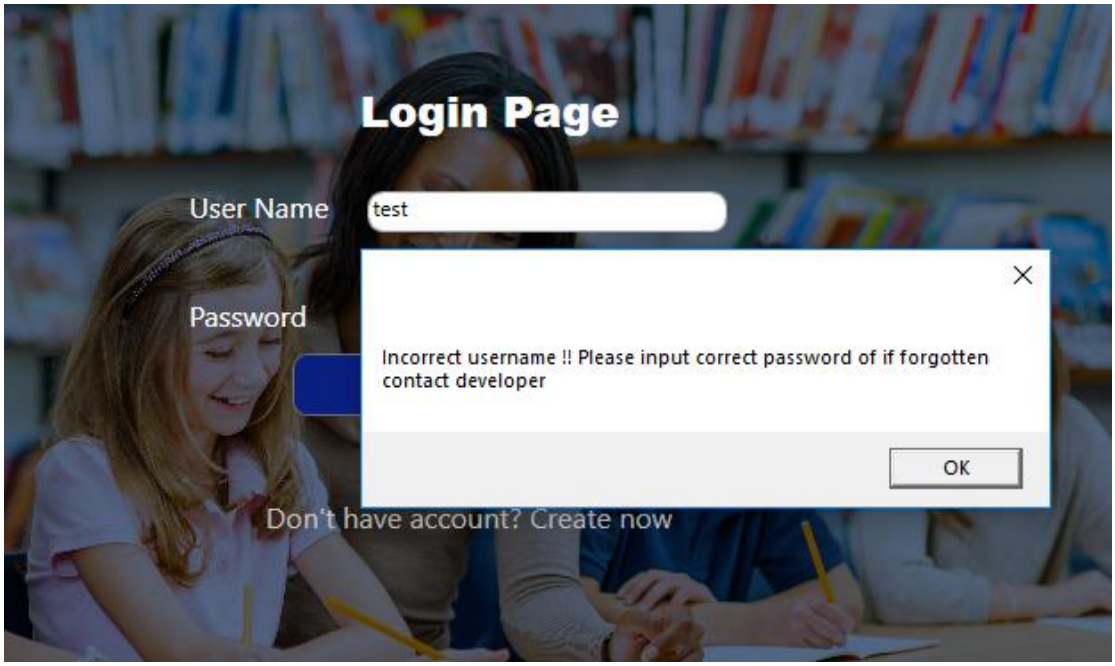


Figure 3:Login screen alert message when username and password are incorrect

Home page

After successful login home page or main screen of the system appears. Here user can choose either to add course or enrol student or bulk import student data from excel or to view report.

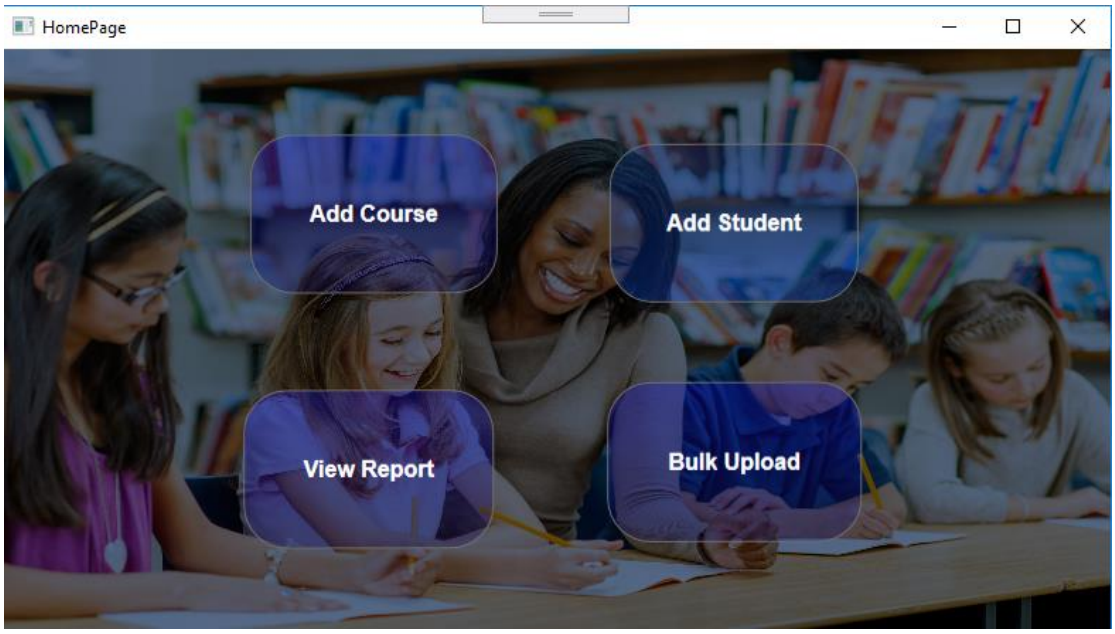


Figure 4:Home Page Design

Add course

After user click on “Add Course” from home page user is redirected to new window where user have to fill the form inorder to add new course. The form consists of course name , course fee and course credit hours. User cannot leave any field blank and course fee and credit hours have to be input in number format only. The course added from here will be displayed in student registration form.

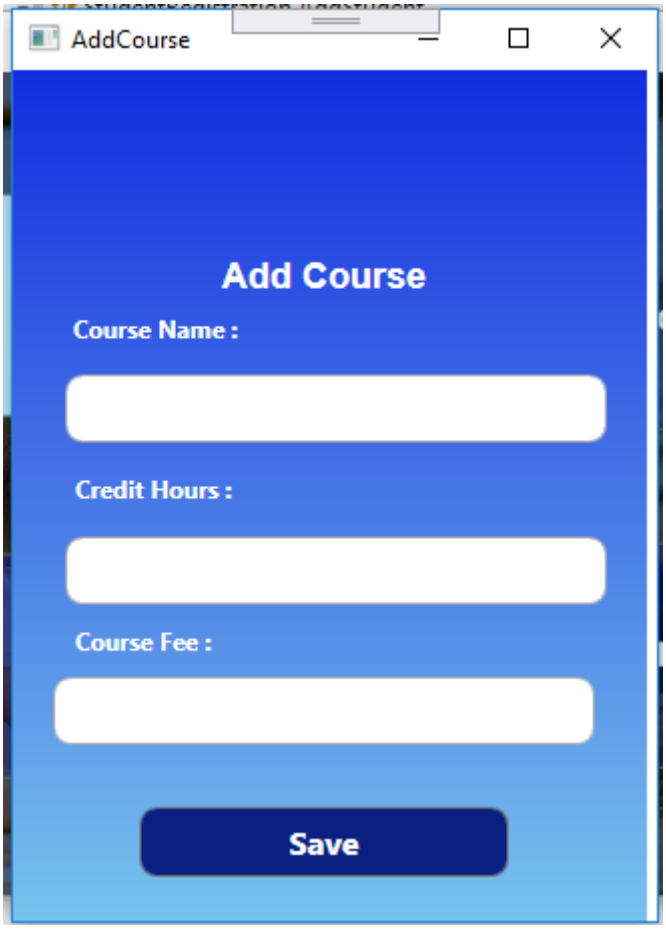


Figure 5:Form to add course

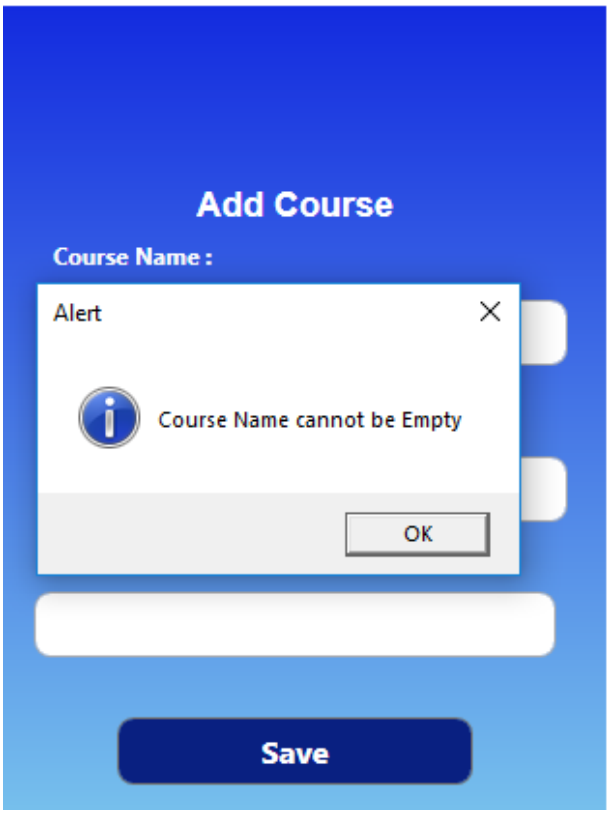


Figure 6:Alert message dialog when field ae empty

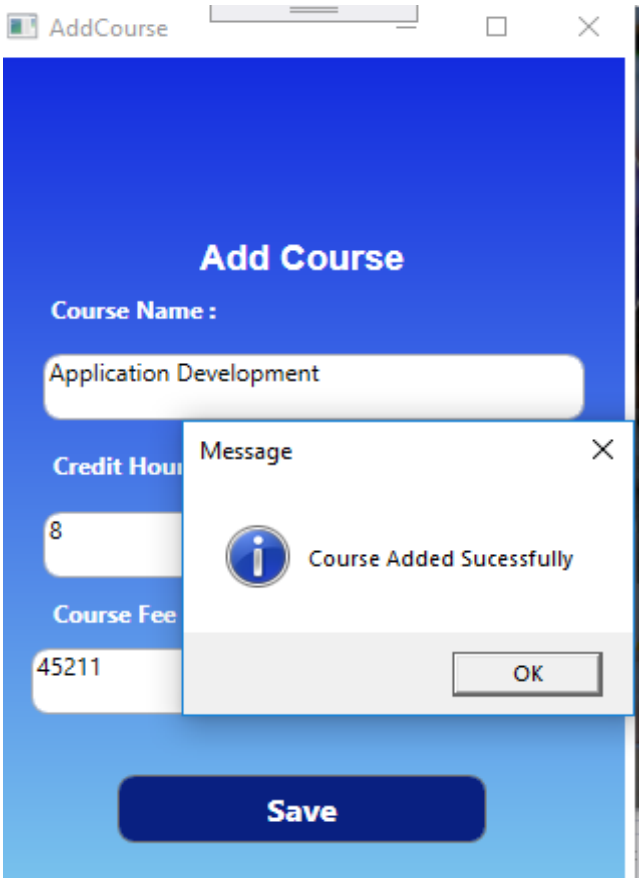


Figure 7:Dialog showing successfully course added

Enrol Student

After user click on “Enrol Student” from home page user is redirected to student registration form. The form consists of three section. The first section consists of form which employee have to fill to register student. The second section consist of table which display old student information and newly added student information. The third section consists of buttons from where user can modify and delete student’s data. In the first section user have to provide the students information like students name, email, phone number, course enrol, address, parents number etc. Students id is given by system but if user want to change it he/she can do so. User cannot provide same student id that is used previously. User cannot leave any field blank for successful registration of student.

