Vision

Provide skilled professionals in Computer Engineering to contribute towards the advancement of technology useful for society and industrial environment.

Mission

M1.Impart need based and value based education by providing exposure of latest tools and technologies in the area of computer engineering to satisfy the stakeholders.

M2.Upgrade and maintain facilities for quality technical education with continuous effort for excellence in Computer Engineering.

M3. Train students with Computer Engineering knowledge to apply it in the general disciplines of design, deployment of software and integration of existing technologies for E-governance and for benefit of society.

M4. Provide a learning ambience to enhance innovations, problem solving skills, leadership qualities, team spirit and ethical responsibilities.

M5. Provide an academic environment and consultancy services to the industry and society in the area of Computer Engineering.

MICRO-PROJECT REPORT

ON

To Develop a Student Attendance System in VB.NET

In Partial fulfilment of Diploma in Computer Engineering

(Third Semester)

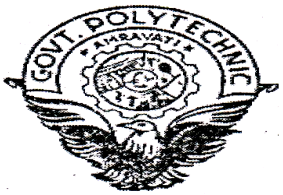
In the subject of

GUI Application Development Using .NET (FC3410)

By

Mr. Ayush Bulbule

Submitted To



Government Polytechnic, Amravati

(An Autonomous Institute of Govt. of Maharashtra)

Under the guidance of

Mr. Monal R. Torney

Lecturer in GUI Application Development Using .NET

Department of Science & Humanities
Government Polytechnic, Amravati
(2020-2021)

Government Polytechnic, Amravati.

(An Autonomous Institute of Govt. of Maharashtra)

Department of Science & Humanities

Certificate

This is to certify that **Mr. Ayush Bulbule** Identity Code. **19CM007,** of Third Semester Diploma in Computer Engineering has satisfactorily completed the micro project entitled " **To Develop Student Attendance System in VB.NET.** " in **(FC3410) GUI Application Development Using .NET** for the academic year 2020-21 as prescribed in curriculum.

Place: Amravati

Date: / /2021

Mr. Monal R. Torney

Lecturer in **GUI Application Development Using .NET**

Annexure-I

Title of Micro-Project

To Develop Student Attendance System in VB.NET

1.0 Brief Introduction

Attendance System are one of the widely used ones ranging from primary schools to major organizations. A lot of paper is been used and which is later wasted by an organizations. This in turn leads to lot of deforestation thus leading to global warming. Small innovative steps in making use of technology for regular purposes would have an adverse effect on the environment issues which we are presently concerned about. For such reasons, this Student Attendance System is useful and has many upcoming applications in educational institutes.

2.0 Aim of the Micro-Project

This Micro-Project aims at:

1. Learning the concept of VB.NET.
2. To learn the concept of MySQL Database.
3. To build Student Attendance System application.
4. To reduce the paper work by the optimum use of computing.
5. To provide secured authentications and user-friendly application to users.

3.0 Action Plan (Sequence and time required for major activities for 8 weeks)

Sr.No.	Details of activity	Plan start date	Plan Finish date	I. Code &Name of Team Members
1	Gathering Contents	5/12/2020	12/12/2020	(19CM003) Bhagyashree Tekade
2	Making Windows Form Application	27/12/2020	9/1/2021	(19CM007) Ayush Bulbule
3	Making Report and File	9/1/2021	17/1/2021	(19CM020) Pratham Gaur
4	Making Database	20/12/2020	26/12/2020	(19CM033) Malhar Joshi
5	Planning (Proposal Submission)	13/12/2020	19/12/2020	(19CM057) Akanksha Shewatkar

4.0 Resources Required (major resources such as raw material, some machining facility, software etc.)

S.N.	Name of Resource/material	Specifications	Remarks
1	Operating System	Windows 10	
2	.NET framework	Visual Studio	
3	Database	MySQL	
4	Internet		

5.0 Names of Team Members with Identity Codes:

i. Bhagyashree Tekade (19CM003)
ii. Ayush Bulbule (19CM007)
iii. Pratham Gaur (19CM020)
iv. Malhar Joshi (19CM033)
v. Akanksha Shewatkar (19CM057)

Guideline for Assessment of Micro-Project

Evaluation as per suggested Rubric for Assessment of Micro-Project

Assessment Parameter	Characteristic to be assessed	Average (1 mark)	Good (1.5 mark)	Excellent (2 mark)
Process Assessment (06)	Relevance of the courses & proposals			
	Literature survey/market survey/information collection			
	Analysis of data & completion of the target as per proposal/			
Product Assessment (04)	Report Preparation/Quality of Prototype/model			

Annexure-II

Title of Micro Project

To Develop Student Attendance System in VB.NET

1.0 Brief Introduction

Attendance System are one of the widely used ones ranging from primary schools to major organizations. A lot of paper is been used and which is later wasted by an organizations. This in turn leads to lot of deforestation thus leading to global warming. Small innovative steps in making use of technology for regular purposes would have an adverse effect on the environment issues which we are presently concerned about. For such reasons, this Student Attendance System is useful and has many upcoming applications in educational institutes.

2.0 Aim of the Micro-Project

This Micro-Project aims at:

a) Learning the concept of VB.NET.
b) To learn the concept of MySQL Database.
c) To build Student Attendance System application.
d) To reduce the paper work by the optimum use of computing.
e) To provide secured authentications and user-friendly application to users.

3.0 Course Outcomes Integrated

- Describe .NET framework and its architecture.
- Develop .NET application using decision control and loop control structures.
- Apply Object Oriented concepts in GUI application.
- Use data access controls to store data in Database and retrieve it.

4.0 Actual Procedure Followed

1) **Bhagyashree Tekade:** Collected information and videos from internet related micro-project.
2) **Ayush Bulbule:** Made Front End (GUI) application using VB.NET in Windows Form Application.
3) **Pratham Gaur:** Made Report and Word File of the micro-project.
4) **Malhar Joshi:** Made Database in MySQL with multiple tables.
5) **Akanksha Shewatkar:** Planned the things which are included in Project and what each member should do in it.

5.0 Actual Resources used (Mention the actual resources used)

S.N.	Name of Resource/material	Specifications	Remarks
1	Operating System	Windows 10	
2	.NET Application	Visual Studio	
3	Database	MySQL	
4	Internet		

6.0 Output of the Micro-Project

Output of this Micro-Project is attached to this file.

7.0 Skill Developed / Learning outcomes of this Micro-Project

- To build the user-friendly application using VB.NET.
- To learn the concept of VB.NET.
- To learn the concept of Database.

8.0 Assessment by Faculty as per Rubrics

Process Assessment (06)	**Product Assessment (04)**	**Total Marks (10)**	**Signature of Faculty**

CONTENTS

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02	SYSTEM REQUIREMENTS	11
2.1	LITERATURE REVIEW	
2.1.1	STRENGTHS	
2.1.2	WEAKNESSES/LIMITATIONS	
03	SYSTEM TOOLS	12
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Abstract

Student Attendance System using VB.NET deals with the maintenance of students' attendance details. The staffs will be provided with the separate username and password to make students' status. The student attendance report based on weekly and consolidate will be generated. Student Attendance System is software developed for daily student attendance in schools, colleges and institutes. The information is sorted by the operators, which will be provided by the teacher for a particular class. The purpose of developing Attendance Management System is to computerized the tradition way of taking attendance. Another purpose for developing this software is to generate the report automatically at the end of the session or in the between of the session. This software has operators as the teachers and the administrators. Firstly administrators will register the students so that the teacher can access the software for taking the attendance and generating the report. The teacher is provided with the facilities such as taking the attendance, generating the consolidate report, view all student attendance through dates and searching particular student attendance. Administrator can also add the new student in the database. Now the teacher can login to take the attendance and generate the consolidate report.

INTRODUCTION

Attendance is taken every day on each working day whether it is college, school or any other institution and in this process every institution wasted lots of paper just for keeping the record. With such small reasons, our natural resources are depleting at the enormous rate and it can be possible that our descendants don't able to get those resources.

Attendance System are one of the widely used ones ranging from primary schools to major organizations. A lot of paper is been used and which is later wasted by an organizations. This in turn leads to lot of deforestation thus leading to global warming. Small innovative steps in making use of technology for regular purposes would have an adverse effect on the environment issues which we are presently concerned about. For such reasons, this Student Attendance System is useful and has many upcoming applications in educational institutes.

1.1 NECESSITY

As far as today's technology is concerned all these things can be very efficiently managed. Student Attendance System is very functional in order to manage various departments within the college. The cost of this system is definitely very much less than the paper work and the speed for the operation will be very much faster. The reduced time to complete process provided by the tangible benefits, improves the day to day operations of all functions within the department, leading to complete tasks and the general 'feel good' factor.

1.2 OBJECTIVES

- To reduce the paper work by the optimum use of computing.
- To provide secured authentications to users.
- To view all student through dates.
- To search particular students' attendance.
- To generate the report automatically at the end of the session or in the between of the session.
- To add the new student in the database.

SYSTEM REQUIRMENTS

2.1 LITERATURE REVIEW

A literature review can be refers to as a review of current system that the researcher had done previously and the review of the system that will be developed. Literature Review also focuses on the knowledge and the ideas established on a topic as well as their strengths and the weaknesses. Nowadays, technology is getting better and better to replacing the traditional system to speed up the process by introducing the computerized system.

2.1.1 STRENGTHS

There is some strengths that can be found in this Desktop-Based Student Attendance System. First of all, the system can be known as a computerized system that reduces the workload of the users in managing the attendance records. Compared to the traditional attendance system, it offered cost effectiveness since it reduces the paper needed to process the data of the student attendance records. In addition, it will also help the lecturers save up a lot of time in recording the attendance of the students throughout the whole semester. In addition, since the proposed system does not required any special hardware to make it workable, so it will be very easy to use due to its simplicity. At the same time, it will reduce the training cost required to train the user in operate that student attendance system. Besides that, it only required local database to store all the information of the student attendance which mean the lecturers do not need to worry about the network coverage issues. Other than that, system was designed in extremely simple graphical user-interface which allows user to easily deal with the system.

