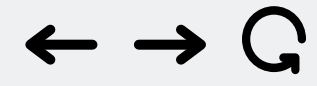


Attendance Management System

Swan Htet Aung (6440043)
Pyae Phyo Thu (6511505)



Attendance Management System



Ginyard International Co.



Attendance Management System



Username

Password

Login as Student

Login as Teacher



Username

Password

Login as Student

Login as Teacher



StudentID:

1

SubjectName:

Mathematics

Filter By:



Attendance ID

Date

ShowAll

EditAttendanceData

ViewAttendance

Back To Login

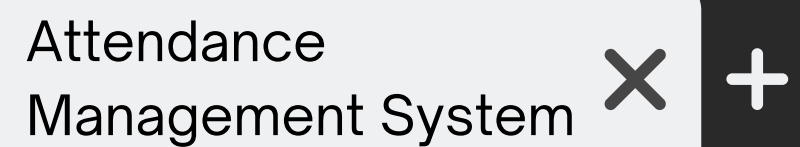
Student ID

Subject Name

Date

Status

No content in table





1

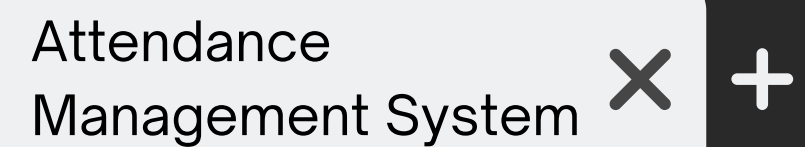
Mathematics

ShowAll




[Back To Login](#)

[illegible]



Mathematics

Date 

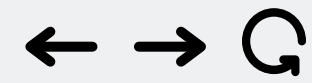
EditAttendanceData

[Back To Login](#)

[illegible]



Attendance
Management System



Q Edit -> Add



AttendanceManagementApp



Student ID	Subject Name	Date	Status
1	Mathematics	2025-02-01	Present
1	Mathematics	2025-02-03	Present
1	Mathematics	2025-02-08	Present
1	Mathematics	2025-02-05	Present
1	Mathematics	2025-02-10	Absent

1

1

2025-02-12

Present

Add

Update

Delete



Student ID	Subject Name	Date	Status
1	Mathematics	2025-02-01	Present
1	Mathematics	2025-02-03	Present
1	Mathematics	2025-02-08	Present
1	Mathematics	2025-02-05	Present
1	Mathematics	2025-02-10	Absent
1	Mathematics	2025-02-12	Present

1

1

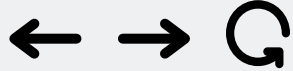
2025-02-12

Present

Add

Update

Delete



Q Edit -> Update



AttendanceManagementApp



Student ID	Subject Name	Date	Status
1	Mathematics	2025-02-01	Present
1	Mathematics	2025-02-03	Present
1	Mathematics	2025-02-08	Present
1	Mathematics	2025-02-05	Present
1	Mathematics	2025-02-10	Absent
1	Mathematics	2025-02-12	Absent

1

1

2025-02-12

Absent

Add

Update

Delete



Student ID	Subject Name	Date	Status
1	Mathematics	2025-02-01	Present
1	Mathematics	2025-02-03	Present
1	Mathematics	2025-02-08	Present
1	Mathematics	2025-02-05	Present
1	Mathematics	2025-02-10	Absent

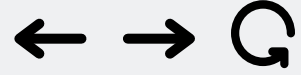
Add

Update

Delete



Attendance Management System



Q Login -> Student



Attendance Management System



Username

johniran01

Password

••••••••

Login as Student

Login as Teacher



Attendance
Management System



Logged



Attendance Management System



Student ID:

Name: John Iran

Subject Name:

Filter By:

Enter Attendance ID or Date

Fetch Attendance

Student ID

Subject Name

Date

Status

No content in table



Student ID:

Name: John Iran

1

Subject Name:

Mathematics

Filter By:

Date



Attendance ID

Date

Fetch Attendance

or Date

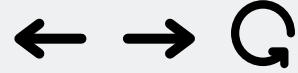
Student ID

Subject Name

Date

Status

No content in table



Q Fetches



Student ID:

Name: John Iran

1

Subject Name:

Mathematics

Filter By:

Date



2025-02-10

Fetch Attendance

Student ID	Subject Name	Date	Status
1	Mathematics	2025-02-10	Absent



1. Introduction

The **Student Attendance Management System** is a JavaFX-based application designed to help teachers manage student attendance efficiently. It allows teachers and students to view, update, and manage attendance records stored in a Microsoft SQL Server database.

Purpose

- Provides a user-friendly interface for teachers and students to interact with attendance records.
- Ensures accurate tracking of student attendance.
- Reduces manual effort required for maintaining attendance records.

Target Users

- **Teachers:** Can log in, view attendance, add/edit/delete records.
- **Students:** Can log in to view their attendance status.

Key Features

- **Login System:** Secure authentication for students and teachers.
- **Teacher Dashboard:** Teachers can view, edit, and manage student attendance.
- **Student Dashboard:** Students can view their attendance records.
- **Database Integration:** Uses Microsoft SQL Server for storage and retrieval of records.



2. Installation Guide

Prerequisites

1. Java Development Kit (JDK) 17 or later

- Download JDK (jdk1.8 is used while designing)

2. Microsoft SQL Server

- Install and configure SQL Server and create the AttendanceDB database.