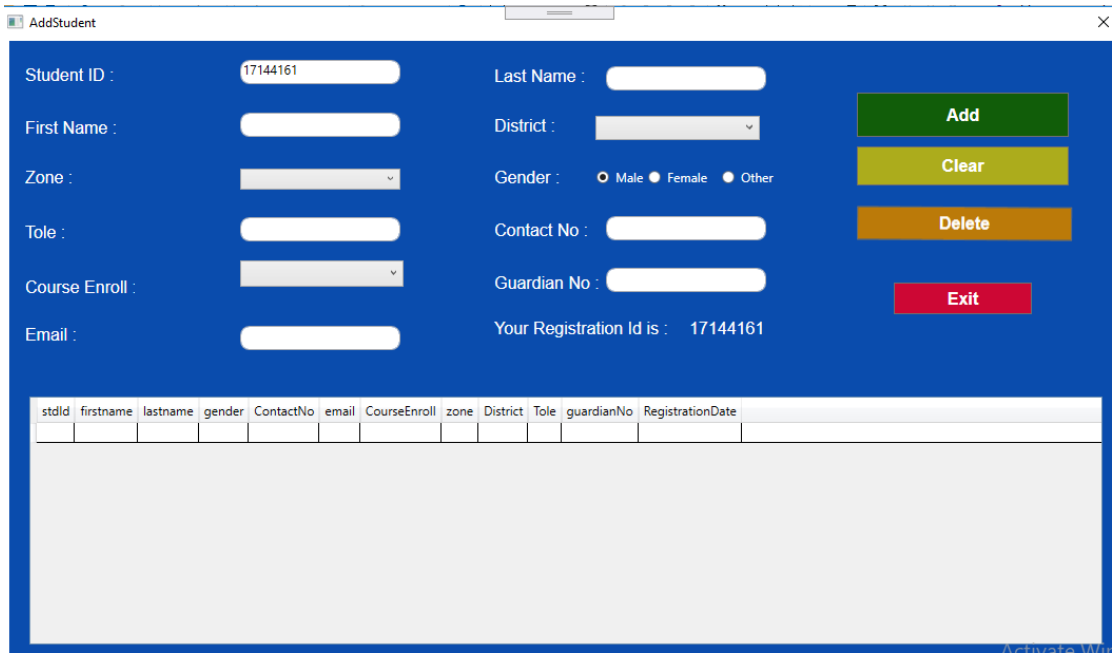


Figure 8:Enroll student or student registration form

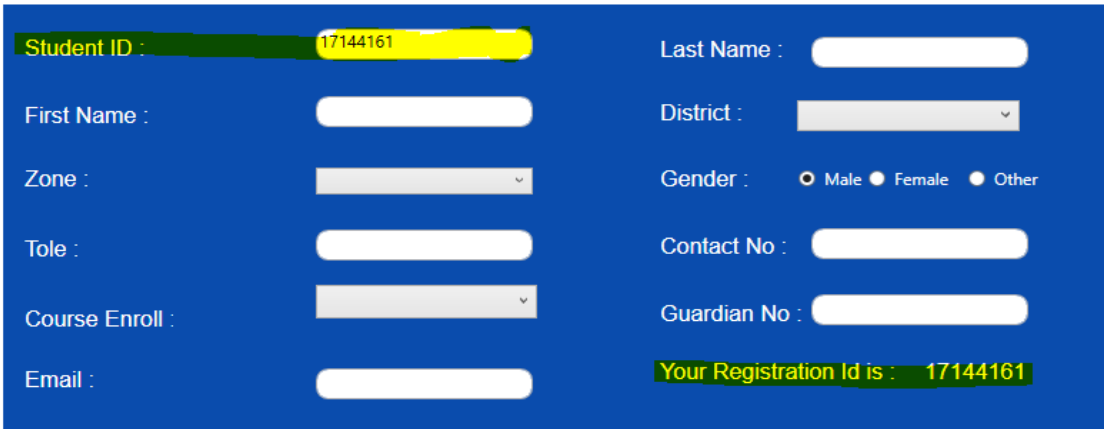


Figure 9:Auto generated studentId

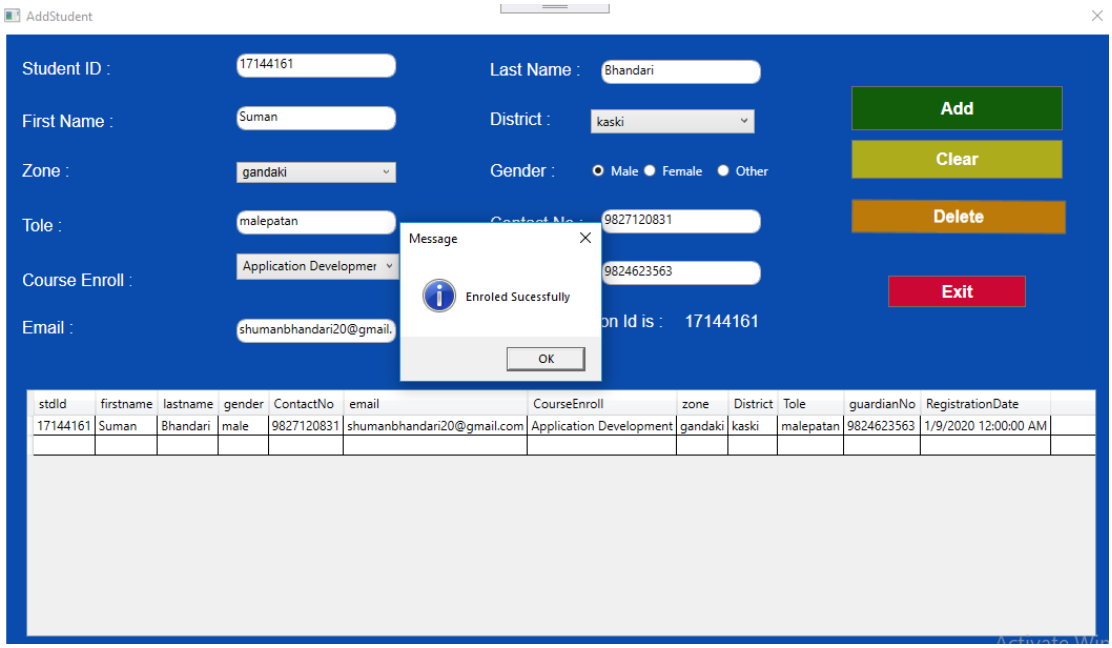


Figure 10:Message dialog showing sucessfull registration of student

Bulk Import

After user click on “Bulk Import” from home page user is redirected to new window. In this page user have to click on browser file button and chose excel file that is in csv format and have students data in pre-defined order. The data from chosen file is displayed in table. If user find any data mistake, he/she have to edit data in excel file and again upload file. At last if all the information is correct user have to click on save button to save students data.

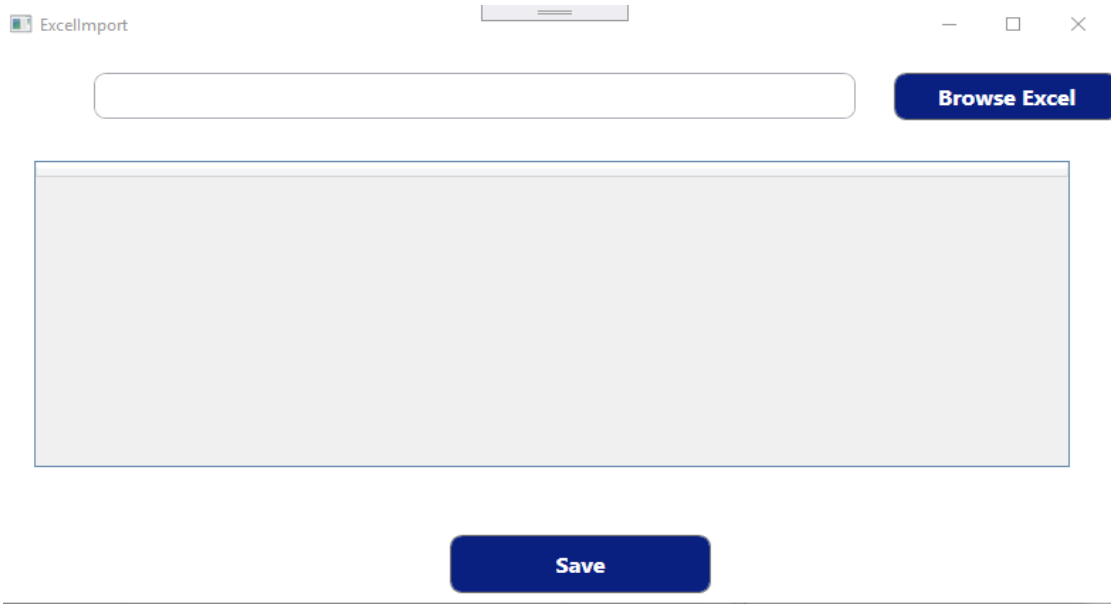


Figure 11:Bulk Import or import from excel form

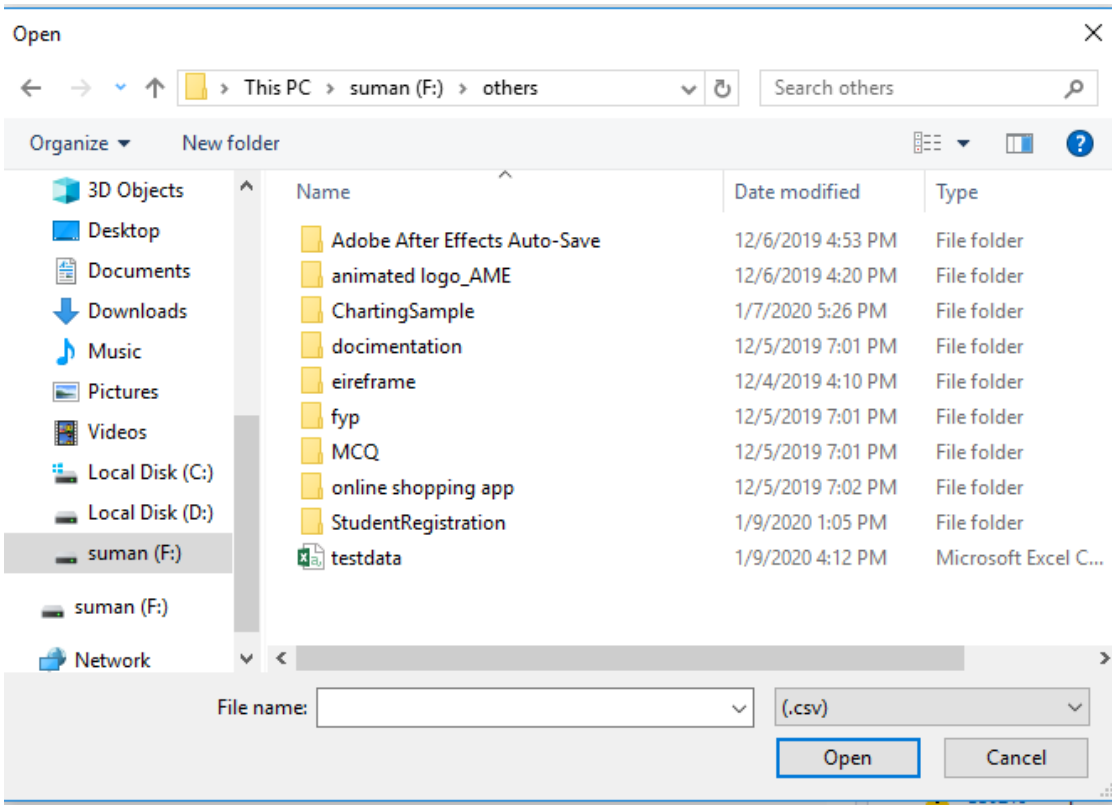
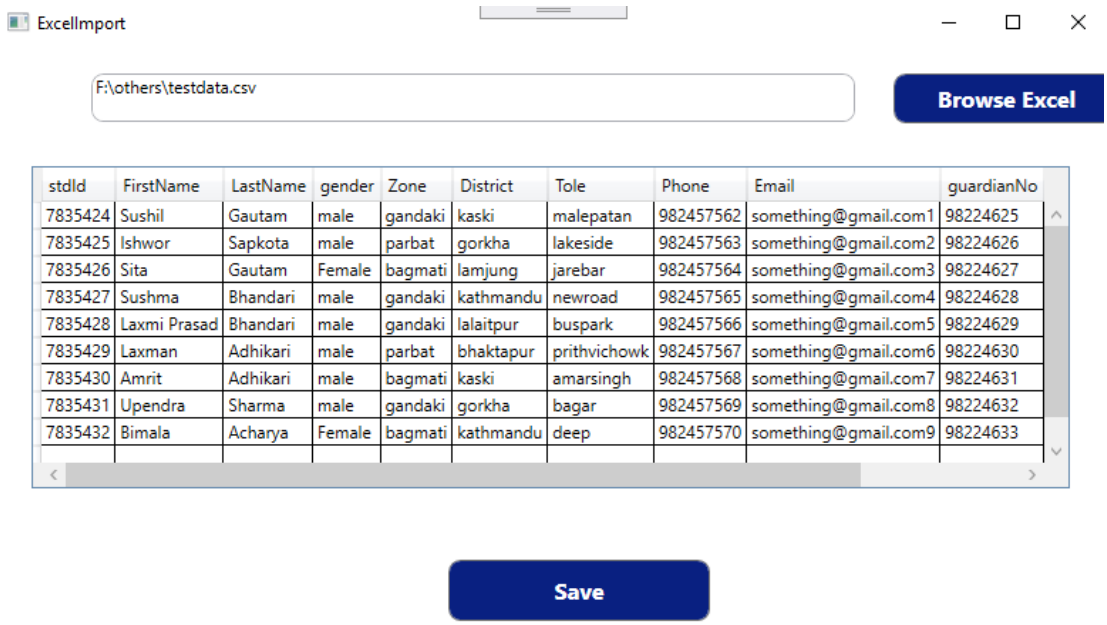


Figure 12:File chooser opened when browse file button is clicked



stdId	FirstName	LastName	gender	Zone	District	Tole	Phone	Email	guardianNo
7835424	Sushil	Gautam	male	gandaki	kaski	malepatan	982457562	something@gmail.com1	98224625
7835425	Ishwor	Sapkota	male	parbat	gorkha	lakeside	982457563	something@gmail.com2	98224626
7835426	Sita	Gautam	Female	bagmati	lamjung	jarebar	982457564	something@gmail.com3	98224627
7835427	Sushma	Bhandari	male	gandaki	kathmandu	newroad	982457565	something@gmail.com4	98224628
7835428	Laxmi Prasad	Bhandari	male	gandaki	lalaitpur	buspark	982457566	something@gmail.com5	98224629
7835429	Laxman	Adhikari	male	parbat	bhaktapur	prithvichowk	982457567	something@gmail.com6	98224630
7835430	Amrit	Adhikari	male	bagmati	kaski	amarsingh	982457568	something@gmail.com7	98224631
7835431	Upendra	Sharma	male	gandaki	gorkha	bagar	982457569	something@gmail.com8	98224632
7835432	Bimala	Acharya	Female	bagmati	kathmandu	deep	982457570	something@gmail.com9	98224633

Figure 13:Data from Excel shown in table format

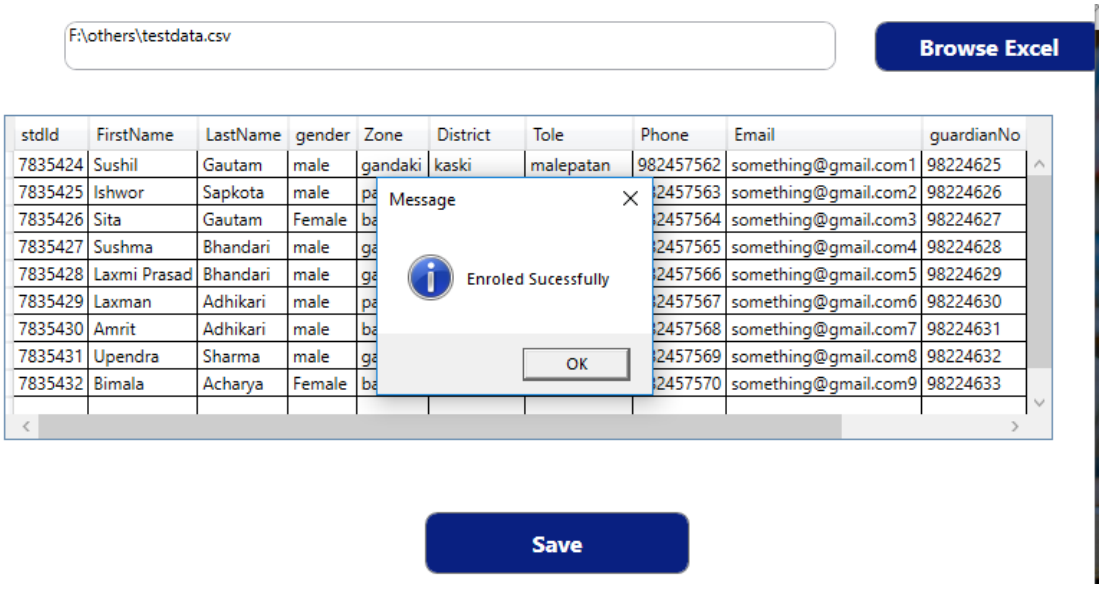


Figure 14:Message Dialog showing successful import of data from excel

View Report

User is redirected to report section after user click on report button from home page. This page consists of three section. On first section all registered students data is displayed in table and user can order them by students first name and date of registration. On section user can view daily and weekly wise report of student registered on courses. On third section user can view graphical view of student number and course registered till the date.

