**College Management System**



Session: 2021 – 2025

**Submitted by:**

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**Supervised by:**

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Department of Computer Science

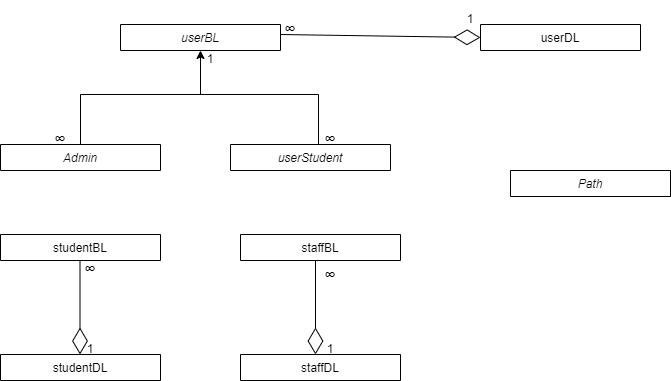
**University of Engineering and Technology**

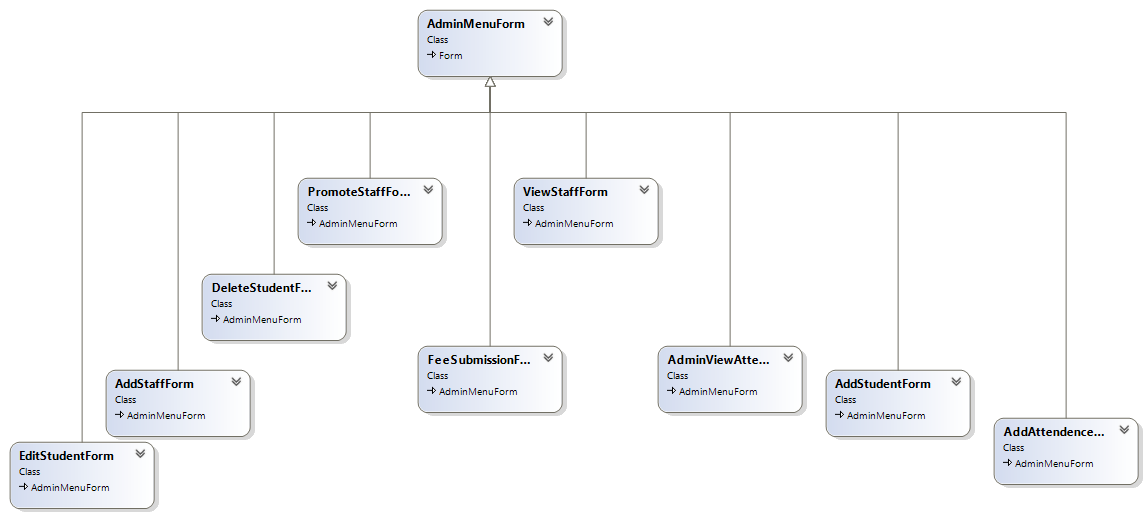
**Lahore Pakistan**

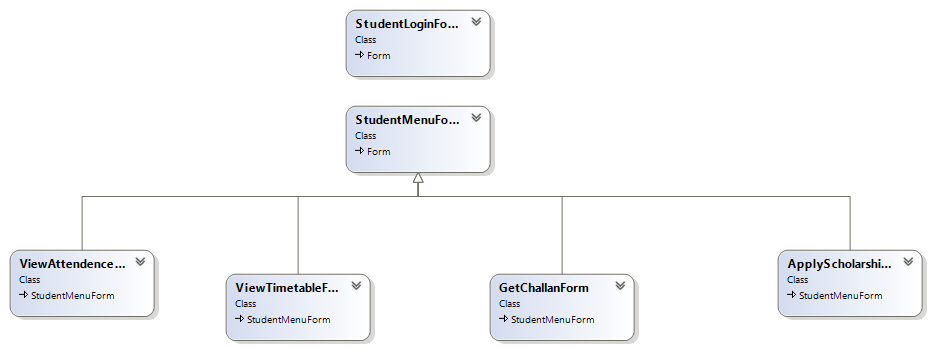
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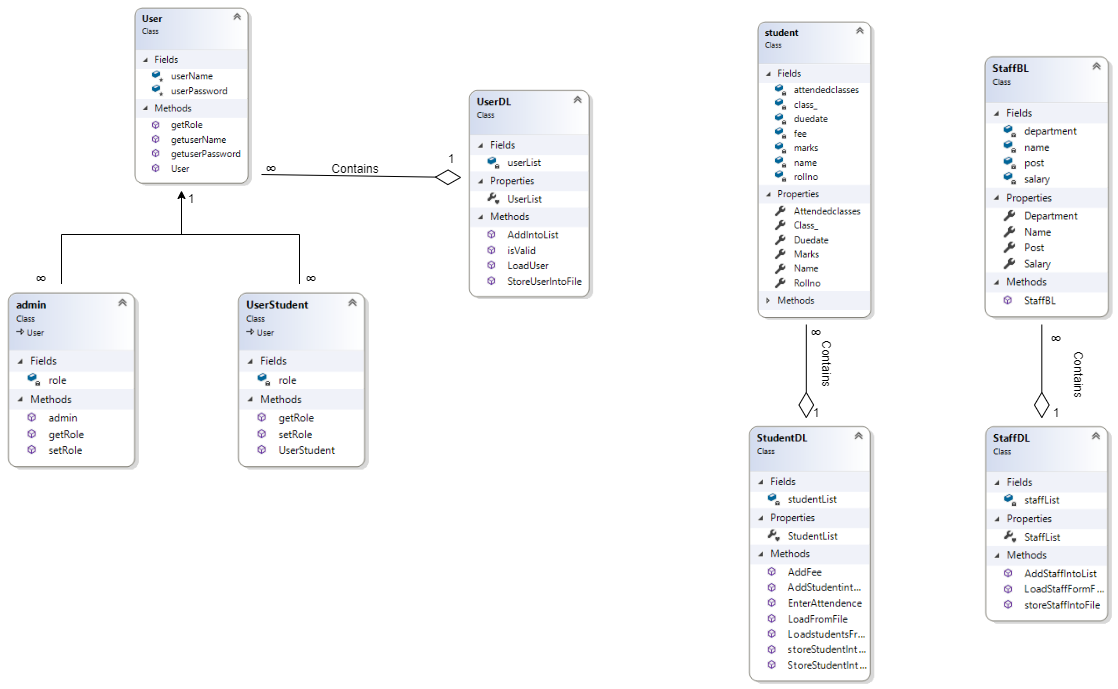
Domain Model:

****



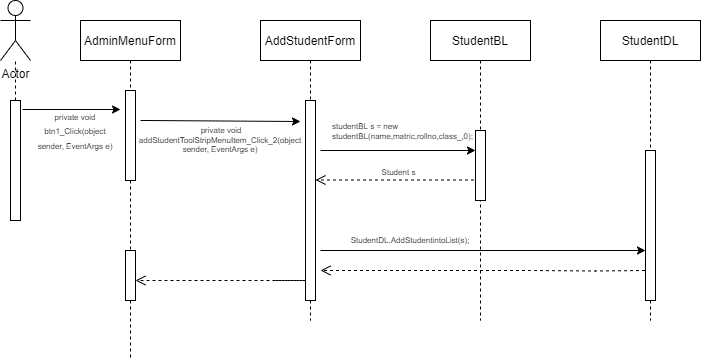


Class Diagram:

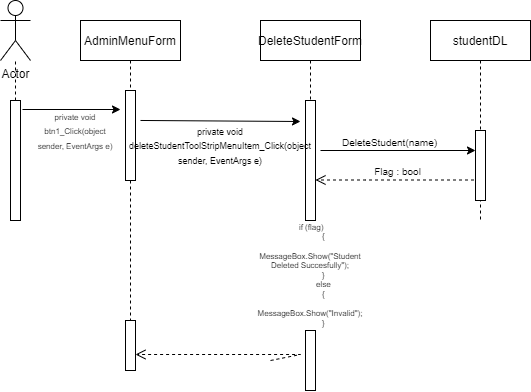


**Sequence Diagrams:**

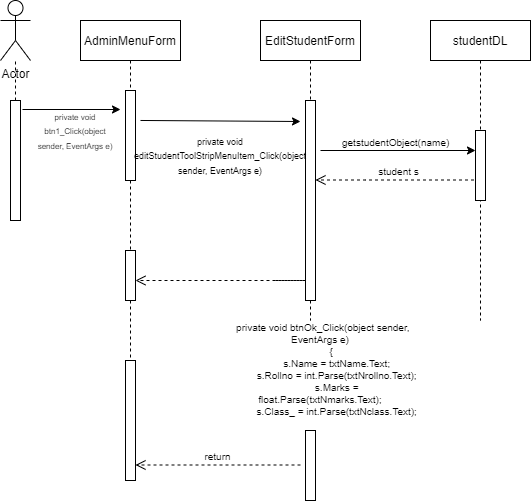
1-Add Student:



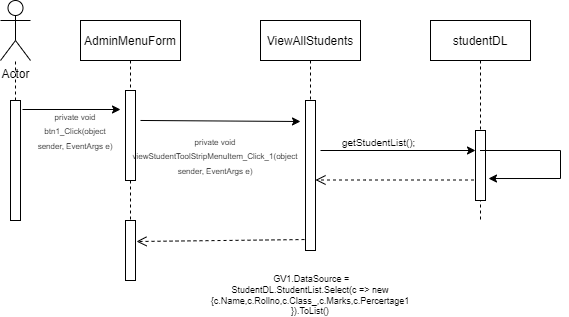
2-Delete Student:



3-Edit Student:

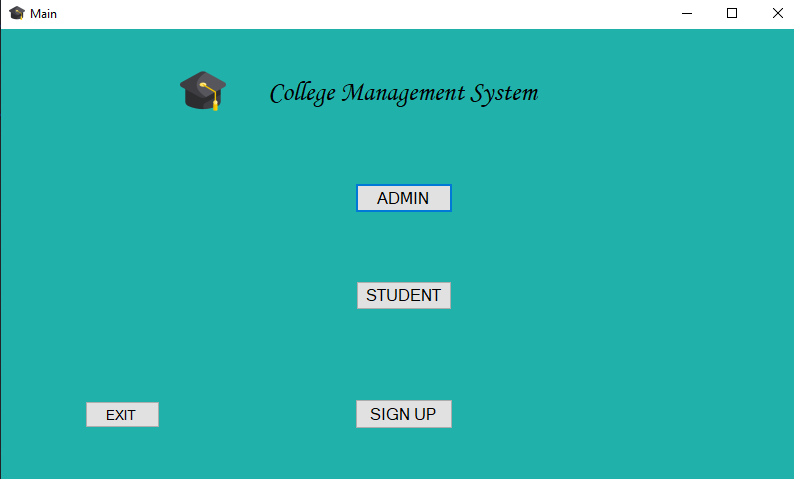


4-View Student:

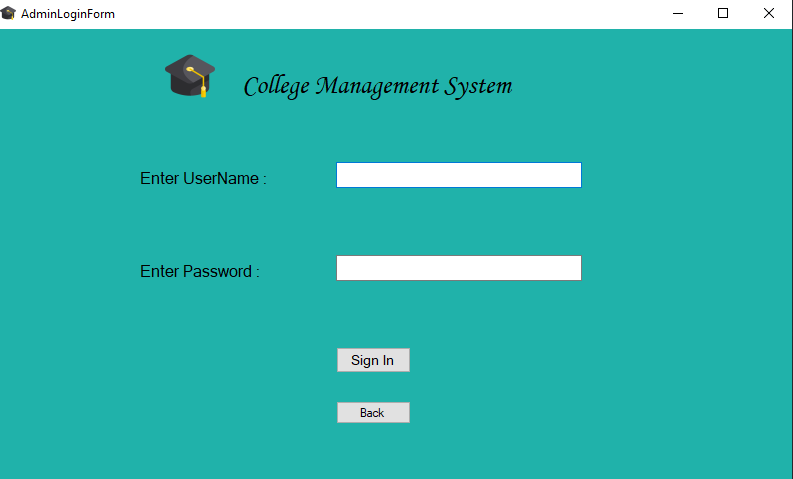


Wireframes:

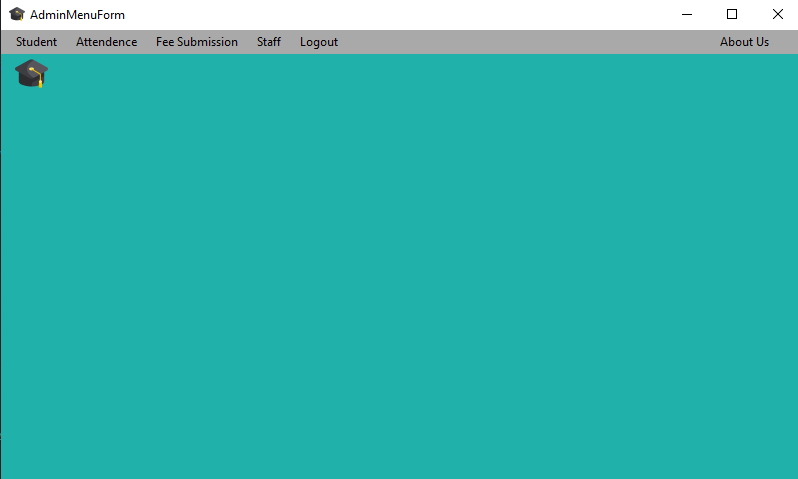
Main:



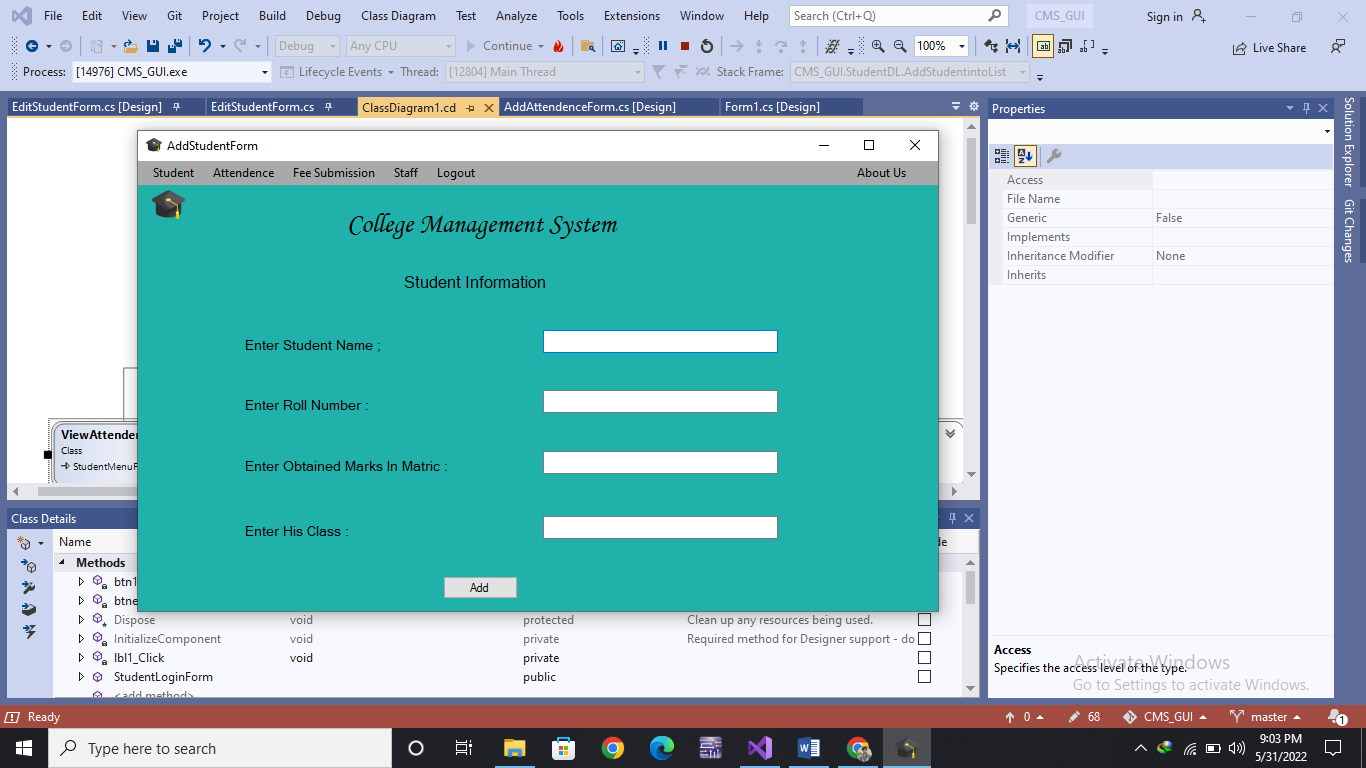
Admin Login Form:



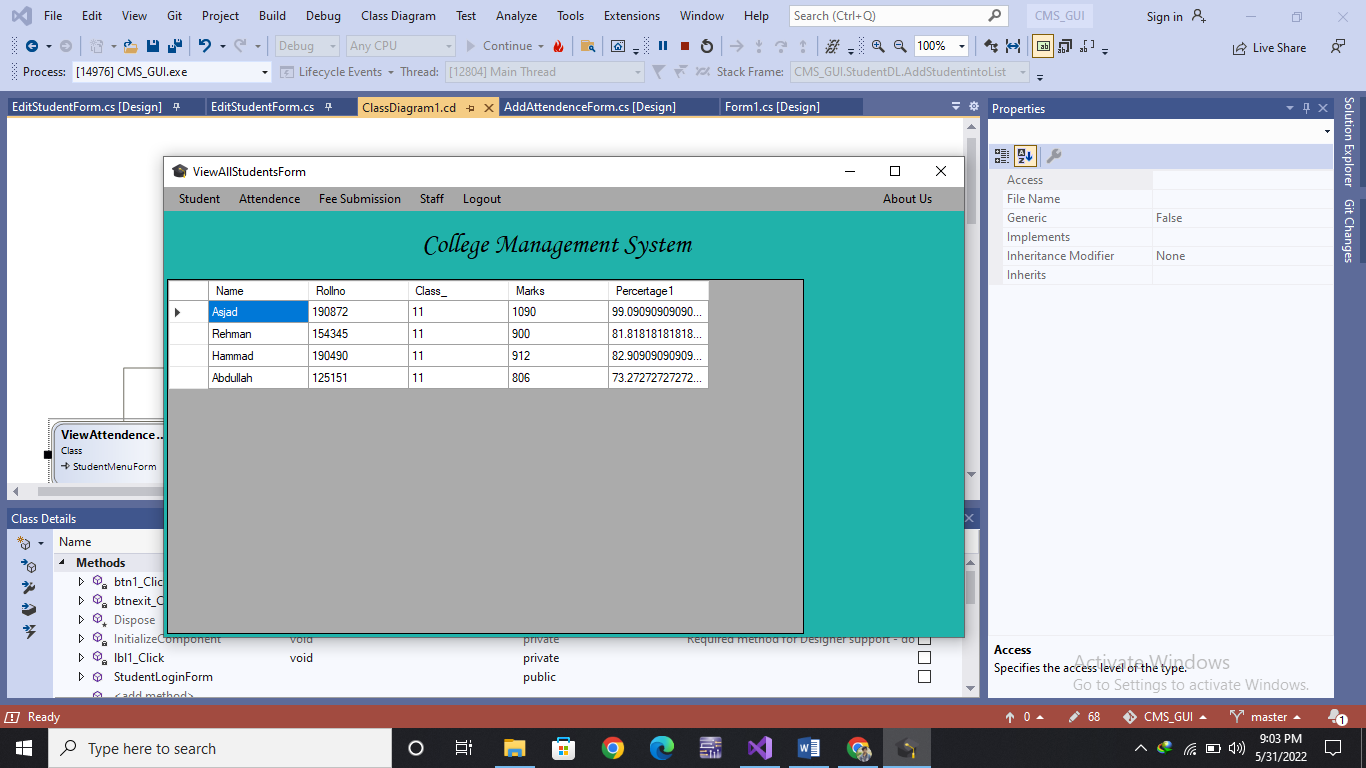
Admin Main Menu:



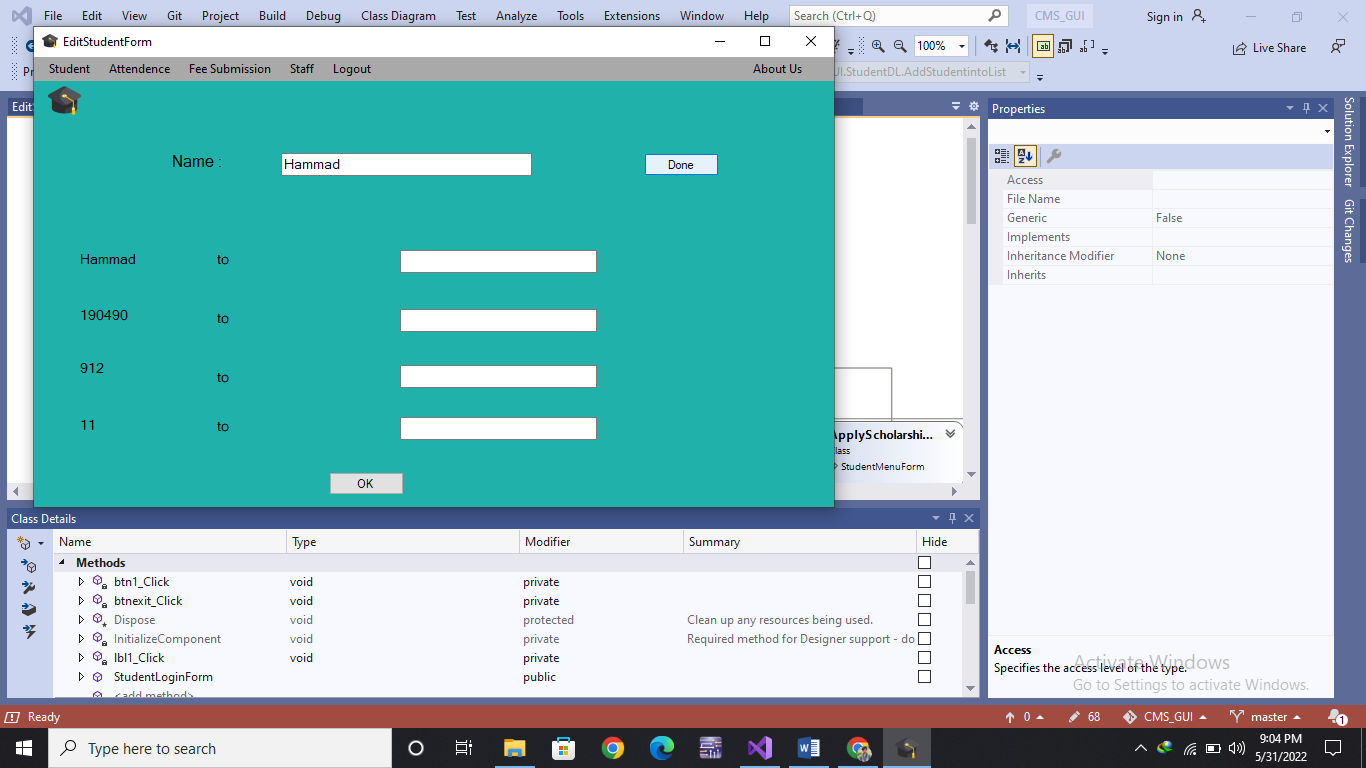
Add Student:



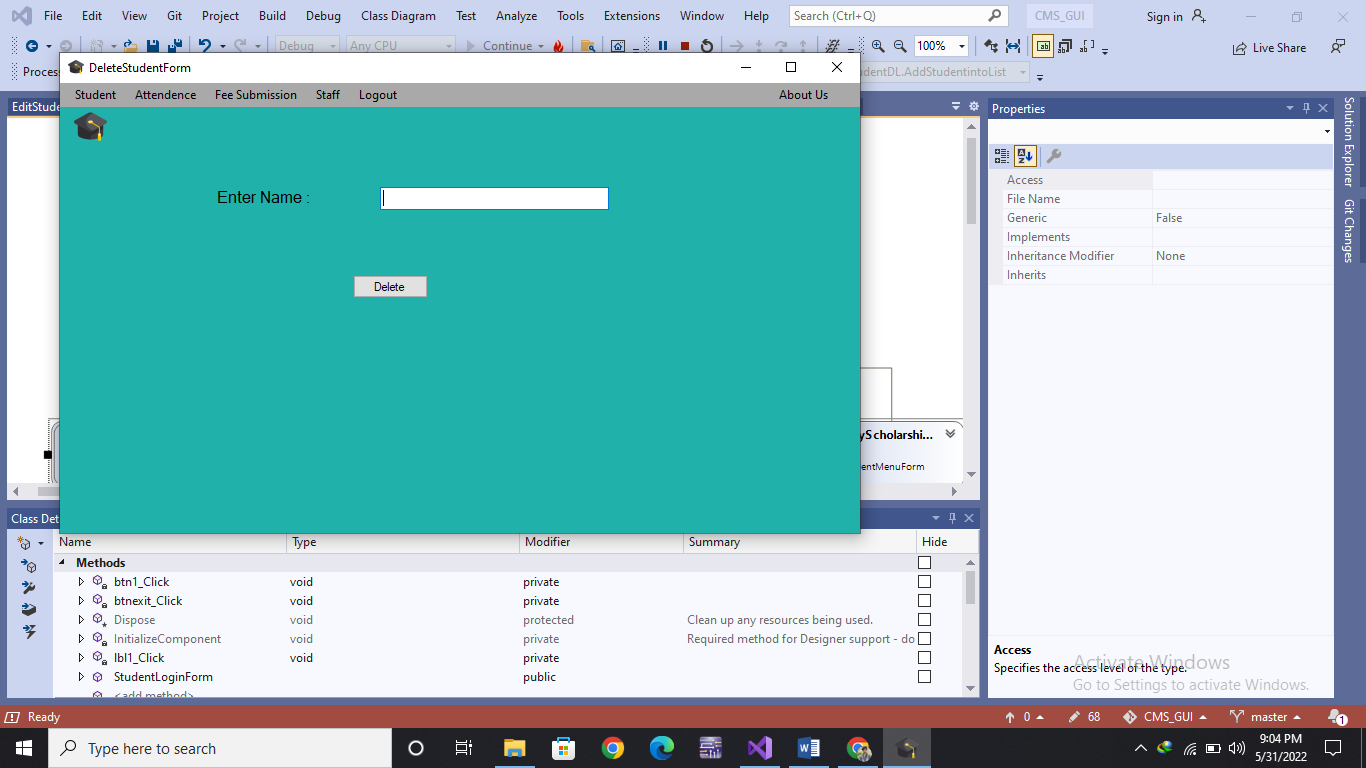
View Student:



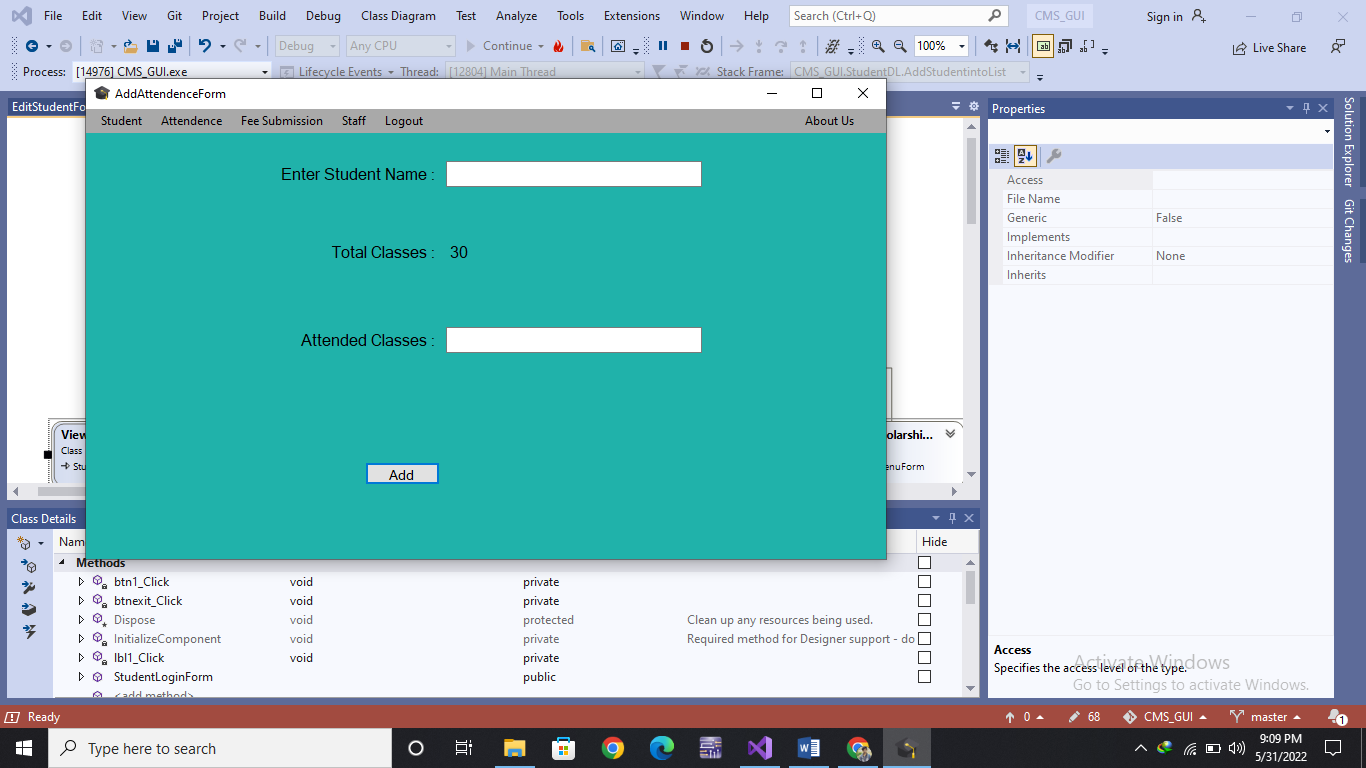
Edit Student:



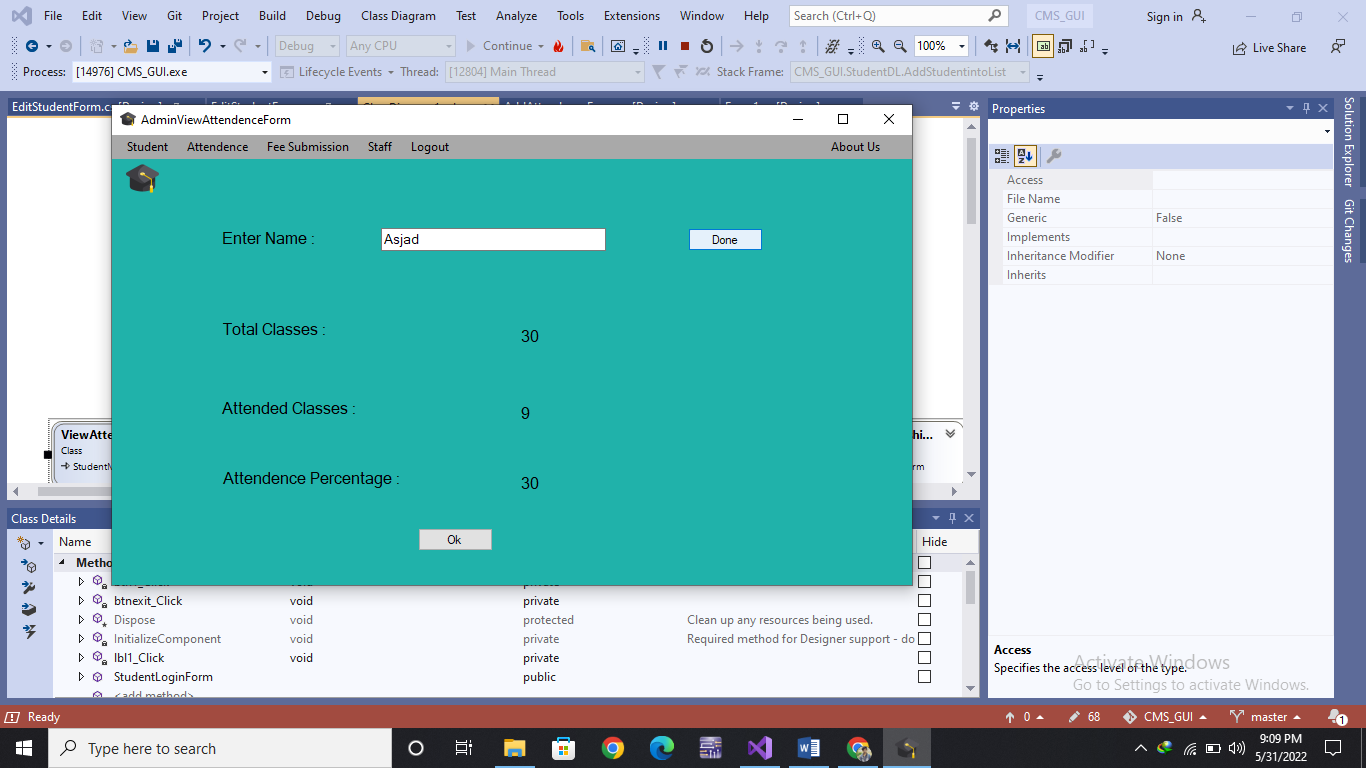
Delete Student:



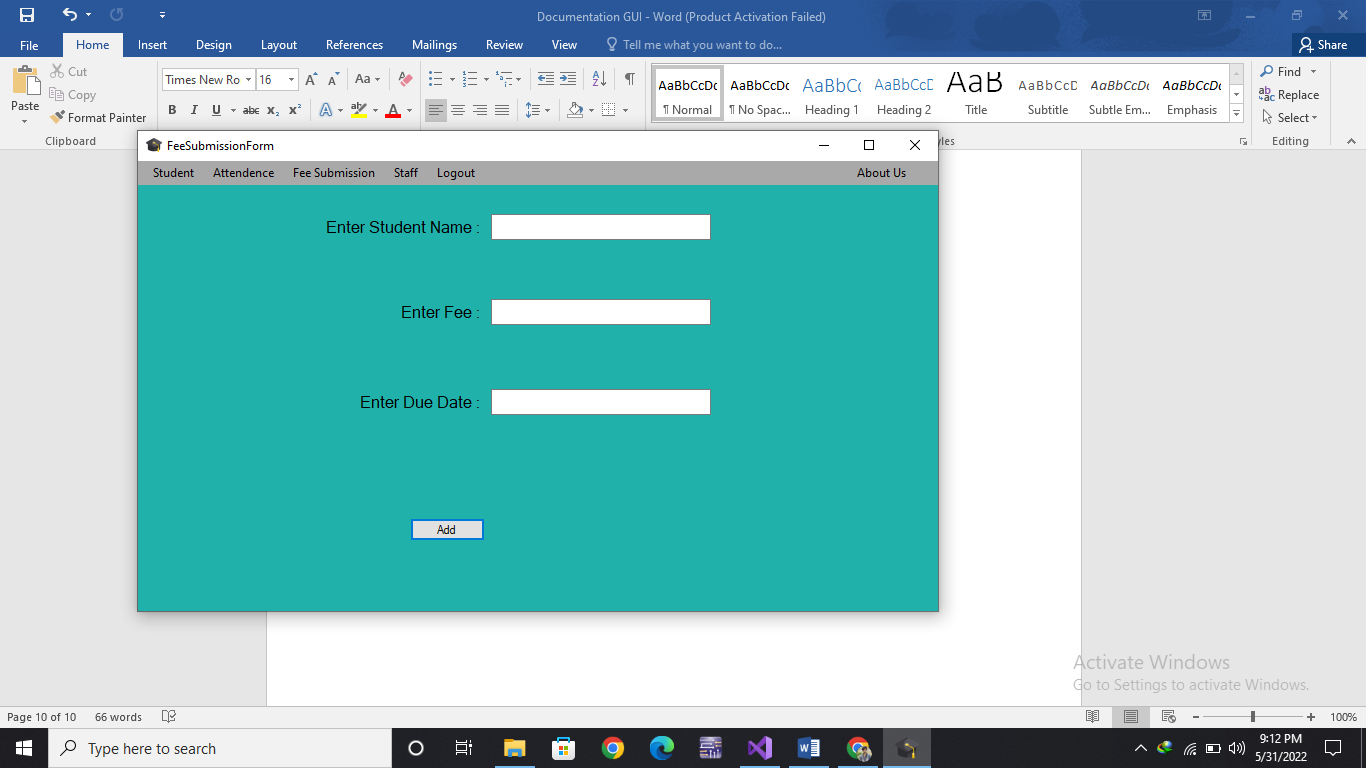
Add Attendance:



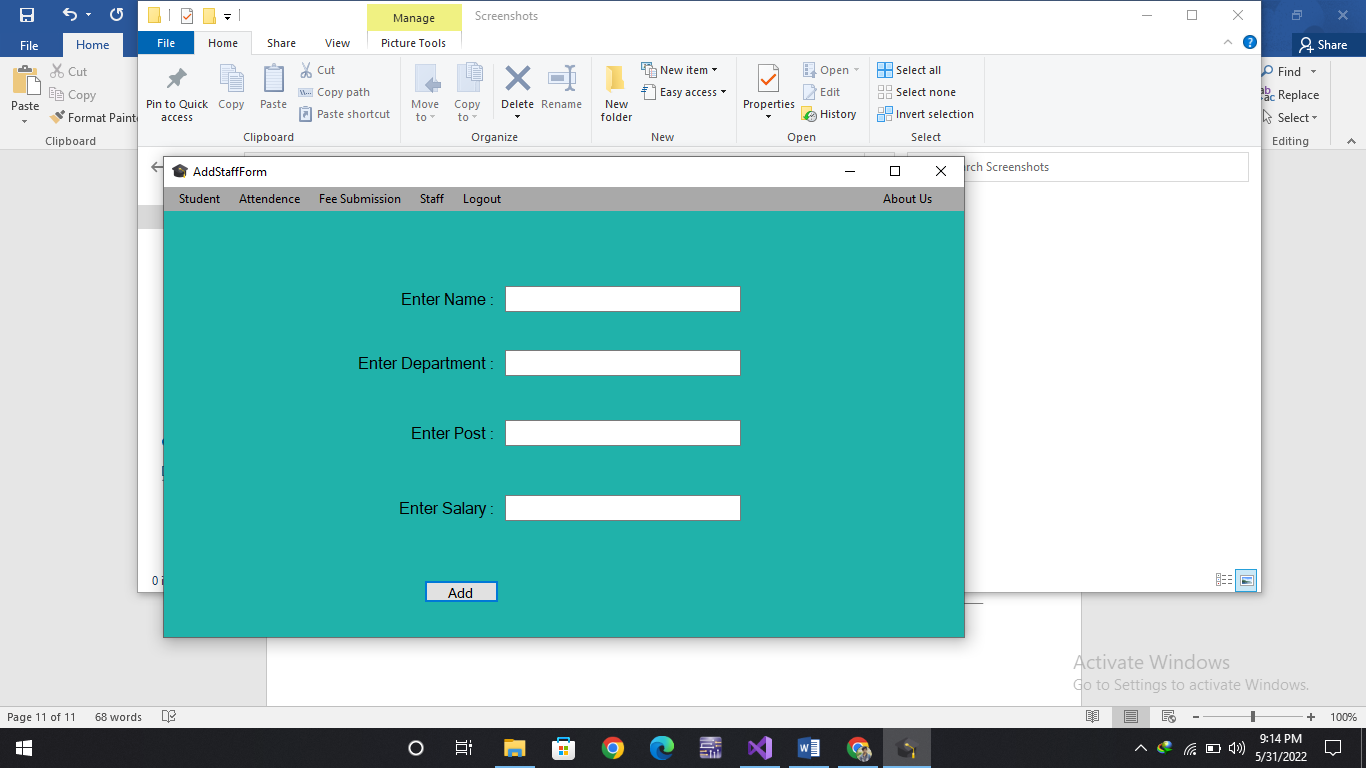
View Attendance:

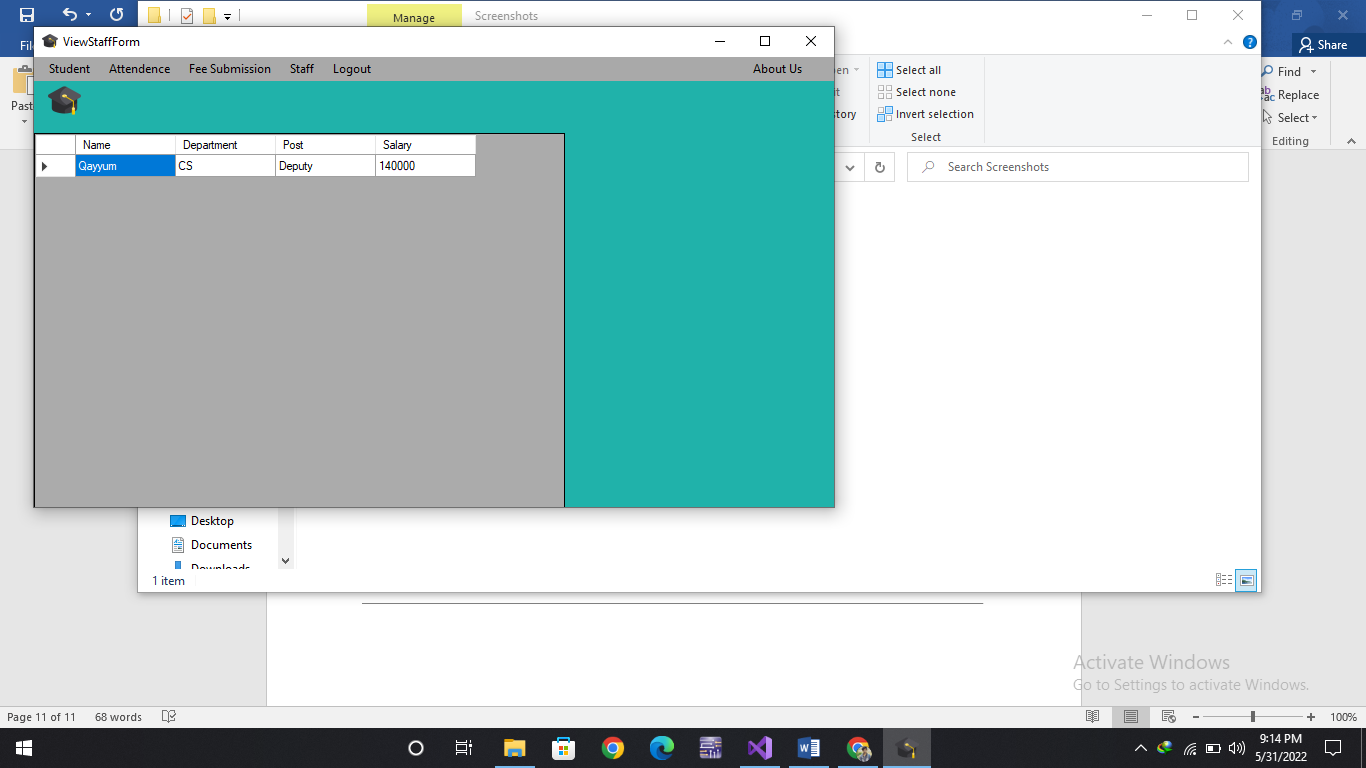


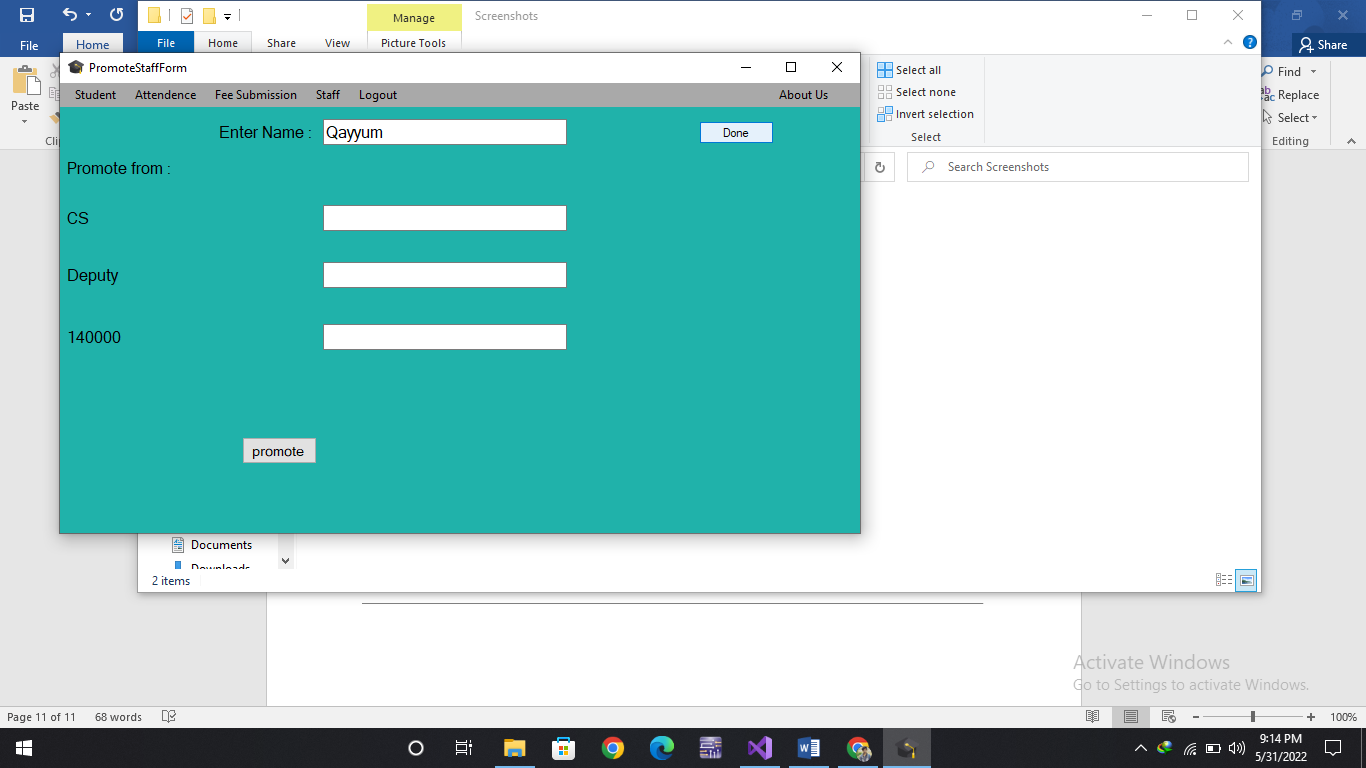
Fee Submission:



Add Staff:

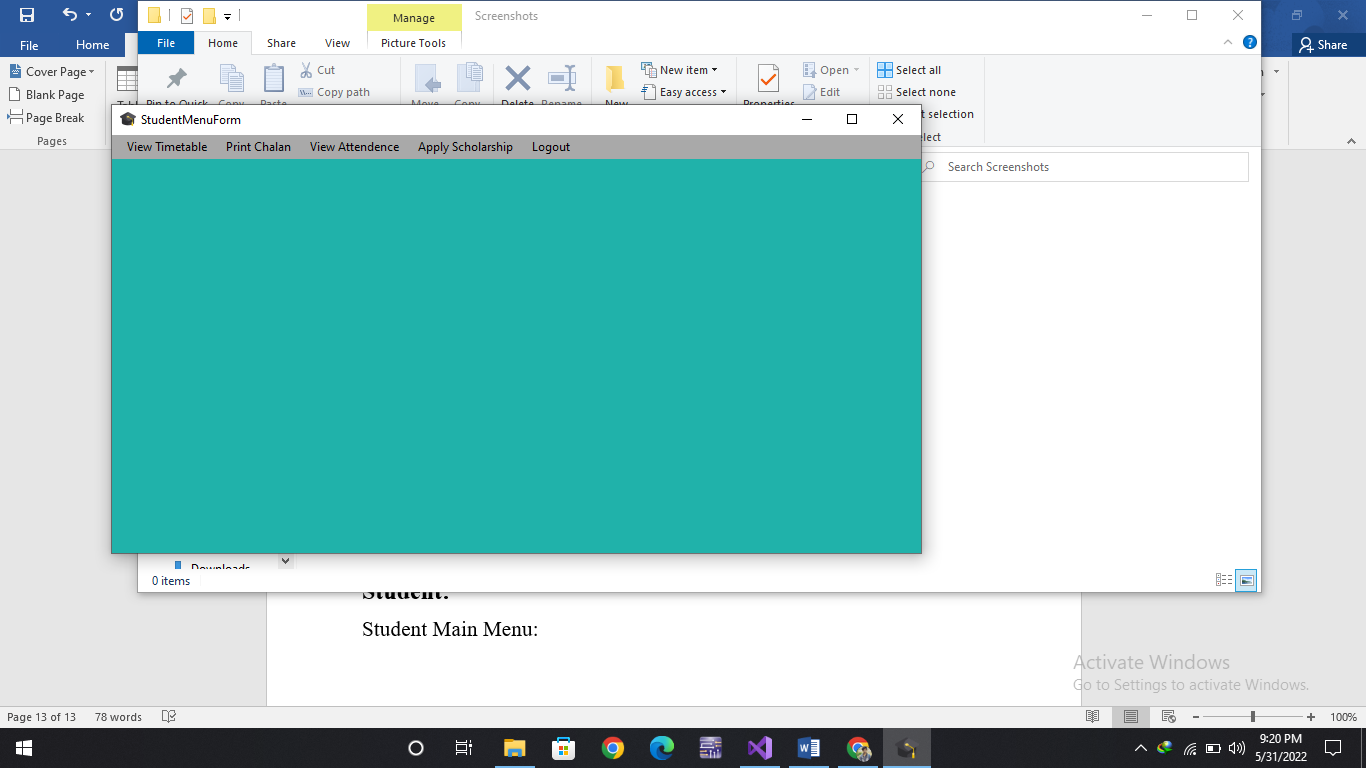


View Staff:  


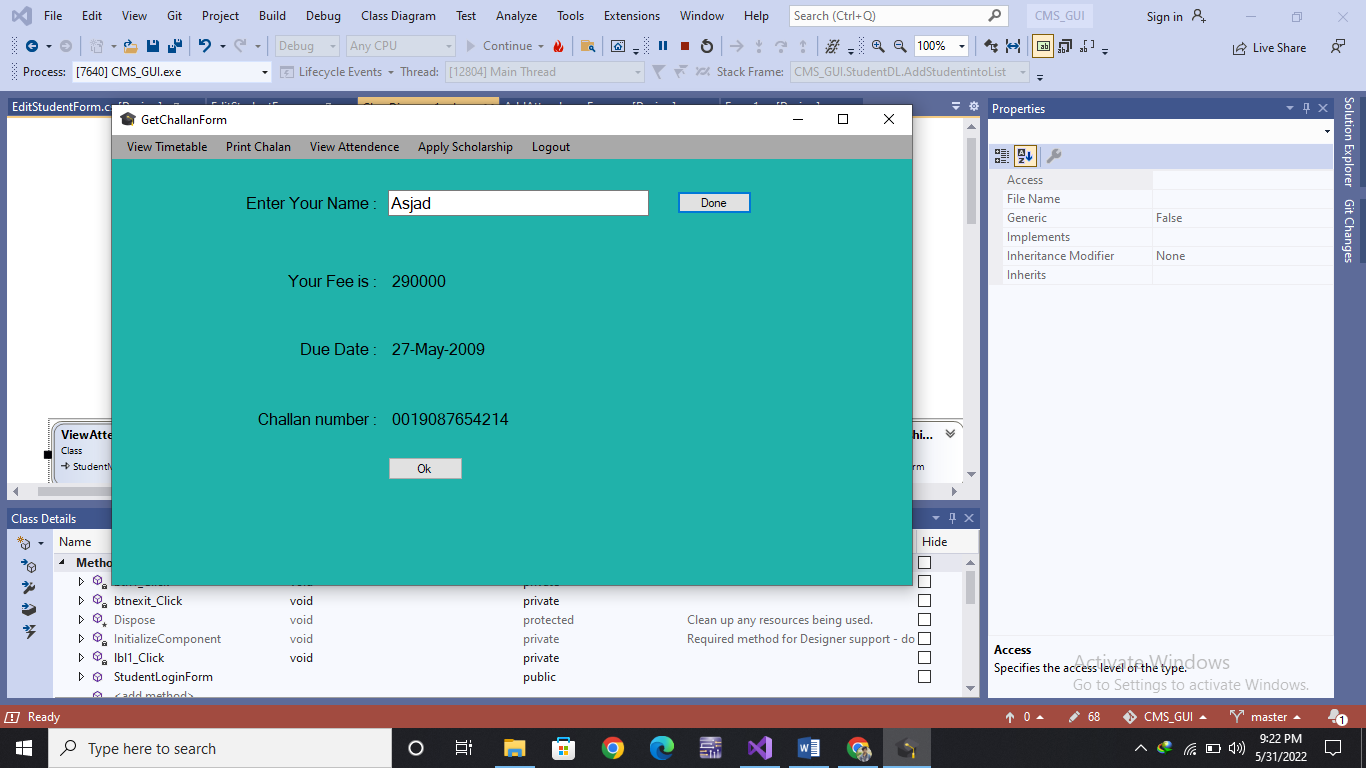
Promote staff:  