2.1.2 WEAKNESSES/LIMITATIONS

There is some drawback that can found from the solution in using desktop- based student attendance system. First of all, the system will still require the lecturers to key-in student attendance records in every class. Although the system had developed to be work in computerization, but it still require computer operator to manage the storing and retrieving of information frequently. So, the proposed system had only converted the traditional attendance system to computerization but everything still have to be done manually such as key-in student attendance and etc. In addition, it only reduces the cost used for paper work but the system does not save up much time from record the student attendance. Other than that, those kind lecturers may try to help those student who always absent from the class to prevent get barred from the final exam by fake the student attendance by their own since lecturers is the one who key-in the attendance records in every class. Other than that, the proposed system only provides very basic functions to be used by the lecturers.

SYSTEM TOOLS

3.1 FRONTEND

The technology which is selected to develop the system is VB.NET. The front end is developed by .NET. Developers have full access to the same framework APIs used by the core applications. The application architecture is designed to simplify the reuse of components; any application can publish its capabilities and any other application may then make use of those capabilities (subject to security constraints enforced by the framework). This same mechanism allows components to be replaced by the user.

3.2 BACKEND

At the back end MySQL is used and operating system is used Windows 10 and the system can be modified on any of the platform in the world. There are various tables created in this database for various purpose such as Users which contains the list of users, Students which contains list of students, etc....

SYSTEM ANALYSIS

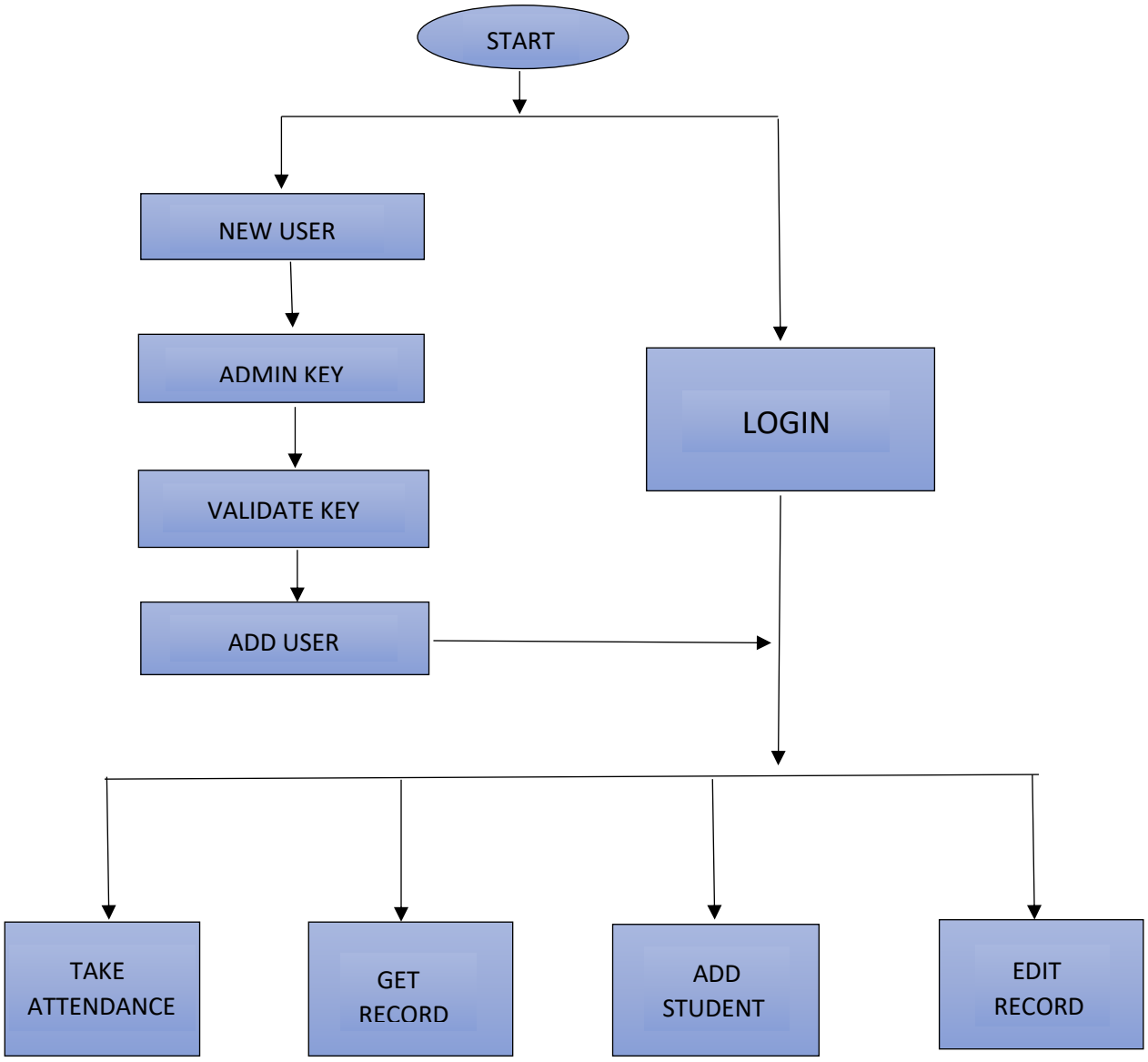
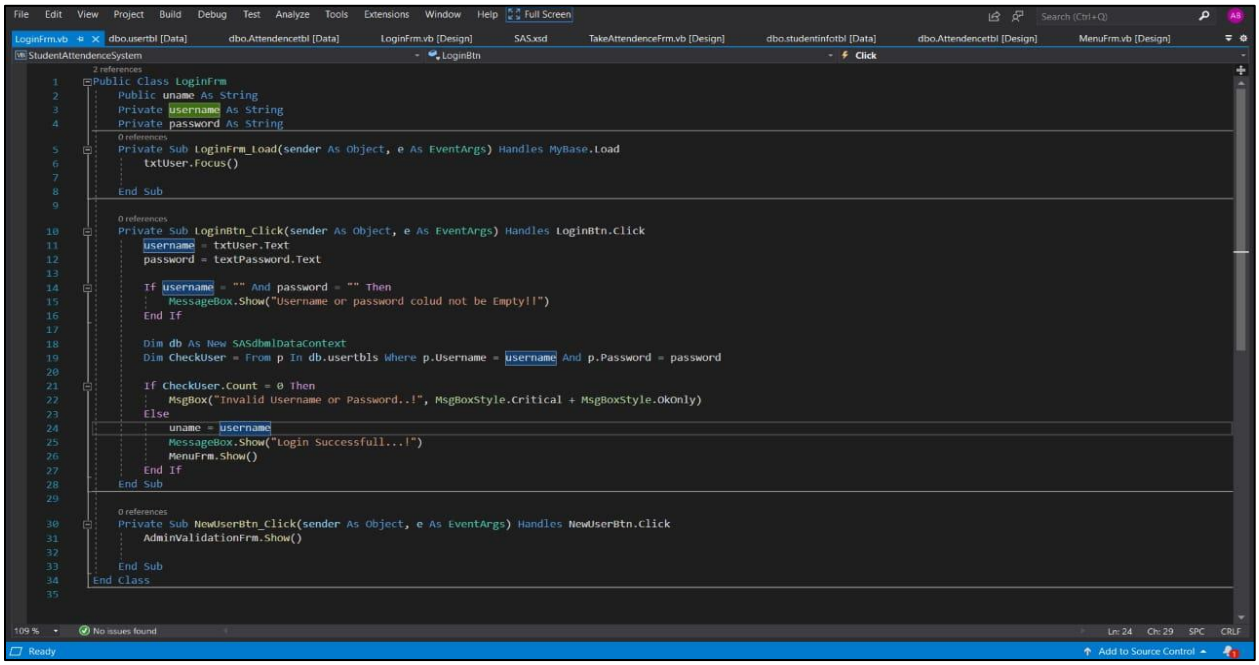