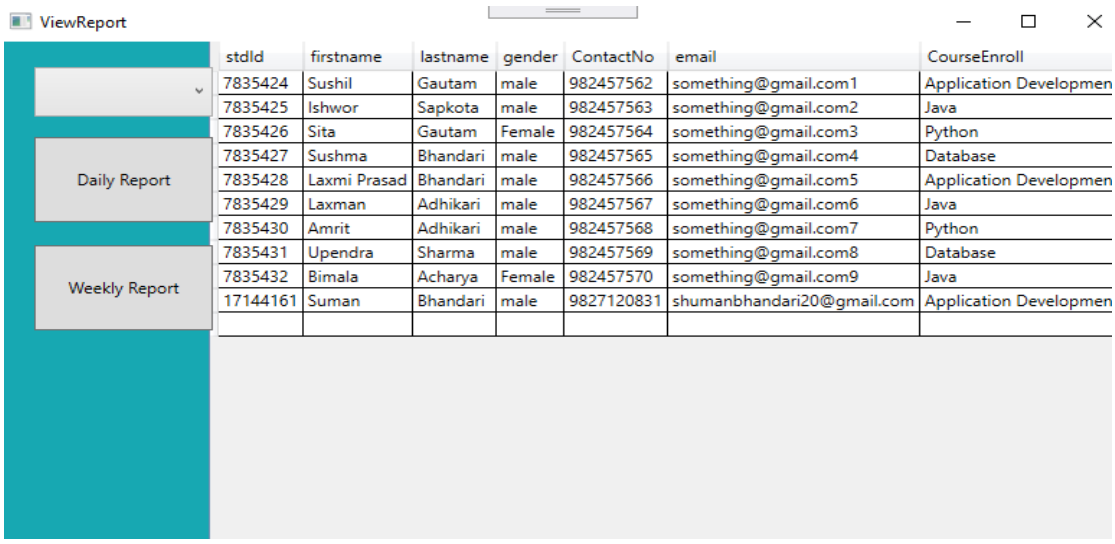
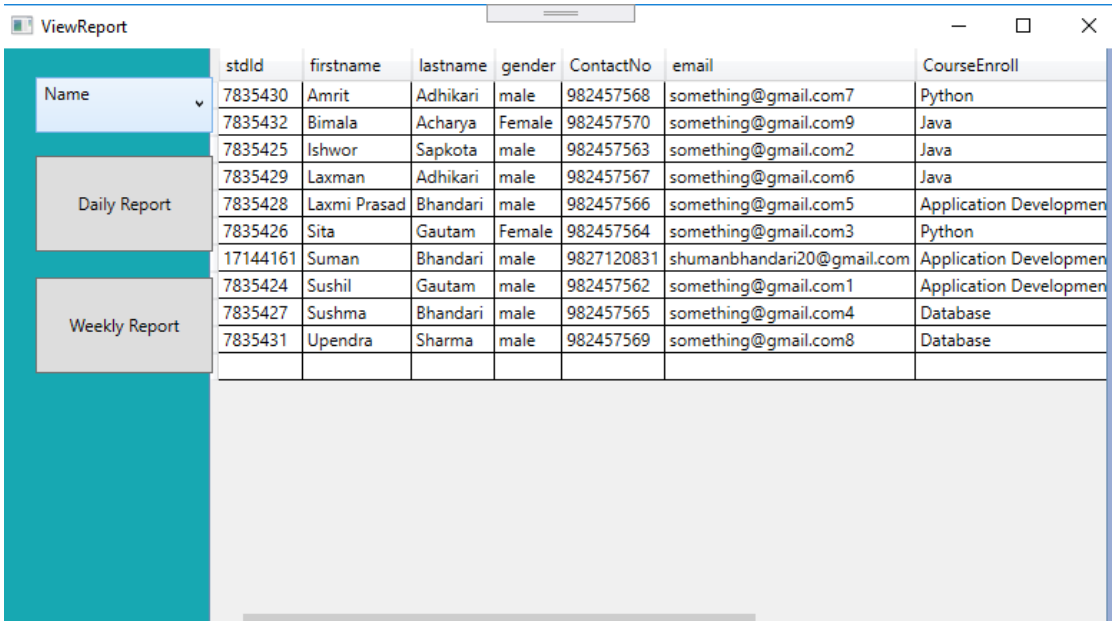
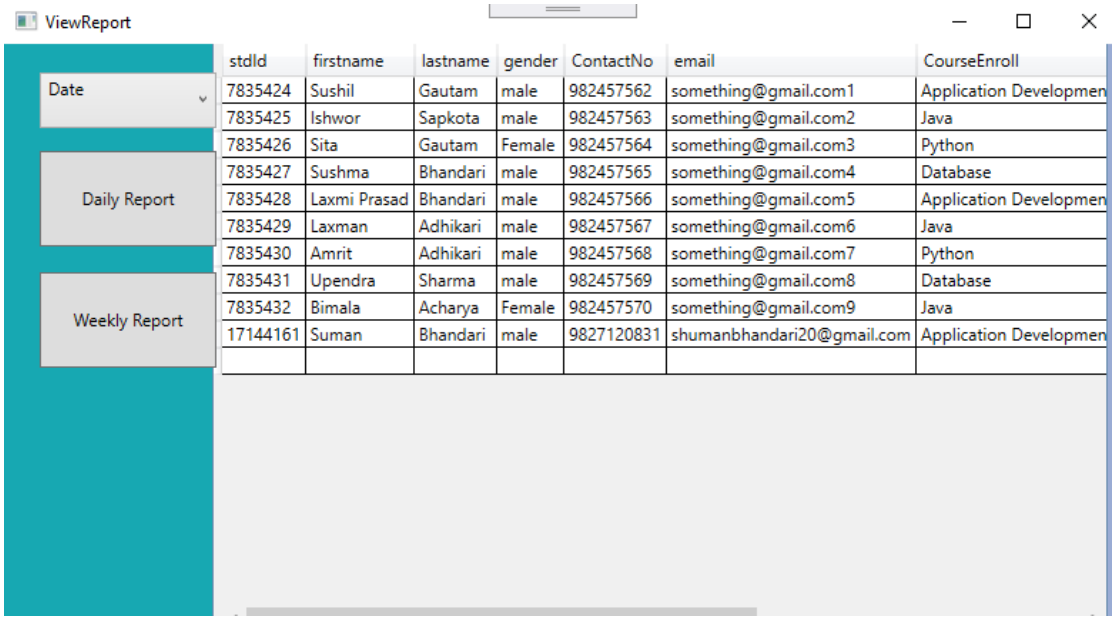


Figure 15:View report page



stdId	firstname	lastname	gender	ContactNo	email	CourseEnroll
7835430	Amrit	Adhikari	male	982457568	something@gmail.com7	Python
7835432	Bimala	Acharya	Female	982457570	something@gmail.com9	Java
7835425	Ishwor	Sapkota	male	982457563	something@gmail.com2	Java
7835429	Laxman	Adhikari	male	982457567	something@gmail.com6	Java
7835428	Laxmi Prasad	Bhandari	male	982457566	something@gmail.com5	Application Developmen
7835426	Sita	Gautam	Female	982457564	something@gmail.com3	Python
17144161	Suman	Bhandari	male	9827120831	shumanbhandari20@gmail.com	Application Developmen
7835424	Sushil	Gautam	male	982457562	something@gmail.com1	Application Developmen
7835427	Sushma	Bhandari	male	982457565	something@gmail.com4	Database
7835431	Upendra	Sharma	male	982457569	something@gmail.com8	Database

Figure 16:Data sorted in ascending order by name



stdId	firstname	lastname	gender	ContactNo	email	CourseEnroll
7835424	Sushil	Gautam	male	982457562	something@gmail.com1	Application Developmen
7835425	Ishwor	Sapkota	male	982457563	something@gmail.com2	Java
7835426	Sita	Gautam	Female	982457564	something@gmail.com3	Python
7835427	Sushma	Bhandari	male	982457565	something@gmail.com4	Database
7835428	Laxmi Prasad	Bhandari	male	982457566	something@gmail.com5	Application Developmen
7835429	Laxman	Adhikari	male	982457567	something@gmail.com6	Java
7835430	Amrit	Adhikari	male	982457568	something@gmail.com7	Python
7835431	Upendra	Sharma	male	982457569	something@gmail.com8	Database
7835432	Bimala	Acharya	Female	982457570	something@gmail.com9	Java
17144161	Suman	Bhandari	male	9827120831	shumanbhandari20@gmail.com	Application Developmen

Figure 17:Data sorted in descending order by registration date

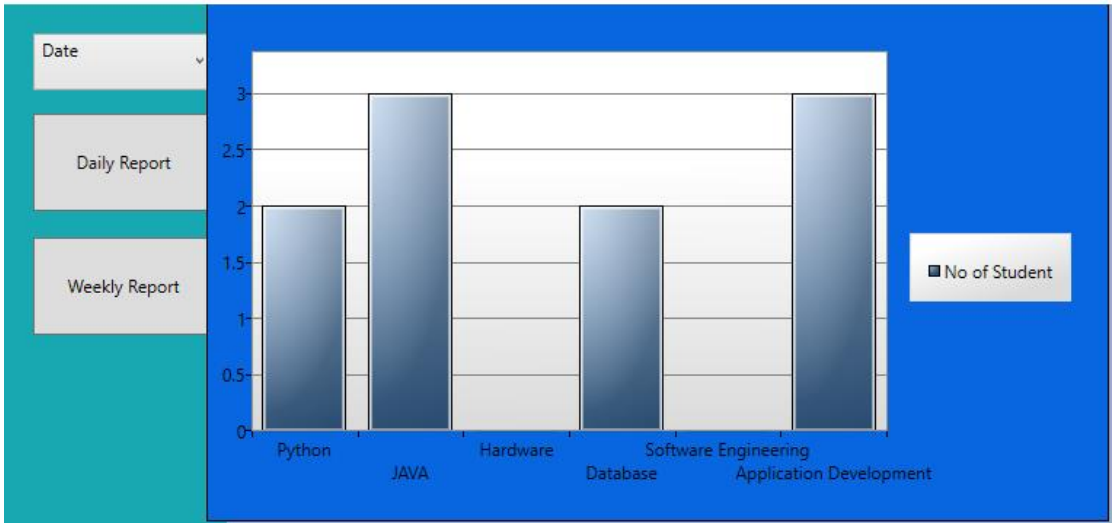
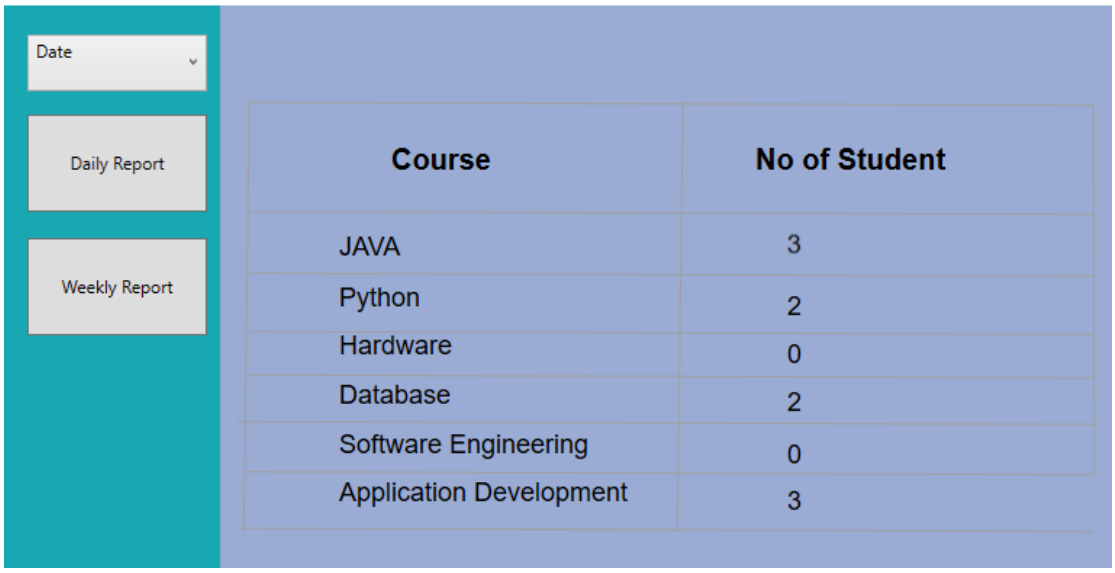


Figure 18:graphical representation of data



Course	No of Student
JAVA	3
Python	2
Hardware	0
Database	2
Software Engineering	0
Application Development	3

