

Student Attendance Management System by Using Bar code

A Project Report

Submitted in partial fulfillment of the Requirements for the award of the Degree
of

MSc. Information Technology
By

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Seat No.: (4135762)



DEPARTMENT OF INFORMATION TECHNOLOGY

Chembur-Trombay Education Society's

N. G Acharya & D. K. Marathe College

Of Arts, Commerce, Science & Professional Courses

N.G Acharya Marg, Chembur (E), Mumbai-400071.

Academic Year
2022-2023

N. G. ACHARYA & D. K. MARATHE COLLEGE

(Affiliated to University of Mumbai)

MUMBAI – MAHARASHTRA - 400071

Semester- III

DEPARTMENT OF INFORMATION TECHNOLOGY



CERTIFICATE

This is to certify that Sangame Devanand Ekanathrao bearing Seat No: 4135762 submitted journal of **Project Implementation and viva** in partial Fulfillment of the requirements for the award of Degree of MASTER OF SCIENCE in INFORMATION TECHNOLOGY from University of Mumbai.

Internal Guide

Coordinator

External Examiner

Date:

College Seal

ABSTRACT

The Project is a System that takes down Student's Attendance using Barcode. Every Student is provided with a card containing a unique Barcode. Each Barcode represents a unique ID of Students. Students just have to Scan their ID Cards using Barcode Scanner and the system notes down their Attendance as per dates. System then stores all the Student's Attendance records and Generates Defaulter List. It also Generates an overall report for Admin and Staff. Such kind of Application is very useful in Schools as well as in Colleges for daily Attendance.

DECLARATION

I hereby declare that the project entitled, “**Student Attendance Management System by using Barcode**” done at **N. G Acharya & D. K. Marathe College Chembur** has not been in any case duplicated to submit to any other university for the award of any degree. To the best of my knowledge other than me, no one has submitted to any other university.

The project is done in partial fulfilment of the requirements for the award of degree of **MASTERS OF SCIENCE IN (INFORMATION TECHNOLOGY)** to be submitted as final semester project as part of our curriculum.

Name and Signature of the Student


Devanand Ekanathrao Sangame

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TBL_ADMIN_LOGIN

	Column Name	Data Type	Allow Nulls
	Username	varchar(10)	<input type="checkbox"/>
	Password	nvarchar(14)	<input type="checkbox"/>
			<input type="checkbox"/>


TBL_STAFF_DETAILS

	Column Name	Data Type	Allow Nulls
	STF_ID	int	<input type="checkbox"/>
	STF_NAME	varchar(30)	<input type="checkbox"/>
	STF_USERNAME	varchar(10)	<input type="checkbox"/>
	STF_PASSWORD	nvarchar(14)	<input type="checkbox"/>
	STF_GENDER	varchar(10)	<input type="checkbox"/>
	DEPT_NAME	varchar(30)	<input type="checkbox"/>
	STF_MAIL_ID	varchar(100)	<input type="checkbox"/>
	STF_MOBILE_NO	varchar(10)	<input type="checkbox"/>
	STF_ADDRESS	varchar(100)	<input type="checkbox"/>
			<input type="checkbox"/>


TBL_DEPARTMENT

	Column Name	Data Type	Allow Nulls
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	HOD_NAME	varchar(50)	<input type="checkbox"/>
	HOD_MOBILE_NO	varchar(10)	<input type="checkbox"/>
	HOD_MAIL_ID	varchar(100)	<input type="checkbox"/>
			<input type="checkbox"/>


TBL_STUDENT_DETAILS

	Column Name	Data Type	Allow Nulls
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	STD_NAME	varchar(50)	<input type="checkbox"/>
	STD_ROLL_NO	varchar(10)	<input type="checkbox"/>
	CLASS_NAME	varchar(20)	<input type="checkbox"/>
	DEPT_NAME	varchar(30)	<input type="checkbox"/>
	STD_GENDER	varchar(10)	<input type="checkbox"/>
	STD_MOBILE_NO	varchar(10)	<input type="checkbox"/>
	STD_MAIL_ID	varchar(100)	<input type="checkbox"/>
	STD_ADDRESS	varchar(100)	<input type="checkbox"/>
			<input type="checkbox"/>

TBL_ATTENDANCE_DETAILS

	Column Name	Data Type	Allow Nulls
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	DATE	datetime	<input type="checkbox"/>
	ATD_STATUS	varchar(20)	<input type="checkbox"/>
	STD_NAME	varchar(50)	<input type="checkbox"/>
	STD_ROLL_NO	varchar(10)	<input type="checkbox"/>
	CLASS_NAME	varchar(20)	<input type="checkbox"/>
			<input type="checkbox"/>

TBL_REPORT_DETAILS

	Column Name	Data Type	Allow Nulls
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	STD_ROLL_NO	varchar(20)	<input type="checkbox"/>
	STD_NAME	varchar(50)	<input type="checkbox"/>
	CLASS_NAME	varchar(20)	<input type="checkbox"/>
	DATE	datetime	<input type="checkbox"/>
	TOTAL_SESSION	int	<input type="checkbox"/>
	TOTAL_ATTEND	int	<input type="checkbox"/>
	STATUS	varchar(50)	<input type="checkbox"/>
			<input type="checkbox"/>

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INTRODUCTION

Student Attendance Online System using bar code reader is one way where the lecturer does not need to use the attendance form to make sure that the students are present that day.

- The purpose for the system is same as ID card that being used nowadays. This system provides with bar code reader which located in front of the class and each student should insert their Card that already has a bar code by their own.
- Bar code reader acts as scanner whereby the function is to scan then compares the Student ID with the database and if the students are present that day, so that the attendance will search and save into the database.
- After the student have been inserted their id card, all the field related such as Student Name, Code of Subject, Subject, Time, Lecturer Name, Class Section, and Location are entered to the database directly.
- Thus, the lecturer can detect all the late comers and absent student that will be view on the system. After the class has been finished, the lecturer can view the student attendance system that has been saved in the faculty server.
- This online attendance system can be accessed by the administrator and staff. The system is fully controlled by administrator about the staffs profile, student information and student attendance. The administrator can add new student, add new staff, view staff and student profile and view the student the student attendance report.
- The student attendance system is protected by password, so that the administrator and the staff should key in their username and password to login the system. For the new administrator and staff, they need to register first before they want to enter the student attendance system. Also they can change their old password to a new one. The staff can view staff profile, search staff attendance report.
- This system also provide the complete report whereby the administrator and the staff can print a hardcopy of the student profile and student attendance, so they just click at the button 'print report' then the report which exactly in the database will be print.

Background

- Current System As we can see now, all the attendances are keep in form of paper that the student must sign it manually.
- This is not a systematic method where the form can be lost and may be damaged.

- The lecturer also must put the form in any files folders that it needs some spaces to put in rack or cabinet.
- The manual system does not provide a security because other student also can sign the attendance form.
- Sometimes the lecturer forgot to make the student attendance. Thus, an absent student can cheat the lecturer by not attending the class.
- Thus, the Student Attendance Online System using bar code reader is the best solutions on how we can keep the data more efficient and safety.
- The data is always being updated in the database and the report can be viewed and be printed by the administrator and staff whenever they want.

Objective

The objectives of this Student Online Attendance System using bar code reader are:

- i. To develop a system for Student Attendance using bar code reader for any school, college and institute.
- ii. To minimize the student cheating by asking their friends to sign the attendance form.
- iii. Can reduce time and the database report can be viewed and be printed immediately by the lecturer. Thus, the system is more efficient.

Purpose, Scope and Applicability:

Purpose:

The purpose of developing attendance management system using bar code 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.

Scope:

- i. This student attendance system used an ID card that already provides a bar code on making attendance.
- ii. The bar code is generated by the bar code software that can download it from the Internet sources.
- iii. The student must scan ID card as soon as they entered the class or before starting the lecture.

SURVEY OF TECHNOLOGY

An attendance policy provides the guidelines and expectations for Students attendance at school as defined, written, disseminated, and implemented by the school. Attendance can be recorded in many ways such as using Web based, RFID, Biometrics and Bar code Scanner. Since most of the application developed nowadays requires the World Wide accessibility, Web based system is the most common attendance system that available.

Each class teacher with the class attendance book whereby it arranged in monthly basis . Since the attendance does not involve any system or application, calculation on student attendance and absenteeism remain tedious. Even there is a tendency of wrong calculation due to human error hence it effect the student performance.

AUTOMATED STUDENT ATTENDANCE SYSTEM

While the move towards the digital era is being fast-tracked every day, biometrics technologies have begun to affect people's daily life. Biometrics technologies verify individuality through characteristics such as fingerprints, irises, retinal patterns, palm prints, voice, etc.

These methods which use physical data, are receiving attention as a personal verification method that is more appropriate than conventional. It is important to identify the correct tools to use in marketable and scientific studies. Barcode readers, Radio Frequency Identification (RFID) system, Bluetooth and NFC are just a few of the examples of such tools .

Today, these tools have become cheaper and they can be used in various applications, such as, identification, tracking, positioning, etc. Barcodes and their readers are greatly used in markets to identify the sales product.

1. Fingerprint based Attendance System

The students mark their presence by placing registered finger on the fingerprint scanner. In this case problem is with the fingerprint device, because it gets damaged very recurrently. Again for marking attendance student has to stand in queue and has to wait for turn for the fingerprint device.

This system can be used for student and staff. In this system the fingerprint is taken as a response for attendance management and it is organized into the subsequent modules Pre-processing, Minutiae (smallest) Extraction, Reconstruction, Fingerprint Recognition, Report generation. In this system, novel fingerprint reconstruction algorithm is used.

2. Mobile Based Attendance System

Student information tracking system is being developed in Android to manage student attendance on mobile. This system allows teachers to take attendance, edit attendance, view student's bunks, and send important documents in PDF format such as exam time table, question bank etc. and also helps teaches to inform students about the events that college is going to organize.

This system is mobile independent. This system can be installed on any mobile which is having android as OS. The Problem of this system is it is developed on for Android platform so it cannot run on an iOS or any other mobile OS.

3. RFID based Attendance System

In this system, attendance of a student is marked while entering in a class. The reader is placed at the entrance of a classroom, labs. Each time when student enters a room for lectures RFID tag is scanned and while leaving the respective class again. After scanning the tag, the tag id is being verified from the database at the backend. BIS present a commercial system based on RFID for attendance management for schools and colleges.

The system can send SMS and email alert to parents/guardians of the students automatically. The student will register at the gate by touching RFID device with their RFID tag and send the data to BISAM server in the school. The server will process the attendance data and send a SMS to the parents/guardians of the absentee student through BISAM SMS gateway server.

The system also has Time Manager Software for managing employees' attendance and HR related functionalities. The problem in this exploration is that verification is not done. So proxy attendance may be marked.

4. Iris Based Attendance System

A wireless iris recognition attendance management system is designed and implemented using Daugman's algorithm (Daugman, 2003). This system is based on biometrics and wireless system which solves the difficulty of spurious presence and the trouble of laying the corresponding network.

It can make the users' attendances more easily and effectively. In this paper, Radio Frequency wireless technique is being used for employee ID. It is too expensive. Main problem in this system is it is too expensive and it is very short distance as well as for every class student has to stand in long line of iris scanner for marking presence.

5. Face Recognition based Attendance System

Student attendance is being taken using one of the bio-metric technique. i.e. Face Recognition. Since Iris and Fingerprints are very short-distance biometrics but our application requires a person to be at a medium distance from the camera, which is fixed at the centre of the classroom near the black board, so that the view of the camera covers the entire classroom.

The model is developed with the aid of real time OpenCV(Open Source Computer Vision) library. The proposed system comprised of using the Viola Jones algorithm for detecting the human faces and then the detected face is resized to the required size, this resized face is further processed by using linear stretch contrast enhancement and finally it is recognized using a simple PCA (*Principal Component Analysis*) / LDA (*Linear Discriminant Analysis*).

Once acknowledgment is done, automatically attendance will be updated in an Excel Sheet along with his name, date and time. An html file is automatically updated by our system so that a remote authenticated user can access the attendance file. The main problem in this system is recognized face has to be compared with all the entries stored in the database.

6. Bar code Scanner

The project is a system that takes down students' attendance using barcode. Every student is provided with a card containing a unique barcode. Each barcode represents a unique id of students. Students just have to scan their cards using barcode scanner and the system notes down their attendance as per dates.

System then stores all the students' attendance records and generates defaulter list. It also generates an overall report in excel sheet for admin. Such kind of application is very useful in school as well as in college for daily attendance.

REQUIREMENTS AND ANALYSIS

Problem Definition

Student Attendance Online System using bar code reader is one way where the lecturer does not need to use the attendance form to make sure that the students are present that day.

- This is not a systematic method where the form can be lost and may be damaged.
- The manual system does not provide a security because other student also can sign the attendance form.
- Sometimes the lecturer forgot to make the student attendance. Thus, an absent student can cheat the lecturer by not attending the class.

The proposed system uses barcode method for authenticating students with a unique barcode that represents their unique id. Every student is provided with a card that contains the barcode. Students just have to scan their cards using barcode reader and the system notes down their attendance as per dates. System then stores all the students' attendance records and generates defaulter list and reports for admin. Such kind of application is very useful in school as well as in college for taking daily attendance.

Requirements Specification

1. Adding a New student:

Requirements:

To add a new user to the system, all of them should have registered in the admission office before they can register in their classes. On the orientation day, all students must scan their ID card in the input device for only one time to save the Barcode data in the registration office to sign up.

2. Use the system to attend to classes

Requirements:

When students have a class, they must scan their ID card in the Barcode Scanner input device. If the scan matches, students can enter the class, and they will be checked on the Canvas page. If the scan does not match, the student must check with the registration office to figure out the checking device.

3. Report students

Requirements:

When the students have enrolled in the class, they are now able to check on their current attendance situation through the Canvas page. In the system, they will be shown a page that gives them the whole attendance status in the semester.

4. Faculty receive a report

Requirements:

The system will send a message after ten minutes of the class time to the Faculty . Faculty will have the all students' attendance reports in the particular class. Faculty can modify some of the attendance grades if he/she needs.

5.Students missed classes

Requirements:

When a student misses a class, he/she will receive a message via email and Canvas page. Students must log in to the Canvas page and go to the attendance page to write the reason for missing the class. Students have to submit the form and wait for the response of the faculty's decision.

6.Students missed two classes and more

Requirements:

When students miss more than one class, students will receive a warning message for missing two classes or more. The warning message should be for the missed classes for the whole semester and their status in a danger level.

7. Faculty check the report and the attendance control panel page

Requirements:

Faculty has to check on the report and give the final submission. Faculty has full control of modifying any grades and looking at students who have excuses to modify their grades. Faculty receives messages from the system about students who missed classes. For students who submit the note for the missed class, faculty members could look at the note and give a decision on the student's grade

Software and Hardware Requirements

Software Requirements:

- Windows 7,8,10
- MS SQL 2008
- Visual Studio 2010

Hardware Components:

- Processor – i5
- Hard Disk – 8 GB
- Memory – 4 GB RAM
- Barcode Reader

Preliminary Product Description

This study focused on reducing effort on paper work and save the time required to generate accurate results from the student's attendance.

The proposed system of attendance management is implemented using barcode technology. Student's record are entered into the system and tied to the barcode.

The code is uniquely associated to each student's details for easy identification.

The computer that implements this system is equipped with a barcode reader. Students fill in their class attendance by swiping their card at the barcode reader which automatically records the attendance information in the server.

The reader, in turn, communicates with card, thereby acting as the intermediary before sending the data to the server.

The barcode reader wiggles the barcode on the ID card and record the data in the server. That way, data can be processed immediately and in a totally automated way.