**Student:**

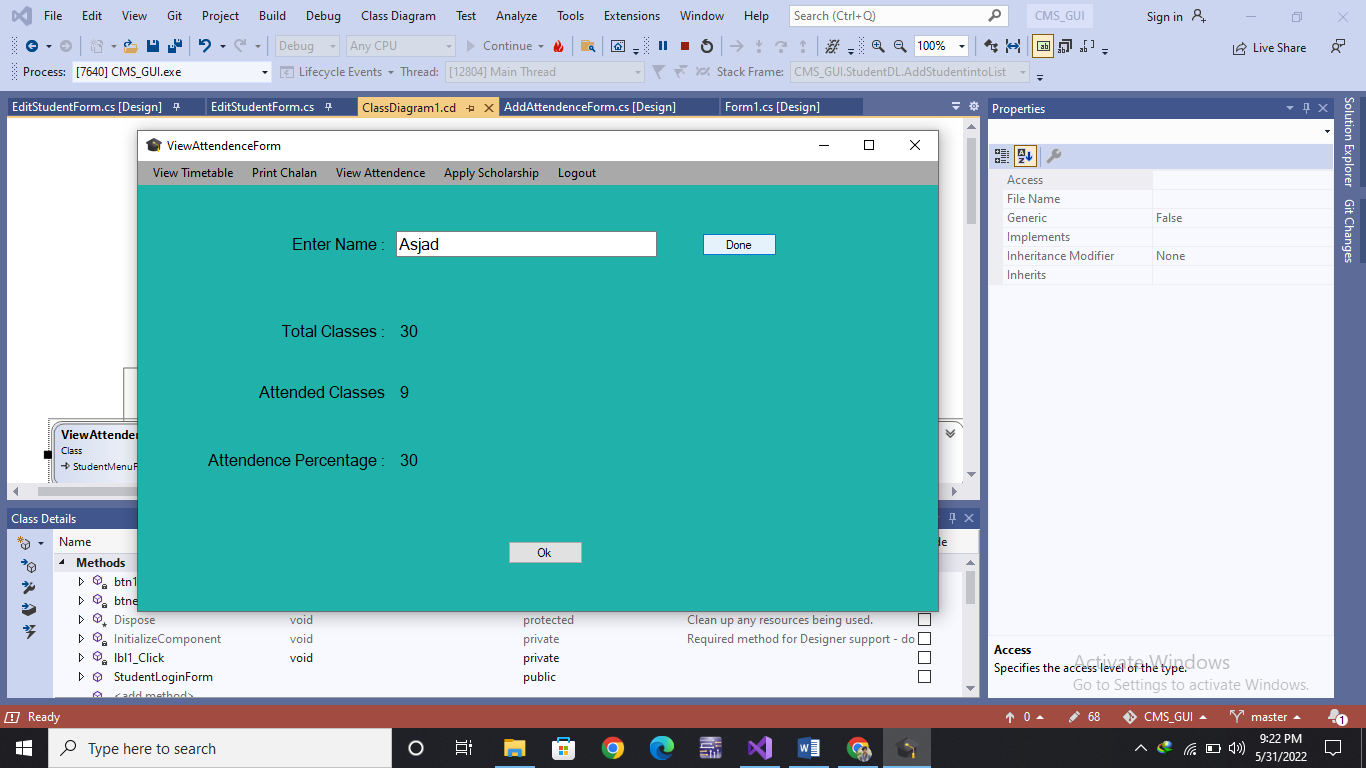
Student Main Menu:



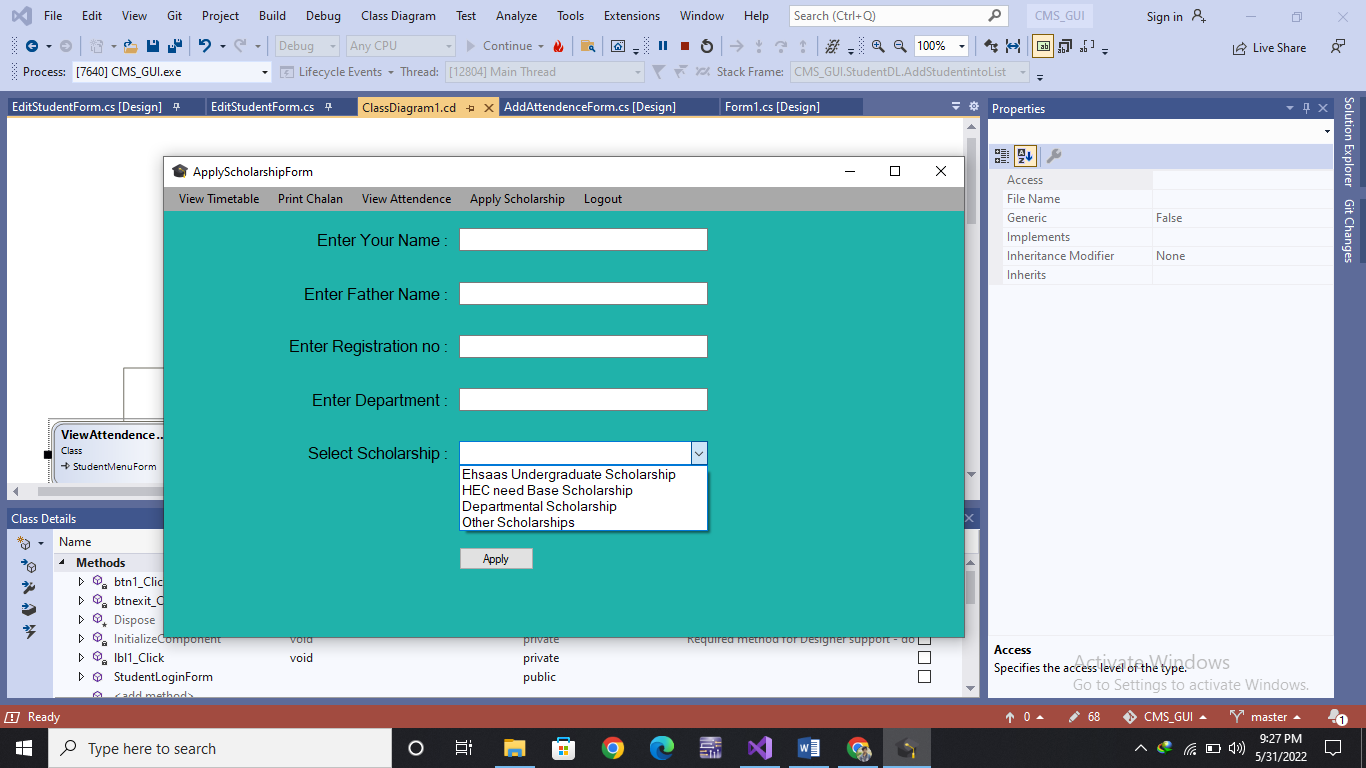
Print Challan:



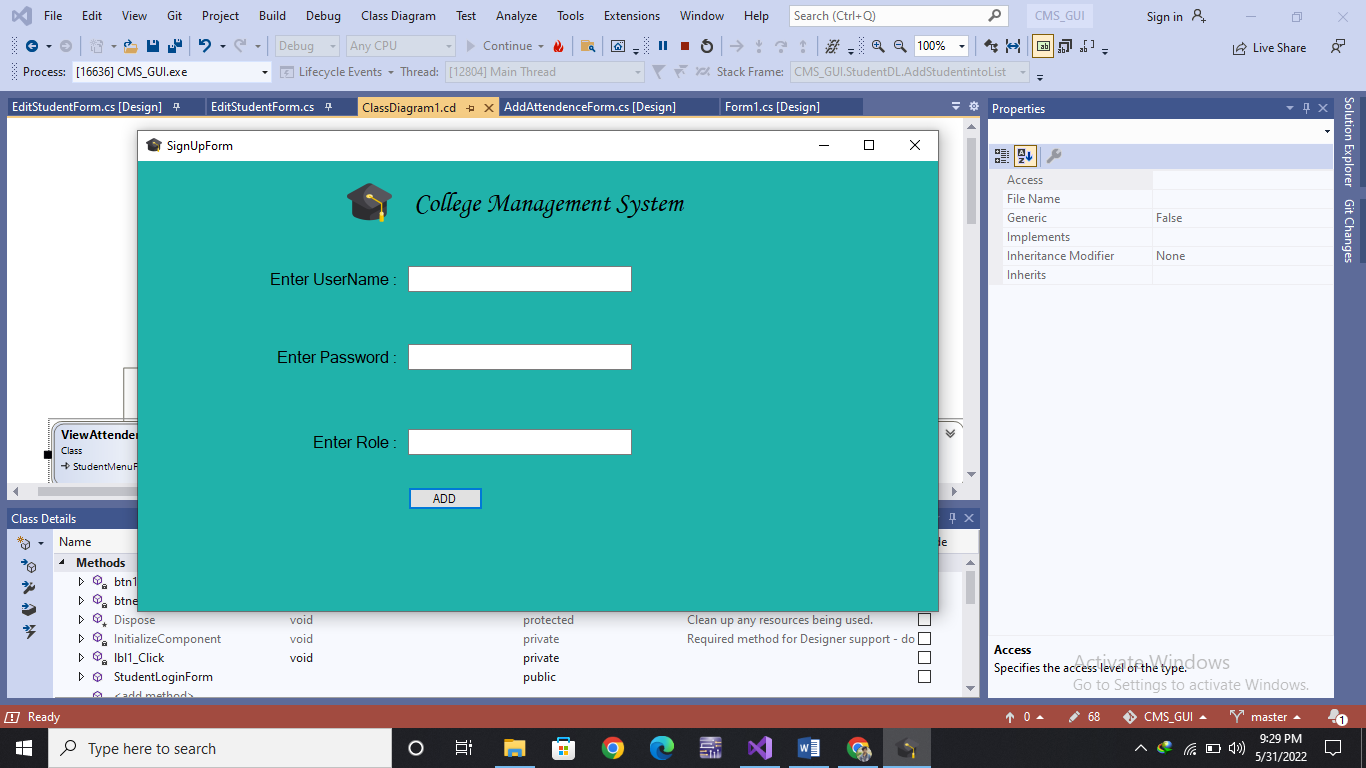
View Attendance:



Apply Scholarship:



Signup:



**Complete Code:**

UserBL:

class User

{

protected string userName;

protected string userPassword;

public User(string userName, string userPassword)

{

this.userName = userName;

this.userPassword = userPassword;

}

public string getuserName()

{

return userName;

}

public string getuserPassword()

{

return userPassword;

}

public virtual string getRole()

{

return "undefined";

}

}

Admin:

class admin : User

{

private string role;

public admin(string userName, string userPassword, string role) : base(userName, userPassword)

{

this.role = role;

}

public override string getRole()

{

return role;

}

public void setRole(string role)

{

this.role = role;

}

}

UserStudent:

class UserStudent : User

{

private string role;

public UserStudent(string userName, string userPassword, string role) : base(userName, userPassword)

{

this.role = role;

}

public override string getRole()

{

return role;

}

public void setRole(string role)

{

this.role = role;

}

}

UserDL:

class UserDL

{

private static List<User> userList = new List<User>();

internal static List<User> UserList { get => userList; set => userList = value; }

public static void AddIntoList(User s)

{

UserList.Add(s);

}

public static void StoreUserIntoFile()

{

StreamWriter f = new StreamWriter(Path.UserPath);

foreach(User u in UserList)

{

f.WriteLine("{0},{1},{2}",u.getuserName(),u.getuserPassword(),u.getRole());

}

f.Flush();

f.Close();

}

public static void LoadUser()

{

StreamReader f = new StreamReader(Path.UserPath);

string record;

while((record = f.ReadLine()) != null)

{

string[] splittedrecord = record.Split(',');

string userName = splittedrecord[0];

string userPassword = splittedrecord[1];

string role = splittedrecord[2];

if(role == "admin")

{

admin u = new admin(userName, userPassword, "admin");

UserDL.AddIntoList(u);

}

else

{

UserStudent u = new UserStudent(userName, userPassword, "student");

UserDL.AddIntoList(u);

}

}

f.Close();

}

public static bool isValid(string username)

{

for(int i = 0; i < username.Length; i++)

{

if (username[i] == '@')

{

return true;

}

}

return false;

}

}

StudentBL:

class student

{

private string name;

private float marks;

private int rollno;

private int class\_;

private int attendedclasses;

private float fee;

private string duedate;

private double Percertage;

public string Name { get => name; set => name = value; }

public float Marks { get => marks; set => marks = value; }

public int Rollno { get => rollno; set => rollno = value; }

public int Class\_ { get => class\_; set => class\_ = value; }

public int Attendedclasses { get => attendedclasses; set => attendedclasses = value; }

public string Duedate { get => duedate; set => duedate = value; }

public double Percertage1 { get => Percertage; set => Percertage = value; }

public student(string name, float marks, int rollno, int class\_, float fee)

{

this.Name = name;

this.Marks = marks;

this.Rollno = rollno;

this.Class\_ = class\_;

this.Attendedclasses = 0;

this.fee = 0;

this.Duedate = "";

this.fee = fee;

Percertage1 = getMarksPercentage(marks);

}

public student(string name, float marks, int rollno, int class\_, float fee , int attendedclasses , string duedate)

{

this.Name = name;

this.Marks = marks;

this.Rollno = rollno;

this.Class\_ = class\_;

this.Attendedclasses = attendedclasses;

this.fee = fee;

this.Duedate = duedate;

Percertage1 = getMarksPercentage(marks);

}

StudentDL:

class StudentDL

{

private static List<student> studentList = new List<student>();

internal static List<student> StudentList { get => studentList; set => studentList = value; }

public static void AddStudentintoList(student s)

{

studentList.Add(s);

}

public static bool EnterAttendence(string name , int attendedClasses)

{

foreach(student s in studentList)

{

if (s.getName() == name)

{

s.setAttendedClasses(attendedClasses);

return true;

}

}

return false;

}

public static bool AddFee(string name , float fee, string duedate)

{

foreach(student s in studentList)

{

if(s.getName() == name)

{

s.setFee(fee);

s.setDuedate(duedate);

return true;

}

}

return false;

}

public static void StoreStudentIntoFile()

{

StreamWriter f = new StreamWriter(Path.StudentPath);

foreach(student s in studentList)

{

f.WriteLine("{0},{1},{2},{3},{4},{5},{6}",s.getName(), s.getMarks(), s.getRollno(), s.getclass\_(), s.GetFee(),s.getAttendedClasses(),s.getDuedate()) ;

}

f.Flush();

f.Close();

}

public static void LoadstudentsFromFile()

{

StreamReader f = new StreamReader(Path.StudentPath);

string record;

while((record = f.ReadLine()) != null)

{

string[] splittedrecord = record.Split(',');

string name = splittedrecord[0];

float marks = float.Parse(splittedrecord[1]);

int rollno = int.Parse(splittedrecord[2]);

int class\_ = int.Parse(splittedrecord[3]);

float fee = float.Parse(splittedrecord[4]);

int attendedclasses = int.Parse(splittedrecord[5]);

string duedate = splittedrecord[6];

student s = new student(name,marks,rollno,class\_,fee,attendedclasses,duedate);

studentList.Add(s);

}

f.Close();

}

public static bool DeleteStudentForm(string name)

{

for(int i = 0; i < studentList.Count; i++)

{

if(studentList[i].Name == name)

{

studentList.RemoveAt(i);

return true;

}

}

return false;

}

public static student GetStudentObject(string name)

{

foreach(student s in studentList)

{

if(s.Name == name)

{

return s;

}

}

return null;

}

}

StaffBL:

class StaffBL

{

private string name;

private string department;

private string post;

private float salary;

public StaffBL(string name,string department,string post,float salary)

{

this.name = name;

this.department = department;

this.post = post;

this.salary = salary;

}

public string Name { get => name; set => name = value; }

public string Department { get => department; set => department = value; }

public string Post { get => post; set => post = value; }

public float Salary { get => salary; set => salary = value; }

}

StaffDL:

class StaffDL

{

private static List<StaffBL> staffList = new List<StaffBL>();

internal static List<StaffBL> StaffList { get => staffList; set => staffList = value; }

public static void AddStaffIntoList(StaffBL s)

{

staffList.Add(s);

}

public static void storeStaffIntoFile()

{

StreamWriter f = new StreamWriter(Path.StaffPath);

foreach(StaffBL s in staffList)

{

f.WriteLine("{0},{1},{2},{3}",s.Name,s.Department,s.Post,s.Salary);

}

f.Flush();

f.Close();

}

public static void LoadStaffFormFile()

{

StreamReader f = new StreamReader(Path.StaffPath);

string record;

while ((record = f.ReadLine()) != null)

{

string[] splittedrecord = record.Split(',');

string name = splittedrecord[0];

string department = splittedrecord[1];

string post = splittedrecord[2];

float salary = float.Parse(splittedrecord[3]);

StaffBL s = new StaffBL(name,department,post,salary);

staffList.Add(s);

}

f.Close();

}

}

MainForm:

public Main()

{

UserDL.LoadUser();

StudentDL.LoadstudentsFromFile();

StaffDL.LoadStaffFormFile();

InitializeComponent();

}

private void tableLayoutPanel1\_Paint(object sender, PaintEventArgs e)

{

}

private void btn1\_Click(object sender, EventArgs e)

{

this.Hide();

AdminLoginForm f = new AdminLoginForm();

f.Show();

}

private void btn3\_Click(object sender, EventArgs e)

{

this.Hide();

SignUpForm f = new SignUpForm();

f.Show();

}

private void btn2\_Click(object sender, EventArgs e)

{

this.Hide();

StudentLoginForm f = new StudentLoginForm();

f.Show();

}

private void btn4\_Click(object sender, EventArgs e)

{

UserDL.StoreUserIntoFile();

StudentDL.StoreStudentIntoFile();

StaffDL.storeStaffIntoFile();

this.Hide();

}

SignUp Form:

public partial class SignUpForm : Form

{

public SignUpForm()

{

InitializeComponent();

}

private void btn1\_Click(object sender, EventArgs e)

{

string userName = txt1.Text;

string userPassword = txt2.Text;

string role = txt3.Text;

if (UserDL.isValid(userName))

{

if(role == "admin")

{

admin user = new admin(userName,userPassword,role);

UserDL.AddIntoList(user);

}

else if(role == "student")

{

UserStudent user = new UserStudent(userName,userPassword,role);

UserDL.AddIntoList(user);

}

else

{

MessageBox.Show("Invalid");

}

this.Hide();

Main f = new Main();

f.Show();

}

else

{

MessageBox.Show("Invalid Username");

}

}

AdminLoginForm:

public partial class AdminLoginForm : Form

{

public AdminLoginForm()

{

InitializeComponent();

}

private void btn1\_Click(object sender, EventArgs e)

{

string userName = txt1.Text;

string userPassword = txt2.Text;

bool flag = false;

foreach (User u in UserDL.UserList)

{

if (u.getuserName() == userName && u.getuserPassword() == userPassword && u.getRole() == "admin")

{

AdminMenuForm f = new AdminMenuForm();

this.Hide();

f.Show();

flag = true;

break;

}

}

if (flag == false)

{

MessageBox.Show("Invalid User");

}

}

private void AdminLoginForm\_Load(object sender, EventArgs e)

{

}

private void btnexit\_Click(object sender, EventArgs e)

{

this.Close();

Main f = new Main();

f.Show();