Figure 19:weekly report in table format

System Architecture

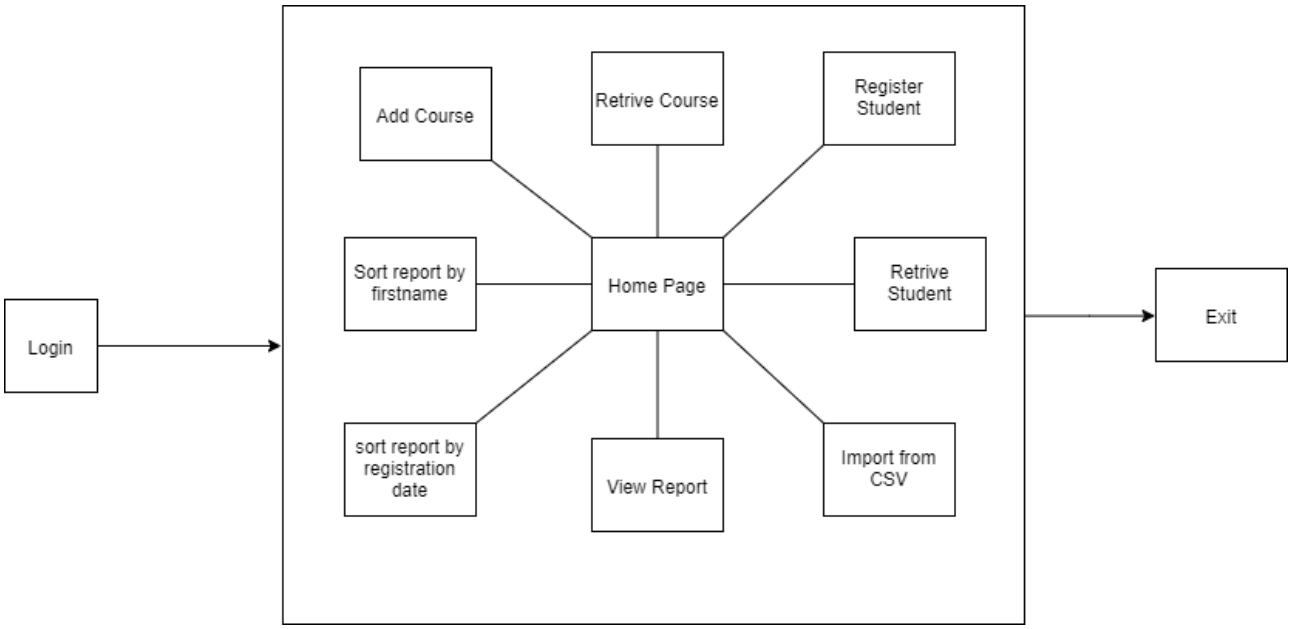


Figure 20:system architecture for student registration system

The figure above is the system architecture of student registration system. The user first login to the system providing valid username and password. After login the user is redirected to main window or home page. from home page user perform other task such as adding new course, enrolling student, viewing report, importing student data from csv etc. After performing the desired task user exit the system.

Functionality

This is windows based application so to run this program a laptop or computer with windows operating system is required and the computer system must contain 2 GB of RAM in order to run this application. Students data and course data are saved in xml format and user can view them and edit them as well as user can view graphical as well as daily and weekly report.

Class Diagram

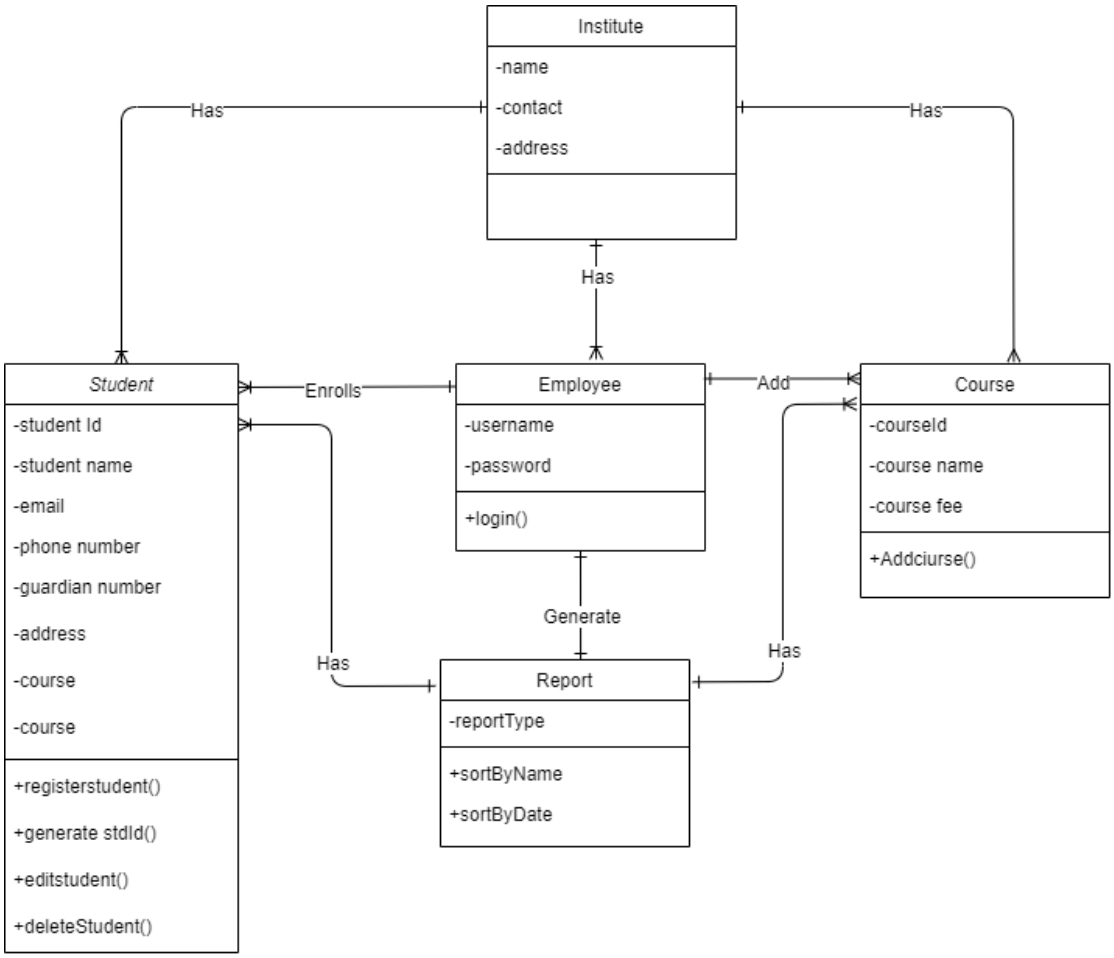


Figure 21:Class diagram for student registration system

Individual Diagram

Login individual diagram

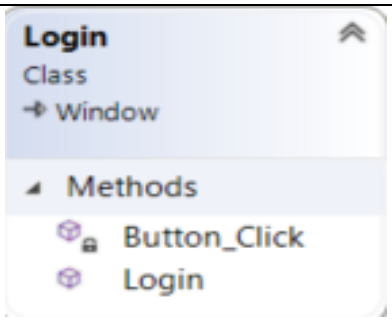
Method	Description	Figure
Button_click	This button redirects to home page if correct username and password is provided.	

Table 1:login individual diagram

Home Page Individual diagram

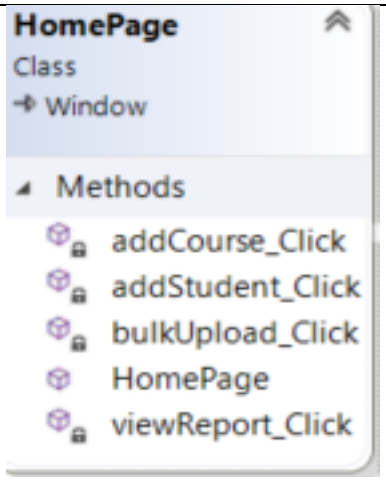
Method	Description	Figure
addCourse_Click	Opens Course adding form	
addStudent_Click	Opens student registration form	
bulkUpload_Click	Opens page to upload data from excel.	
viewReport_Click	Opens report section	

Table 2:Home page individual diagram

Add Student Individual Diagram

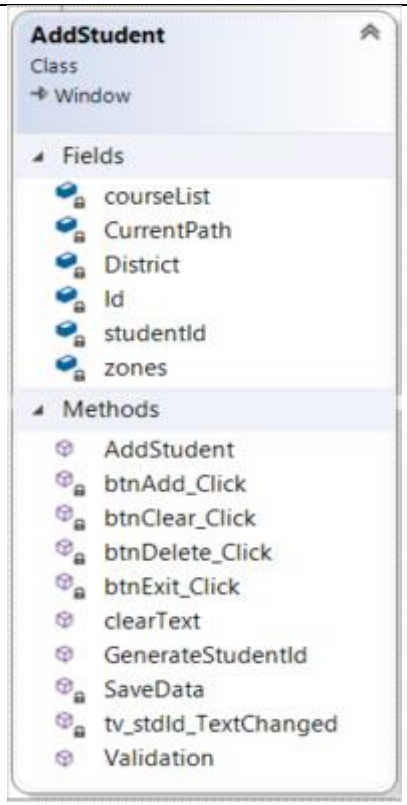
Methods	Description	Figure
btnAdd_click	Save new student data in xml and view in datagrid.	
btnClear_click	Clears the data from textbox and combobox.	
btnDelete_Click	Deletes the selected data.	
btnExit_Click	Close the student registration window.	
cleartext	Clears the data from textbox and other field after data is saved.	
GenerateStudentId	Generates unique student id	
SavesData	Saves student data in xml format	
Validation	Check if textbox is empty or not	

Table 3:Add student individual diagram

View Report individual diagram

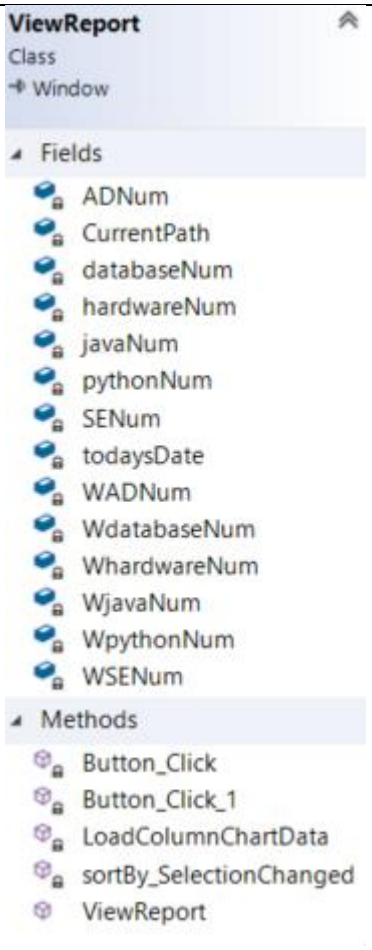
Method	Description	Figure
Button_Click	Display Daily data in tabular form.	
Button_Click_1	Display weekly data in tabular form.	
Load ColumnChartData	Display column chart of student number and course.	
sortBy_SectionChanged	Sort data by name and registration date.	

Table 4:view report page individual diagram

Add Course individual diagram

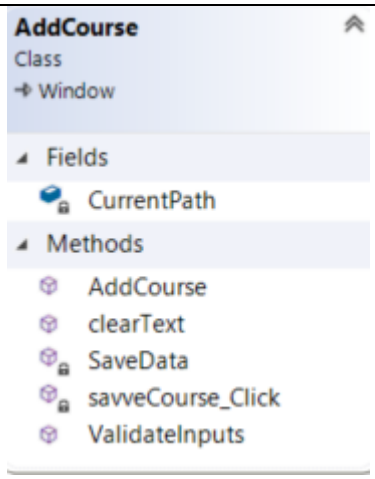
Method	Description	Figure
ClearText	Clears the inputted text from field	
SaveData	Saves course details to xml.	
savveCourse_click	Calls saveData method and save course details.	
ValidateInputs	Checks wheather the fields are empty or not.	

Table 5:add course individual diagram

Import Excel individual diagram

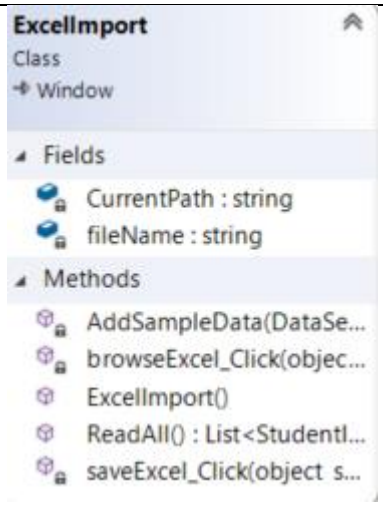
Method	Description	Figure
AddSampleData	It adds the data from excel to dataset.	
browseExcel_Click	It opens file chooser to chose csv file.	
ReadAll	It reads the data from excel.	
SaveExcel	It saves the read data from excel to xml	

Table 6:import excel individual diagram

Datahandler individual diagram

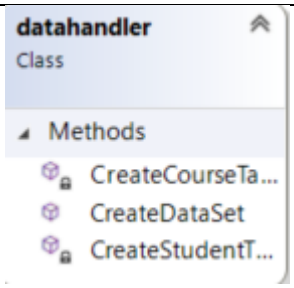
Method	Description	Figure
CreateCourseTable	It creates xml format for course or creates course table	
CreateDataSet	It crates the dataset from table.	
CreateStudentTable	It creates the student table and also creates xml format for keeping record of stdent data.	

Table 7:datahandler individual diagram

Student Info individual diagram

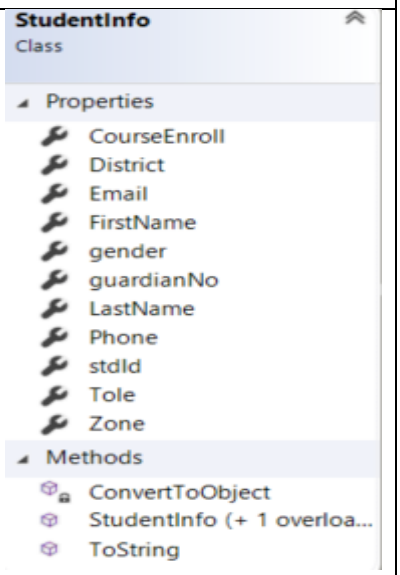
Method	Description	Figure
ConvertToObject	It split the data using certain symbol and stores data in specific variable.	
StudentInfo	It contains getter and setter for Students data read from excel.	