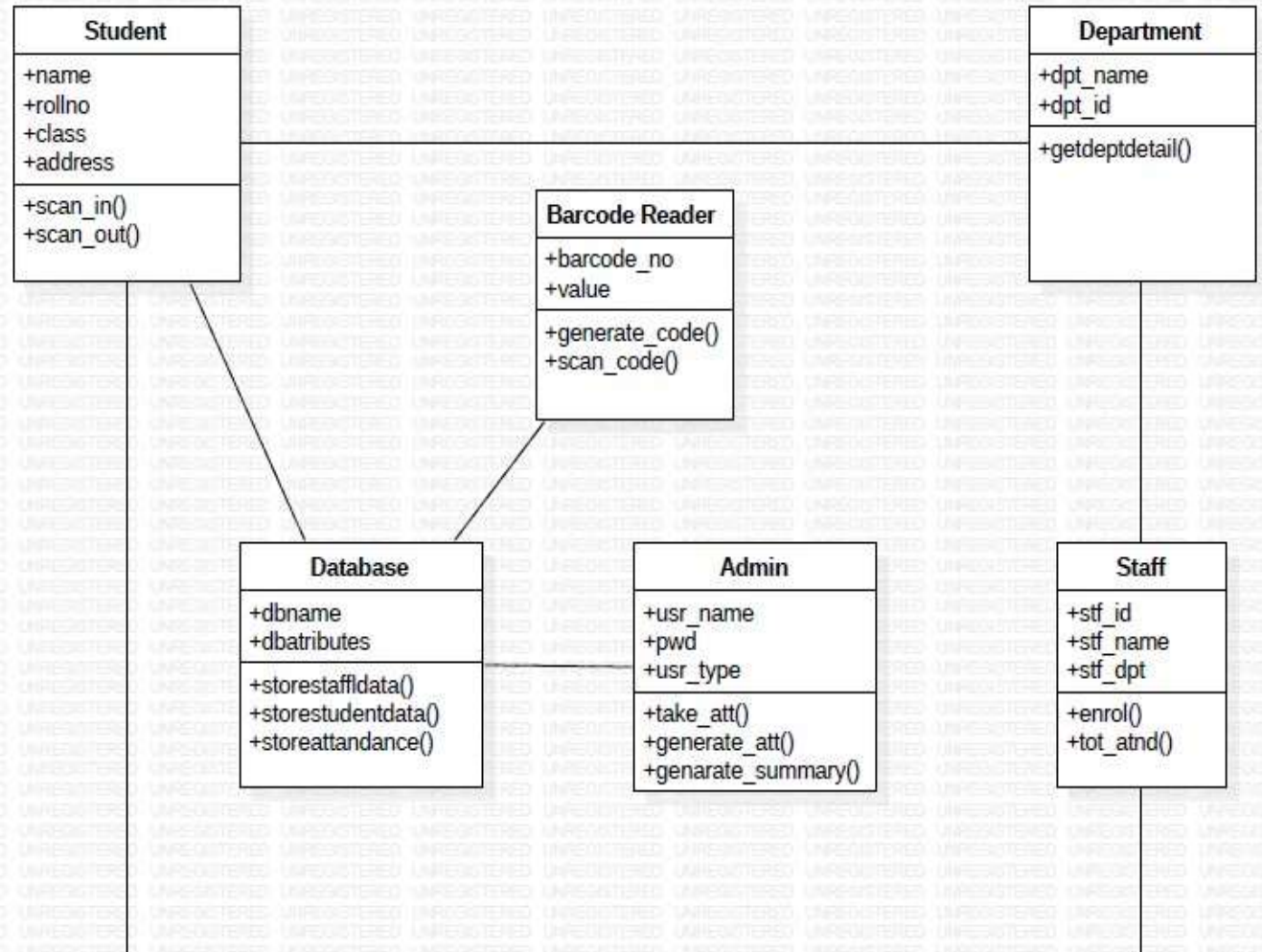
At the end of the semester, lecturers can get the calculation of the students' attendance percentage more efficiently and view the standard attendance report

GANTT CHART

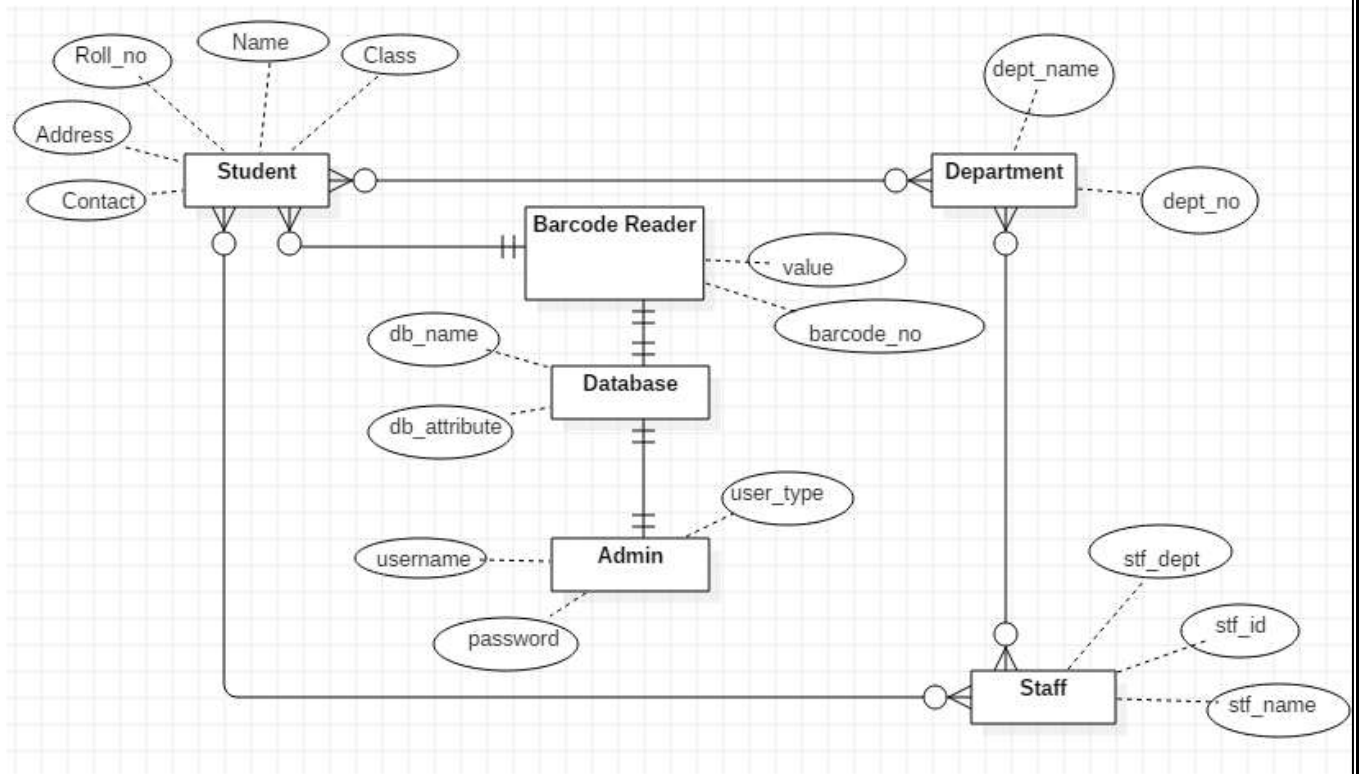
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1.	Preliminary Investigation			18/01/2020					
	Organizational Overview	01/12/19	03/12/19						
	Description Of Present System	04/12/19	05/12/19						
	Limitations of present system	06/12/19	07/12/19						
	Proposed System & Advantages	08/12/19	11/12/19						
	Feasibility Study	11/12/19	13/12/19						
	Stakeholders	14/12/19	19/12/19						
	HW/SW Requirement specification	15/12/19	15/12/19						
	GANTT Chart	18/01/2020	18/01/2020						
2.	System Analysis			27/01/2020					
	Event Table	20/01/2020	21/01/2020						
	Use Case Diagram	22/01/2020	22/01/2020						
	Activity Diagram	23/01/2020	23/01/2020						
	Class Diagram	24/01/2020	24/01/2020						
	Sequence Diagram	25/01/2020	25/01/2020						
	Collaboration Diagram	26/01/2020	26/01/2020						
	State Diagram	27/01/2020	27/01/2020						
3.	System Design			30/02/2020					
	Component Diagram	28/01/2020	28/01/2020						
	Deployment Diagram	30/01/2020	30/01/2020						
4.	System Coding			31/03/2020					
	List of table with attributes and constraints	18/02/2020	31/02/2020						
	Form Description & Coding	01/02/2020	25/03/2020						
	Validation, Testing	26/03/2020	31/03/2020						
5.	Demo Date			10/04/2020					