Fig. 1 Data Flow Diagram

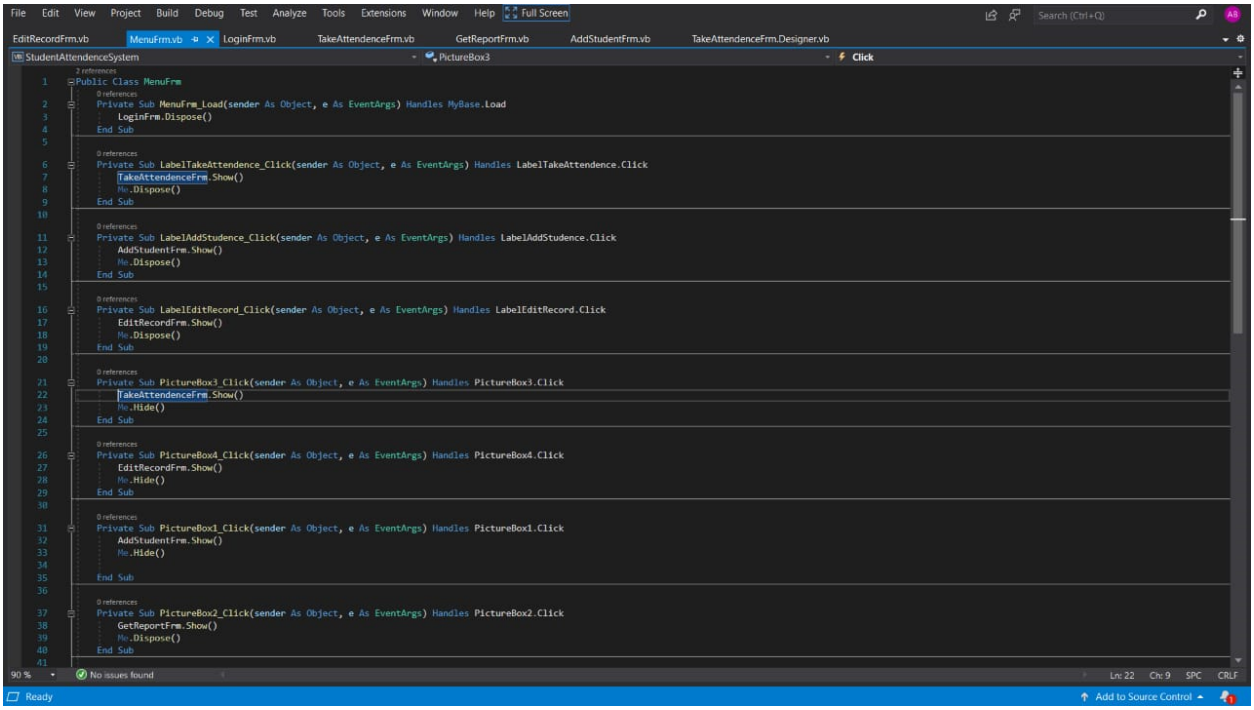
SNAPSHOTS

5.1 CODE



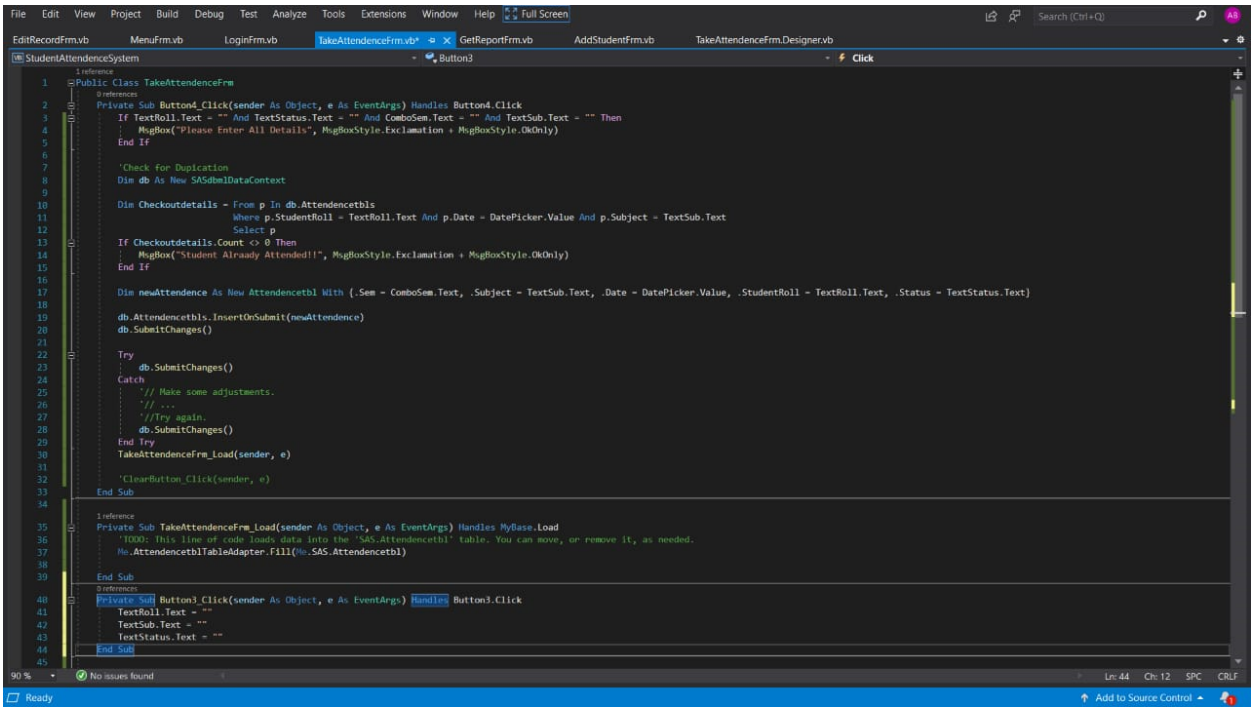
```
Public Class LoginFrm
    Public uname As String
    Private username As String
    Private password As String

    Private Sub LoginFrm_Load(sender As Object, e As EventArgs) Handles MyBase.Load
        txtUser.Focus()

    End Sub

    Private Sub LoginBtn_Click(sender As Object, e As EventArgs) Handles LoginBtn.Click
        username = txtUser.Text
        password = textPassword.Text

        If username = "" And password = "" Then
            MessageBox.Show("Username or password colud not be Empty!!")
        End If

        Dim db As New SASdbmlDataContext
        Dim CheckUser = From p In db.usertbls Where p.Username = username And p.Password = password

        If CheckUser.Count = 0 Then
            MsgBox("Invalid Username or Password..!", MsgBoxStyle.Critical + MsgBoxStyle.OkOnly)
        Else
            uname = username
            MessageBox.Show("Login Successfull...!")
            MenuFrm.Show()
        End If
    End Sub

    Private Sub NewUserBtn_Click(sender As Object, e As EventArgs) Handles NewUserBtn.Click
        AdminValidationFrm.Show()

    End Sub
End Class
```

Fig. 2 Login Form Code



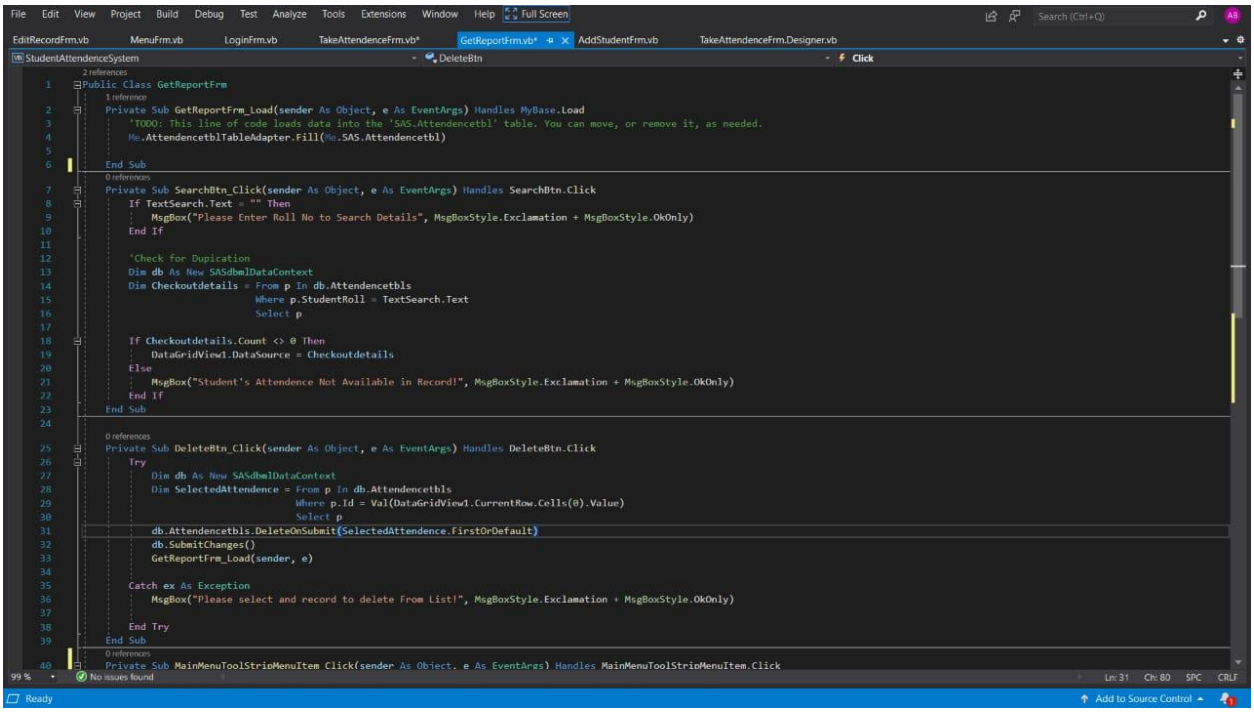
```
Public Class MenuFrm
    Private Sub MenuFrm_Load(sender As Object, e As EventArgs) Handles MyBase.Load
        LoginFrm.Dispose()
    End Sub

    Private Sub LabelTakeAttendence_Click(sender As Object, e As EventArgs) Handles LabelTakeAttendence.Click
        TakeAttendenceFrm.Show()
        Me.Dispose()
    End Sub

    Private Sub LabelAddStudence_Click(sender As Object, e As EventArgs) Handles LabelAddStudence.Click
        AddStudentFrm.Show()
        Me.Dispose()
    End Sub

    Private Sub LabelEditRecord_Click(sender As Object, e As EventArgs) Handles LabelEditRecord.Click
        EditRecordFrm.Show()
        Me.Dispose()
    End Sub

    Private Sub PictureBox3_Click(sender As Object, e As EventArgs) Handles PictureBox3.Click
        TakeAttendenceFrm.Show()
        Me.Hide()
    End Sub

    Private Sub PictureBox4_Click(sender As Object, e As EventArgs) Handles PictureBox4.Click
        EditRecordFrm.Show()
        Me.Hide()
    End Sub

    Private Sub PictureBox1_Click(sender As Object, e As EventArgs) Handles PictureBox1.Click
        AddStudentFrm.Show()
        Me.Hide()

    End Sub

    Private Sub PictureBox2_Click(sender As Object, e As EventArgs) Handles PictureBox2.Click
        GetReportFrm.Show()
        Me.Dispose()
    End Sub
```