Table 8 student info individual diagram

Flow chart

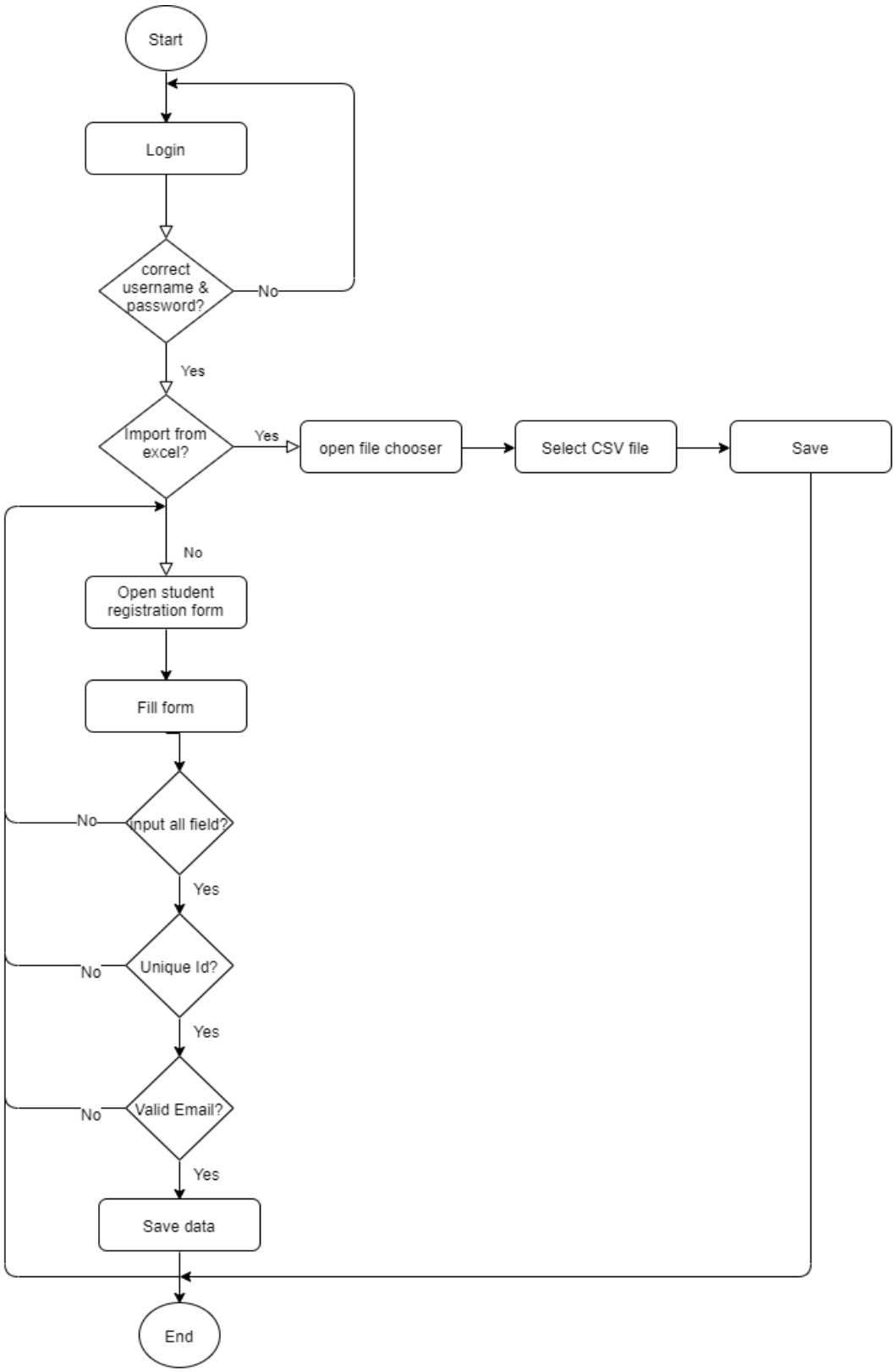


Figure 22:Flowchart for student registration

Test Cases

Test case 1

Objective	Open File Chooser
Action	Click on Browse Excel
Expected Result	Open file chooser dialog box and only show .csv format
Actual Result	File chooser opened
Conclusion	Test successful

Table 9:test case 1 :open file chooser

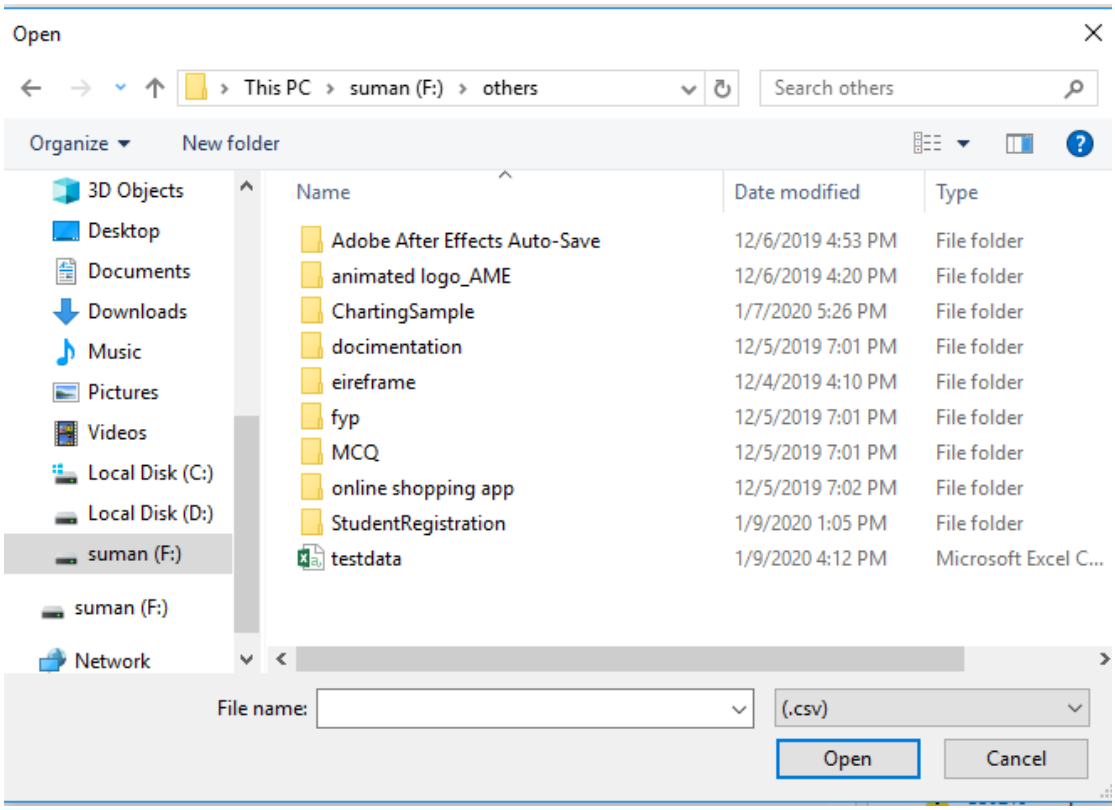
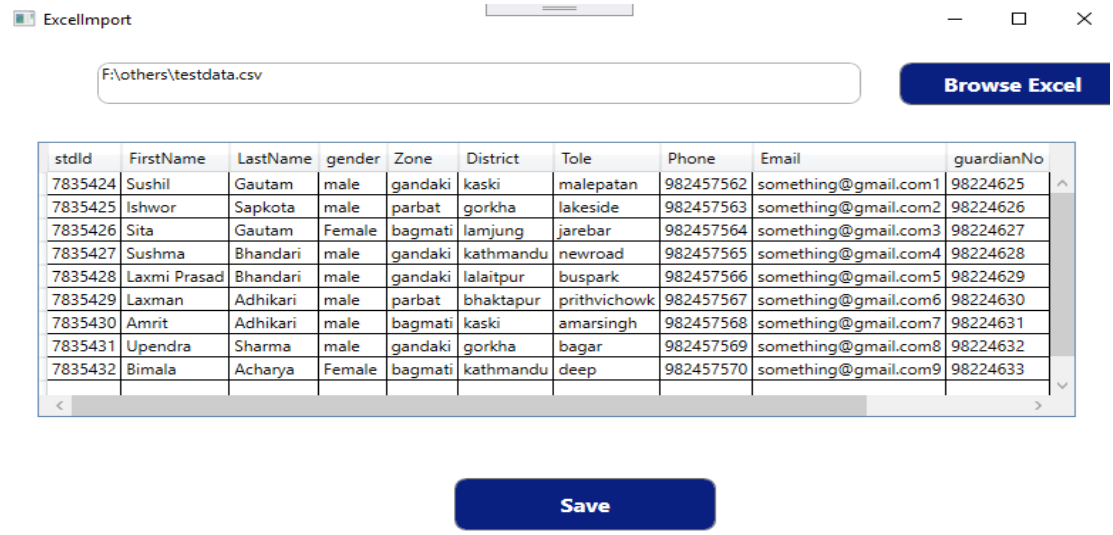


Figure 23:test case 1: open file chooser

Test case 2

Objective	Import Excel
Action	Select csv file
Expected Result	Data from Csv should be displayed in table
Actual Result	Data displayed in table
Conclusion	Test successful

Table 10:test case 2: import excel



stdId	FirstName	LastName	gender	Zone	District	Tole	Phone	Email	guardianNo
7835424	Sushil	Gautam	male	gandaki	kaski	malepatan	982457562	something@gmail.com1	98224625
7835425	Ishwor	Sapkota	male	parbat	gorkha	lakeside	982457563	something@gmail.com2	98224626
7835426	Sita	Gautam	Female	bagmati	lamjung	jarebar	982457564	something@gmail.com3	98224627
7835427	Sushma	Bhandari	male	gandaki	kathmandu	newroad	982457565	something@gmail.com4	98224628
7835428	Laxmi Prasad	Bhandari	male	gandaki	lalaitpur	buspark	982457566	something@gmail.com5	98224629
7835429	Laxman	Adhikari	male	parbat	bhaktapur	prithvichowk	982457567	something@gmail.com6	98224630
7835430	Amrit	Adhikari	male	bagmati	kaski	amarsingh	982457568	something@gmail.com7	98224631
7835431	Upendra	Sharma	male	gandaki	gorkha	bagar	982457569	something@gmail.com8	98224632
7835432	Bimala	Acharya	Female	bagmati	kathmandu	deep	982457570	something@gmail.com9	98224633

Figure 24:test case 2: import excel

Test case 3

Objective	Add course
Action	Click on add course.
Expected Result	Course detail should be saved and displayed while enrolling student.
Actual Result	Course added displayed in student registration form
Conclusion	Test successful

Table 11:test case 3: add course

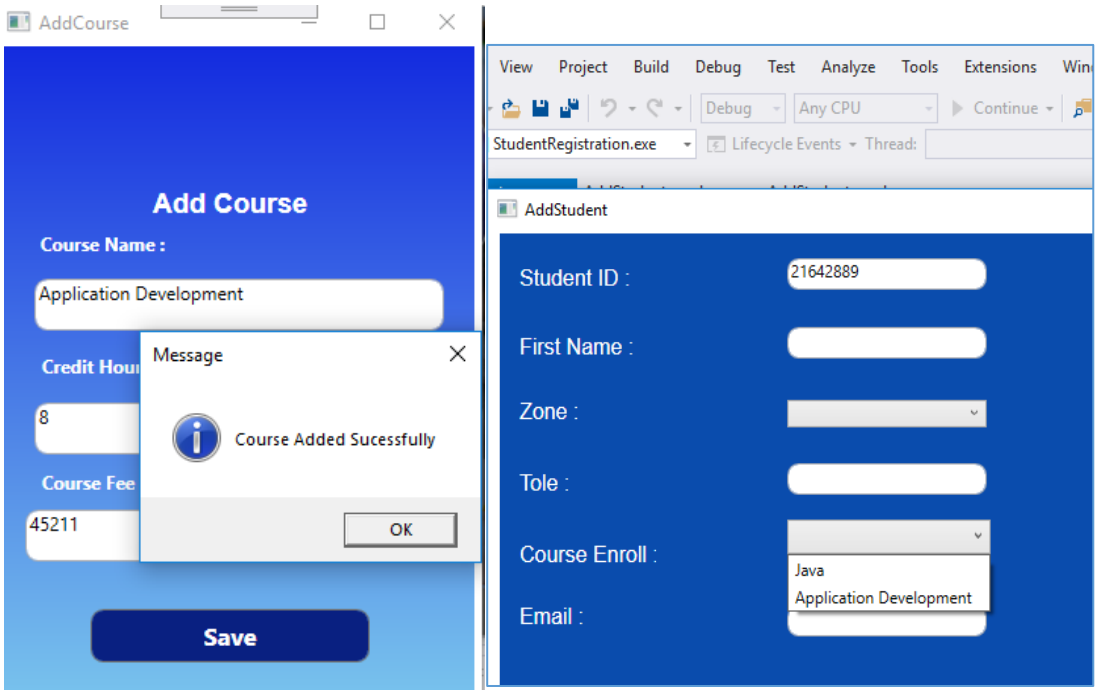


Figure 25:test case 3: add course

Test case 4

Objective	Email Validation
Action	Click on add student button
Expected Result	Wrong email format should be prevented displaying message in dialog box.
Actual Result	Massage displayed saying invalid email format
Conclusion	Test successful