SYSTEM DESIGN

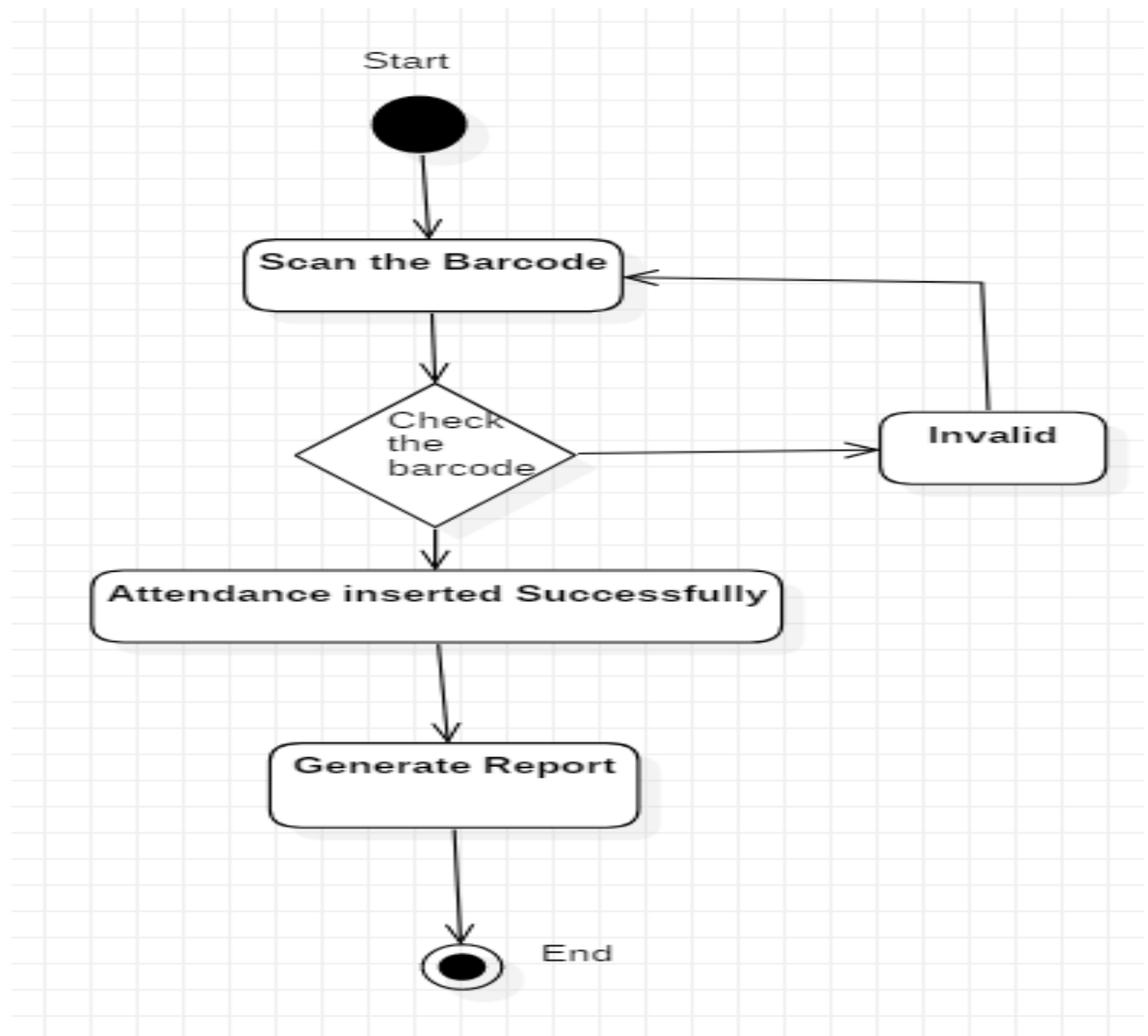
CLASS DIAGRAM



ER DIAGRAM

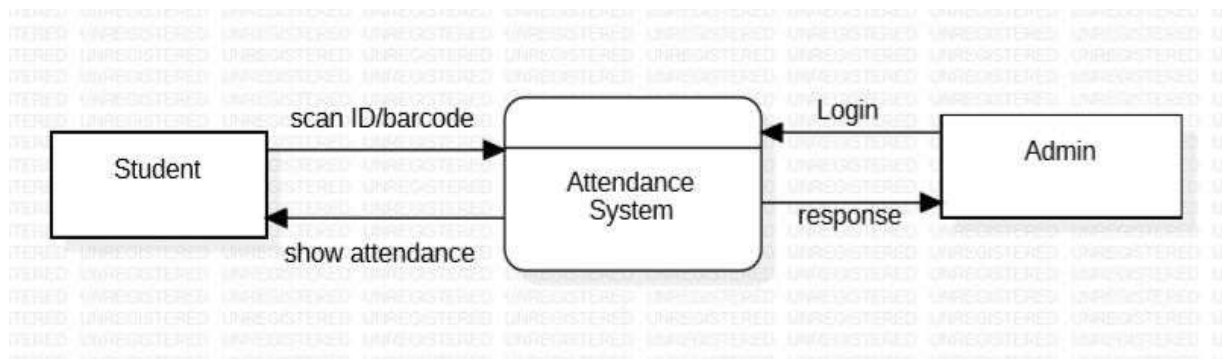


ACTIVITY DIAGRAM

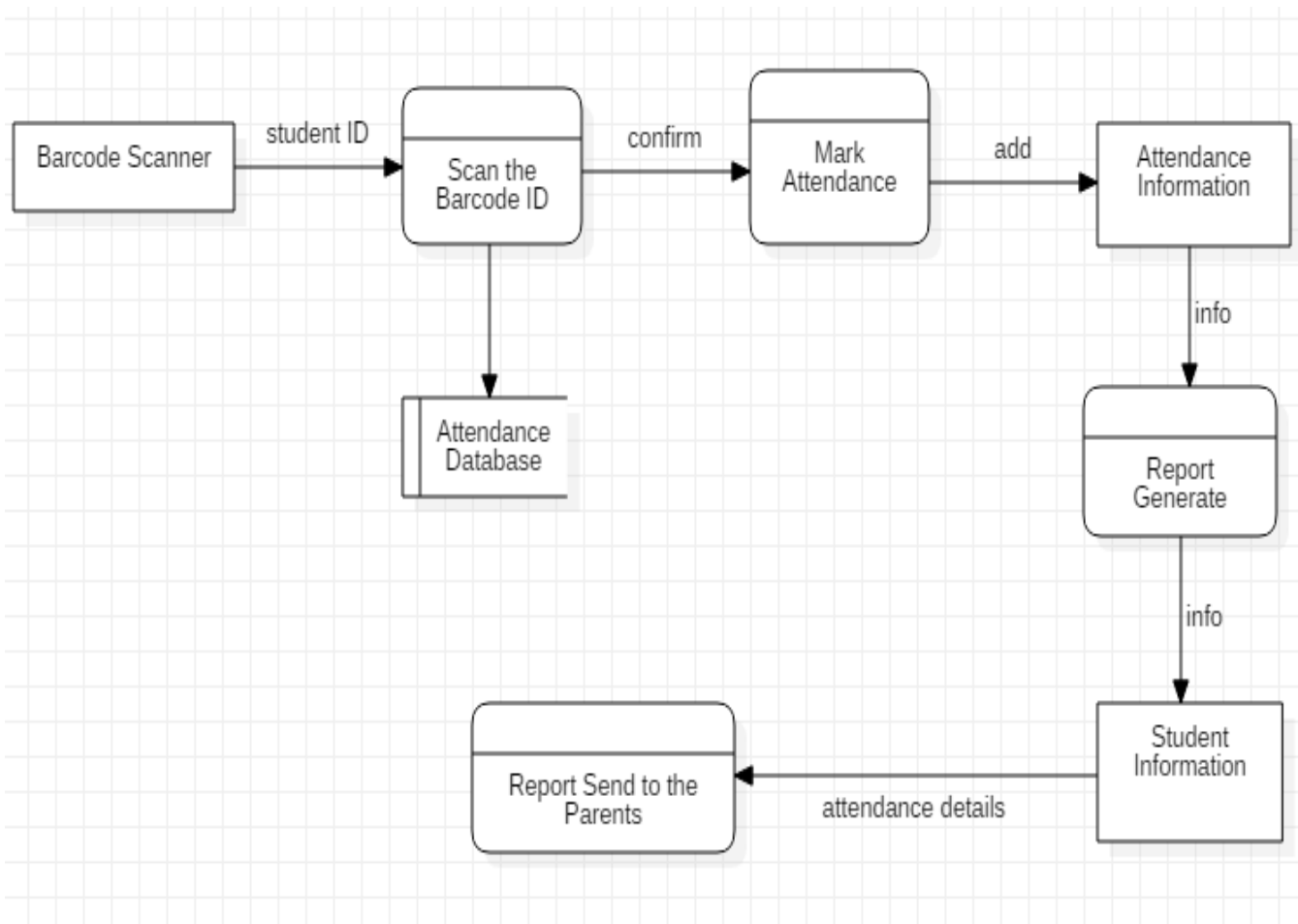


DATA FLOW DIAGRAM

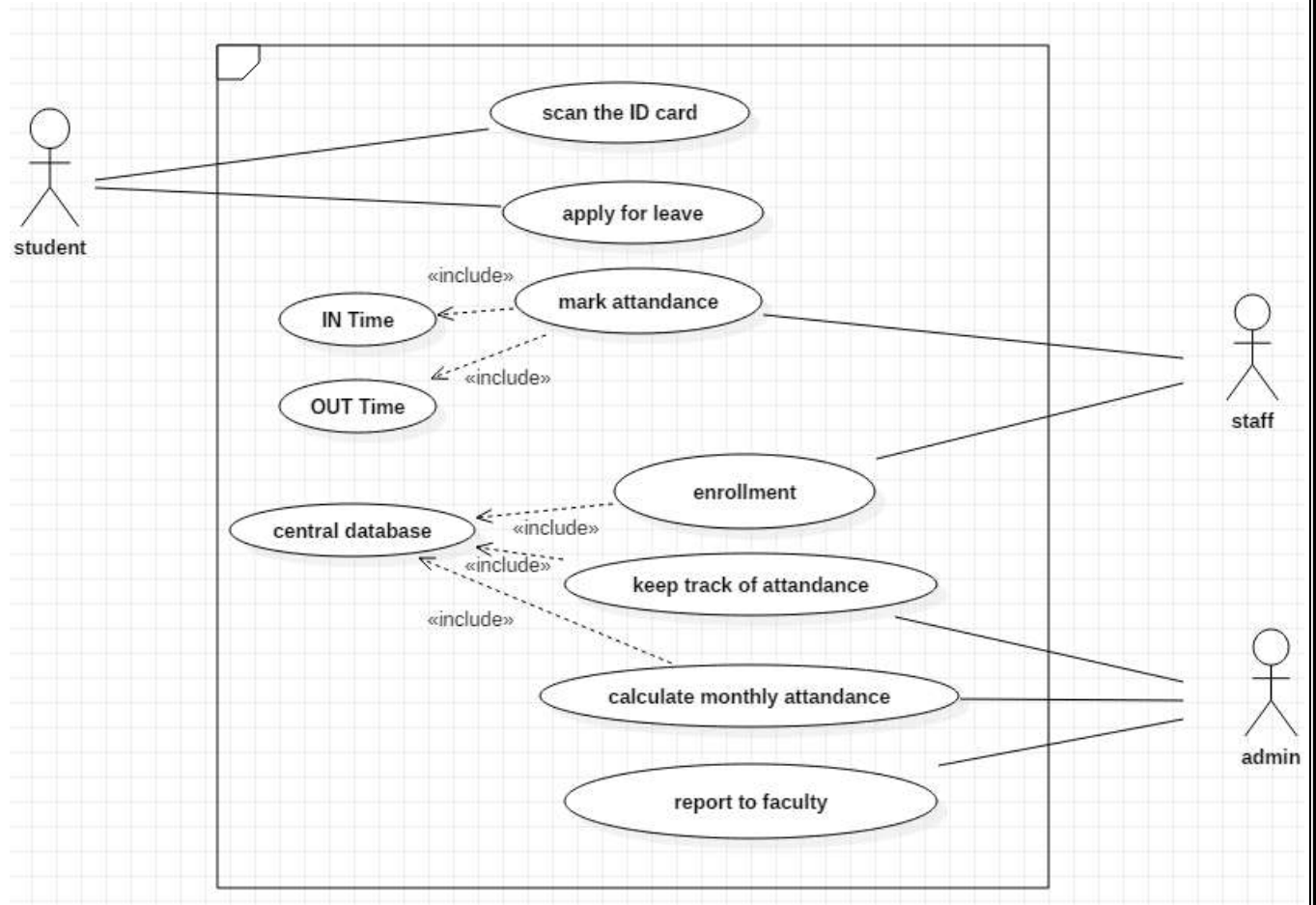
Level 0 DFD



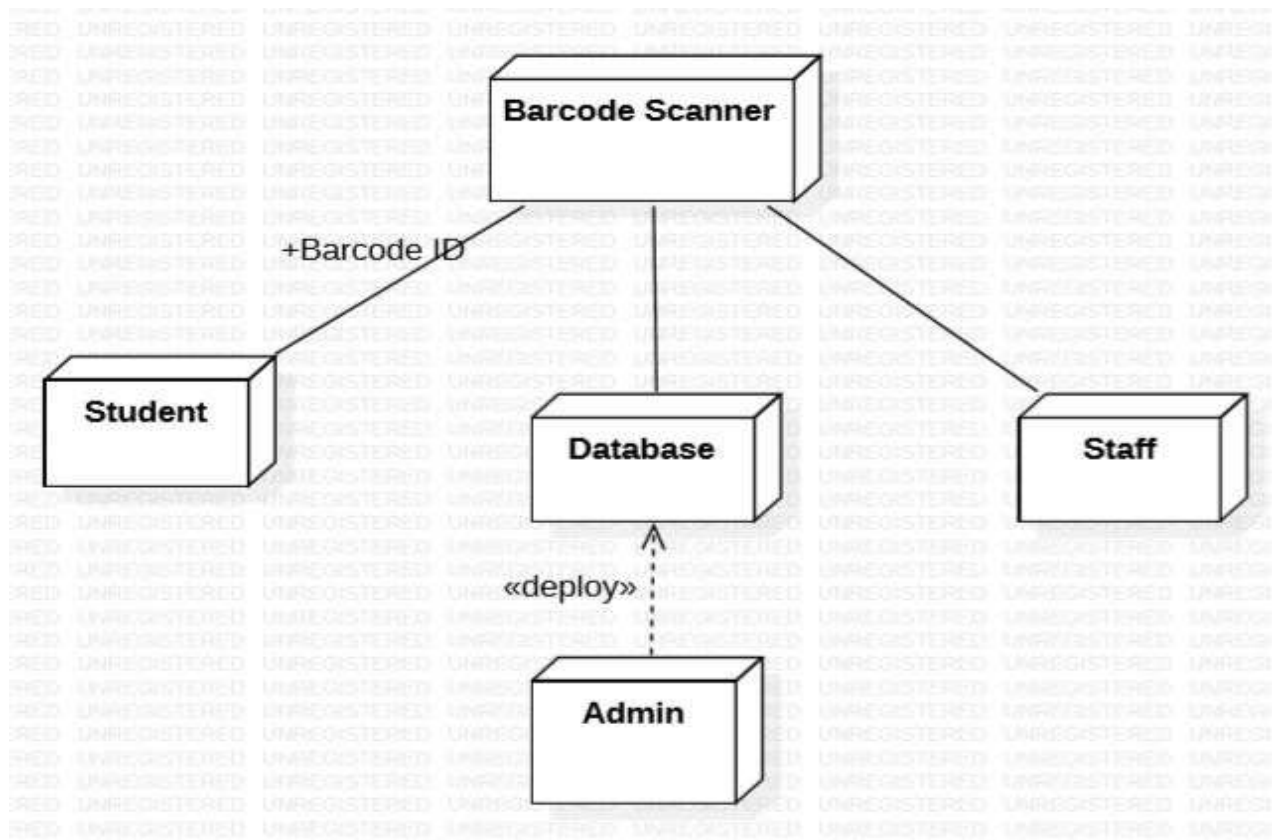
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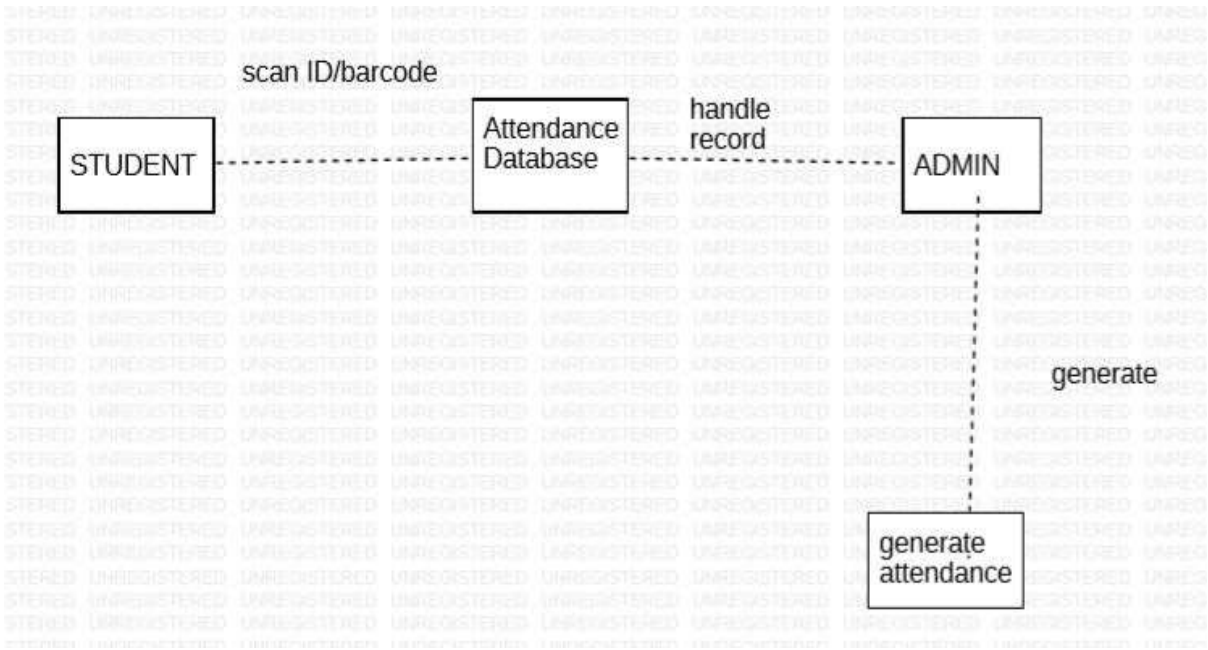
USE CASE DIAGRAM



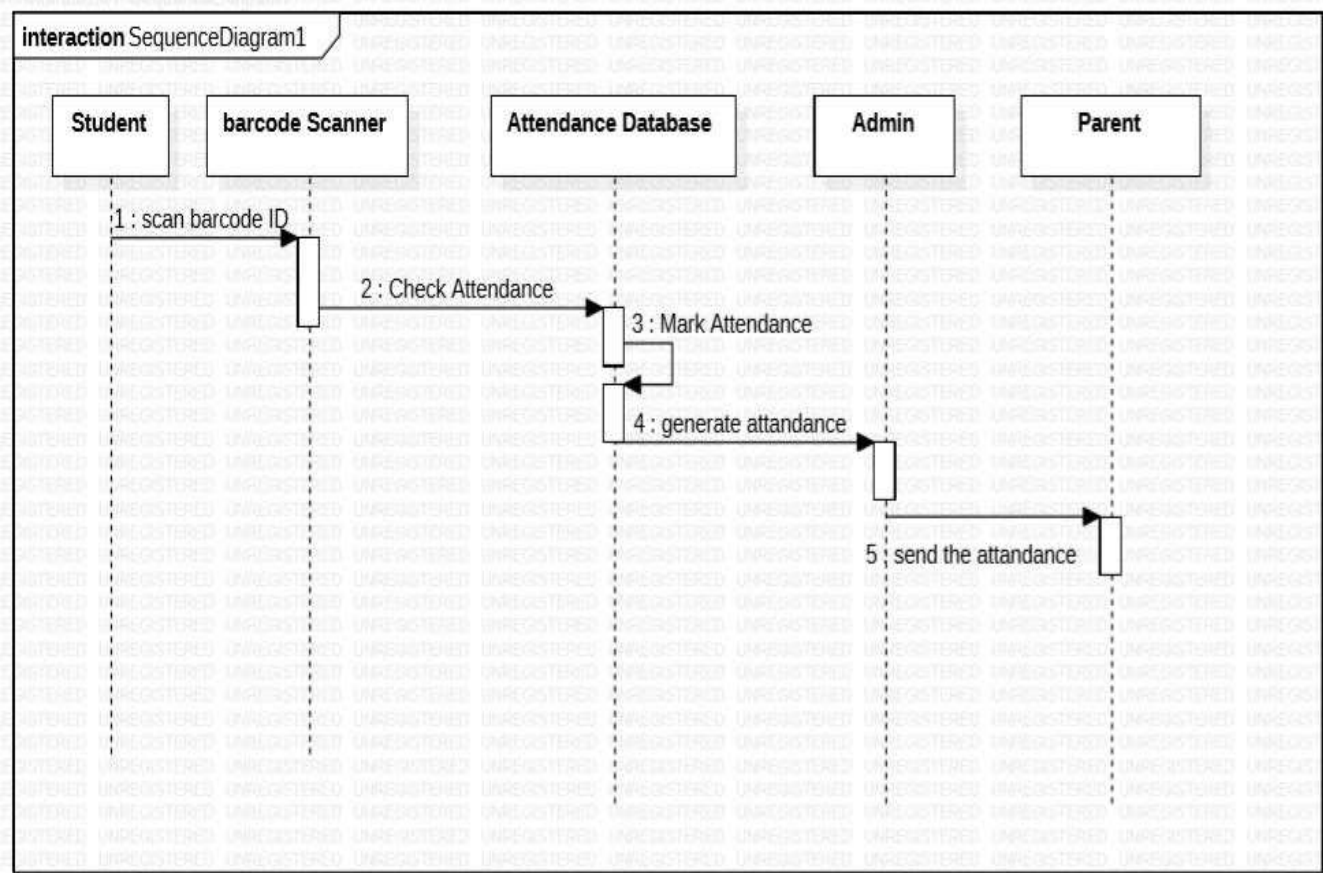
DEPLOYMENT DIAGRAM



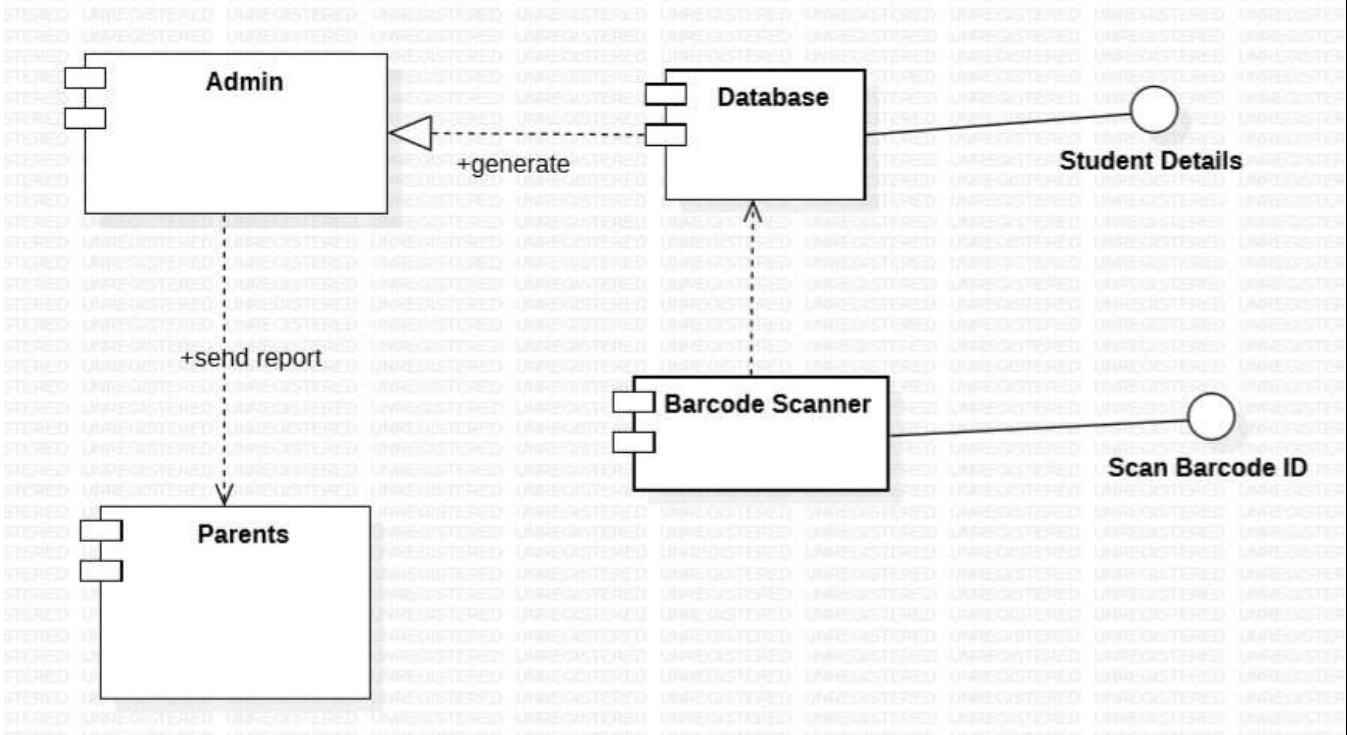
COLLABORATION DIAGRAM



SEQUENCE DIAGRAM



COMPONENT DIAGRAM



Implementation & Testing

HOME PAGE



using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Windows.Forms;

namespace mainpage

{

 public partial class main_page : Form

 {

 public main_page()