Fig. 3 Menu Form Code



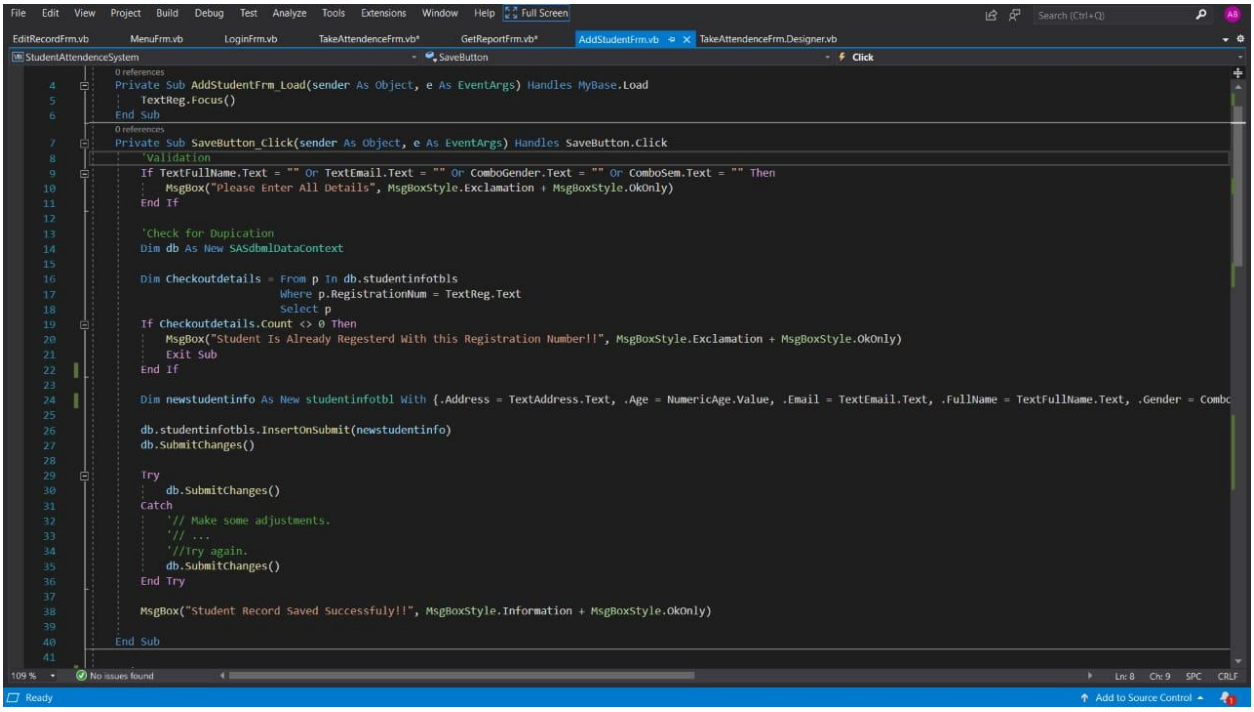
```
Public Class TakeAttendenceFrm
    Private Sub Button4_Click(sender As Object, e As EventArgs) Handles Button4.Click
        If TextRoll.Text = "" And TextStatus.Text = "" And ComboSem.Text = "" And TextSub.Text = "" Then
            MsgBox("Please Enter All Details", MsgBoxStyle.Exclamation + MsgBoxStyle.OkOnly)
        End If

        'Check for Dupication
        Dim db As New SASdbmlDataContext

        Dim Checkoutdetails = From p In db.Attendencetbls
                              Where p.StudentRoll = TextRoll.Text And p.Date = DatePicker.Value And p.Subject = TextSub.Text
                              Select p
        If Checkoutdetails.Count <> 0 Then
            MsgBox("Student Already Attended!!", MsgBoxStyle.Exclamation + MsgBoxStyle.OkOnly)
        End If

        Dim newAttendence As New Attendencetbl With {.Sem = ComboSem.Text, .Subject = TextSub.Text, .Date = DatePicker.Value, .StudentRoll = TextRoll.Text, .Status = TextStatus.Text}

        db.Attendencetbls.InsertOnSubmit(newAttendence)
        db.SubmitChanges()

        Try
            db.SubmitChanges()
        Catch
            '// Make some adjustments.
            '// ...
            '//Try again.
            db.SubmitChanges()
        End Try
        TakeAttendenceFrm_Load(sender, e)

        'ClearButton_Click(sender, e)
    End Sub

    Private Sub TakeAttendenceFrm_Load(sender As Object, e As EventArgs) Handles MyBase.Load
        'TODO: This line of code loads data into the 'SAS.Attendencetbl' table. You can move, or remove it, as needed.
        Me.AttendencetblTableAdapter.Fill(Me.SAS.Attendencetbl)

    End Sub
    Private Sub Button3_Click(sender As Object, e As EventArgs) Handles Button3.Click
        TextRoll.Text = ""
        TextSub.Text = ""
        TextStatus.Text = ""
    End Sub
```

Fig. 4 Take Attendance Form Code



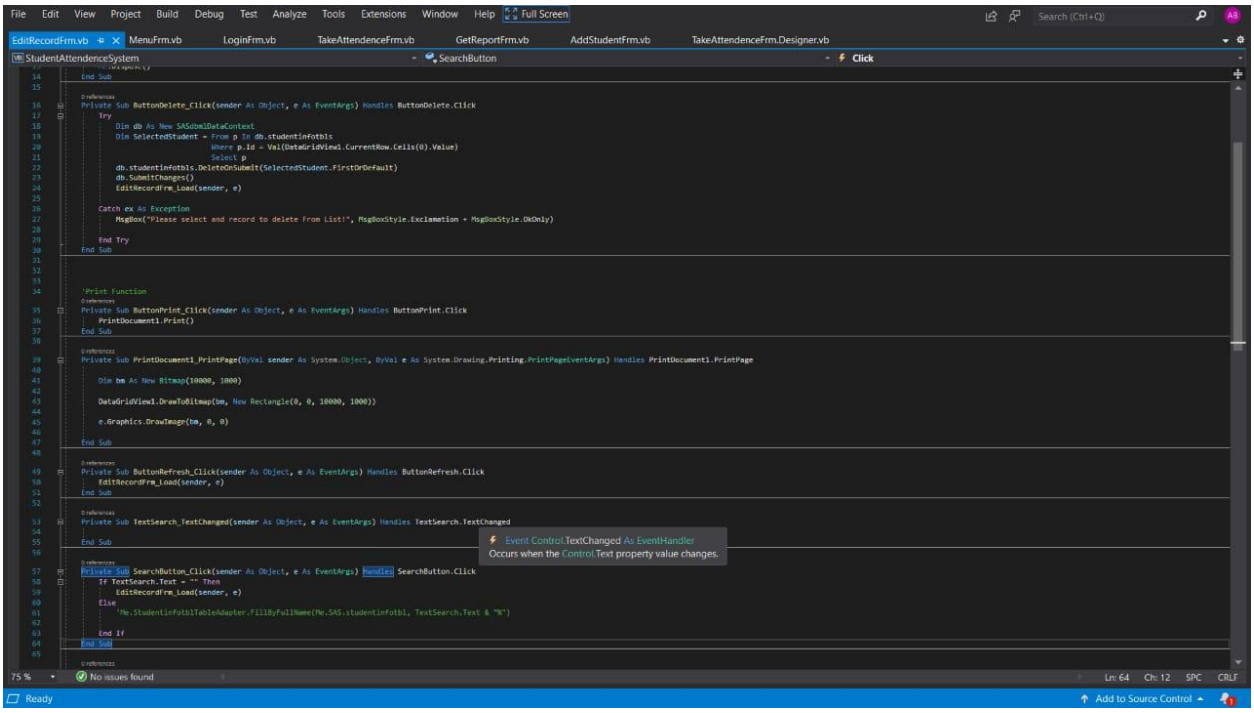
```
Public Class GetReportFrm
    Private Sub GetReportFrm_Load(sender As Object, e As EventArgs) Handles MyBase.Load
        'TODO: This line of code loads data into the 'SAS.Attendencetbl' table. You can move, or remove it, as needed.
        Me.AttendencetblTableAdapter.Fill(Me.SAS.Attendencetbl)

    End Sub
    Private Sub SearchBtn_Click(sender As Object, e As EventArgs) Handles SearchBtn.Click
        If TextSearch.Text = "" Then
            MsgBox("Please Enter Roll No to Search Details", MsgBoxStyle.Exclamation + MsgBoxStyle.OkOnly)
        End If

        'Check for Dupication
        Dim db As New SASdbmlDataContext
        Dim Checkoutdetails = From p In db.Attendencetbls
                              Where p.StudentRoll = TextSearch.Text
                              Select p

        If Checkoutdetails.Count <> 0 Then
            DataGridView1.DataSource = Checkoutdetails
        Else
            MsgBox("Student's Attendence Not Available in Record!", MsgBoxStyle.Exclamation + MsgBoxStyle.OkOnly)
        End If
    End Sub

    Private Sub DeleteBtn_Click(sender As Object, e As EventArgs) Handles DeleteBtn.Click
        Try
            Dim db As New SASdbmlDataContext
            Dim SelectedAttendence = From p In db.Attendencetbls
                                     Where p.Id = Val(DataGridView1.CurrentRow.Cells(0).Value)
                                     Select p
            db.Attendencetbls.DeleteOnSubmit(SelectedAttendence.FirstOrDefault)
            db.SubmitChanges()
            GetReportFrm_Load(sender, e)

        Catch ex As Exception
            MsgBox("Please select and record to delete From List!", MsgBoxStyle.Exclamation + MsgBoxStyle.OkOnly)

        End Try
    End Sub
    Private Sub MainMenuToolStripMenuItem_Click(sender As Object, e As EventArgs) Handles MainMenuToolStripMenuItem.Click
```