Table 12:test case 4:email validation

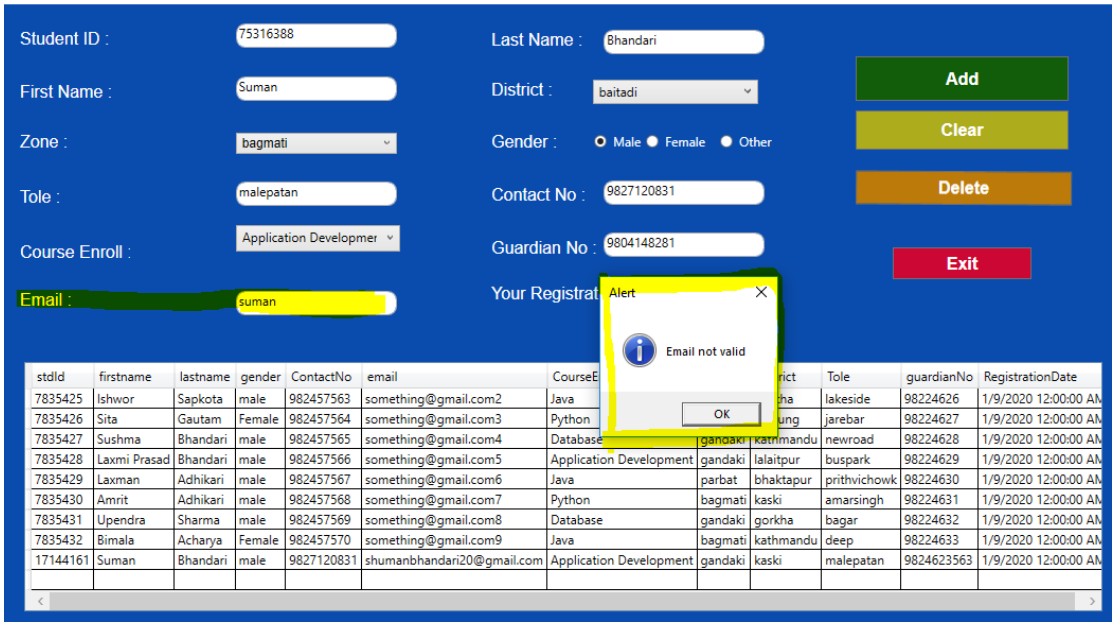


Figure 26:test case 4:email validation

Test case 5

Objective	Contact number should only accept number.
Action	Click Add student button
Expected Result	Contact number should only accept number and display error message if any other character in input,
Actual Result	Error message displayed saying invalid phone number
Conclusion	Test successful

Table 13:test case 5: phone no validation

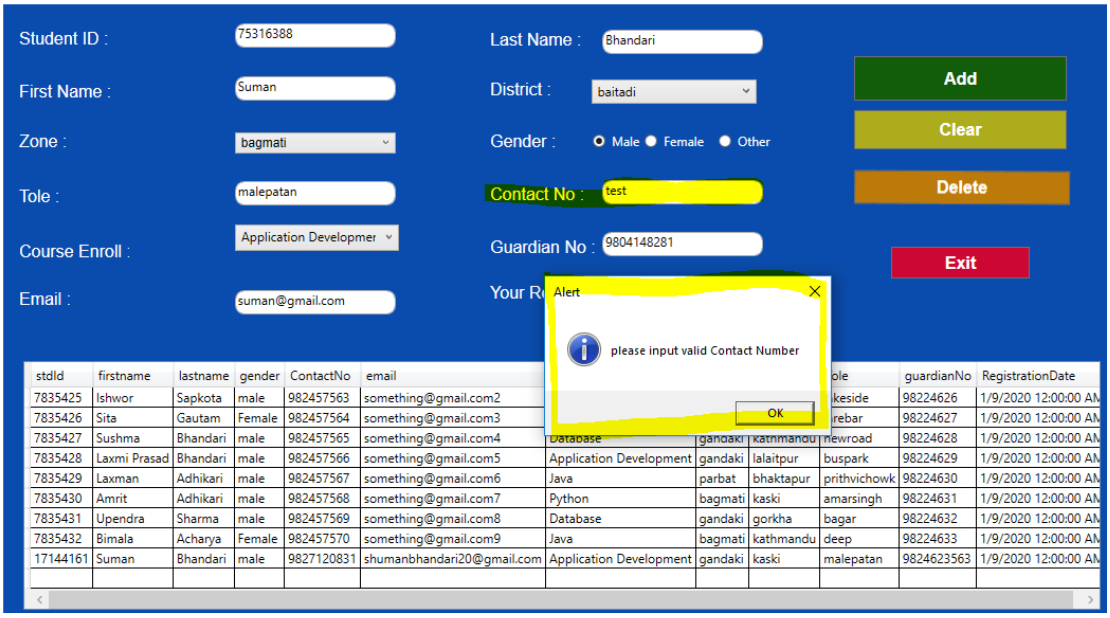


Figure 27:test case 5: phone no validation

Test case 6

Objective	Auto generate student Id
Action	Click on Add student
Expected Result	Student Id should be auto generated and displayed in textbox.
Actual Result	Student id auto generated and displayed
Conclusion	Test successful

Table 14:test case 6:auto generate student id

Figure 28:test case 6:auto generate student id

Test case 7

Objective	Do not allow student registration with same Id.
Action	Student Id changed so that it matches already saved student Id
Expected Result	Error message saying student with this already exist should be displayed.
Actual Result	Error message displayed saying student with this Id already exist.
Conclusion	Test successful

Table 15:test case 7 unique student id

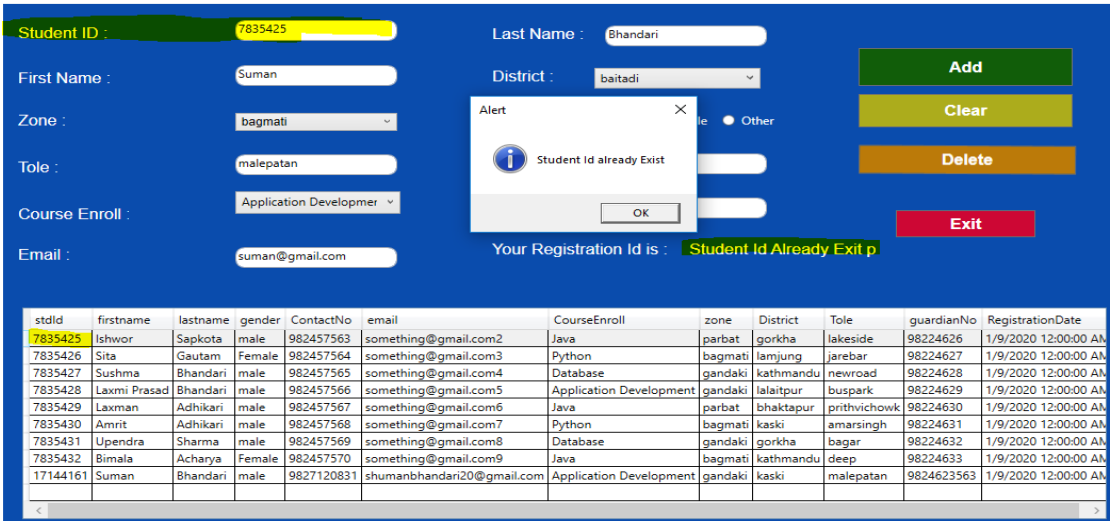


Figure 29:test case 7 unique student id

Test case 8

Objective	Delete student Data
Action	Click on student data and click delete button.
Expected Result	Student data should be permanently deleted from xml file.
Actual Result	Student data deleted
Conclusion	Test successful

Table 16:test case 8: delete student data

Figure 30:test case 8: delete student data

Sorting Algorithm

Bubble sort, sometimes referred to as sinking sort, is a simple sorting algorithm that repeatedly steps through the list, compares adjacent elements and swaps them if they are in the wrong order (.tutorialspoint, 2020). The pass through the list is repeated until the list is sorted. Bubble sort has a worst-case and average complexity of O(n2), where n is the number of items being sorted. When the list is already sorted (best-case), the complexity of bubble sort is only O(n) (Astrachan, 2019).

It compares all the element one by one and sort them based on their values. If the given array has to be sorted in ascending order, then bubble sort will start by comparing the first element of the array with the second element, if the first element is greater than the second element, it will swap both the elements, and then move on to compare the second and the third element, and so on (Paul Biggar, David Gregg, 2005).

Working Mechanism

Below is the example showing how bubble sort algorithm works:

First Pass:

Lets take an unsorted array .

(5 1 4 2 8) –> (1 5 4 2 8), Here, algorithm compares the first two elements, and swaps since 5 > 1.

(1 5 4 2 8) –> (1 4 5 2 8), Swap since 5 > 4

(1 4 5 2 8) –> (1 4 2 5 8), Swap since 5 > 2

(1 4 2 5 8) –> (1 4 2 5 8), Now, since these elements are already in order (8 > 5), algorithm does not swap them.

Second Pass:

(1 4 2 5 8) –> (1 4 2 5 8)

(1 4 2 5 8) –> (1 2 4 5 8), Swap since 4 > 2

(1 2 4 5 8) –> (1 2 4 5 8)

(1 2 4 5 8) –> (1 2 4 5 8)

Now, the array is already sorted, but our algorithm does not know if it is completed. The algorithm needs one whole pass without any swap to know it is sorted.

Third Pass:

(1 2 4 5 8) –> (1 2 4 5 8)

(1 2 4 5 8) –> (1 2 4 5 8)

(1 2 4 5 8) –> (1 2 4 5 8)

(1 2 4 5 8) –> (1 2 4 5 8)

And finally, we get the sorted array. Same algorithm is used in the development process to sort student data in ascending order by name and by registration date.

Related Research

WPF in Action with Visual Studio 2008((Arlen Feldman, Maxx Daymon, 2008))

WPF in Action with visual studio is a book written by Arlen Fedman and Maxx Daymon is an awesome book which give great idea on working with WPF. This book helps us to learn about WPF desktop app development in the simplest, funny & Graphical way. This book made my journey of learning desktop app development much easier and fun.

Microsoft .Ne t(https://docs.microsoft.com)

Microsoft.Net is the official website of Microsoft and it provide all the information of visual studio and working with visual studio. I have got so many information from this website when I was in confusion.

WPF Tutorial(www.wpf-tutorial.com)

WPF tutorial, currently consisting of 125 articles, where you'll learn to make your own applications using the WPF UI framework. This is an awesome website which also help in completion of my project in time. Functionalities like importing data from excel was done with the help of this website.

SearchCIO (searchcio.techtarget.com)

SearchCIO.com provides technology management strategies designed exclusively for the enterprise CIO. Our award-winning team of editors and industry luminaries offer strategic advice and technology best practices to help streamline global IT operations. This website was also used during development of my project.

techopedia (www.techopedia.com)

Techopedia is the go-to tech source for professional IT insight and inspiration, plus it tirelessly feed anyone who is proud to be called a "geek" with the informational and entertaining content they need.

Reflection

Student Registration system is a desktop app developed using visual studio 2019 using C# programming language in WPF design form. The system is user friendly and have simple and clean UI. Logic used in the system reflects the real working environment of educational institute.

Lots of research on different relevant topics was done in order to complete this project in time. Research on topics like visual studio, C# programming, WPF etc. was done before and during development of the project. I also surf different websites, read different books and journals as well watched different tutorial videos. While doing this project I faced many problems but those problems were solved with the help of tutor and friends and solving the problem was so happy moment.

The main features of the system include addition of new course, Registration of student in specific one course, Bulk registration of student by importing from csv and viewing daily and weekly report.

The project not only complete the coursework in time but also taught me many new ideas. I got more working experience in working in visual studio in C# programming language. I learned features like saving data in xml and retrieving data from xml. Also importing data from excel in csv format was learnt. Similarly, working with charts was also learnt. Thus, I had a great experience on working on C# programming language in visual studio in developing a desktop-based application.

Conclusion

Task assigned in the coursework was so tough and it was completed in time with strong determination and hard labor. I have completed the task by taking help from lecturer, friends and different books, journals and website. The main objective of the task was to develop a student registration system with features of enrolling student in course by filling form and by importing data from excel and generating weekly and daily report.

The tasks assigned in the coursework were not easy at all. It required lots of labor and research. For the successful completion of all the tasks, each task was carried out in steps, in every step deploying the full effort. At first, lots of study and research was done on the relevant topics like C# programming language, visual studio WPF, excel import, XML etc. In the next step UI was designed in WPF window. After that, login system was designed and adding course was done. Then student registration was done by saving data in xml and retrieving course while enrolling student. And then student data was imported from excel in csv format. And lastly, weekly and daily report was generated with bar graph along with sorting feature. Finally, report was written and submission was done.

This project didn't only complete all the tasks assigned in the coursework in time, but also, helped in developing various skills and taught many things which can be really useful in future career as a programmer. While being involved in this project, sound knowledge on XML, Excel data import, C#, visual studio, sorting algorithm and graph generation was acquired. And these learning would surely be a lot helpful in the pursue of development of career as a good programmer. Valuable experience has been gained working on this project. All in all, although the tasks were tough and required nights of hard work and labor, successfully completing those tough tasks was a great fun.

References

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https://www.tutorialspoint.com/data_structures_algorithms/bubble_sort_algorithm.htm
[Accessed 04 01 2020].

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Astrachan, O., 2019. Bubble Sort: An Archaeological Algorithmic Analysis. In: s.l.:s.n.

Paul Biggar, David Gregg, 2005. *Sorting in the Presence of Branch Prediction.* s.l.:s.n.