}

}

AdminMenuForm:

private void viewStudentToolStripMenuItem\_Click(object sender, EventArgs e)

{

ViewAllStudentsForm f = new ViewAllStudentsForm();

this.Hide();

f.Show();

}

private void addStudentToolStripMenuItem\_Click\_2(object sender, EventArgs e)

{

this.Hide();

AddStudentForm f = new AddStudentForm();

f.Show();

}

private void addAttendenceToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Hide();

AddAttendenceForm f = new AddAttendenceForm();

f.Show();

}

private void feeSubmissionToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Hide();

FeeSubmissionForm f = new FeeSubmissionForm();

f.Show();

}

private void logoutToolStripMenuItem\_Click\_1(object sender, EventArgs e)

{

this.Hide();

Main f = new Main();

f.Show();

}

private void addStaffToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Hide();

AddStaffForm f = new AddStaffForm();

f.Show();

}

private void promoteStaffToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Hide();

PromoteStaffForm f = new PromoteStaffForm();

f.Show();

}

private void pictureBox1\_Click(object sender, EventArgs e)

{

}

private void viewStudentToolStripMenuItem\_Click\_1(object sender, EventArgs e)

{

this.Hide();

ViewAllStudentsForm f = new ViewAllStudentsForm();

f.Show();

}

private void menuStrip1\_ItemClicked(object sender, ToolStripItemClickedEventArgs e)

{

}

private void viewAttendenceToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Hide();

AdminViewAttendenceForm f = new AdminViewAttendenceForm();

f.Show();

}

private void viewStaffToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Close();

ViewStaffForm f = new ViewStaffForm();

f.Show();

}

private void deleteStudentToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Close();

DeleteStudentForm f = new DeleteStudentForm();

f.Show();

}

private void editStudentToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Close();

EditStudentForm f = new EditStudentForm();

f.Show();

}

AddStudentForm:

public partial class AddStudentForm : AdminMenuForm

{

public AddStudentForm()

{

InitializeComponent();

}

private void AddStudentForm\_Load(object sender, EventArgs e)

{

}

private void btn1\_Click(object sender, EventArgs e)

{

string name = txt1.Text;

int rollno = int.Parse(txt2.Text);

float matric = float.Parse(txt3.Text);

int class\_ = int.Parse(txt4.Text);

student s = new student(name,matric,rollno,class\_,0);

StudentDL.AddStudentintoList(s);

MessageBox.Show("student Added");

AdminMenuForm f = new AdminMenuForm();

this.Hide();

f.Show();

}

EditStudentForm:

public partial class EditStudentForm : AdminMenuForm

{

student s;

public EditStudentForm()

{

InitializeComponent();

}

private void EditStudentForm\_Load(object sender, EventArgs e)

{

}

private void label1\_Click(object sender, EventArgs e)

{

}

private void btnDone\_Click(object sender, EventArgs e)

{

string Name = txtName.Text;

s = StudentDL.GetStudentObject(Name);

lblOname.Text = s.Name;

lblOrollno.Text = s.Rollno.ToString();

lblOMarks.Text = s.Marks.ToString();

lblOclass.Text = s.Class\_.ToString();

}

private void btnOk\_Click(object sender, EventArgs e)

{

s.Name = txtName.Text;

s.Rollno = int.Parse(txtNrollno.Text);

s.Marks = float.Parse(txtNmarks.Text);

s.Class\_ = int.Parse(txtNclass.Text);

this.Close();

AdminMenuForm f = new AdminMenuForm();

f.Show();

}

}

DeleteStudentForm:

public partial class DeleteStudentForm : AdminMenuForm

{

public DeleteStudentForm()

{

InitializeComponent();

}

private void DeleteStudentForm\_Load(object sender, EventArgs e)

{

}

private void btndelete\_Click(object sender, EventArgs e)

{

string Name = txtName.Text;

bool flag = StudentDL.DeleteStudentForm(Name);

if (flag)

{

MessageBox.Show("Student Deleted Succesfully");

}

else

{

MessageBox.Show("Invalid");

}

this.Close();

AdminMenuForm f = new AdminMenuForm();

f.Show();

}

}

AddAttendenceForm:

public partial class AddAttendenceForm : AdminMenuForm

{

public AddAttendenceForm()

{

InitializeComponent();

}

private void AddAttendenceForm\_Load(object sender, EventArgs e)

{

}

private void btn1\_Click(object sender, EventArgs e)

{

string Name = txt1.Text;

int attendedclasses = int.Parse(txt2.Text);

bool flag = StudentDL.EnterAttendence(Name,attendedclasses);

if (flag)

{

MessageBox.Show("Attendence Added");

}

else

{

MessageBox.Show("Invalid Student Name");

}

this.Hide();

AdminMenuForm f = new AdminMenuForm();

f.Show();

}

}

AdminViewAttendenceForm:

public partial class AdminViewAttendenceForm : AdminMenuForm

{

public AdminViewAttendenceForm()

{

InitializeComponent();

}

private void AdminViewAttendenceForm\_Load(object sender, EventArgs e)

{

}

private void button1\_Click(object sender, EventArgs e)

{

string name = txt1.Text;

student s = StudentDL.GetStudentObject(name);

lbl5.Text = "30";

lbl6.Text = s.getAttendedClasses().ToString();

lbl7.Text = s.getAttendencePercentage().ToString();

}

private void btn2\_Click(object sender, EventArgs e)

{

this.Hide();

StudentMenuForm f = new StudentMenuForm();

f.Show();

f.Show();

}

}

Fee Submission Form:  
 public partial class FeeSubmissionForm : AdminMenuForm

{

public FeeSubmissionForm()

{

InitializeComponent();

}

private void FeeSubmissionForm\_Load(object sender, EventArgs e)

{

}

private void btn1\_Click(object sender, EventArgs e)

{

string name = txt1.Text;

float fee = float.Parse(txt2.Text);

string DueDate = txt3.Text;

bool flag = StudentDL.AddFee(name,fee,DueDate);

if (flag)

{

MessageBox.Show("Fee Added");

}

else

{

MessageBox.Show("Invalid Student Name");

}

this.Hide();

AdminMenuForm f = new AdminMenuForm();

f.Show();

}

}

Add Staff Form:

public partial class AddStaffForm : AdminMenuForm

{

public AddStaffForm()

{

InitializeComponent();

}

private void AddStaffForm\_Load(object sender, EventArgs e)

{

}

private void btn1\_Click(object sender, EventArgs e)

{

string name = txt1.Text;

string Department = txt2.Text;

string post = txt3.Text;

float salary = int.Parse(txt4.Text);

StaffBL s = new StaffBL(name,Department,post,salary);

StaffDL.AddStaffIntoList(s);

MessageBox.Show("Action Completed");

this.Hide();

AdminMenuForm f = new AdminMenuForm();

f.Show();

}

}

Promote Staff Form:

public partial class PromoteStaffForm : AdminMenuForm

{

public PromoteStaffForm()

{

InitializeComponent();

}

private void PromoteStaffForm\_Load(object sender, EventArgs e)

{

}

private void tableLayoutPanel1\_Paint(object sender, PaintEventArgs e)

{

}

private void btn2\_Click(object sender, EventArgs e)

{

string name = txt1.Text;

foreach (StaffBL s in StaffDL.StaffList)

{

if(s.Name == name)

{

lbl3.Text = s.Department;

lbl4.Text = s.Post;

lbl5.Text = s.Salary.ToString();

}

}

}

private void btn1\_Click(object sender, EventArgs e)

{

string name = txt1.Text;

bool flag = false;

foreach (StaffBL s in StaffDL.StaffList)

{

if (s.Name == name)

{

s.Department = txt2.Text;

s.Post = txt3.Text;

s.Salary = float.Parse(txt4.Text);

flag = true;

}

}

if (flag)

{

MessageBox.Show("Action Completed");

}

else

{

MessageBox.Show("invalid");

}

this.Hide();

AdminMenuForm f = new AdminMenuForm();

f.Show();

}

}

Student Menu Form:

public partial class StudentMenuForm : Form

{

public StudentMenuForm()

{

InitializeComponent();

}

private void viewTimetableToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Hide();

}

private void printChalanToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Hide();

GetChallanForm f = new GetChallanForm();

f.Show();

}

private void viewAttendenceToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Hide();

ViewAttendenceForm f = new ViewAttendenceForm();

f.Show();

}

private void applyScholarshipToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Hide();

ApplyScholarshipForm f = new ApplyScholarshipForm();

f.Show();

}

private void menuStrip1\_ItemClicked(object sender, ToolStripItemClickedEventArgs e)

{

}

private void StudentMenuForm\_Load(object sender, EventArgs e)

{

}

private void logoutToolStripMenuItem\_Click(object sender, EventArgs e)

{

this.Hide();

Main f = new Main();

f.Show();

}

}

Print Challan:

public partial class GetChallanForm : StudentMenuForm

{

public GetChallanForm()

{

InitializeComponent();

}

private void GetChallanForm\_Load(object sender, EventArgs e)

{

}

private void btn1\_Click(object sender, EventArgs e)

{

}

private void btn1\_Click\_1(object sender, EventArgs e)

{

string name = txt1.Text;

student s = StudentDL.GetStudentObject(name);

lbl5.Text = s.GetFee().ToString();

lbl6.Text = s.getDuedate();

lbl7.Text = "0019087654214";

}

private void btn2\_Click(object sender, EventArgs e)

{

this.Hide();

StudentMenuForm f = new StudentMenuForm();

f.Show();

}

}

}

View Attendance:

public partial class ViewAttendenceForm : StudentMenuForm

{

public ViewAttendenceForm()

{

InitializeComponent();

}

private void ViewAttendenceForm\_Load(object sender, EventArgs e)

{

}

private void btn1\_Click(object sender, EventArgs e)

{

string name = txt1.Text;

student s = StudentDL.GetStudentObject(name);

lbl5.Text = "30";

lbl6.Text = s.getAttendedClasses().ToString();

lbl7.Text = s.getAttendencePercentage().ToString();

}

private void btn2\_Click(object sender, EventArgs e)

{

this.Hide();

StudentMenuForm f = new StudentMenuForm();

f.Show();

}

}

Apply Scholarship:  
public partial class ApplyScholarshipForm : StudentMenuForm

{

public ApplyScholarshipForm()

{

InitializeComponent();

}

private void ApplyScholarshipForm\_Load(object sender, EventArgs e)

{

}

private void btn1\_Click(object sender, EventArgs e)

{

this.Hide();

Main f = new Main();

MessageBox.Show("Applied Successfully");

f.Show();

}

}