 {

 InitializeComponent();

```
}

private void main_page_FormClosing(object sender, FormClosingEventArgs e)
{
    this.WindowState = FormWindowState.Normal;
    e.Cancel = true;
    this.Hide();
}

private void menuStrip1_ItemClicked(object sender, ToolStripItemClickedEventArgs e)
{
}

private void adminToolStripMenuItem_Click(object sender, EventArgs e)
{
    this.Hide();

    admin_login a = new admin_login();
    a.ShowDialog();
}

private void staffToolStripMenuItem_Click(object sender, EventArgs e)
{
    this.Hide();

    stf_login s = new stf_login();
    s.ShowDialog();
}

private void Form1_Load(object sender, EventArgs e)
{
}

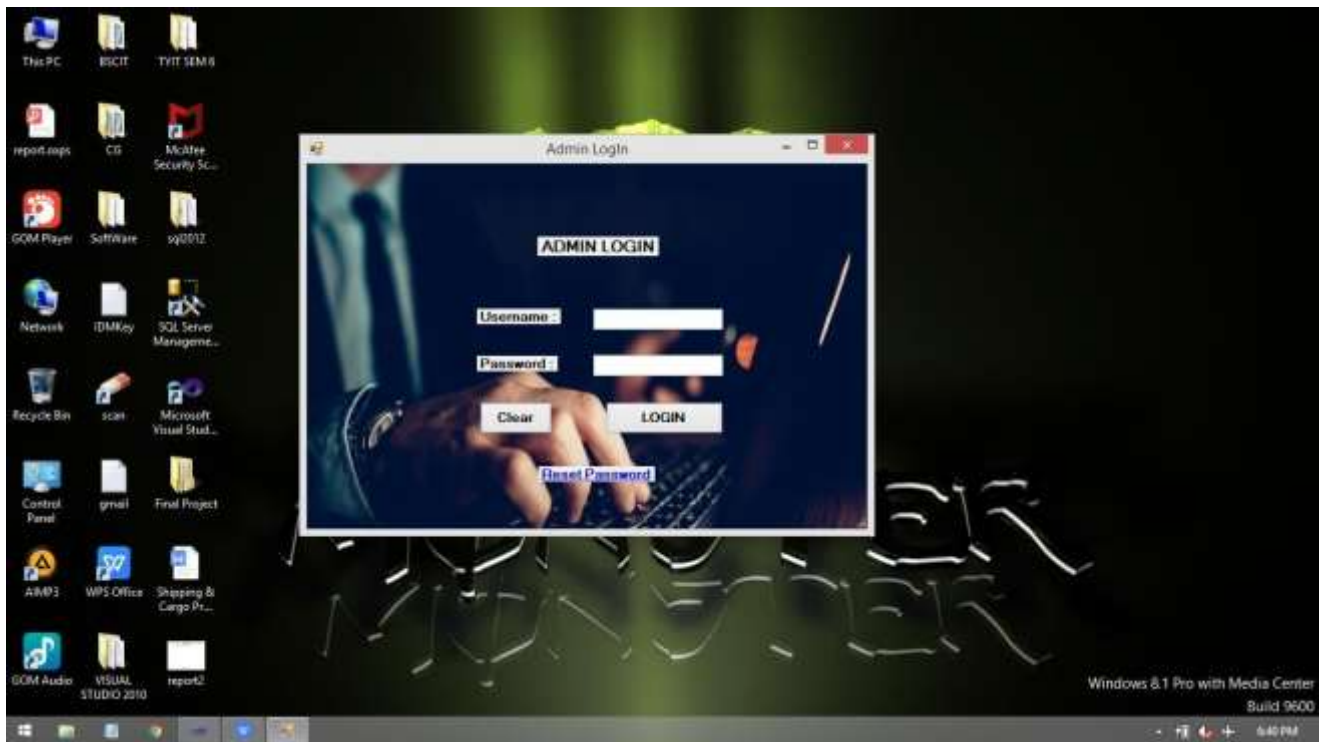
private void helpToolStripMenuItem_Click(object sender, EventArgs e)
{
    main_help mh = new main_help();
}
```

```
        mh.ShowDialog();
    }
    private void aboutUsToolStripMenuItem_Click(object sender, EventArgs e)
    {
        about_us au = new about_us();
        au.ShowDialog();
    }
    private void sendMailToolStripMenuItem_Click(object sender, EventArgs e)
    {

    }
    private void contactUsToolStripMenuItem_Click(object sender, EventArgs e)
    {

    }
}
}
```


ADMIN LOGIN



using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Windows.Forms;

using System.Data.SqlClient;

namespace mainpage

{

 public partial class admin_login : Form

 {

 SqlConnection con = new SqlConnection(@"Data Source=.;Initial
Catalog=student_attendance_management_system;Integrated Security=True");

```
public admin_login()
{
    InitializeComponent();
}

private void admin_login_FormClosing(object sender, FormClosingEventArgs e)
{
    this.WindowState = FormWindowState.Normal;
    e.Cancel = true;
    this.Hide();
    main_page mp = new main_page();
    mp.ShowDialog();
}

private void admin_Load(object sender, EventArgs e)
{
}

private void admin_rst_LinkClicked(object sender, LinkLabelLinkClickedEventArgs e)
{
    this.Hide();
    admin_reset_pwd r = new admin_reset_pwd();
    r.ShowDialog();
}

private void admin_clr_Click(object sender, EventArgs e)
{
    admin_usr.ResetText();
    admin_pwd.ResetText();
}

private void admin_lgn_Click(object sender, EventArgs e)
{
    try
```

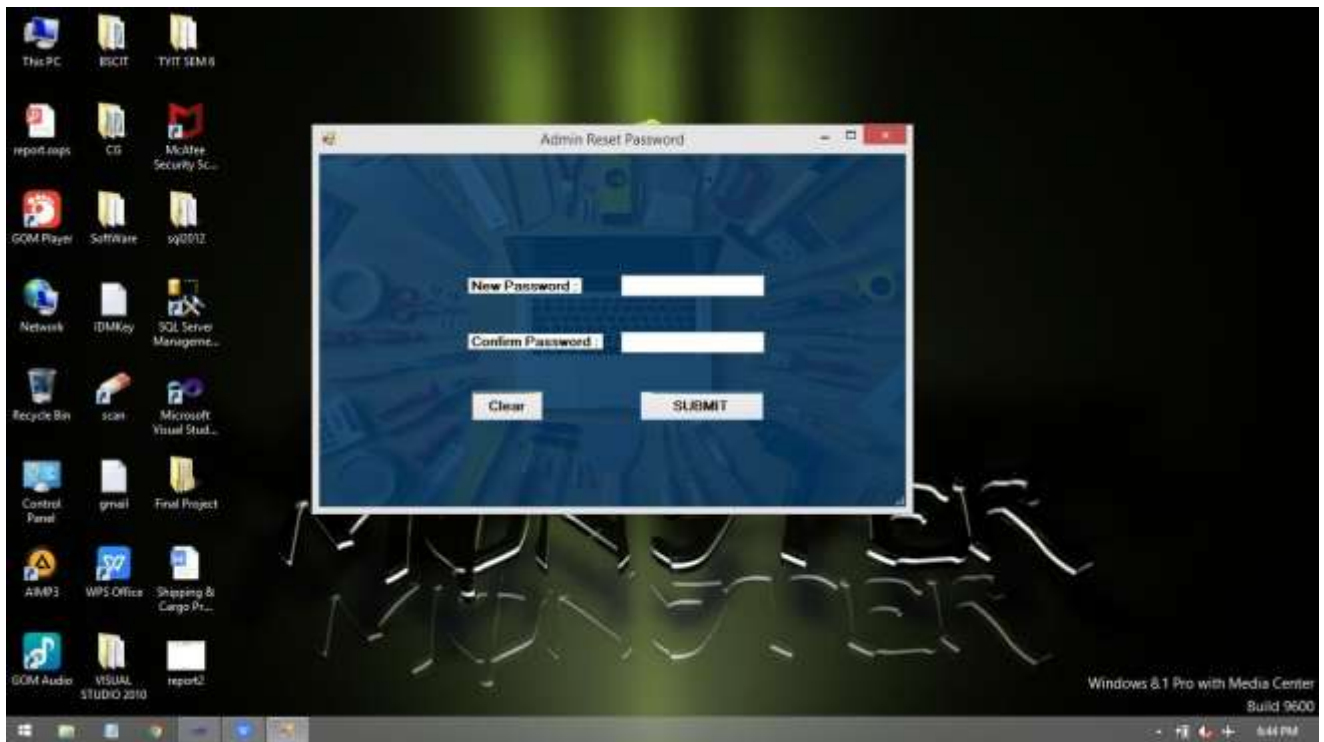
```
{
    if (admin_usr.Text == "" || admin_pwd.Text == "")
    {
        MessageBox.Show("Please Enter A UserID or Password", "Error");
    }
    else
    {
        SqlDataAdapter sda = new SqlDataAdapter("SELECT COUNT(*) FROM
TBL_ADMIN_LOGIN WHERE Username='" + admin_usr.Text + "'AND Password='" +
admin_pwd.Text + "'", con);

        DataTable dt = new DataTable();
        sda.Fill(dt);
        if (dt.Rows[0][0].ToString() == "1")
        {
            MessageBox.Show("You are Granted with Access");
            this.Hide();
            admin_home ah = new admin_home();
            ah.ShowDialog();
        }
        else
        {
            MessageBox.Show("Something is Wrong !");
        }
    }
}
catch (Exception err)
{
    MessageBox.Show(err.Message.ToString());
}
finally
{

```

```
        if (con.State == ConnectionState.Open)
        {
            con.Close();
        }
    }
    admin_usr.ResetText();
    admin_pwd.ResetText();
}
}
```

ADMIN RESET PASSWORD



`using System;`

`using System.Collections.Generic;`

`using System.ComponentModel;`

`using System.Data;`

`using System.Drawing;`

`using System.Linq;`

`using System.Text;`

`using System.Windows.Forms;`

`using System.Data.SqlClient;`

`namespace mainpage`

`{`

`public partial class admin_reset_pwd : Form`

`{`

`SqlConnection con = new SqlConnection(@"Data Source=.;Initial
Catalog=student_attendance_management_system;Integrated Security=True");`

```
public admin_reset_pwd()
{
    InitializeComponent();
}

private void admin_reset_pwd_FormClosing(object sender, FormClosingEventArgs e)
{
    this.WindowState = FormWindowState.Normal;
    e.Cancel = true;
    this.Hide();
    admin_login al = new admin_login();
    al.ShowDialog();
}

private void resetpassword_Load(object sender, EventArgs e)
{
}

private void admin_clr_Click(object sender, EventArgs e)
{
    admin_new_pwd.ResetText();
    admin_cnf_pwd.ResetText();
}

private void admin_submit_Click(object sender, EventArgs e)
{
    try
    {
        if (admin_new_pwd.Text == "" || admin_cnf_pwd.Text == "")
        {
            MessageBox.Show("Please Fill All The Fields");
        }
        else if (admin_new_pwd.Text != admin_cnf_pwd.Text)
```

```
{
    MessageBox.Show("Password Missmatch");
}
else
{
    con.Open();

    SqlCommand cmd = new SqlCommand("UPDATE TBL_ADMIN_LOGIN SET
Password=" + admin_new_pwd.Text.Trim() + "'", con);

    int result = cmd.ExecuteNonQuery();
    if (result > 0)
    {
        MessageBox.Show("Update Succesfully");
        this.Hide();
        admin_login al = new admin_login();
        al.ShowDialog();
    }
    else
    {
        MessageBox.Show("Error in Updation");
    }
}
}
catch (Exception err)
{
    MessageBox.Show(err.Message.ToString());
}
finally
{
    if (con.State == ConnectionState.Open)
    {
        con.Close();
    }
}
```

}

}

}

}

}

ADMIN HOME PAGE



```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
namespace mainpage
{
    public partial class admin_home : Form
    {
        public admin_home()
        {
            InitializeComponent();
        }
    }
}
```

```
}

private void admin_home_FormClosing(object sender, FormClosingEventArgs e)
{
    this.WindowState = FormWindowState.Normal;
    e.Cancel = true;
    this.Hide();
    main_page mp = new main_page();
    mp.ShowDialog();
}

private void admin_home_Load(object sender, EventArgs e)
{
}

private void showStudentDetailsToolStripMenuItem_Click(object sender, EventArgs e)
{
    show_std_details sd = new show_std_details();
    sd.ShowDialog();
}

private void show_staffDetailsToolStripMenuItem_Click(object sender, EventArgs e)
{
    show_staff_details shd = new show_staff_details();
    shd.ShowDialog();
}

private void showDepartmentToolStripMenuItem_Click(object sender, EventArgs e)
{
    show_deptcs sdept = new show_deptcs();
    sdept.ShowDialog();
}

private void logOutToolStripMenuItem_Click(object sender, EventArgs e)
{
}
```

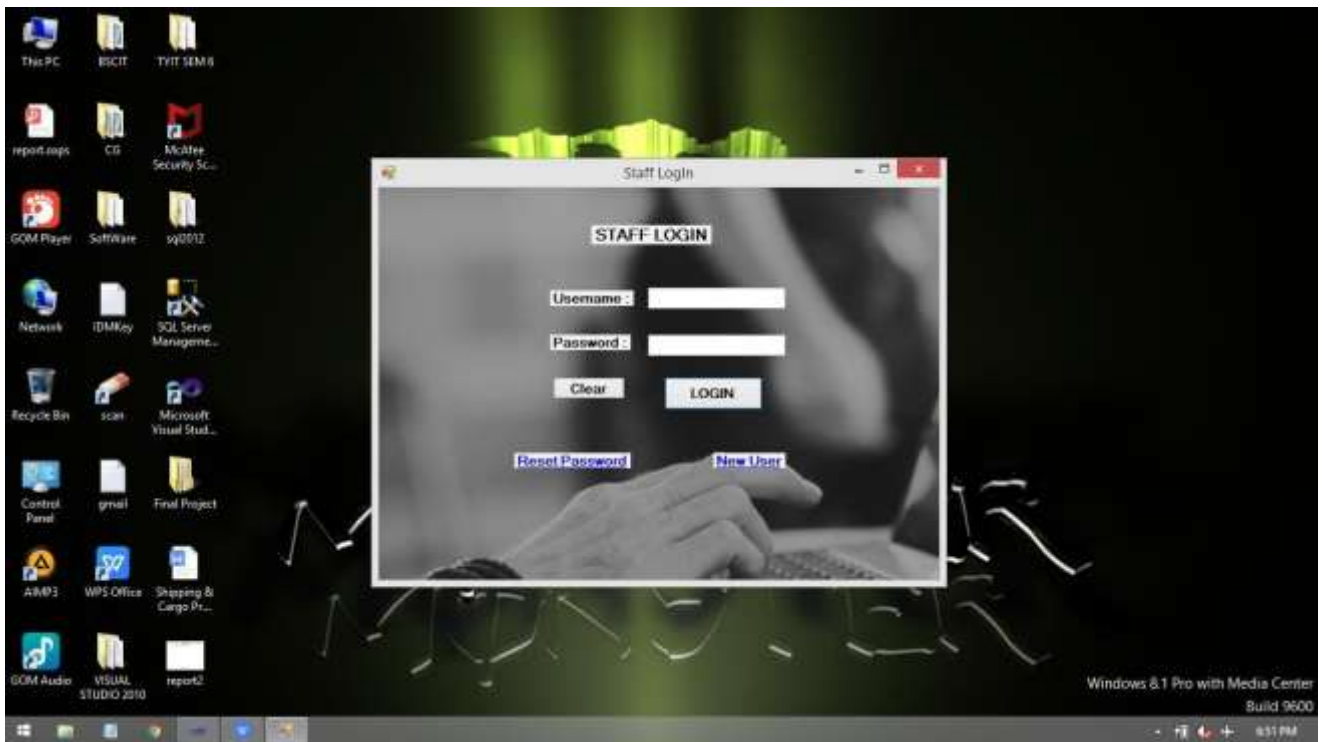
```
this.Close();

main_page mp = new main_page();
mp.ShowDialog();
}

private void StdRptToolStripMenuItem_Click(object sender, EventArgs e)
{
    show_std_report ssr = new show_std_report();
    ssr.ShowDialog();
}

private void generateStudentReportToolStripMenuItem_Click(object sender, EventArgs e)
{
    generate_std_report gsr = new generate_std_report();
    gsr.ShowDialog();
}
}
```