Appendix

Login Page

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



        private void Button_Click(object sender, RoutedEventArgs e)
        {
            string username = tvUsername.Text;
            string password = tvPassword.Password;
            if (username == "" || password == "")
            {
                MessageBox.Show("username or password cannot be empty");
            }
            else
            {
                if (username == "admin")
                {
                    if (password == "admin")
                    {

                        HomePage home = new HomePage();
                        home.Show();
                        this.Hide();
                    }
                    else
                    {
                        MessageBox.Show("Incorrect password !! Please input
correct password of if forgotten contact developer");
                    }
                }
                else
                {
                    MessageBox.Show("Incorrect username !! Please input correct
password of if forgotten contact developer");
                }

            }


        }
    }
}
```

Home page

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

        private void addStudent_Click(object sender, RoutedEventArgs e)
        {
            AddStudent addstd = new AddStudent();
            addstd.Show();
        }

        private void bulkUpload_Click(object sender, RoutedEventArgs e)
        {
            ExcelImport excelImport = new ExcelImport();
            excelImport.Show();
        }

        private void viewReport_Click(object sender, RoutedEventArgs e)
        {
            ViewReport viewReport = new ViewReport();
            viewReport.Show();
        }

        private void addCourse_Click(object sender, RoutedEventArgs e)
        {
            AddCourse addCourse = new AddCourse();
            addCourse.Show();
        }
    }
}
```

Add Course

```
namespace StudentRegistration
{
    /// <summary>
    /// Interaction logic for AddCourse.xaml
    /// </summary>
    public partial class AddCourse : Window
    {
        private int course;
        private string CurrentPath =
System.AppDomain.CurrentDomain.BaseDirectory+ "\\StudentCWData.xml";
        public AddCourse()
        {
            InitializeComponent();
            var dataHandler = new datahandler();
            var dataSet = dataHandler.CreateDataSet();
            if (File.Exists(CurrentPath))
            {
                dataSet.ReadXml(CurrentPath);
            }
            else
            {
                dataSet.WriteXml(CurrentPath);
            }

        }

        private void savveCourse_Click(object sender, RoutedEventArgs e)
        {
            var dataHandler = new datahandler();
            var dataSet = dataHandler.CreateDataSet();
            SaveCourse(dataSet);

            if (ValidateInputs())
            {
                if (File.Exists(CurrentPath))
                {
                    dataSet.ReadXml(CurrentPath);
                    dataSet.WriteXml(CurrentPath);
                    MessageBox.Show("Course Added Sucessfully", "Message",
MessageBoxButton.OK, MessageBoxImage.Information);
                    clearText();
                }
                else
                {
                    dataSet.WriteXml(CurrentPath);
                    MessageBox.Show("Course Added Sucessfully", "Message",
MessageBoxButton.OK, MessageBoxImage.Information);
                    clearText();
                }

            }
        }
        //This method is used to save course data in xml by taking input from
form
        private void SaveCourse(DataSet dataSet)
        {
            var dr = dataSet.Tables["Course"].NewRow();
            dr["CourseName"] = courseName.Text;
            dr["CreditHours"] = courseFee.Text;
```

```
            dr["CourseFee"] = creditHours.Text;
            dataSet.Tables["Course"].Rows.Add(dr);
        }
        //this method is used to clear fields
        public void clearText()
        {
            courseName.Text = "";
            courseFee.Text = "";
            creditHours.Text = "";

        }
        //This method is used to check the user input
        public Boolean ValidateInputs()
        {
            if (courseName.Text.Equals(""))
            {
                MessageBox.Show("Course Name cannot be Empty", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }
            else if (courseFee.Text.Equals(""))
            {
                MessageBox.Show("Course Fee Name cannot be Empty", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }
            else if (creditHours.Text.Equals(""))
            {
                MessageBox.Show("Credit Hours cannot be Empty", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }
            else if (course>0)
            {
                MessageBox.Show("Course already Exist", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }

            return true;
        }
        //this method iis used to check if same course exist or not
        public int courseNameChecker()
        {
            var dataset = new DataSet();
            dataset.ReadXml(CurrentPath);
            DataTable studentTable = dataset.Tables["course"];

            int course = 0;

            for (int i = 0; i < studentTable.Rows.Count; i++)
            {
                string col = studentTable.Rows[i]["CourseName"].ToString();
                if (col == courseName.Text)
                {
                    course++;
                }

            }
            return course;
```

```
        }

        private void courseName_TextChanged(object sender, TextChangedEventArgs
e)
        {
            course = courseNameChecker();
        }
    }
}
```

Register Student

```
namespace StudentRegistration
{
    /// <summary>
    /// Interaction logic for AddStudent.xaml
    /// </summary>
    public partial class AddStudent : Window
    {
        private List<string> courseList = new List<string>();
        private List<string> zones = new List<string>();
        private List<string> District = new List<string>();
        private string studentId,selectedId;
        private int _Id;
        private string _gender;
        private bool _isValidEmail;
        private bool _isContactNumber;
        private bool _isGuardianContactNumber;
        private string CurrentPath =
System.AppDomain.CurrentDomain.BaseDirectory + "\\StudentCWData.xml";

        public AddStudent()
        {
            InitializeComponent();
            studentId= GenerateStudentId();
            tv_stdId.Text = studentId;

            var dataHandler = new datahandler();
            var dataSet = dataHandler.CreateDataSet();
            DataTable studentTable = dataSet.Tables["student"];
            _Id = studentTable.Select("stdId =
'"+tv_stdId.Text+"'").Count<DataRow>();
            stdId.Content = studentId;
            if (File.Exists(CurrentPath))
            {
                dataSet.ReadXml(CurrentPath);
            }
            else
            {
                dataSet.WriteXml(CurrentPath);
            }
            DataGridTest.ItemsSource = new DataView(dataSet.Tables["Student"]);
            DataTable courseTable = dataSet.Tables["Course"];
            foreach (DataRow row in courseTable.Rows)
            {
                var courseName = row["CourseName"].ToString();
                courseList.Add(courseName);
            }
            course.ItemsSource = courseList;

            zones.Add("gandaki");
```

```
zones.Add("bagmati");
zones.Add("bheri");
zones.Add("dhawalagiri");
zones.Add("gandaki");
zones.Add("janakpur");
zones.Add("karnali");
zones.Add("koshi");
zones.Add("lumbini");
zones.Add("mahakali");
zones.Add("mechi");
zones.Add("narayani");
zones.Add("rapti");
zones.Add("sagarmatha");
zones.Add("seti");
cb_zone.ItemsSource = zones;

District.Add("achham");
District.Add("arghakhanchi");
District.Add("baglung");
District.Add("baitadi");
District.Add("bajhang");
District.Add("bajura");
District.Add("banke");
District.Add("bara");
District.Add("bardiya");
District.Add("bhaktapur");
District.Add("bhojpur");
District.Add("chitwan");
District.Add("dadeldhura");
District.Add("dailekh");
District.Add("dang deukhuri");
District.Add("darchula");
District.Add("dhading");
District.Add("dhankuta");
District.Add("dhanusa");
District.Add("dholkha");
District.Add("dolpa");
District.Add("doti");
District.Add("gorkha");
District.Add("gulmi");
District.Add("humla");
District.Add("ilam");
District.Add("jajarkot");
District.Add("jhapa");
District.Add("jumla");
District.Add("kailali");
District.Add("kalikot");
District.Add("kanchanpur");
District.Add("kapilvastu");
District.Add("kaski");
District.Add("kathmandu");
District.Add("kavrepalanchok");
District.Add("khotang");
District.Add("lalitpur");
District.Add("lamjung");
District.Add("mahottari");
District.Add("makwanpur");
District.Add("manang");
District.Add("morang");
District.Add("mugu");
District.Add("mustang");
District.Add("myagdi");
```

```
            District.Add("nawalparasi");
            District.Add("nuwakot");
            District.Add("okhaldhunga");
            District.Add("palpa");
            District.Add("panchthar");
            District.Add("parbat");
            District.Add("parsa");
            District.Add("pyuthan");
            District.Add("ramechhap");
            District.Add("rasuwa");
            District.Add("rautahat");
            District.Add("rolpa");
            District.Add("rukum");
            District.Add("rupandehi");
            District.Add("salyan");
            District.Add("sankhuwasabha");
            District.Add("saptari");
            District.Add("sarlahi");
            District.Add("sindhuli");
            District.Add("sindhupalchok");
            District.Add("siraha");
            District.Add("solukhumbu");
            District.Add("sunsari");
            District.Add("surkhet");
            District.Add("syangja");
            District.Add("tanahu");
            District.Add("taplejung");
            District.Add("terhathum");
            District.Add("udayapur");
            cb_district.ItemsSource = District;
        }

private void btnAdd_Click(object sender, RoutedEventArgs e)
        {
            var dataHandler = new datahandler();
            var dataSet = dataHandler.CreateDataSet();
            studentId = GenerateStudentId();

            if (Validation())
            {
                SaveStudent(dataSet);
                if (File.Exists(CurrentPath))
                {
                    dataSet.ReadXml(CurrentPath);
                    dataSet.WriteXml(CurrentPath);
                    MessageBox.Show("Enroled Sucessfully", "Message",
MessageBoxButton.OK, MessageBoxImage.Information);
                    clearText();
                    tv_stdId.Text = studentId;

                }
                else
                {
                    dataSet.WriteXml(CurrentPath);
                    MessageBox.Show("Enroled Sucessfully", "Message",
MessageBoxButton.OK, MessageBoxImage.Information);
                    clearText();
                }

            }
            else
            {
```

```
                dataSet.ReadXml(CurrentPath);
            }
        }
        //this method saves student data to xml
        private void SaveStudent(DataSet dataSet)
        {
            var dr = dataSet.Tables["Student"].NewRow();
            dr["stdId"] = tv_stdId.Text;
            dr["firstName"] = tv_firstName.Text;
            dr["lastName"] = tv_lastName.Text;
            dr["gender"] = _gender;
            dr["ContactNo"] = tv_contactNo.Text;
            dr["email"] = tv_email.Text;
            dr["CourseEnroll"] = course.Text;
            dr["zone"] = cb_zone.Text;
            dr["District"] = cb_district.Text;
            dr["Tole"] = tv_tole.Text;
            dr["guardianNo"] = tv_guardianNo.Text;
            dr["RegistrationDate"] = DateTime.Now;
            dataSet.Tables["Student"].Rows.Add(dr);
            DataGridTest.ItemsSource = new DataView(dataSet.Tables["Student"]);
        }
        //this method is used to clear fields
        public void clearText()
        {
            tv_firstName.Text = "";
            tv_lastName.Text = "";
            tv_email.Text = "";
            tv_contactNo.Text = "";
            tv_email.Clear();
            tv_tole.Clear();
            tv_guardianNo.Clear();
            tv_contactNo.Clear();
            cb_district.SelectedIndex=-1;
            cb_zone.SelectedIndex = -1;
            course.SelectedIndex = -1;
        }

        //this method is used to validate user input before saving data
        public Boolean Validation()
        {
            if (tv_firstName.Text.Equals(""))
            {
                MessageBox.Show("First Name cannot be Empty", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }
            else if (tv_lastName.Text.Equals(""))
            {
                MessageBox.Show("Last Name cannot be Empty", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }
            else if (cb_district.Text.Equals(""))
            {
                MessageBox.Show("District cannot be Empty", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }
            else if (cb_zone.Text.Equals(""))
            {
```

```
                MessageBox.Show("Zone cannot be Empty", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }
            else if (tv_contactNo.Text.Equals(""))
            {
                MessageBox.Show("Contact Number cannot be
Empty"+_isContactNumber, "Alert", MessageBoxButton.OK,
MessageBoxImage.Information);
                return false;
            }
            else if (!_isContactNumber)
            {
                MessageBox.Show("please input valid Contact Number", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }
            else if (!_isGuardianContactNumber)
            {
                MessageBox.Show("Please input valid Guardian Nuumber", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }
            else if (tv_email.Text.Equals(""))
            {

                MessageBox.Show("Email cannot be Empty", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }
            else if (!_isValidEmail)
            {
                MessageBox.Show("Email not valid", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }
            else if (_Id>0)
            {
                MessageBox.Show("Student Id already Exist", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
                return false;
            }

            return true;
        }

        //clear the field on clicking clear button
        private void btnClear_Click(object sender, RoutedEventArgs e)
        {
            clearText();

       }
        //close the window on clicking exit button
        private void btnExit_Click(object sender, RoutedEventArgs e)
        {
            this.Close();
        }

//delete  selscted students data on clicking delete button
        private void btnDelete_Click(object sender, RoutedEventArgs e)
        {
            if (!selectedId.Equals(""))
```

```
            {
                XDocument doc = XDocument.Load(CurrentPath);
                var removeStudent = doc.Descendants("Student").Where(c =>
c.Element("stdId").Value == selectedId).FirstOrDefault();
                removeStudent.Remove();
                doc.Save(CurrentPath);
                var result=MessageBox.Show("Deleted sucessfully", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);

                if ( result==MessageBoxResult.OK)
                {
                    var dataHandler = new datahandler();
                    var dataSet = dataHandler.CreateDataSet();
                    dataSet.ReadXml(CurrentPath);
                    DataGridTest.ItemsSource = new
DataView(dataSet.Tables["Student"]);
                }
            }
            else
            {
                MessageBox.Show("Please select data before deleting", "Alert",
MessageBoxButton.OK, MessageBoxImage.Information);
            }

        }
        //this method is used ti generate unique student id
        public string GenerateStudentId()
        {
            var bytes = new byte[4];
            var randomNo = RandomNumberGenerator.Create();
            randomNo.GetBytes(bytes);
            uint random = BitConverter.ToUInt32(bytes, 0) % 100000000;
            return String.Format("{0:D8}", random);
        }

        private void tv_stdId_TextChanged(object sender, TextChangedEventArgs
e)
        {
            var dataHandler = new datahandler();
            var dataSet = dataHandler.CreateDataSet();
            DataTable studentTable = dataSet.Tables["student"];
            _Id = studentIdChecker();
            if (_Id > 0)
            {
                stdId.Content = "Student Id Already Exit please change student
Id";
            }
            else
            {
                stdId.Content = tv_stdId.Text;
            }

        }
        //this method is used to check if student with the same id exist or not
        public int studentIdChecker()
        {
            var dataset = new DataSet();
            dataset.ReadXml(CurrentPath);
            DataTable studentTable = dataset.Tables["student"];
            int stdId = 0;
            for (int i = 0; i < studentTable.Rows.Count; i++)
            {
```

```
                string col = studentTable.Rows[i]["stdId"].ToString();
                if (col == tv_stdId.Text)
                {
                    stdId++;
                }
            }
            return stdId;
        }

        private void tv_email_TextChanged(object sender, TextChangedEventArgs
e)
        {
            _isValidEmail = IsValidEmail(tv_email.Text);

        }
        //the method validates the email input
        private  bool IsValidEmail(string emailAddress)
        {
            const string validEmailPattern =
@"^(?!\.)(""([^""\r\\]|\\[""\r\\])*""|"
                                                + @"([-a-z0-
9!#$%&'*+/=?^_`{|}~]|(?<!\.)\.)*)(?<!\.)"
                                                + @"@[a-z0-9][\w\.-]*[a-z0-9]\.[a-
z][a-z\.]*[a-z]$";

            return new Regex(validEmailPattern,
RegexOptions.IgnoreCase).IsMatch(emailAddress);
        }
        //this method is used to validate input is number or not
        private bool isInputNumber(string number)
        {
            const string validNumberPattern = "^[0-9]+$";

            return new Regex(validNumberPattern).IsMatch(number);
        }

        private void tv_contactNo_TextChanged(object sender,
TextChangedEventArgs e)
        {
            _isContactNumber = isInputNumber(tv_contactNo.Text);

        }

        private void DataGridTest_SelectionChanged(object sender,
SelectionChangedEventArgs e)
        {
            DataGrid datagid = sender as DataGrid;
            if
((DataGridRow)DataGridTest.ItemContainerGenerator.ContainerFromIndex(datagid.Se
lectedIndex) != null)
            {
                DataGridRow row =
(DataGridRow)DataGridTest.ItemContainerGenerator.ContainerFromIndex(datagid.Sel
ectedIndex);
                DataGridCell rowColumn =
datagid.Columns[0].GetCellContent(row).Parent as DataGridCell;
                selectedId = ((TextBlock)rowColumn.Content).Text;

            }
        }

        private void RadioButton_Checked(object sender, RoutedEventArgs e)
```

```
        {
            _gender = "Male";
        }

        private void RadioButton_Checked_1(object sender, RoutedEventArgs e)
        {
            _gender = "Female";
        }

        private void RadioButton_Checked_2(object sender, RoutedEventArgs e)
        {
            _gender = "Other";
        }

        private void tv_guardianNo_TextChanged(object sender,
TextChangedEventArgs e)
        {
            _isGuardianContactNumber = isInputNumber(tv_guardianNo.Text);

        }
    }
}
```