Fig. 5 Get Report Form Code



```
Private Sub AddStudentFrm_Load(sender As Object, e As EventArgs) Handles MyBase.Load
    TextReg.Focus()
End Sub

Private Sub SaveButton_Click(sender As Object, e As EventArgs) Handles SaveButton.Click
    'Validation
    If TextFullName.Text = "" Or TextEmail.Text = "" Or ComboGender.Text = "" Or ComboSem.Text = "" Then
        MsgBox("Please Enter All Details", MsgBoxStyle.Exclamation + MsgBoxStyle.OkOnly)
    End If

    'Check for Dupication
    Dim db As New SASdbmlDataContext

    Dim Checkoutdetails = From p In db.studentinfotbls
                          Where p.RegistrationNum = TextReg.Text
                          Select p
    If Checkoutdetails.Count <> 0 Then
        MsgBox("Student Is Already Regesterd With this Registration Number!!", MsgBoxStyle.Exclamation + MsgBoxStyle.OkOnly)
        Exit Sub
    End If

    Dim newstudentinfo As New studentinfotbl With {.Address = TextAddress.Text, .Age = NumericAge.Value, .Email = TextEmail.Text, .FullName = TextFullName.Text, .Gender = Combo

    db.studentinfotbls.InsertOnSubmit(newstudentinfo)
    db.SubmitChanges()

    Try
        db.SubmitChanges()
    Catch
        '// Make some adjustments.
        '// ...
        '//try again.
        db.SubmitChanges()
    End Try

    MsgBox("Student Record Saved Successfuly!!", MsgBoxStyle.Information + MsgBoxStyle.OkOnly)

End Sub
```

Fig. 6 Add Student Form



```
End Sub

Private Sub ButtonDelete_Click(sender As Object, e As EventArgs) Handles ButtonDelete.Click
    Try
        Dim db As New SASdbmlDataContext
        Dim SelectedStudent = From p In db.studentinfotbls
                              Where p.Id = Val(DataGridView1.CurrentRow.Cells(0).Value)
                              Select p
        db.studentinfotbls.DeleteOnSubmit(SelectedStudent.FirstOrDefault)
        db.SubmitChanges()
        EditRecordFrm_Load(sender, e)

    Catch ex As Exception
        MsgBox("Please select and record to delete from List!", MsgBoxStyle.Exclamation + MsgBoxStyle.OkOnly)

    End Try
End Sub


'Print Function
Private Sub ButtonPrint_Click(sender As Object, e As EventArgs) Handles ButtonPrint.Click
    PrintDocument1.Print()
End Sub

Private Sub PrintDocument1_PrintPage(ByVal sender As System.Object, ByVal e As System.Drawing.Printing.PrintPageEventArgs) Handles PrintDocument1.PrintPage

    Dim bm As New Bitmap(10000, 1000)

    DataGridView1.DrawToBitmap(bm, New Rectangle(0, 0, 10000, 1000))

    e.Graphics.DrawImage(bm, 0, 0)

End Sub

Private Sub ButtonRefresh_Click(sender As Object, e As EventArgs) Handles ButtonRefresh.Click
    EditRecordFrm_Load(sender, e)
End Sub

Private Sub TextSearch_TextChanged(sender As Object, e As EventArgs) Handles TextSearch.TextChanged

End Sub

Private Sub SearchButton_Click(sender As Object, e As EventArgs) Handles SearchButton.Click
    If TextSearch.Text = "" Then
        EditRecordFrm_Load(sender, e)
    Else
        'Me.StudentinfotblTableAdapter.FillByFullName(Me.SAS.studentinfotbl, TextSearch.Text & "%")

    End If
End Sub
```

Fig. 7 Edit Record Form Code

5.2 DATABASE

dbo.usertbl [Data] | dbo.Attendencetbl [Data] | LoginFrm.vb [Design]

Max Rows: 1000

	Id	FullName	Username	Password
▷	1	Ayush Bulbule ...	ayush	12345
	2	Pratham Gaur ...	pratham	12345
	3	Malhar Joshi ...	malhar	12345
	4	Jay ...	jay	12345
✪	NULL	NULL	NULL	NULL

Fig. 8 User Table

Max Rows: 1000

	Id	StudentRoll	Sem	Subject	Date	Status
	11	GPA001	Third ...	GUI .NET	16-01-2021	Present
	12	GPA002	Third ...	GUI .NET	16-01-2021	Present
	13	GPA003	Third ...	GUI .NET	16-01-2021	Absent
	14	GPA004	Third ...	GUI .NET	16-01-2021	Absent
	15	GPA004	Third ...	GUI .NET	16-01-2021	Present
	16	GPA005	Third ...	GUI .NET	16-01-2021	Present
	17	GPA005	Third ...	GUI .NET	16-01-2021	Present
⋈	NULL	NULL	NULL	NULL	NULL	NULL