STAFF LOGIN



using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Windows.Forms;

using System.Data.SqlClient;

namespace mainpage

{

 public partial class stf_login : Form

 {

 SqlConnection con = new SqlConnection(@"Data Source=.;Initial
Catalog=student_attendance_management_system;Integrated Security=True");

```
public stf_login()
{
    InitializeComponent();
}

private void stf_login_FormClosing(object sender, FormClosingEventArgs e)
{
    this.WindowState = FormWindowState.Normal;
    e.Cancel = true;
    this.Hide();
    main_page mp = new main_page();
    mp.ShowDialog();
}

private void stffloin_Load(object sender, EventArgs e)
{
}

private void stf_clr_Click(object sender, EventArgs e)
{
    stf_username.ResetText();
    stf_pwd.ResetText();
}

private void stf_new_user_LinkClicked(object sender, LinkLabelLinkClickedEventArgs e)
{
    this.Hide();
    stf_signup s = new stf_signup();
    s.ShowDialog();
}

private void stf_rst_pwd_LinkClicked(object sender, LinkLabelLinkClickedEventArgs e)
{
}
```

```

        this.Hide();

        stf_reset_pwd f = new stf_reset_pwd();
        f.ShowDialog();
    }

    private void stf_log_in_Click(object sender, EventArgs e)
    {
        try
        {
            if (stf_username.Text == "" || stf_pwd.Text == "")
            {
                MessageBox.Show("Please Enter A UserID or Password", "Error");
            }
            else
            {
                con.Open();

                SqlCommand cmd = new SqlCommand("SELECT
STF_USERNAME,STF_PASSWORD FROM TBL_STAFF_DETAILS WHERE
STF_USERNAME =" + stf_username.Text + "AND STF_PASSWORD =" + stf_pwd.Text + "",
con);

                SqlDataAdapter sda = new SqlDataAdapter(cmd);

                DataTable dt = new DataTable();

                sda.Fill(dt);

                con.Close();

                if (dt.Rows.Count > 0)
                {
                    MessageBox.Show("Staff LogIn Succesfull.");

                    this.Hide();

                    stf_home sh = new stf_home();

                    sh.ShowDialog();
                }
            }
        }
        else
    }

```

```
        {  
            MessageBox.Show("Please Enter A Valid UserID or Password", "Error");  
        }  
    }  
}  
catch (Exception err)  
{  
    MessageBox.Show(err.Message.ToString());  
}  
finally  
{  
    if (con.State == ConnectionState.Open)  
    {  
        con.Close();  
    }  
}  
stf_username.ResetText();  
stf_pwd.ResetText();  
}  
}  
}
```

STAFF REGISTRATION



using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Windows.Forms;

using System.Data.SqlClient;

namespace mainpage

{

 public partial class stf_signup : Form

 {


```
SqlConnection con = new SqlConnection(@"Data Source=.;Initial  
Catalog=student_attendance_management_system;Integrated Security=True");
```

```
public stf_signup()
```

```
{
```

```
    InitializeComponent();
```

```
}
```

```
private void stf_signup_FormClosing(object sender, FormClosingEventArgs e)
```

```
{
```

```
    this.WindowState = FormWindowState.Normal;
```

```
    e.Cancel = true;
```

```
    this.Hide();
```

```
    stf_login sl = new stf_login();
```

```
    sl.ShowDialog();
```

```
}
```

```
private void staff_Load(object sender, EventArgs e)
```

```
{
```

```
}
```

```
private void stf_clr_Click(object sender, EventArgs e)
```

```
{
```

```
    stf_name.ResetText();
```

```
    stf_username.ResetText();
```

```
    stf_pwd.ResetText();
```

```
    stf_cnfrm_pwd.ResetText();
```

```
    stf_gender_comboBox.Text="--- Select ---";
```

```
    stf_dept.Text="--- Select ---";
```

```
    stf_mail.ResetText();
```

```
    stf_mobileNo.ResetText();
```

```
    stf_address.ResetText();
```

```
}
```

```
private void stf_already_acc_LinkClicked(object sender, LinkLabelLinkClickedEventArgs e)
```

```

{
    this.Hide();

    stf_login stf = new stf_login();

    stf.ShowDialog();
}

private void stf_sign_up_Click(object sender, EventArgs e)
{
    try
    {
        if(stf_name.Text==" " || stf_username.Text==" " || stf_pwd.Text==" " ||
stf_cnfrm_pwd.Text==" " || stf_gender_comboBox.Text=="--- Select ---" || stf_dept.Text=="--- Select
---" || stf_mail.Text==" " || stf_mobileNo.Text==" " || stf_address.Text==" ")
        {
            MessageBox.Show("Please Fill All The Details.");
        }
        else if(stf_pwd.Text != stf_cnfrm_pwd.Text)
        {
            MessageBox.Show("Password Mismatch.");
        }
        else
        {
            SqlCommand cmd;

            con.Open();

            string s="INSERT INTO TBL_STAFF_DETAILS
VALUES(@p1,@p2,@p3,@p4,@p5,@p6,@p7,@p8)";

            cmd = new SqlCommand(s,con);

            cmd.Parameters.AddWithValue("@p1",stf_name.Text);
            cmd.Parameters.AddWithValue("@p2",stf_username.Text);
            cmd.Parameters.AddWithValue("@p3",stf_pwd.Text);
            cmd.Parameters.AddWithValue("@p4",stf_gender_comboBox.Text);
            cmd.Parameters.AddWithValue("@p5",stf_dept.Text);

```

```
cmd.Parameters.AddWithValue("@p6",stf_mail.Text);
cmd.Parameters.AddWithValue("@p7",stf_mobileNo.Text);
cmd.Parameters.AddWithValue("@p8",stf_address.Text);
cmd.CommandType = CommandType.Text;
int result=cmd.ExecuteNonQuery();
con.Close();
if(result>0)
{
    MessageBox.Show("Staff Registration Succesfull.");
    this.Hide();
    stf_login sl = new stf_login();
    sl.ShowDialog();
}
}
}
catch(Exception err)
{
    MessageBox.Show(err.Message.ToString());
}
finally
{
    if(con.State==ConnectionState.Open)
    {
        con.Close();
    }
}
}
}
```

STAFF RESET PASSWORD



`using System;`

`using System.Collections.Generic;`

`using System.ComponentModel;`

`using System.Data;`

`using System.Drawing;`

`using System.Linq;`

`using System.Text;`

`using System.Windows.Forms;`

`using System.Data.SqlClient;`

`namespace mainpage`

`{`

`public partial class stf_reset_pwd : Form`

`{`

`SqlConnection con = new SqlConnection(@"Data Source=.;Initial
Catalog=student_attendance_management_system;Integrated Security=True");`

```
public stf_reset_pwd()
{
    InitializeComponent();
}

private void stf_reset_pwd_FormClosing(object sender, FormClosingEventArgs e)
{
    this.WindowState = FormWindowState.Normal;
    e.Cancel = true;
    this.Hide();
    stf_login sl = new stf_login();
    sl.ShowDialog();
}

private void forgetpassword_Load(object sender, EventArgs e)
{
}

private void submit_pwd_Click(object sender, EventArgs e)
{
    try
    {
        if (stf_usr.Text == "" || stf_new_pwd.Text == "" || stf_cnf_pwd.Text == "")
        {
            MessageBox.Show("Please Fill All The Fields");
        }
        else if (stf_new_pwd.Text != stf_cnf_pwd.Text)
        {
            MessageBox.Show("Password Mismatch");
        }
        else
```

```

{
    con.Open();

    SqlCommand cmd = new SqlCommand("UPDATE TBL_STAFF_DETAILS SET
STF_PASSWORD='" + stf_new_pwd.Text.Trim() + "' WHERE STF_USERNAME='" +
stf_usr.Text + "'", con);

    int i = cmd.ExecuteNonQuery();

    if (i > 0)
    {
        MessageBox.Show("Update Succesfully");

        this.Hide();

        stf_login sl = new stf_login();

        sl.ShowDialog();
    }
    else
    {
        MessageBox.Show("Error in Updation.");
    }
}

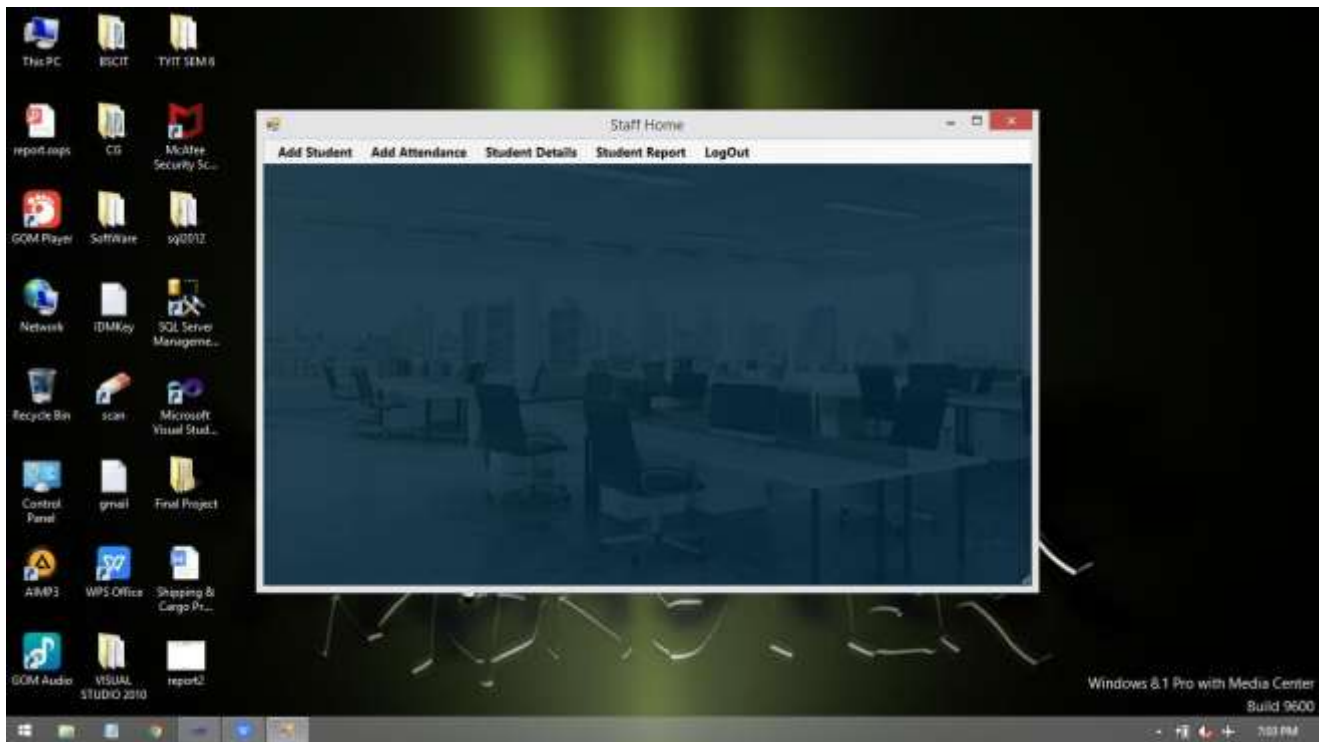
catch (Exception err)
{
    MessageBox.Show(err.Message.ToString());
}

finally
{
    if (con.State == ConnectionState.Open)
    {
        con.Close();
    }
}
}

```

```
private void clr_rcd_Click(object sender, EventArgs e)
{
    stf_usr.ResetText();
    stf_new_pwd.ResetText();
    stf_cnf_pwd.ResetText();
}
}
```

STAFF HOME PAGE



`using System;`

`using System.Collections.Generic;`

`using System.ComponentModel;`

`using System.Data;`

`using System.Drawing;`

`using System.Linq;`

`using System.Text;`

`using System.Windows.Forms;`

`namespace mainpage`

`{`

`public partial class stf_home : Form`

`{`

`public stf_home()`

`{`

`InitializeComponent();`


```

}

private void stf_home_FormClosing(object sender, FormClosingEventArgs e)
{
    this.WindowState = FormWindowState.Normal;
    e.Cancel = true;
    this.Hide();
    main_page mp = new main_page();
    mp.ShowDialog();
}

private void managAttendanceToolStripMenuItem_Click(object sender, EventArgs e)
{
    this.Hide();
    manage_atd ag = new manage_atd();
    ag.ShowDialog();
}

private void addStudentToolStripMenuItem_Click(object sender, EventArgs e)
{
    this.Hide();
    add_std_details se = new add_std_details();
    se.ShowDialog();
}

private void menuStrip1_ItemClicked(object sender, ToolStripItemClickedEventArgs e)
{
}

private void managAttendanceToolStripMenuItem_Click_1(object sender, EventArgs e)
{
    manage_atd ag = new manage_atd();
    ag.ShowDialog();
}

```

```
private void addStudentToolStripMenuItem_Click_1(object sender, EventArgs e)
{
    add_std_details se = new add_std_details();
    se.ShowDialog();
}

private void stf_home_Load(object sender, EventArgs e)
{
}

private void showStudentDetailsToolStripMenuItem_Click(object sender, EventArgs e)
{
    show_std_details ssd = new show_std_details();
    ssd.ShowDialog();
}

private void logOutToolStripMenuItem_Click(object sender, EventArgs e)
{
    this.Hide();

    main_page mp = new main_page();
    mp.ShowDialog();
}

private void addAttendanceToolStripMenuItem_Click(object sender, EventArgs e)
{
    add_std_attendance asa = new add_std_attendance();
    asa.ShowDialog();
}

private void showStudentReportToolStripMenuItem_Click(object sender, EventArgs e)
{
    show_std_report ssr = new show_std_report();
    ssr.ShowDialog();
}
```

}

}

ADD NEW STUDENT



`using System;`

`using System.Collections.Generic;`

`using System.ComponentModel;`

`using System.Data;`

`using System.Drawing;`

`using System.Linq;`

`using System.Text;`

`using System.Windows.Forms;`

`using System.Data.SqlClient;`

`namespace mainpage`

`{`

`public partial class add_std_details : Form`

`{`

`SqlConnection con = new SqlConnection(@"Data Source=.;Initial
Catalog=student_attendance_management_system;Integrated Security=True");`

```

public add_std_details()
{
    InitializeComponent();
}

private void student_entry_Load(object sender, EventArgs e)
{

}

private void std_clear_Click(object sender, EventArgs e)
{
    std_name.ResetText();
    roll_no.ResetText();
    std_mobileNo.ResetText();
    std_class.Text = "--- Select ---";
    std_dept.Text = "--- Select ---";
    std_gender_comboBox.Text="--- Select ---";
    std_mail.ResetText();
    std_address.ResetText();
}

private void std_submit_Click(object sender, EventArgs e)
{
    try
    {
        if (std_name.Text == "" || roll_no.Text == "" || std_class.Text == "" || std_dept.Text == "" ||
std_gender_comboBox.Text == "" || std_mail.Text == "" || std_mobileNo.Text == "" ||
std_address.Text == "")
        {
            MessageBox.Show("Please Fill All The Details.");
        }
        else
        {