Import From Excel

```
namespace StudentRegistration
{
    /// <summary>
    /// Interaction logic for ExcelImport.xaml
    /// </summary>
    public partial class ExcelImport : Window
    {
        private string CurrentPath =
System.AppDomain.CurrentDomain.BaseDirectory + "\\StudentCWData.xml";
        private string fileName;
        public ExcelImport()
        {
            InitializeComponent();
        }
        //this method opens file choser to select csv file
        private void browseExcel_Click(object sender, RoutedEventArgs e)
        {
            OpenFileDialog openfile = new OpenFileDialog();
            openfile.DefaultExt = ".csv";
            openfile.Filter = "(.csv)|*.csv";
            openfile.ShowDialog();
            fileName = openfile.FileName;
            excelFilepath.Text = fileName;
            var student = ReadData();
            datagrid.ItemsSource = student;
        }
        //this method is used to read data from csv file
        public List<StudentInfo> ReadData()
        {
            try
            {
                if (!File.Exists(fileName))
                {
                    throw new FileNotFoundException("Student Info file doesn't
exist");
                }
            }
```

```
            catch (Exception ex)
            {
                MessageBox.Show("Sorry! unexpected Error occured! try again",
"Error", MessageBoxButton.OK, MessageBoxImage.Error);

            }
            List<StudentInfo> students = new List<StudentInfo>();
            try
            {
                using (StreamReader streamReader = new StreamReader(fileName))
                {
                    streamReader.ReadLine();
                    while (streamReader.Peek() != -1)
                    {
                        var studentString = streamReader.ReadLine();
                        var studentInfo = new StudentInfo(studentString);
                        students.Add(studentInfo);

                    }

                    streamReader.Close();
                }
            }
            catch (Exception ex)
            {
                MessageBox.Show("Sorry! unexpected Error occured! try again",
"Error", MessageBoxButton.OK, MessageBoxImage.Error);
                this.Close();
                ExcelImport excellImport = new ExcelImport();
                excellImport.Show();
            }
            return students;
        }

        //this method is used to save data from excel to xml
        private void saveExcel_Click(object sender, RoutedEventArgs e)
        {
            var dataHandler = new datahandler();
            var dataSet = dataHandler.CreateDataSet();
            SaveData(dataSet);
            if (File.Exists(CurrentPath))
            {
                dataSet.ReadXml(CurrentPath);
                dataSet.WriteXml(CurrentPath);
                System.Windows.MessageBox.Show("Enroled Sucessfully",
"Message", MessageBoxButton.OK, MessageBoxImage.Information);
            }
            else
            {
                dataSet.WriteXml(CurrentPath);
                System.Windows.MessageBox.Show("Enroled Sucessfully",
"Message", MessageBoxButton.OK, MessageBoxImage.Information);
                if (MessageBoxResult.OK.Equals(1))
                {
                    this.Close();
                }

            }
        }

        private void SaveData(DataSet dataSet)
        {
```

```
            var stdData = ReadData();
            foreach (StudentInfo students in stdData)
            {
                var dr = dataSet.Tables["student"].NewRow();
                dr["stdId"] = students.stdId;
                dr["firstName"] = students.FirstName;
                dr["lastName"] = students.LastName;
                dr["gender"] = students.gender;
                dr["ContactNo"] = students.Phone;
                dr["email"] = students.Email;
                dr["CourseEnroll"] = students.CourseEnroll;
                dr["zone"] = students.Zone;
                dr["District"] = students.District;
                dr["Tole"] = students.Tole;
                dr["guardianNo"] = students.guardianNo;
                dr["RegistrationDate"] = DateTime.Today;
                dataSet.Tables["Student"].Rows.Add(dr);

            }
        }

    }
    //this class contains getter and setter for student data
    public class StudentInfo
    {
        public StudentInfo() { }

        public StudentInfo(string studentString)
        {
            this.ConvertToObject(studentString);
        }
        public string stdId { get; set; }
        public string FirstName { get; set; }
        public string LastName { get; set; }
        public string gender { get; set; }
        public string Zone { get; set; }
        public string District { get; set; }
        public string Tole { get; set; }
        public string Phone { get; set; }
        public string Email { get; set; }
        public string guardianNo { get; set; }
        public string CourseEnroll { get; set; }

       public override string ToString()
        {
            return
$"{this.stdId}:{this.FirstName}:{this.LastName}:{this.gender}:{this.Zone}:{this
.District}:{this.Tole}:{this.Phone}:{this.Email}:{this.guardianNo}:{this.Course
Enroll}";
        }
        //this method extract data from file by splliting data with certain
symbol
        private void ConvertToObject(string studentString)
        {
            var splitedStrings = studentString.Split(',');
            this.stdId = splitedStrings[0];
            this.FirstName = splitedStrings[1];
            this.LastName = splitedStrings[2];
            this.gender = splitedStrings[3];
            this.Zone = splitedStrings[4];
            this.District = splitedStrings[5];
            this.Tole = splitedStrings[6];
```

```
            this.Phone = splitedStrings[7];
            this.Email = splitedStrings[8];
            this.guardianNo = splitedStrings[9];
            this.CourseEnroll = splitedStrings[10];
        }

    }
}
```

View Report

```
namespace StudentRegistration
{
    /// <summary>
    /// Interaction logic for ViewReport.xaml
    /// </summary>
    public partial class ViewReport : Window

    {
        string CurrentPath = System.AppDomain.CurrentDomain.BaseDirectory +
"\\StudentCWData.xml";

        private int javaNum,
pythonNum,hardwareNum,databaseNum,SENum,ADNum;//initialisation of daily student
number in specific course
        private int WjavaNum, WpythonNum, WhardwareNum, WdatabaseNum, WSENum,
WADNum;//initialisation of weekly student number in specific course
        private int TjavaNum, TpythonNum, ThardwareNum, TdatabaseNum, TSENum,
TADNum;////initialisation of total student number in specific course

        private void WeeklyReport_Click(object sender, RoutedEventArgs e)
        {
            graphGrid.Visibility = Visibility.Hidden;
            dailyreportgrid.Visibility = Visibility.Visible;
            reportDataGrid.Visibility = Visibility.Hidden;
            javano.Content = WjavaNum;
            pythonNo.Content = WpythonNum;
            hardwareNo.Content = WhardwareNum;
            databaseNo.Content = WdatabaseNum;
            SENo.Content = WSENum;
            ADNo.Content = WADNum;
        }

        private DateTime todaysDate;
        public ViewReport()
        {
            InitializeComponent();
            var dataHandler = new datahandler();
            var dataSet = dataHandler.CreateDataSet();
            todaysDate = DateTime.UtcNow.Date;
            if (File.Exists(CurrentPath))
            {
                dataSet.ReadXml(CurrentPath);
                reportDataGrid .ItemsSource = new
DataView(dataSet.Tables["Student"]);
                reportDataGrid.Visibility = Visibility.Visible;
            }
            DataTable studentTable = dataSet.Tables["student"];
```

```
            javaNum = studentTable.Select("CourseEnroll = 'java' AND
RegistrationDate>='" + todaysDate + "'").Count<DataRow>();
            pythonNum = studentTable.Select("CourseEnroll = 'python' AND
RegistrationDate >='" + todaysDate + "'").Count<DataRow>();
            hardwareNum = studentTable.Select("CourseEnroll = 'hardware' AND
RegistrationDate >='" + todaysDate + "'").Count<DataRow>();
            databaseNum = studentTable.Select("CourseEnroll = 'Database' AND
RegistrationDate >='" + todaysDate + "'").Count<DataRow>();
            SENum = studentTable.Select("CourseEnroll = 'Software Engineering'
AND RegistrationDate >='" + todaysDate + "'").Count<DataRow>();
            ADNum = studentTable.Select("CourseEnroll = 'Application
Development' AND RegistrationDate >='" + todaysDate + "'").Count<DataRow>();

            TjavaNum = studentTable.Select("CourseEnroll = 'java'
").Count<DataRow>();
            TpythonNum = studentTable.Select("CourseEnroll =
'python'").Count<DataRow>();
            ThardwareNum = studentTable.Select("CourseEnroll = 'hardware'
").Count<DataRow>();
            TdatabaseNum = studentTable.Select("CourseEnroll = 'Database'
").Count<DataRow>();
            TSENum = studentTable.Select("CourseEnroll = 'Software Engineering'
").Count<DataRow>();
            TADNum = studentTable.Select("CourseEnroll = 'Application
Development' ").Count<DataRow>();

            WjavaNum = studentTable.Select("CourseEnroll = 'java' AND
RegistrationDate>='" + todaysDate.AddDays(-7) + "'").Count<DataRow>();
            WpythonNum = studentTable.Select("CourseEnroll = 'python' AND
RegistrationDate>='" + todaysDate.AddDays(-7) + "'").Count<DataRow>();
            WhardwareNum = studentTable.Select("CourseEnroll = 'hardware' AND
RegistrationDate>='" + todaysDate.AddDays(-7) + "'").Count<DataRow>();
            WdatabaseNum = studentTable.Select("CourseEnroll = 'Database' AND
RegistrationDate>='" + todaysDate.AddDays(-7) + "'").Count<DataRow>();
            WSENum = studentTable.Select("CourseEnroll = 'Software Engineering'
AND RegistrationDate>='" + todaysDate.AddDays(-7) + "'").Count<DataRow>();
            WADNum = studentTable.Select("CourseEnroll = 'Application
Development' AND RegistrationDate>='" + todaysDate.AddDays(-7) +
"'").Count<DataRow>();
        }

        private void sortBy_SelectionChanged(object sender,
SelectionChangedEventArgs e)
        {
            dailyreportgrid.Visibility = Visibility.Collapsed;
            reportDataGrid.Visibility = Visibility.Visible;
            graphGrid.Visibility = Visibility.Hidden;
            weeklyReportGrid.Visibility = Visibility.Hidden;

            var sortby = sortBy.SelectedIndex;
            if (sortby == 0)
            {
                reportDataGrid.Items.SortDescriptions.Clear();
                reportDataGrid.Items.SortDescriptions.Add(new
SortDescription("firstname", ListSortDirection.Ascending));
                reportDataGrid.Items.Refresh();

            }
            if (sortby == 1)
            {
                reportDataGrid.Items.SortDescriptions.Clear();
```

```
                reportDataGrid.Items.SortDescriptions.Add(new
SortDescription("RegistrationDate", ListSortDirection.Descending));
                reportDataGrid.Items.Refresh();

            }
        }

        private void Button_Click(object sender, RoutedEventArgs e)
        {
            dailyreportgrid.Visibility = Visibility.Visible;
            reportDataGrid.Visibility = Visibility.Hidden;
            graphGrid.Visibility = Visibility.Hidden;
            weeklyReportGrid.Visibility = Visibility.Hidden;

            javano.Content = javaNum;
            pythonNo.Content = pythonNum;
            hardwareNo.Content = hardwareNum;
            databaseNo.Content = databaseNum;
            SENo.Content = SENum;
            ADNo.Content = ADNum;
        }
        //this method is used to generate graoh
        private void LoadColumnChartData()
        {
            ((ColumnSeries)mcChart.Series[0]).ItemsSource =
                new KeyValuePair<string, int>[]{
        new KeyValuePair<string, int>("Python", TpythonNum),
        new KeyValuePair<string, int>("JAVA", TjavaNum),
        new KeyValuePair<string, int>("Hardware", ThardwareNum),
        new KeyValuePair<string, int>("Database", TdatabaseNum),
        new KeyValuePair<string, int>("Software Engineering", TSENum),
        new KeyValuePair<string, int>("Application Development", TADNum) };
        }

        private void Button_Click_1(object sender, RoutedEventArgs e)
        {
            graphGrid.Visibility=Visibility.Visible;
            dailyreportgrid.Visibility = Visibility.Collapsed;
            reportDataGrid.Visibility = Visibility.Hidden;
            weeklyReportGrid.Visibility = Visibility.Hidden;
            LoadColumnChartData();
        }

        private void GraphicalReport_Click(object sender, RoutedEventArgs e)
        {
            graphGrid.Visibility = Visibility.Visible;
            dailyreportgrid.Visibility = Visibility.Collapsed;
            reportDataGrid.Visibility = Visibility.Hidden;
            weeklyReportGrid.Visibility = Visibility.Hidden;
            LoadColumnChartData();
        }

    }
}
```