Fig. 9 Attendance Table

5.3 OUTPUT

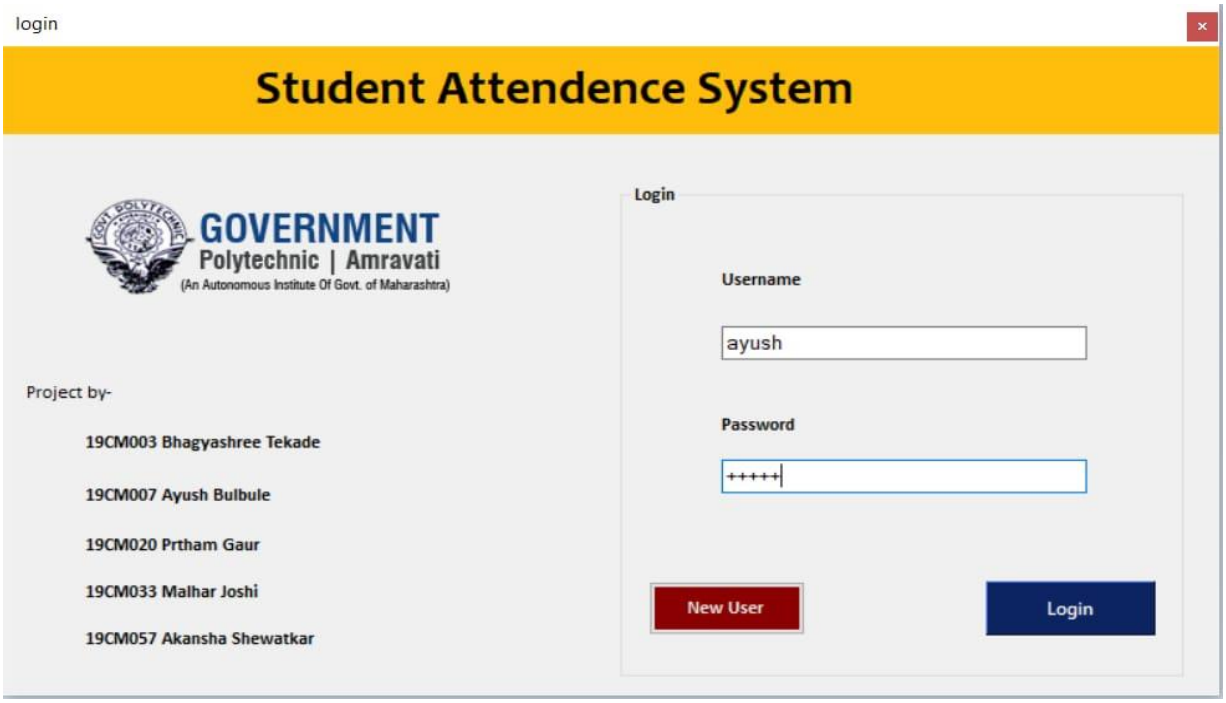


Fig. 10 Login Form

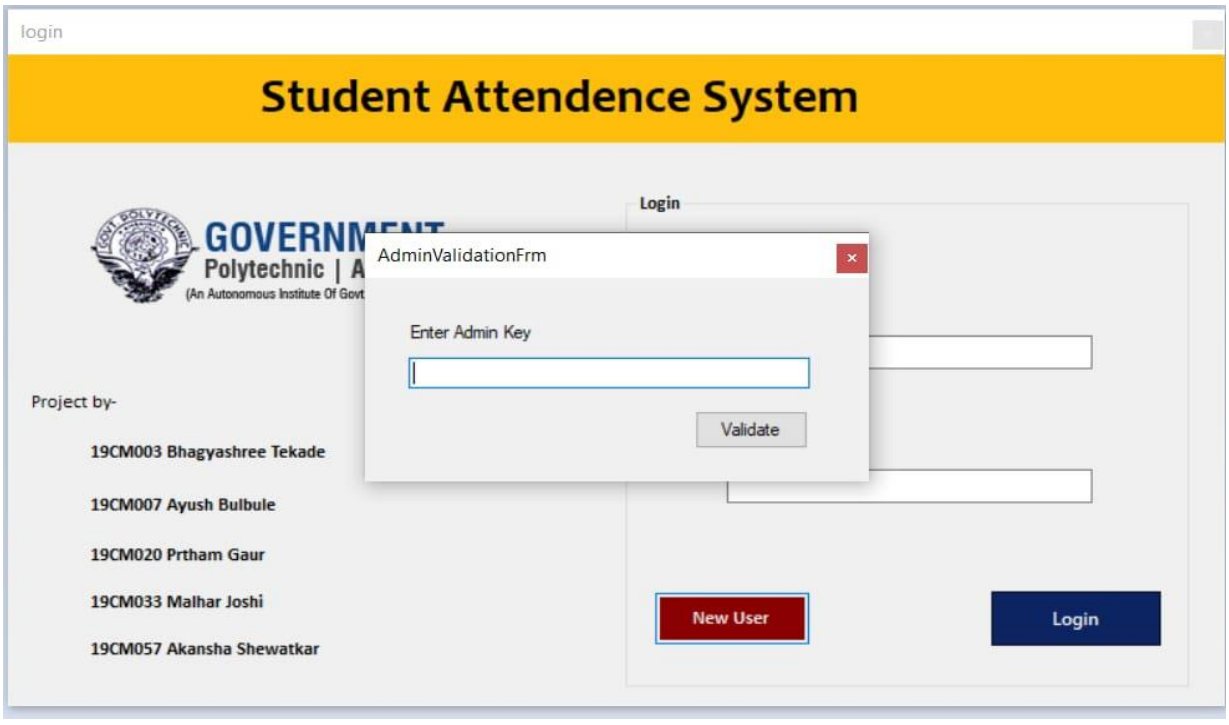


Fig. 11.1 Add User Form

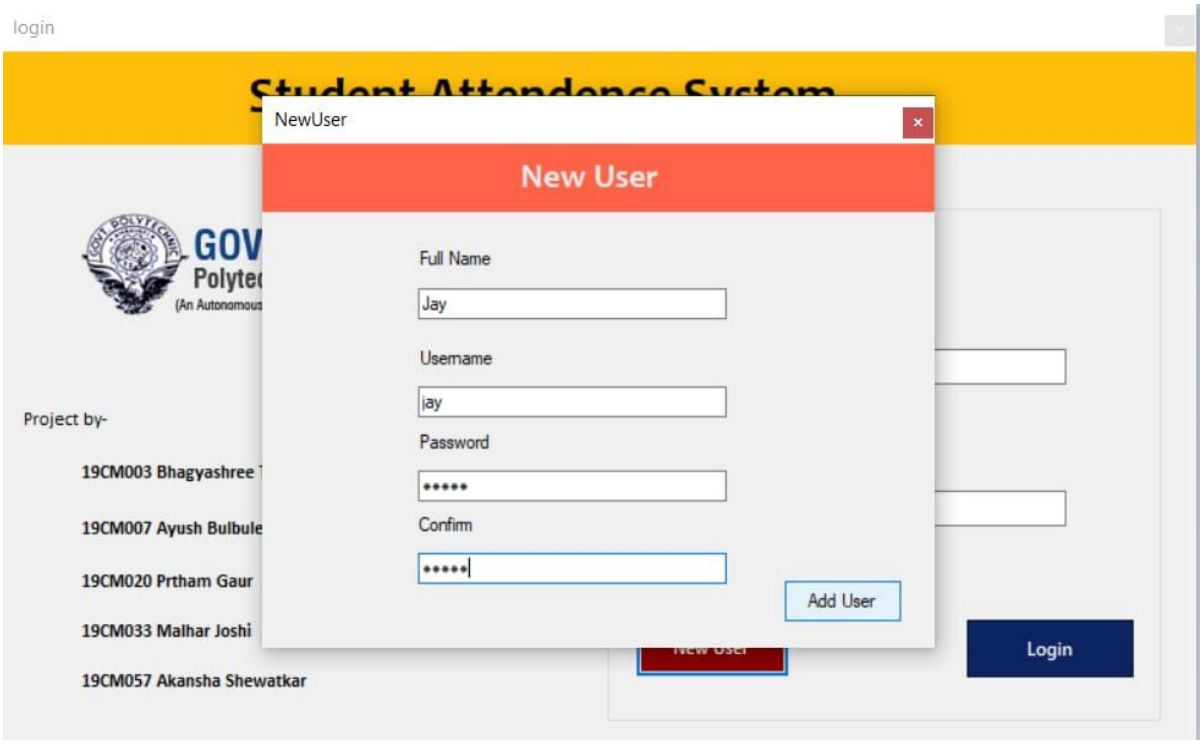


Fig. 11.2 New User Information Form

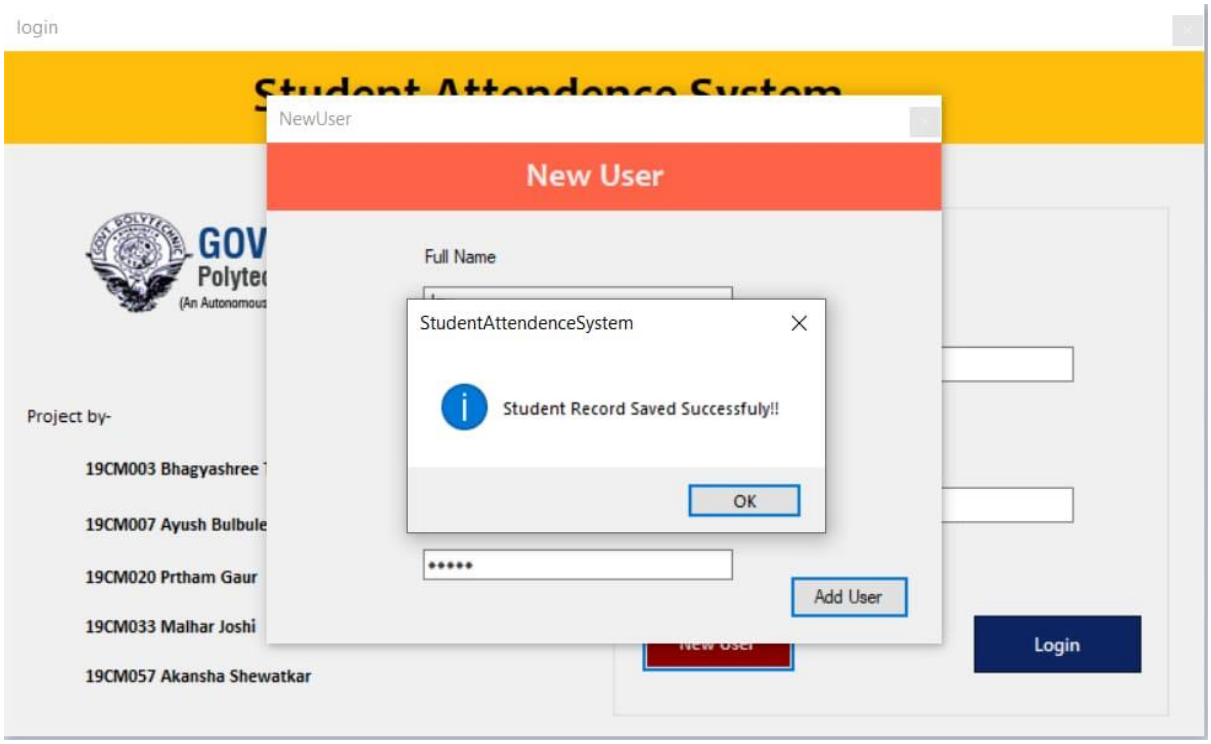


Fig. 11.3 New User Form

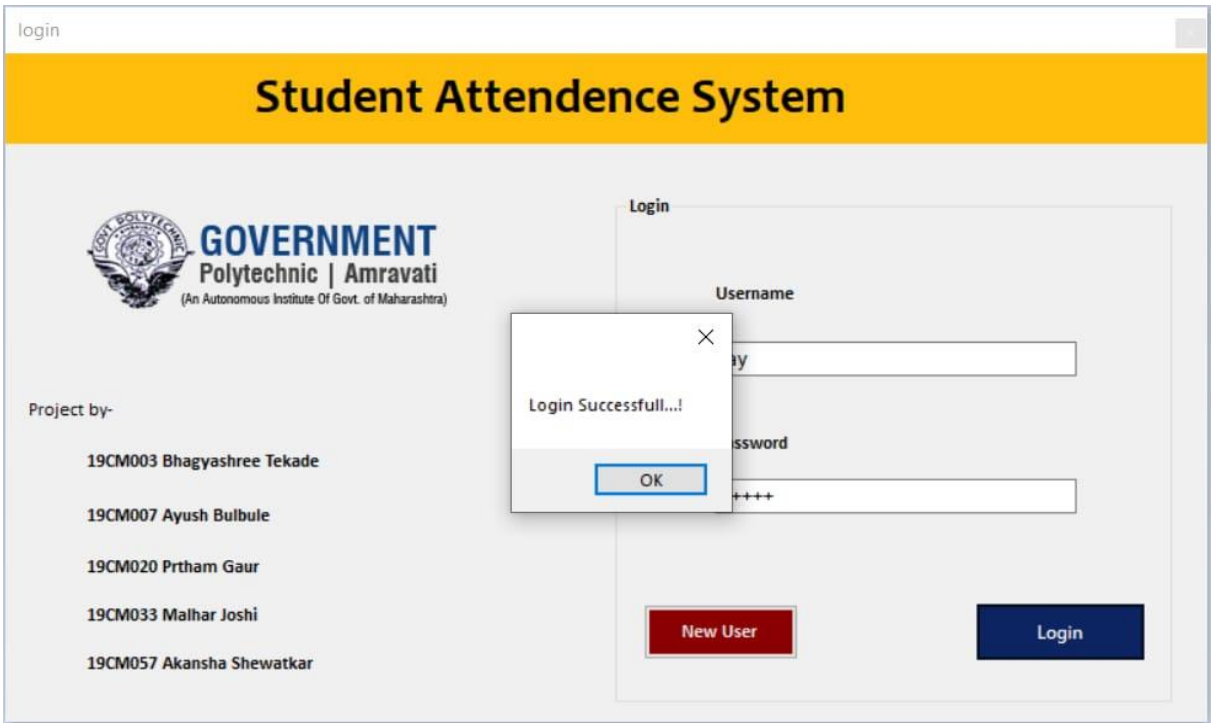


Fig. 11.4 Login Form

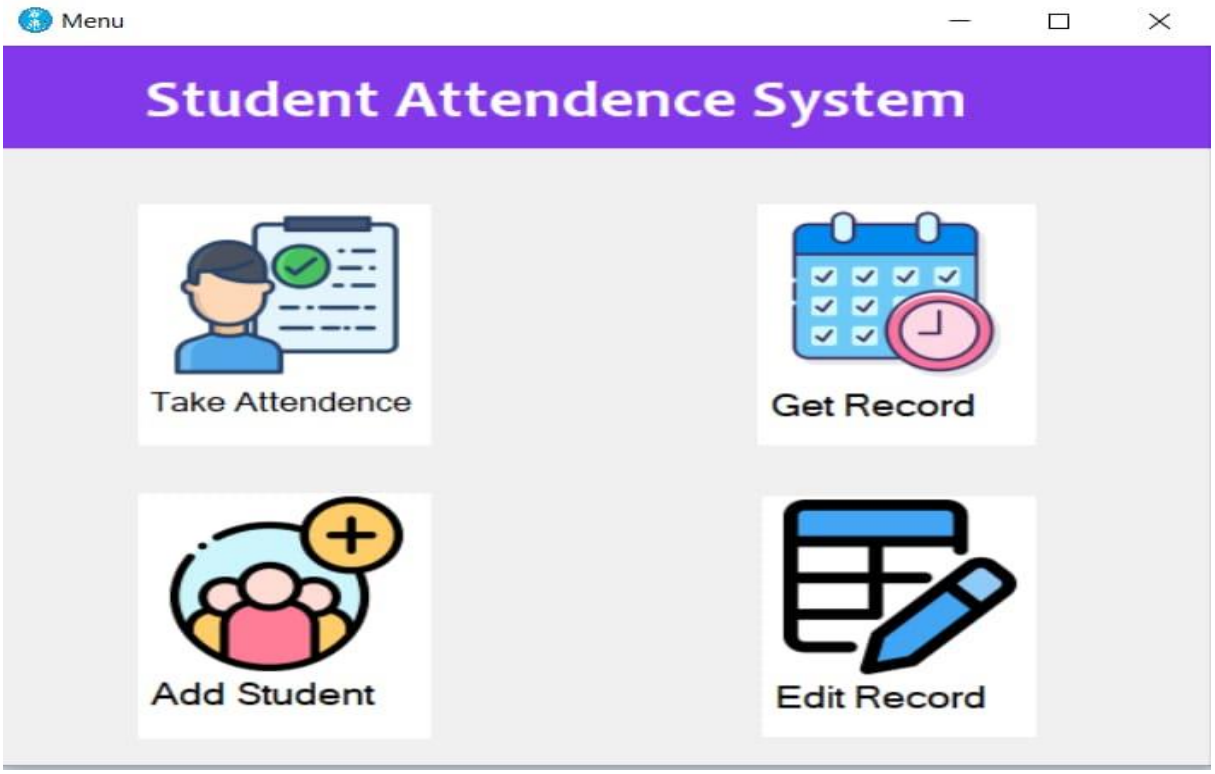


Fig. 12 Menu Form

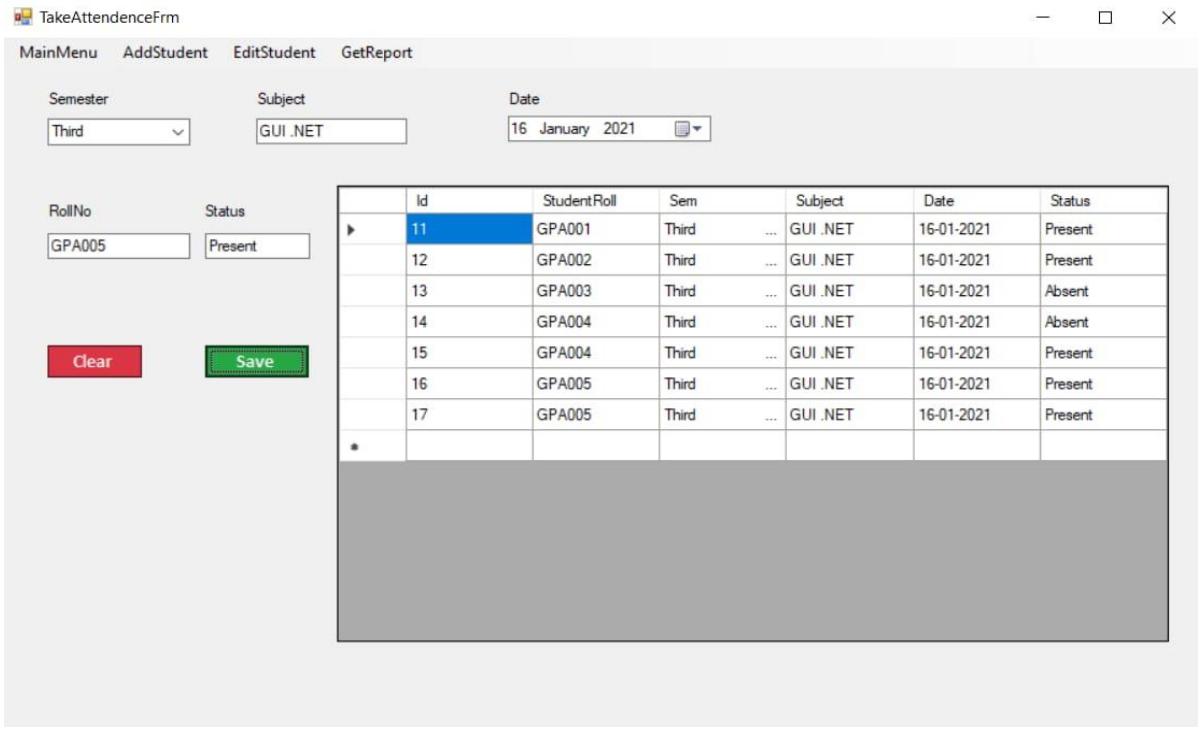


Fig. 13.1 Attendance Form

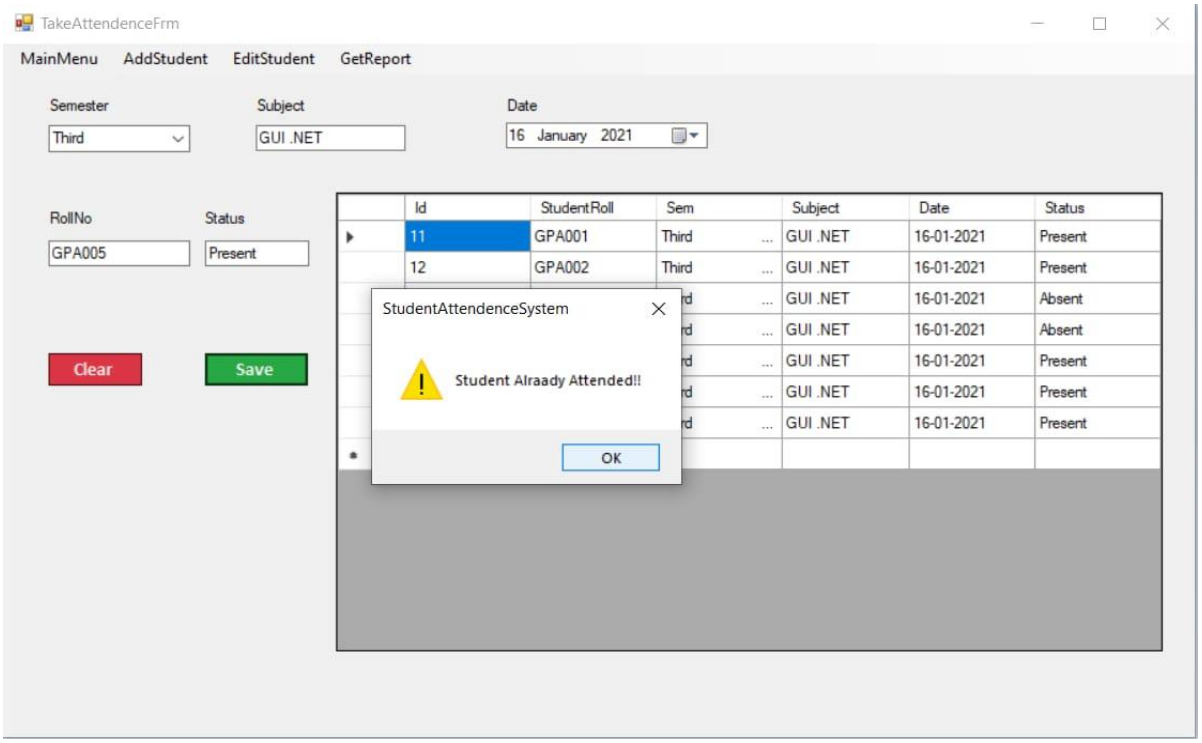


Fig. 13.2 Attendance Form