```

```

con.Open();

SqlCommand cmd = new SqlCommand(@"INSERT INTO
TBL_STUDENT_DETAILS VALUES(@s1,@s2,@s3,@s4,@s5,@s6,@s7,@s8)",con);

cmd.Parameters.AddWithValue("@s1", std_name.Text);
cmd.Parameters.AddWithValue("@s2", roll_no.Text);
cmd.Parameters.AddWithValue("@s3", std_class.Text);
cmd.Parameters.AddWithValue("@s4", std_dept.Text);
cmd.Parameters.AddWithValue("@s5", std_gender_comboBox.Text);
cmd.Parameters.AddWithValue("@s6", std_mobileNo.Text);
cmd.Parameters.AddWithValue("@s7", std_mail.Text);
cmd.Parameters.AddWithValue("@s8", std_address.Text);

int i=cmd.ExecuteNonQuery();

if (i != 0)
{
    MessageBox.Show(" Student Record Insert Succesfull.");
}

con.Close();

std_name.Text="";
roll_no.Text="";
std_mobileNo.Text="";
std_class.Text = "--- Select ---";
std_dept.Text = "--- Select ---";
std_gender_comboBox.Text = "--- Select ---";
std_mail.Text="";
std_address.Text="";
}
}

catch (Exception err)
{
    MessageBox.Show(err.Message.ToString());
}

```

```
finally
```

```
{
```

```
    if (con.State == ConnectionState.Open)
```

```
    {
```

```
        con.Close();
```

```
    }
```

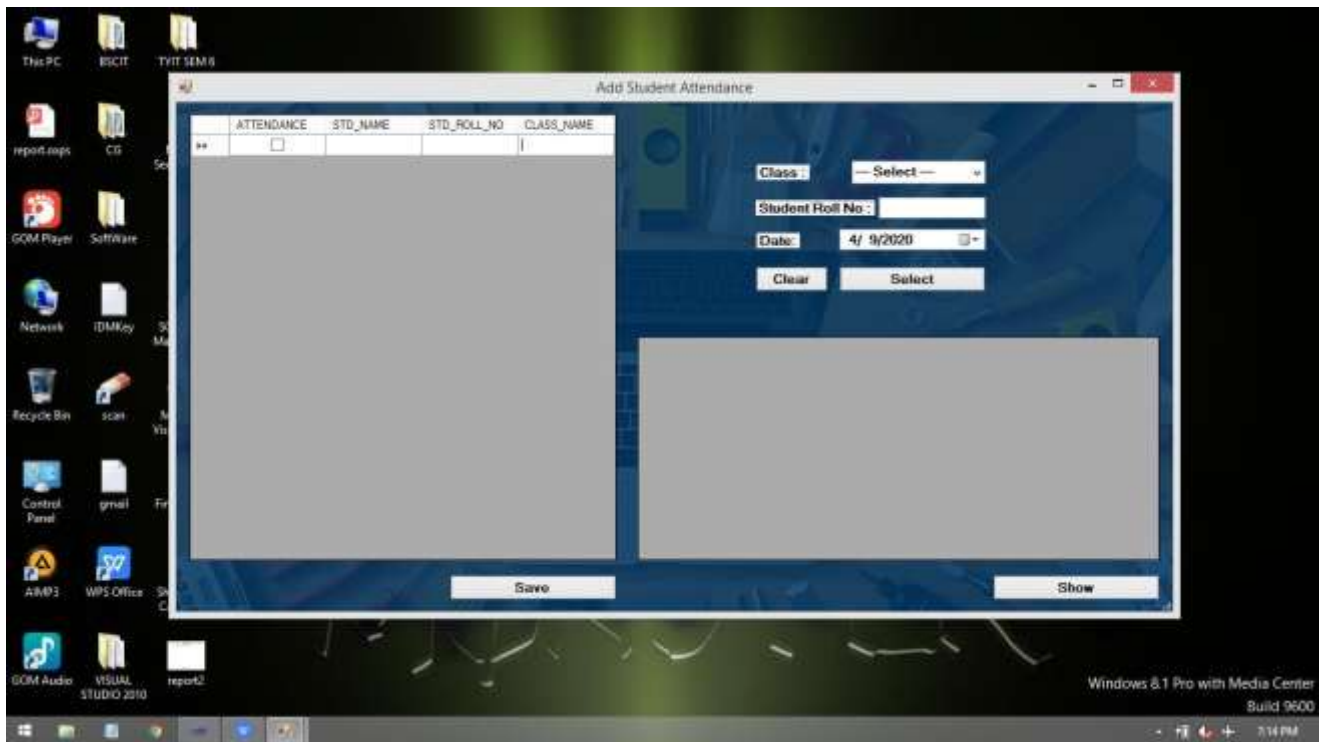
```
}
```

```
}
```

```
}
```

```
}
```

ADD ATTENDANCE



```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using System.Data.SqlClient;
namespace mainpage
{
    public partial class add_std_attendance : Form
    {
        SqlConnection con = new SqlConnection(@"Data Source=.;Initial
        Catalog=student_attendance_management_system;Integrated Security=True");
```



```

public add_std_attendance()
{
    InitializeComponent();
}

private void select_Click(object sender, EventArgs e)
{
    try
    {
        con.Open();

        if (class_comboBox.Text == "--- Select ---")
        {
            MessageBox.Show("Please Select Class !");
        }
        else
        {
            if(std_roll.Text != "")
            {
                SqlCommand cmd = new SqlCommand("SELECT
STD_NAME,STD_ROLL_NO,CLASS_NAME FROM TBL_STUDENT_DETAILS WHERE
STD_ROLL_NO='"+std_roll.Text+"' AND CLASS_NAME='"+ class_comboBox.Text + "'", con);

                SqlDataAdapter sda = new SqlDataAdapter(cmd);

                DataTable dt = new DataTable();

                sda.Fill(dt);

                atd_dataGridView.DataSource = dt;
            }
            else
            {
                SqlCommand cmd = new SqlCommand("SELECT
STD_NAME,STD_ROLL_NO,CLASS_NAME FROM TBL_STUDENT_DETAILS WHERE
CLASS_NAME='"+ class_comboBox.Text + "'", con);

                SqlDataAdapter sda = new SqlDataAdapter(cmd);

```

```

        DataTable dt = new DataTable();

        sda.Fill(dt);

        atd_dataGridView.DataSource = dt;
    }
}

catch (Exception err)
{
    MessageBox.Show(err.Message.ToString());
}

finally
{
    if (con.State == ConnectionState.Open)
    {
        con.Close();
    }
}

private void show_Click(object sender, EventArgs e)
{
    try
    {
        con.Open();

        if (class_comboBox.Text == "--- Select ---")
        {
            MessageBox.Show("Please Select Class !");
        }

        else
        {
            if (std_roll.Text != "")

```

```

    {
        SqlCommand cmd = new SqlCommand("SELECT DATE,STD_NAME AS
NAME,STD_ROLL_NO AS ROLL_NO,CLASS_NAME AS CLASS,ATD_STATUS AS STATUS
FROM TBL_ATTENDANCE_DETAILS WHERE STD_ROLL_NO='" + std_roll.Text + "' AND
CLASS_NAME='" + class_comboBox.Text + "' AND DATE='" + dateTimePicker.Text + "'", con);

        SqlDataAdapter sda = new SqlDataAdapter(cmd);

        DataTable dt = new DataTable();

        sda.Fill(dt);

        show_dataGridView.DataSource = dt;
    }
else
{
    SqlCommand cmd = new SqlCommand("SELECT DATE,STD_NAME AS
NAME,STD_ROLL_NO AS ROLL_NO,CLASS_NAME AS CLASS,ATD_STATUS AS STATUS
FROM TBL_ATTENDANCE_DETAILS WHERE CLASS_NAME='" + class_comboBox.Text + "'
AND DATE='" + dateTimePicker.Text + "'", con);

    SqlDataAdapter sda = new SqlDataAdapter(cmd);

    DataTable dt = new DataTable();

    sda.Fill(dt);

    show_dataGridView.DataSource = dt;
}
}
}
catch (Exception err)
{
    MessageBox.Show(err.Message.ToString());
}
finally
{
    if (con.State == ConnectionState.Open)
    {
        con.Close();
    }
}

```

```

    }
}

private void add_attendance_Click(object sender, EventArgs e)
{
    if (atd_dataGridView.DataSource == null)
    {
        MessageBox.Show("Empty Records !");
    }
    else
    {
        for (int i = 0; i < atd_dataGridView.Rows.Count - 1; i++)
        {
            SqlCommand cmd = new SqlCommand("INSERT INTO
TBL_ATTENDANCE_DETAILS(DATE,ATD_STATUS,STD_NAME,STD_ROLL_NO,CLASS_
NAME) VALUES('" + dateTimePicker.Text + "','" + atd_dataGridView.Rows[i].Cells[0].Value +
',' + atd_dataGridView.Rows[i].Cells[1].Value + "','" + atd_dataGridView.Rows[i].Cells[2].Value
+ "','" + atd_dataGridView.Rows[i].Cells[3].Value + "')", con);

            con.Open();

            cmd.ExecuteNonQuery();

            con.Close();
        }
        MessageBox.Show("Successful");
        atd_dataGridView.DataSource = null;
    }
}

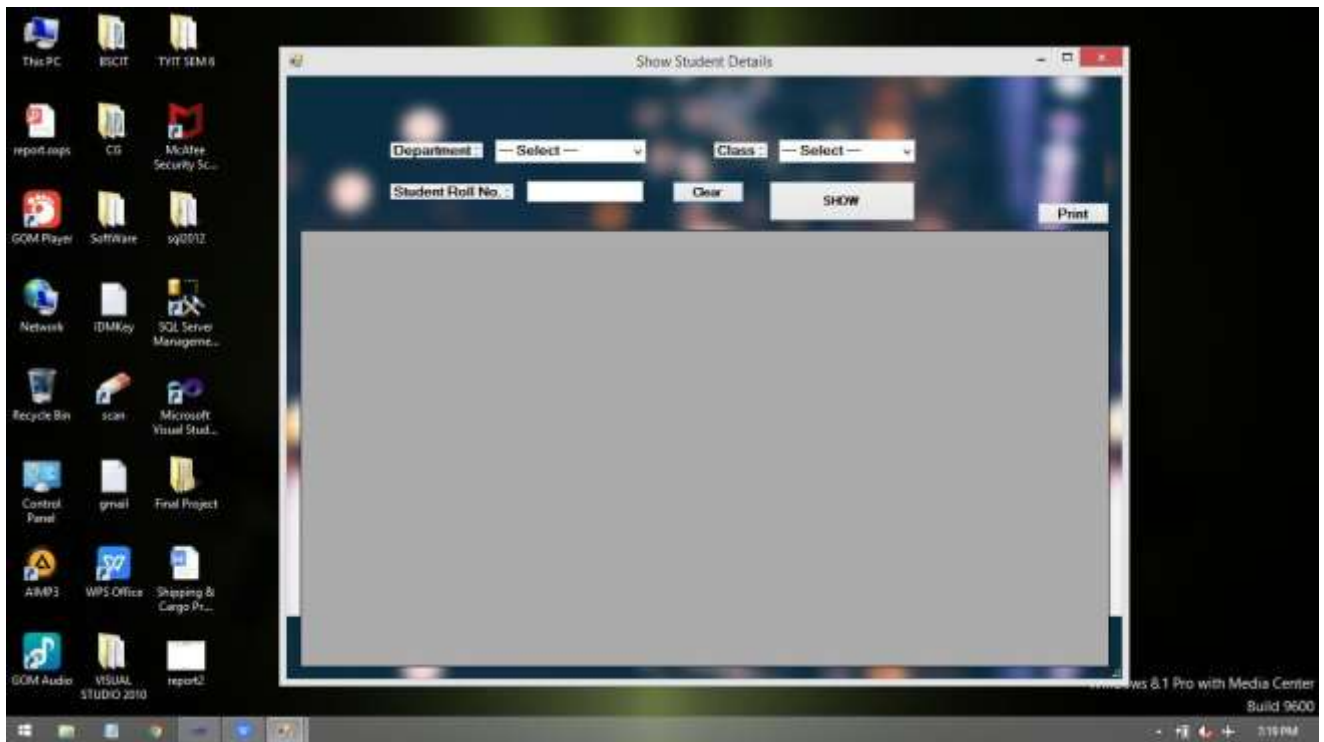
private void add_std_attendance_Load(object sender, EventArgs e)
{
}

private void clr_Click(object sender, EventArgs e)
{
    class_comboBox.Text = "--- Select ---";
}

```

```
std_roll.Text = "";  
dateTimePicker.ResetText();  
atd_dataGridView.DataSource = null;  
}  
}  
}
```

SHOW STUDENT DETAILS



```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using System.Data.SqlClient;
using DGVPrinterHelper;
namespace mainpage
{
    public partial class show_std_details : Form
    {

```

```

SqlConnection con = new SqlConnection(@"Data Source=.;Initial
Catalog=student_attendance_management_system;Integrated Security=True");

public show_std_details()
{
    InitializeComponent();
}

private void dataGridView1_CellContentClick(object sender, DataGridViewCellEventArgs e)
{
}

private void show_std_details_Load(object sender, EventArgs e)
{
}

private void clr_std_Click(object sender, EventArgs e)
{
    std_roll_no.ResetText();
    dept_comboBox.Text="--- Select ---";
    class_comboBox.Text = "--- Select ---";
    std_dataGridView.DataSource = null;
}

private void show_tsd_Click(object sender, EventArgs e)
{
    try
    {
        con.Open();

        SqlCommand cmd = new SqlCommand();

        if(std_roll_no.Text==" " && dept_comboBox.Text=="--- Select ---" &&
class_comboBox.Text=="--- Select ---")
        {
            MessageBox.Show("Please Select Fields !");

```

```

    }

    else

    {

        if (std_roll_no.Text != "")

        {

            cmd = new SqlCommand("SELECT STD_NAME AS NAME,STD_ROLL_NO AS
ROLL_NO,CLASS_NAME AS CLASS,DEPT_NAME AS DEPARTMENT,STD_GENDER AS
GENDER,STD_MOBILE_NO AS MOBILE_NO,STD_MAIL_ID AS MAIL_ID,STD_ADDRESS
AS ADDRESS FROM TBL_STUDENT_DETAILS WHERE STD_ROLL_NO =" +
std_roll_no.Text + "", con);

        }

        else if (dept_comboBox.Text != "--- Select ---")

        {

            cmd = new SqlCommand("SELECT STD_NAME AS NAME,STD_ROLL_NO AS
ROLL_NO,CLASS_NAME AS CLASS,DEPT_NAME AS DEPARTMENT,STD_GENDER AS
GENDER,STD_MOBILE_NO AS MOBILE_NO,STD_MAIL_ID AS MAIL_ID,STD_ADDRESS
AS ADDRESS FROM TBL_STUDENT_DETAILS WHERE DEPT_NAME =" +
dept_comboBox.Text + "", con);

        }

        else if (class_comboBox.Text != "--- Select ---")

        {

            cmd = new SqlCommand("SELECT STD_NAME AS NAME,STD_ROLL_NO AS
ROLL_NO,CLASS_NAME AS CLASS,DEPT_NAME AS DEPARTMENT,STD_GENDER AS
GENDER,STD_MOBILE_NO AS MOBILE_NO,STD_MAIL_ID AS MAIL_ID,STD_ADDRESS
AS ADDRESS FROM TBL_STUDENT_DETAILS WHERE CLASS_NAME =" +
class_comboBox.Text + "", con);

        }

        else

        {

            cmd = new SqlCommand("SELECT STD_NAME AS NAME,STD_ROLL_NO AS
ROLL_NO,CLASS_NAME AS CLASS,DEPT_NAME AS DEPARTMENT,STD_GENDER AS
GENDER,STD_MOBILE_NO AS MOBILE_NO,STD_MAIL_ID AS MAIL_ID,STD_ADDRESS
AS ADDRESS FROM TBL_STUDENT_DETAILS WHERE STD_ROLL_NO =" +
std_roll_no.Text + " AND DEPT_NAME=" + dept_comboBox.Text + " AND CLASS_NAME ="
+ class_comboBox.Text + "", con);

        }

        cmd.CommandType = CommandType.Text;