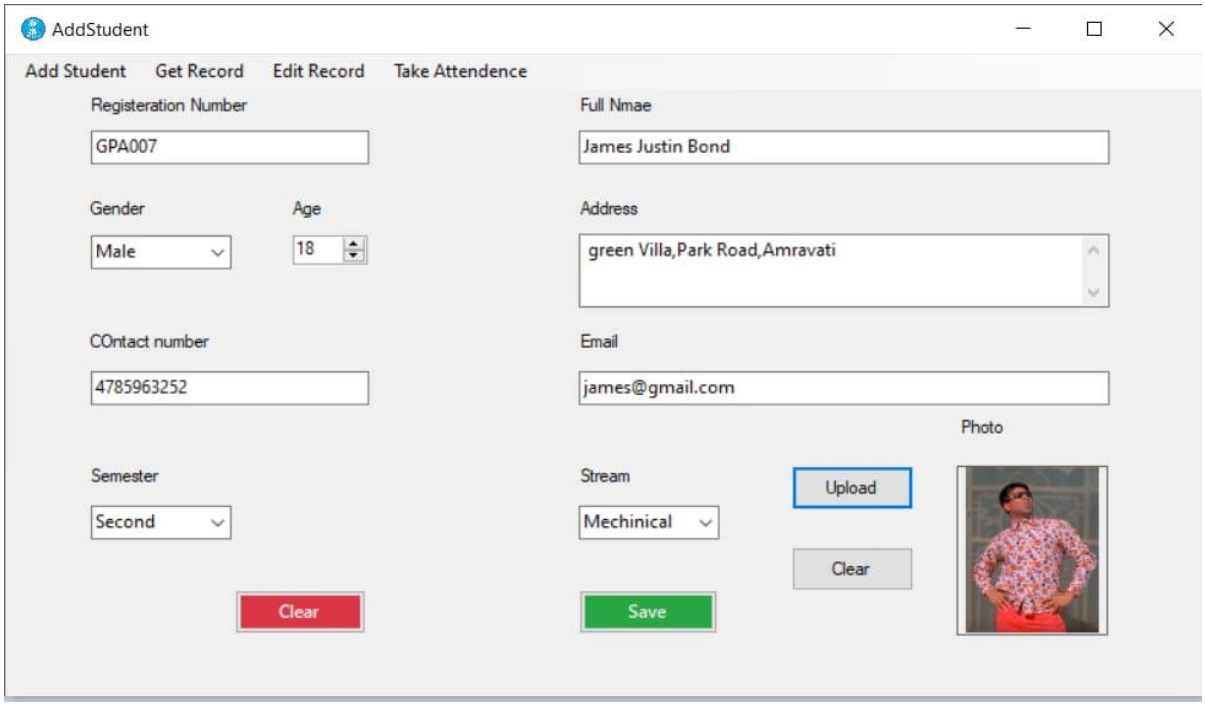


Fig. 14.1 Add Student Form

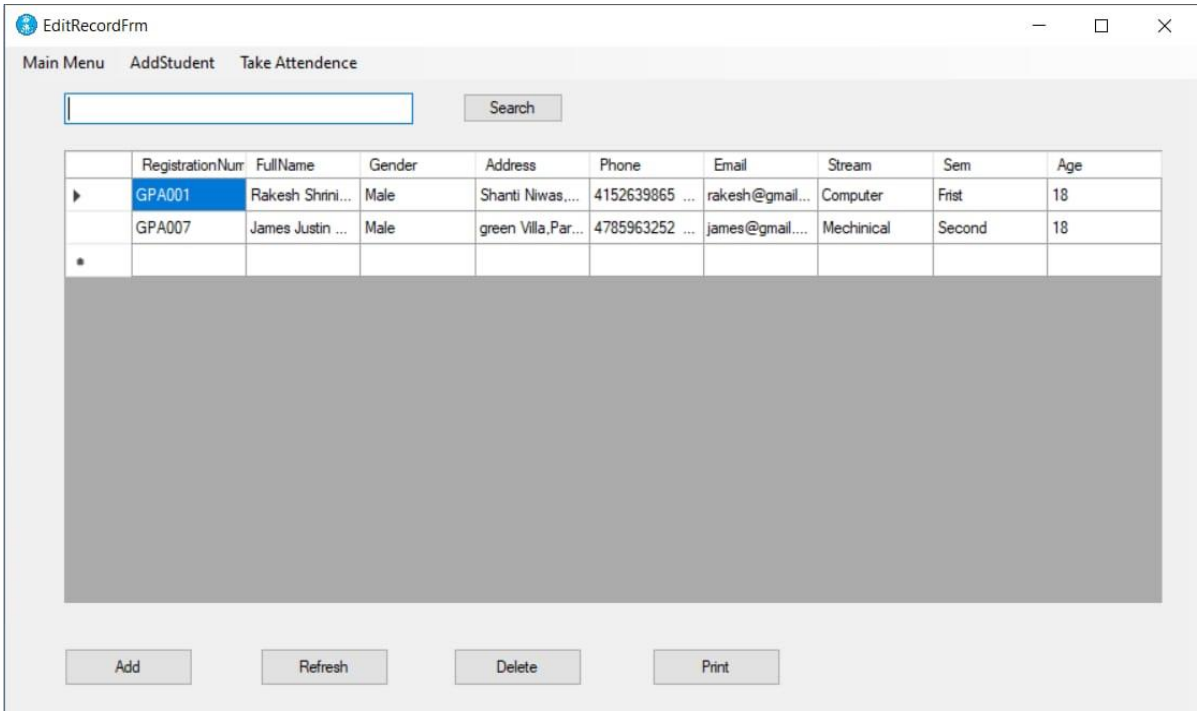


Fig. 14.2 Add Student Form

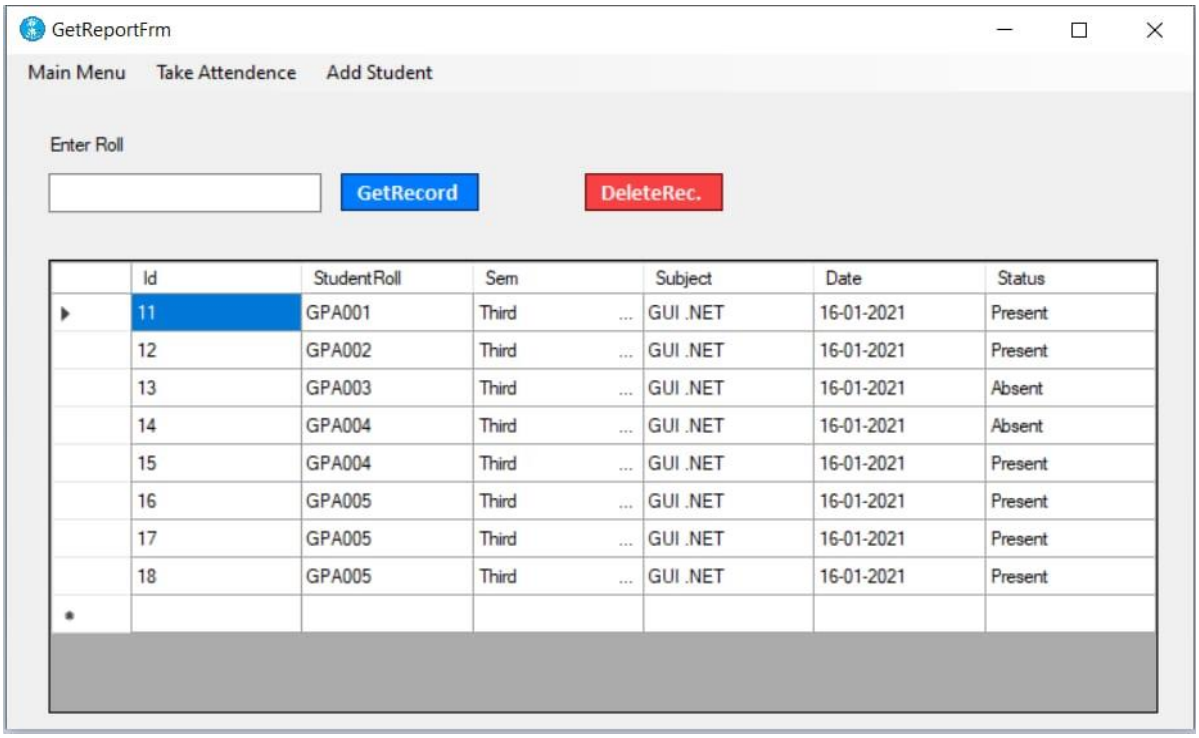


Fig. 15.1 Get Record Form

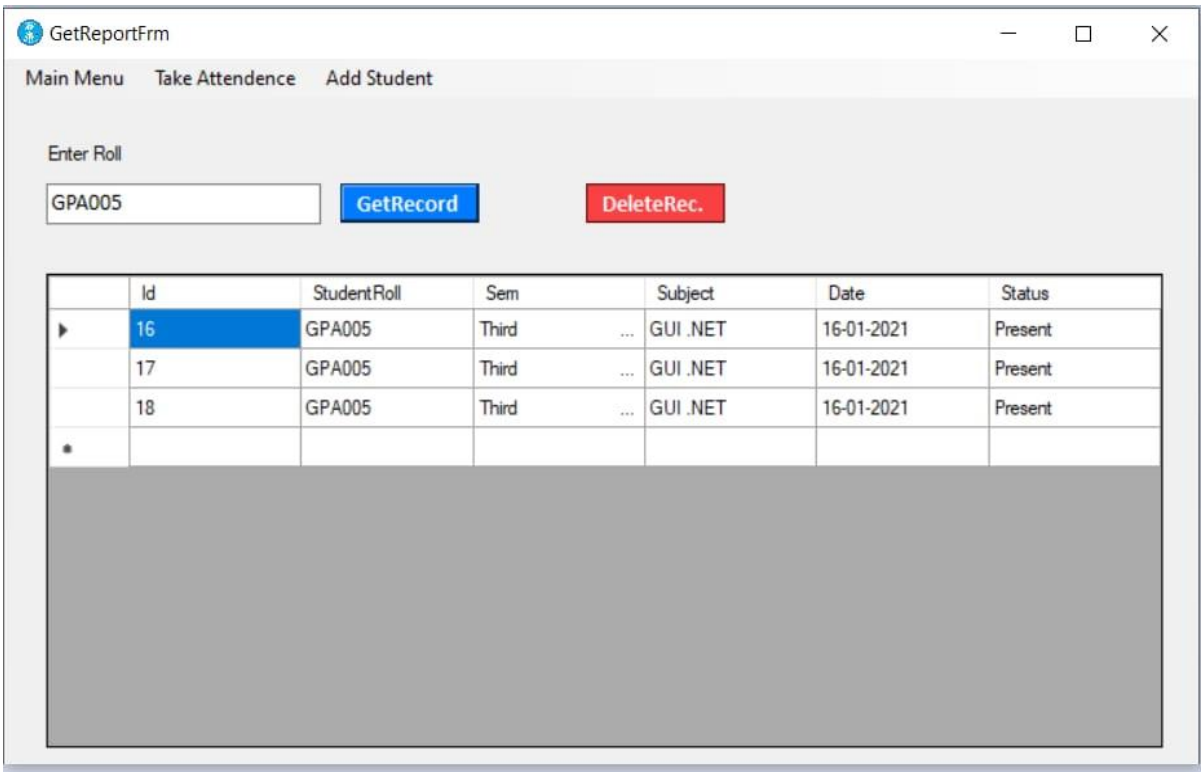


Fig. 15.2 Get Record Form

CONCLUSION

Thus, Student Attendance System using VB.NET deals with the maintenance of students' attendance details. Student Attendance System is software developed for daily student attendance in schools, colleges and institutes. As far as today's technology is concerned all these things can be very efficiently managed. Student Attendance System is very functional in order to manage various departments within the college.

It reduce the paper work by the optimum use of computing, provide secured authentications to users, view all student through dates, search particular students' attendance, generate the report automatically at the end of the session or in the between of the session and also add the new student in the database.

Student Attendance System is a software interface that is easy to use. It is friendly to the user, meaning it is not difficult to learn or understand.

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