```

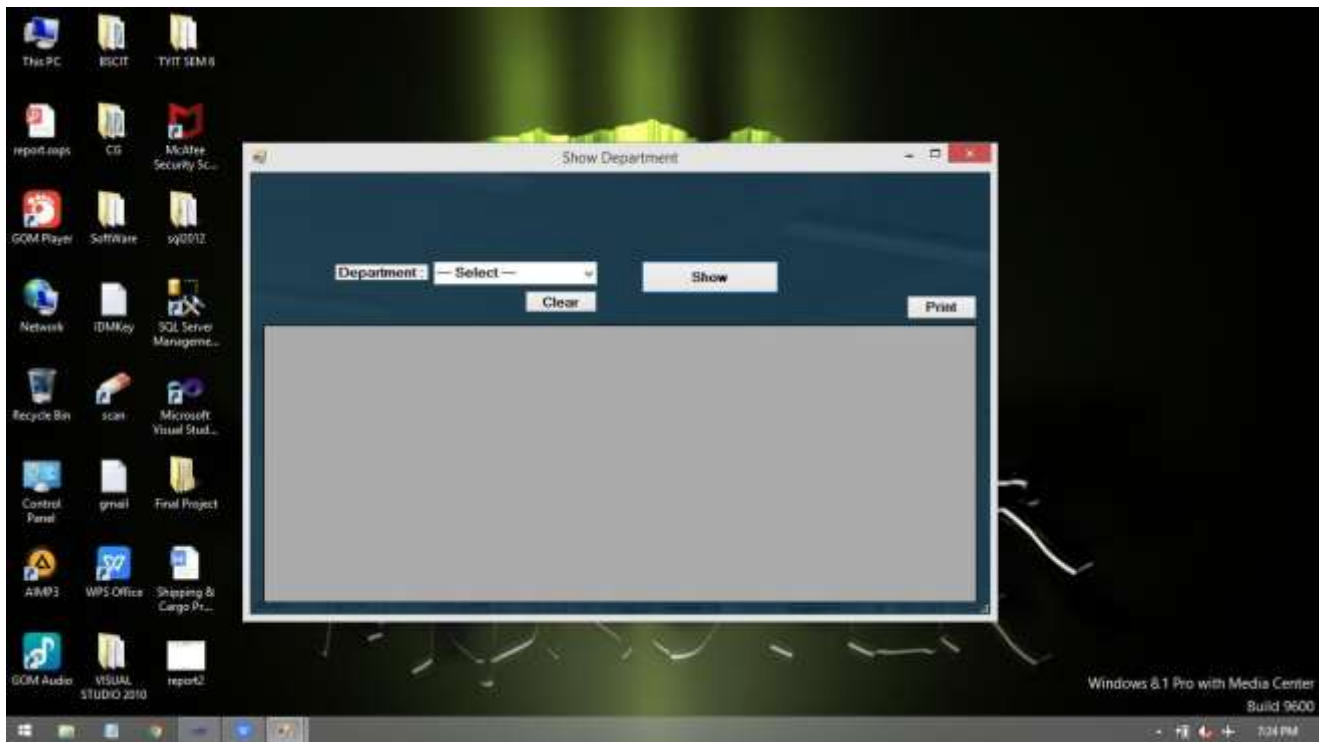


```
        SqlDataAdapter sda = new SqlDataAdapter(cmd);
        DataTable dt = new DataTable();
        sda.Fill(dt);
        std_dataGridView.DataSource = dt;
    }
    con.Close();
}
catch (Exception err)
{
    MessageBox.Show(err.Message.ToString());
}
finally
{
    if (con.State == ConnectionState.Open)
    {
        con.Close();
    }
}
}

private void prt_std_Click(object sender, EventArgs e)
{
    if (std_dataGridView.DataSource == null)
    {
        MessageBox.Show("Empty Data !");
    }
    else
    {
        DGVPrinter printer = new DGVPrinter();
        printer.Title = "Student Details";//Header
        printer.SubTitle = string.Format("Date: {0}",
            DateTime.Now.Date.ToString("MM/dd/yyyy"));
    }
}
```

```
printer.SubTitleFormatFlags = StringFormatFlags.LineLimit | StringFormatFlags.NoClip;
printer.PageNumbers = true;
printer.PageNumberInHeader = false;
printer.PorportionalColumns = true;
printer.HeaderCellAlignment = StringAlignment.Near;
printer.Footer = "Student Attendance Management System";//Footer
printer.FooterSpacing = 15;
//Print landscape mode
printer.printDocument.DefaultPageSettings.Landscape = true;
printer.PrintDataGridView(std_dataGridView);
    }
}
}
}
```

SHOW DEPARTMENT DETAILS



```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using DGVPrinterHelper;
namespace mainpage
{
    public partial class show_deptcs : Form
    {

```

```
SqlConnection con = new SqlConnection(@"Data Source=.;Initial  
Catalog=student_attendance_management_system;Integrated Security=True");
```

```
public show_deptcs()
```

```
{
```

```
    InitializeComponent();
```

```
}
```

```
private void show_deptcs_Load(object sender, EventArgs e)
```

```
{
```

```
}
```

```
private void show_dept_Click(object sender, EventArgs e)
```

```
{
```

```
    try
```

```
    {
```

```
        con.Open();
```

```
        if (dept_name_comboBox.Text == "--- Select ---")
```

```
        {
```

```
            SqlCommand cmd = new SqlCommand("SELECT DEPT_ID AS ID,DEPT_NAME AS  
DEPARTMENT,HOD_NAME,HOD_MOBILE_NO AS MOBILE_NO,HOD_MAIL_ID AS  
MAIL_ID FROM TBL_DEPARTMENT", con);
```

```
            cmd.CommandType = CommandType.Text;
```

```
            SqlDataAdapter sda = new SqlDataAdapter(cmd);
```

```
            DataTable dt = new DataTable();
```

```
            sda.Fill(dt);
```

```
            dept_dataGridView.DataSource = dt;
```

```
        }
```

```
    else
```

```
    {
```

```
        SqlCommand cmd = new SqlCommand("SELECT DEPT_ID AS ID,DEPT_NAME AS  
DEPARTMENT,HOD_NAME,HOD_MOBILE_NO AS MOBILE_NO,HOD_MAIL_ID AS  
MAIL_ID FROM TBL_DEPARTMENT WHERE DEPT_NAME='" + dept_name_comboBox.Text  
+ "'", con);
```

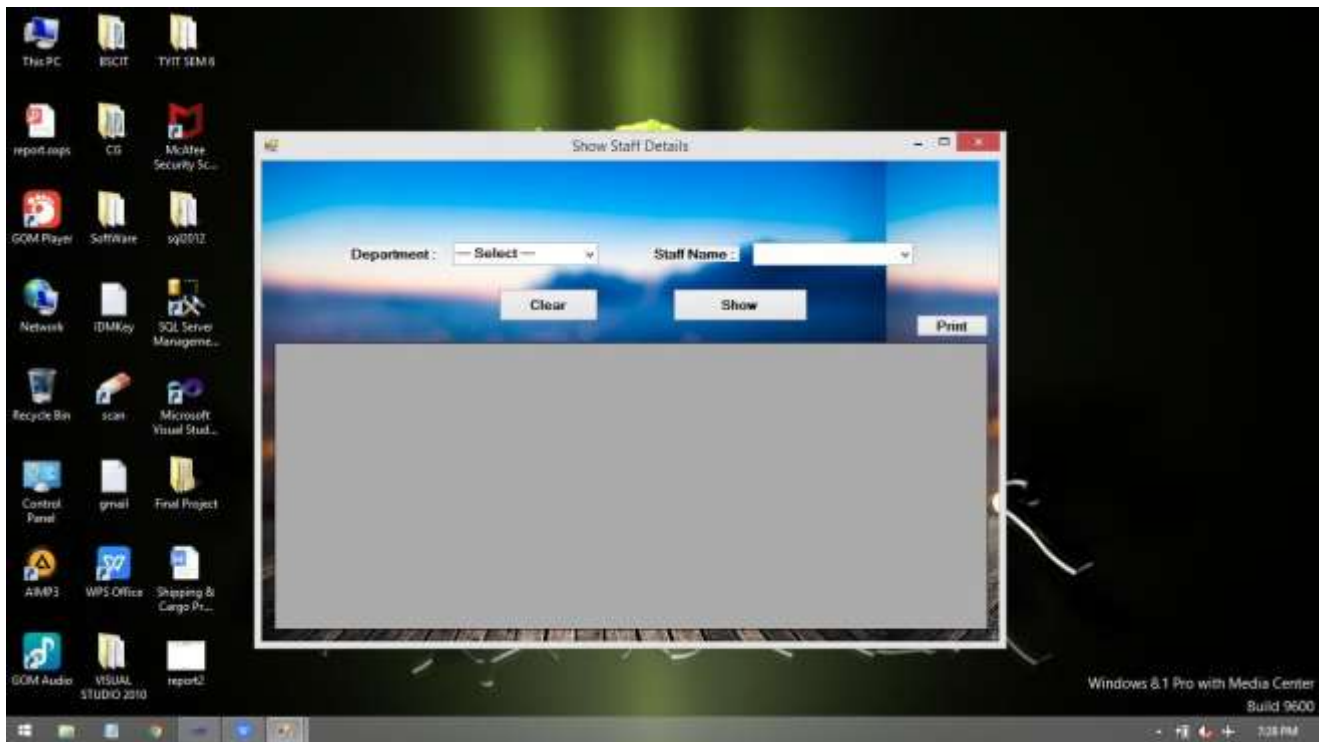
```
        cmd.CommandType = CommandType.Text;
```

```
        SqlDataAdapter sda = new SqlDataAdapter(cmd);
        DataTable dt = new DataTable();
        sda.Fill(dt);
        dept_dataGridView.DataSource = dt;
    }
    con.Close();
}
catch (Exception err)
{
    MessageBox.Show(err.Message.ToString());
}
finally
{
    if (con.State == ConnectionState.Open)
    {
        con.Close();
    }
}
}

private void prt_dept_Click(object sender, EventArgs e)
{
    if (dept_dataGridView.DataSource == null)
    {
        MessageBox.Show("Empty Data !");
    }
    else
    {
        DGVPainter printer = new DGVPainter();
        printer.Title = "Department Details";//Header
        printer.SubTitle = string.Format("Date: {0}",
            DateTime.Now.Date.ToString("MM/dd/yyyy"));
    }
}
```

```
printer.SubTitleFormatFlags = StringFormatFlags.LineLimit | StringFormatFlags.NoClip;
printer.PageNumbers = true;
printer.PageNumberInHeader = false;
printer.PorportionalColumns = true;
printer.HeaderCellAlignment = StringAlignment.Near;
printer.Footer = "Student Attendance Management System";//Footer
printer.FooterSpacing = 15;
//Print landscape mode
printer.printDocument.DefaultPageSettings.Landscape = true;
printer.PrintDataGridView(dept_dataGridView);
}
}
private void clr_Click(object sender, EventArgs e)
{
    dept_dataGridView.DataSource = null;
    dept_name_comboBox.Text = "--- Select ---";
}
}
}
```

SHOW STAFF DETAILS



```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using DGVPrinterHelper;
namespace mainpage
{
    public partial class show_staff_details : Form
    {

```

```

SqlConnection con = new SqlConnection(@"Data Source=.;Initial
Catalog=student_attendance_management_system;Integrated Security=True");

public show_staff_details()
{
    InitializeComponent();
}

private void show_Click(object sender, EventArgs e)
{
    try
    {
        con.Open();

        SqlCommand cmd = new SqlCommand();

        if (dept_comboBox.Text == "--- Select ---" && stf_comboBox.Text == "")
        {
            cmd = new SqlCommand("SELECT STF_ID AS ID,STF_NAME AS
NAME,DEPT_NAME AS DEPARTMENT,STF_GENDER AS GENDER,STF_MAIL_ID AS
MAIL_ID,STF_MOBILE_NO AS MOBILE_NO,STF_ADDRESS AS ADDRESS FROM
TBL_STAFF_DETAILS", con);
        }
        else
        {
            if (dept_comboBox.Text != "--- Select ---")
            {
                cmd = new SqlCommand("SELECT STF_ID AS ID,STF_NAME AS
NAME,DEPT_NAME AS DEPARTMENT,STF_GENDER AS GENDER,STF_MAIL_ID AS
MAIL_ID,STF_MOBILE_NO AS MOBILE_NO,STF_ADDRESS AS ADDRESS FROM
TBL_STAFF_DETAILS WHERE DEPT_NAME='" + dept_comboBox.Text + "'", con);
            }
            else if (stf_comboBox.Text != "")
            {
                cmd = new SqlCommand("SELECT STF_ID AS ID,STF_NAME AS
NAME,DEPT_NAME AS DEPARTMENT,STF_GENDER AS GENDER,STF_MAIL_ID AS
MAIL_ID,STF_MOBILE_NO AS MOBILE_NO,STF_ADDRESS AS ADDRESS FROM
TBL_STAFF_DETAILS WHERE STF_NAME='" + stf_comboBox.Text + "'", con);
            }
        }
    }
    catch { }
}

```



```

    }

    else

    {

        cmd = new SqlCommand("SELECT STF_ID AS ID,STF_NAME AS
NAME,DEPT_NAME AS DEPARTMENT,STF_GENDER AS GENDER,STF_MAIL_ID AS
MAIL_ID,STF_MOBILE_NO AS MOBILE_NO,STF_ADDRESS AS ADDRESS FROM
TBL_STAFF_DETAILS WHERE STF_NAME='" + stf_comboBox.Text + "' AND
DEPT_NAME='" + dept_comboBox.Text + "'", con);

    }

    cmd.CommandType = CommandType.Text;

    SqlDataAdapter sda = new SqlDataAdapter(cmd);

    DataTable dt = new DataTable();

    sda.Fill(dt);

    stf_dataGridView.DataSource = dt;

}

con.Close();

}

catch (Exception err)

{

    MessageBox.Show(err.Message.ToString());

}

finally

{

    if (con.State == ConnectionState.Open)

    {

        con.Close();

    }

}

}

private void show_staff_details_Load(object sender, EventArgs e)

{

```

// TODO: This line of code loads data into the 'student_attendance_management_systemDataSet1.TBL_STAFF_DETAILS' table. You can move, or remove it, as needed.

```
this.tBL_STAFF_DETAILSTableAdapter.Fill(this.student_attendance_management_systemDataSet1.TBL_STAFF_DETAILS);
```

```
}
```

```
private void clr_Click(object sender, EventArgs e)
```

```
{
```

```
    dept_comboBox.Text="--- Select ---";
```

```
    stf_comboBox.Text="--- Select ---";
```

```
    stf_dataGridView.DataSource = null;
```

```
}
```

```
private void prt_stf_Click(object sender, EventArgs e)
```

```
{
```

```
    if (stf_dataGridView.DataSource == null)
```

```
    {
```

```
        MessageBox.Show("Empty Data !");
```

```
    }
```

```
    else
```

```
    {
```

```
        DGVPrinter printer = new DGVPrinter();
```

```
        printer.Title = "Staff Details";//Header
```

```
        printer.SubTitle = string.Format("Date: {0}",  
DateTime.Now.Date.ToString("MM/dd/yyyy"));
```

```
        printer.SubTitleFormatFlags = StringFormatFlags.LineLimit | StringFormatFlags.NoClip;
```

```
        printer.PageNumbers = true;
```

```
        printer.PageNumberInHeader = false;
```

```
        printer.PorportionalColumns = true;
```

```
        printer.HeaderCellAlignment = StringAlignment.Near;
```

```
        printer.Footer = "Student Attendance Management System";//Footer
```

```
        printer.FooterSpacing = 15;
```

```
//Print landscape mode
```

```
printer.printDocument.DefaultPageSettings.Landscape = true;
```

```
printer.PrintDataGridView(stf_dataGridView);
```

```
}
```

```
}
```

```
}
```

```
}
```

GENERATE STUDENT REPORT



```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using System.Data.SqlClient;
using DGVPrinterHelper;
namespace mainpage
{
    public partial class generate_std_report : Form
    {

```

```
SqlConnection con = new SqlConnection(@"Data Source=.;Initial  
Catalog=student_attendance_management_system;Integrated Security=True");
```

```
public generate_std_report()
```

```
{
```

```
    InitializeComponent();
```

```
}
```

```
private void report_gnrt_Click(object sender, EventArgs e)
```

```
{
```

```
    try
```

```
    {
```

```
        if (to_dateTimePicker.Text == from_dateTimePicker.Text)
```

```
        {
```

```
            MessageBox.Show("Mismatch Date !");
```

```
        }
```

```
    else
```

```
    {
```

```
        if (class_comboBox.Text == "--- Select ---" && std_roll_no.Text=="")
```

```
        {
```

```
            MessageBox.Show("Select Fields !");
```

```
        }
```

```
    else
```

```
    {
```

```
        con.Open();
```

```
        SqlCommand cmd = new SqlCommand();
```

```
        if (std_roll_no.Text != "")
```

```
        {
```

```
            cmd = new SqlCommand("SELECT DISTINCT  
STD_ROLL_NO,STD_NAME,CLASS_NAME,COUNT(ATD_STATUS) AS  
TOTAL_SESSION,COUNT(case when ATD_STATUS='Present' then 1 else null end) AS  
TOTAL_ATTEND,COUNT(case when ATD_STATUS='Present' then 1 else null  
end)*100/COUNT(ATD_STATUS) AS PERCENTAGE,(case when COUNT(case when  
ATD_STATUS='Present' then 1 else null end)*100/COUNT(ATD_STATUS)=100 then 'Golden'  
when COUNT(case when ATD_STATUS='Present' then 1 else null  
end)*100/COUNT(ATD_STATUS) < 75 then 'Defaulter' else 'Good' end) AS STATUS FROM
```

```
TBL_ATTENDANCE_DETAILS WHERE STD_ROLL_NO="" + std_roll_no.Text + "" AND DATE  
BETWEEN "" + from_dateTimePicker.Text + "" AND "" + to_dateTimePicker.Text + "" GROUP BY  
STD_ROLL_NO,STD_NAME,CLASS_NAME", con);
```

```
}
```

```
else if(class_comboBox.Text != "--- Select ---")
```

```
{
```

```
cmd = new SqlCommand("SELECT DISTINCT  
STD_ROLL_NO,STD_NAME,CLASS_NAME,COUNT(ATD_STATUS) AS  
TOTAL_SESSION,COUNT(case when ATD_STATUS='Present' then 1 else null end) AS  
TOTAL_ATTEND,COUNT(case when ATD_STATUS='Present' then 1 else null  
end)*100/COUNT(ATD_STATUS) AS PERCENTAGE,(case when COUNT(case when  
ATD_STATUS='Present' then 1 else null end)*100/COUNT(ATD_STATUS)=100 then 'Golden'  
when COUNT(case when ATD_STATUS='Present' then 1 else null  
end)*100/COUNT(ATD_STATUS) < 75 then 'Defaulter' else 'Good' end) AS STATUS FROM  
TBL_ATTENDANCE_DETAILS WHERE CLASS_NAME="" + class_comboBox.Text + "" AND  
DATE BETWEEN "" + from_dateTimePicker.Text + "" AND "" + to_dateTimePicker.Text + ""  
GROUP BY STD_ROLL_NO,STD_NAME,CLASS_NAME", con);
```

```
}
```

```
else
```

```
{
```

```
cmd = new SqlCommand("SELECT DISTINCT  
STD_ROLL_NO,STD_NAME,CLASS_NAME,COUNT(ATD_STATUS) AS  
TOTAL_SESSION,COUNT(case when ATD_STATUS='Present' then 1 else null end) AS  
TOTAL_ATTEND,COUNT(case when ATD_STATUS='Present' then 1 else null  
end)*100/COUNT(ATD_STATUS) AS PERCENTAGE,(case when COUNT(case when  
ATD_STATUS='Present' then 1 else null end)*100/COUNT(ATD_STATUS)=100 then 'Golden'  
when COUNT(case when ATD_STATUS='Present' then 1 else null  
end)*100/COUNT(ATD_STATUS) < 75 then 'Defaulter' else 'Good' end) AS STATUS FROM  
TBL_ATTENDANCE_DETAILS WHERE STD_ROLL_NO="" + std_roll_no.Text + "" AND  
CLASS_NAME="" + class_comboBox.Text + "" AND DATE BETWEEN "" +  
from_dateTimePicker.Text + "" AND "" + to_dateTimePicker.Text + "" GROUP BY  
STD_ROLL_NO,STD_NAME,CLASS_NAME", con);
```

```
}
```

```
SqlDataAdapter sda = new SqlDataAdapter(cmd);
```

```
DataTable dt = new DataTable();
```

```
sda.Fill(dt);
```

```
report_dataGridView.DataSource = dt;
```

```
}
```

```
con.Close();
```

```
}
```

```

    }

    catch (Exception err)
    {
        MessageBox.Show(err.Message.ToString());
    }

    finally
    {
        if (con.State == ConnectionState.Open)
        {
            con.Close();
        }
    }
}

private void generate_std_report_Load(object sender, EventArgs e)
{
}

private void save_report_Click(object sender, EventArgs e)
{
    if (report_dataGridView.DataSource == null)
    {
        MessageBox.Show("Empty Data !");
    }
    else
    {
        for (int i = 0; i < report_dataGridView.Rows.Count - 1; i++)
        {
            SqlCommand cmd = new SqlCommand("INSERT INTO
TBL_REPORT_DETAILS(STD_ROLL_NO,STD_NAME,CLASS_NAME,DATE,TOTAL_SESSI
ON,TOTAL_ATTEND,STATUS) VALUES('" + report_dataGridView.Rows[i].Cells[0].Value +
",'" + report_dataGridView.Rows[i].Cells[1].Value + "','" +
report_dataGridView.Rows[i].Cells[2].Value + "','" + to_dateTimePicker.Text + "','" +

```

```
report_dataGridView.Rows[i].Cells[3].Value + "','" + report_dataGridView.Rows[i].Cells[4].Value  
+ "','" + report_dataGridView.Rows[i].Cells[5].Value + "')", con);
```

```
    con.Open();
```

```
    cmd.ExecuteNonQuery();
```

```
    con.Close();
```

```
}
```

```
    MessageBox.Show("Saved !");
```

```
}
```

```
}
```

```
private void clr_Click(object sender, EventArgs e)
```

```
{
```

```
    class_comboBox.Text = "--- Select ---";
```

```
    std_roll_no.Text = "";
```

```
    to_dateTimePicker.ResetText();
```

```
    from_dateTimePicker.ResetText();
```

```
    report_dataGridView.DataSource = null;
```

```
}
```

```
private void prt_rpt_Click(object sender, EventArgs e)
```

```
{
```

```
    if (report_dataGridView.DataSource == null)
```

```
    {
```

```
        MessageBox.Show("Empty Data !");
```

```
    }
```

```
    else
```

```
    {
```

```
        DGVPrinter printer = new DGVPrinter();
```

```
        printer.Title = "Student Report";//Header
```

```
        printer.SubTitle = string.Format("Date: {0}",  
DateTime.Now.Date.ToString("MM/dd/yyyy"));
```

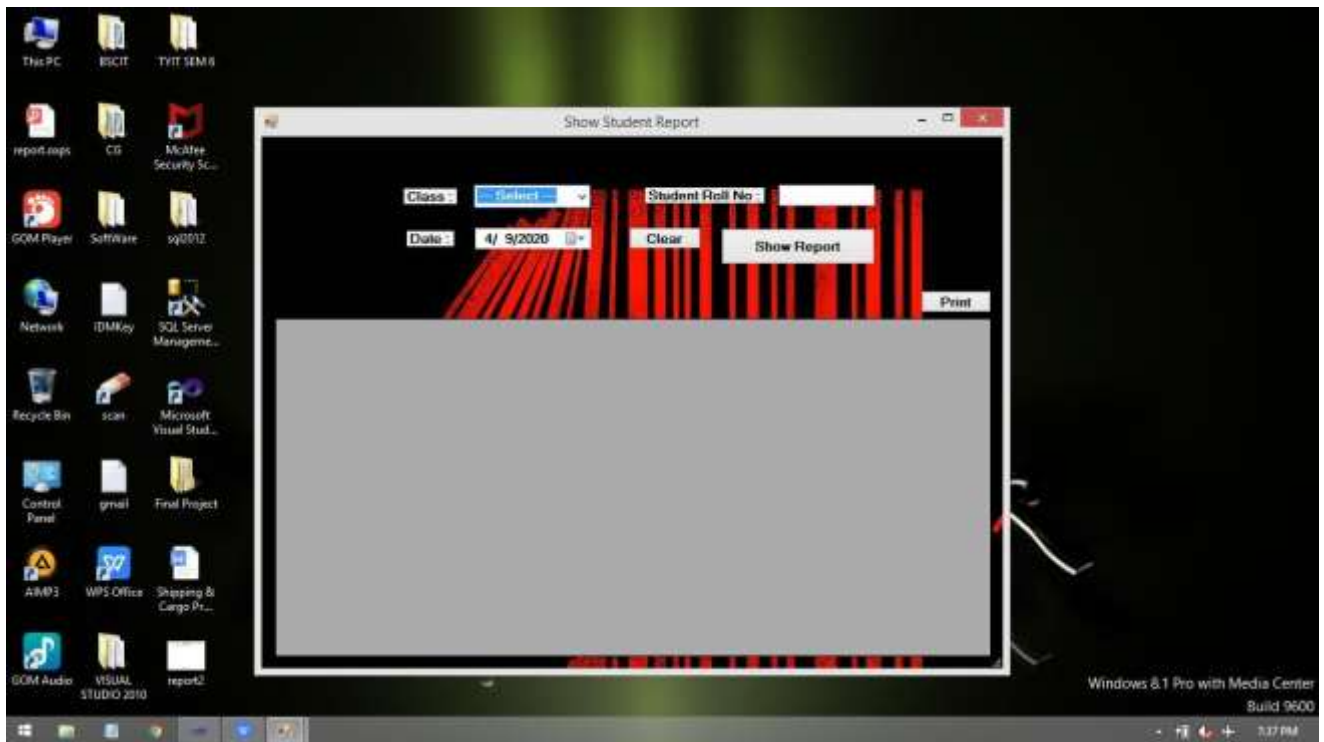
```
        printer.SubTitleFormatFlags = StringFormatFlags.LineLimit | StringFormatFlags.NoClip;
```

```
        printer.PageNumbers = true;
```



```
printer.PageNumberInHeader = false;
printer.PorportionalColumns = true;
printer.HeaderCellAlignment = StringAlignment.Near;
printer.Footer = "Student Attendance Management System";//Footer
printer.FooterSpacing = 15;
//Print landscape mode
printer.printDocument.DefaultPageSettings.Landscape = true;
printer.PrintDataGridView(report_dataGridView);
    }
}
}
```

SHOW STUDENT REPORT



```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using System.Data.SqlClient;
using DGVPrinterHelper;
namespace mainpage
{
    public partial class show_std_report : Form
    {

```

```

SqlConnection con = new SqlConnection(@"Data Source=.;Initial
Catalog=student_attendance_management_system;Integrated Security=True");

public show_std_report()
{
    InitializeComponent();
}

private void show_std_report_Load(object sender, EventArgs e)
{
}

private void show_report_Click(object sender, EventArgs e)
{
    try
    {
        con.Open();

        if (class_comboBox.Text == "--- Select ---")
        {
            MessageBox.Show("Please Select Class !");
        }
        else
        {
            if(std_roll_no.Text != "")
            {
                SqlCommand cmd = new SqlCommand("SELECT STD_NAME AS
STUDENT_NAME,STD_ROLL_NO AS ROLL_NO,CLASS_NAME AS
CLASS,DATE,TOTAL_SESSION,TOTAL_ATTEND,STATUS FROM TBL_REPORT_DETAILS
WHERE STD_ROLL_NO='"+std_roll_no.Text+"' AND CLASS_NAME='"+ class_comboBox.Text
+ "' AND DATE='"+dateTimePicker.Text+"'", con);

                SqlDataAdapter sda = new SqlDataAdapter(cmd);

                DataTable dt = new DataTable();

                sda.Fill(dt);

                report_dataGridView.DataSource = dt;
            }
        }
    }
    catch
    {
    }
}

```

```

    }
    else
    {
        SqlCommand cmd = new SqlCommand("SELECT STD_NAME AS
STUDENT_NAME,STD_ROLL_NO AS ROLL_NO,CLASS_NAME AS
CLASS,DATE,TOTAL_SESSION,TOTAL_ATTEND,STATUS FROM TBL_REPORT_DETAILS
WHERE CLASS_NAME='" + class_comboBox.Text + "' AND DATE='" + dateTimePicker.Text +
"', con);

        SqlDataAdapter sda = new SqlDataAdapter(cmd);

        DataTable dt = new DataTable();

        sda.Fill(dt);

        report_dataGridView.DataSource = dt;
    }
}
}
catch (Exception err)
{
    MessageBox.Show(err.Message.ToString());
}
finally
{
    if (con.State == ConnectionState.Open)
    {
        con.Close();
    }
}
}

private void print_Click(object sender, EventArgs e)
{
    if (report_dataGridView.DataSource == null)
    {
        MessageBox.Show("Empty Data !");
    }
}

```

```

    }
else
{
    DGVPrinter printer = new DGVPrinter();
    printer.Title = "Student Report";//Header
    printer.SubTitle = string.Format("Date: {0}",
DateTime.Now.Date.ToString("MM/dd/yyyy"));
    printer.SubTitleFormatFlags = StringFormatFlags.LineLimit | StringFormatFlags.NoClip;
    printer.PageNumbers = true;
    printer.PageNumberInHeader = false;
    printer.PorportionalColumns = true;
    printer.HeaderCellAlignment = StringAlignment.Near;
    printer.Footer = "Student Attendance Management System";//Footer
    printer.FooterSpacing = 15;
    //Print landscape mode
    printer.printDocument.DefaultPageSettings.Landscape = true;
    printer.PrintDataGridView(report_dataGridView);
}
}
private void clr_Click(object sender, EventArgs e)
{
    class_comboBox.Text = "--- Select ---";
    std_roll_no.Text = "";
    report_dataGridView.DataSource = null;
    dateTimePicker.ResetText();
}
}
}

```

Testing Approaches

METHODOLOGY USED FOR TESTING

Functional Testing:

In function testing, the structure of the project is not considered. Test cases are solely decided on the basis of the requirements or specification of the program or module and internal of module or program is not considered for selection of the test cases due to its nature function test is called as “BLACK BOX TESTING”. In this the tester only knows the inputs that can be given to the system and what output is expected from the system.

The basic for deciding test cases in functional testing is a requirement or specifications of the system or module.

Structural Testing:

White box testing is also known as structural testing. In this the testing with implementation of the program is considered. The intent of this testing is not to exercise all different input or output conditions but to exercise the different programming structures and the data structures used in the program. To test the structure of a program, structural testing aims to achieve test cases that will force the desired coverage of different structures. The criteria for structural testing are quite precise as they are based on the program structures, which are formal and precise.

Various Types of Testing:

There are four different types of testing the project, so that, it can check the working of projects i.e. to check whether the system is working neatly and error free.

Four different types of testing are:

- 1. UNIT TESTING**
- 2. MODULE TESTING**
- 3. INTEGRATED TESTING**
- 4. SYSTEM**

TESTING

Unit Testing:

Unit testing is very important in testing of the project, from the name itself, we come to know that it checks the system unit wise. Each and every field on each form is tested during the coding phase:

1. The validation rules applied are working and the system is storing correct data.
2. Numeric fields are checked for the valid ranges and that they are not left blank.
3. All character fields for proper data types, NOT NULL or EMPTY fields' length and allowed values.
4. All buttons are checked so that when they are pressed the proper form is displayed.
5. Sample test data is prepared with correct and incorrect value considering validation rules and regulations, then after system is checked so that it should accept only correct vales and should return incorrect data with user-friendly error message.

Module Testing:

For Systematic Progressive testing, we will adopt the modular approach. The system is tested to check if all fields work together and produce the results as per the stated rules and regulations without affecting the tested during change. Each and every module is tested during programming stage.

Integrated Testing:

All modules are integrated and combined to carry out module testing and check the following:

1. After the proper option, the particular module should be called.
2. When the called module is terminated, the control should go back to the main form.
3. The integrated testing checks that the control flow goes as per the decided flow.

System Testing:

In system testing, whole system is checked for whether the system is giving correct output as per the expectations. It is the last stage therefore it is implemented for which a testing plan is necessary that will aid to maximize the effectiveness of discovering errors.

Conclusion and Future Work

- With the help of this system, we can send real time messages of student's attendance to their parents.
- There is no paper work required.
- This system will automatically take attendance with the help of barcode scanner.
- It also helps to generate defaulter report.
- It saves teachers as well as student's time.

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