3. JDBC Driver for SQL Server

- Download and configure Microsoft JDBC Driver

Installation Steps

- **Clone the Repository**

```
git clone https://github.com/your-repo/StudentAttendanceSystem.git
cd StudentAttendanceSystem
```

- **Database Setup**

- Create the AttendanceDB database in SQL Server.
- Run the necessary SQL scripts to create tables (Students, Teachers, Attendance, Subjects).

- **Configure Database Connection**

- Modify the database connection details in each class using SQL (e.g., LoginGUI.java, TeacherGUI.java).

```
String url =
"jdbc:sqlserver://localhost:1433;databaseName=AttendanceDB;encrypt=true;trustServerCertifica
te=true";
String user = "SA";
String password = "1234";
```

- **Open in IntelliJ IDEA and** load the project into IntelliJ IDEA. Ensure that all dependencies are correctly set up.
- **Run the Application by** executing LoginGUI.java to launch the system.



3. Usage Guide

Login System (LoginGUI.java)

1. Enter your username and password.
2. Select role:
 - a. "Login as Student" redirects to the student dashboard.
 - b. "Login as Teacher" redirects to the teacher dashboard.

Student Dashboard (StudentGUI.java)

- Displays student name and ID.
- Students can filter and view their attendance based on subject or date.
- Uses an SQL query to fetch attendance data from the database.

Teacher Dashboard (TeacherGUI.java)

- Teachers can **view all attendance records**.
- Can filter records based on **student ID, subject, and date**.
- Options to **edit attendance data** (switches to Edit_Attendance_byTeacher.java).

Edit Attendance (Edit_Attendance_byTeacher.java)

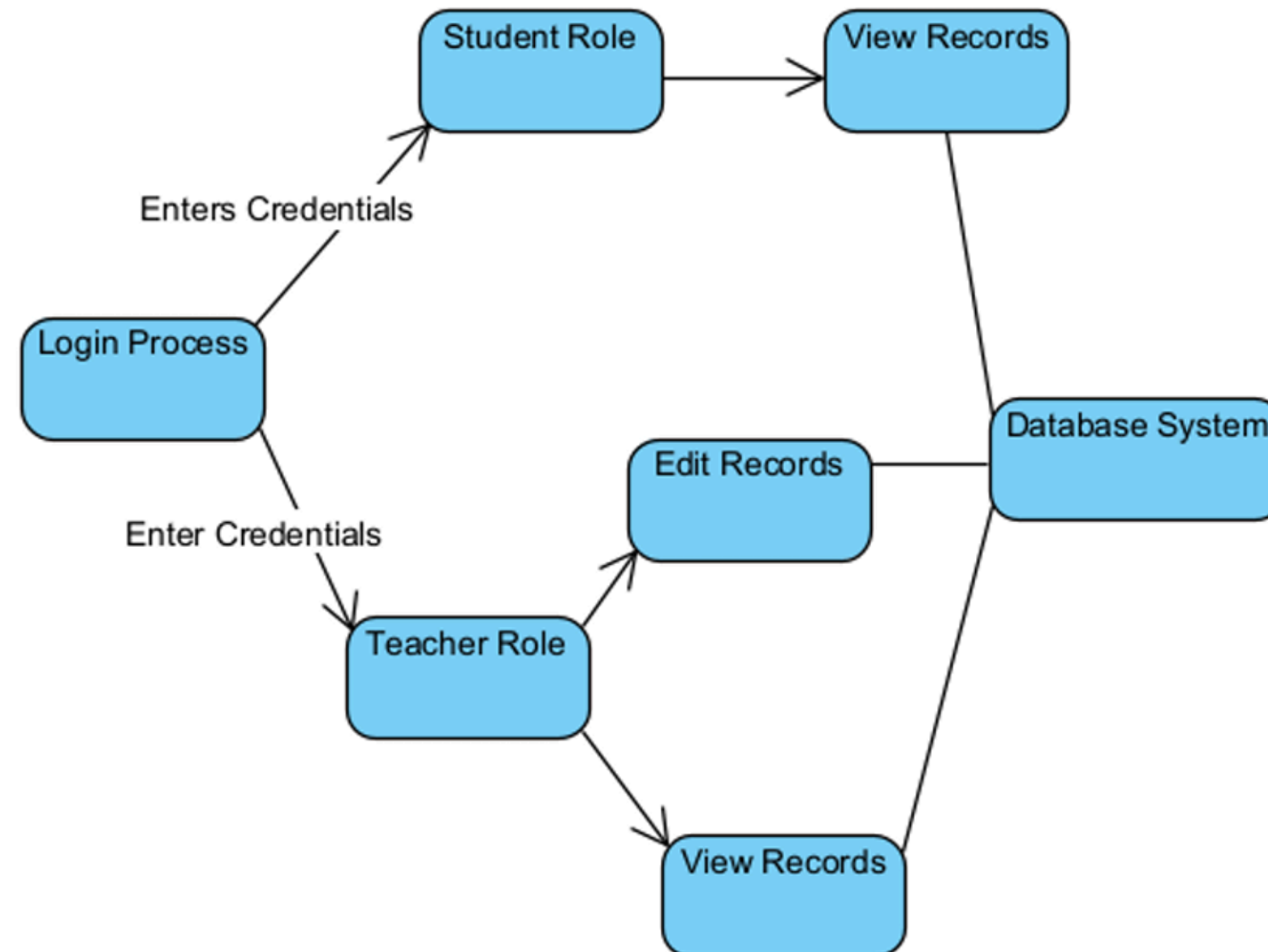
- Teachers can **add, update, or delete** student attendance records.
- Uses an SQL query to insert, update, or remove records from the Attendance table.



4. Architecture and Design

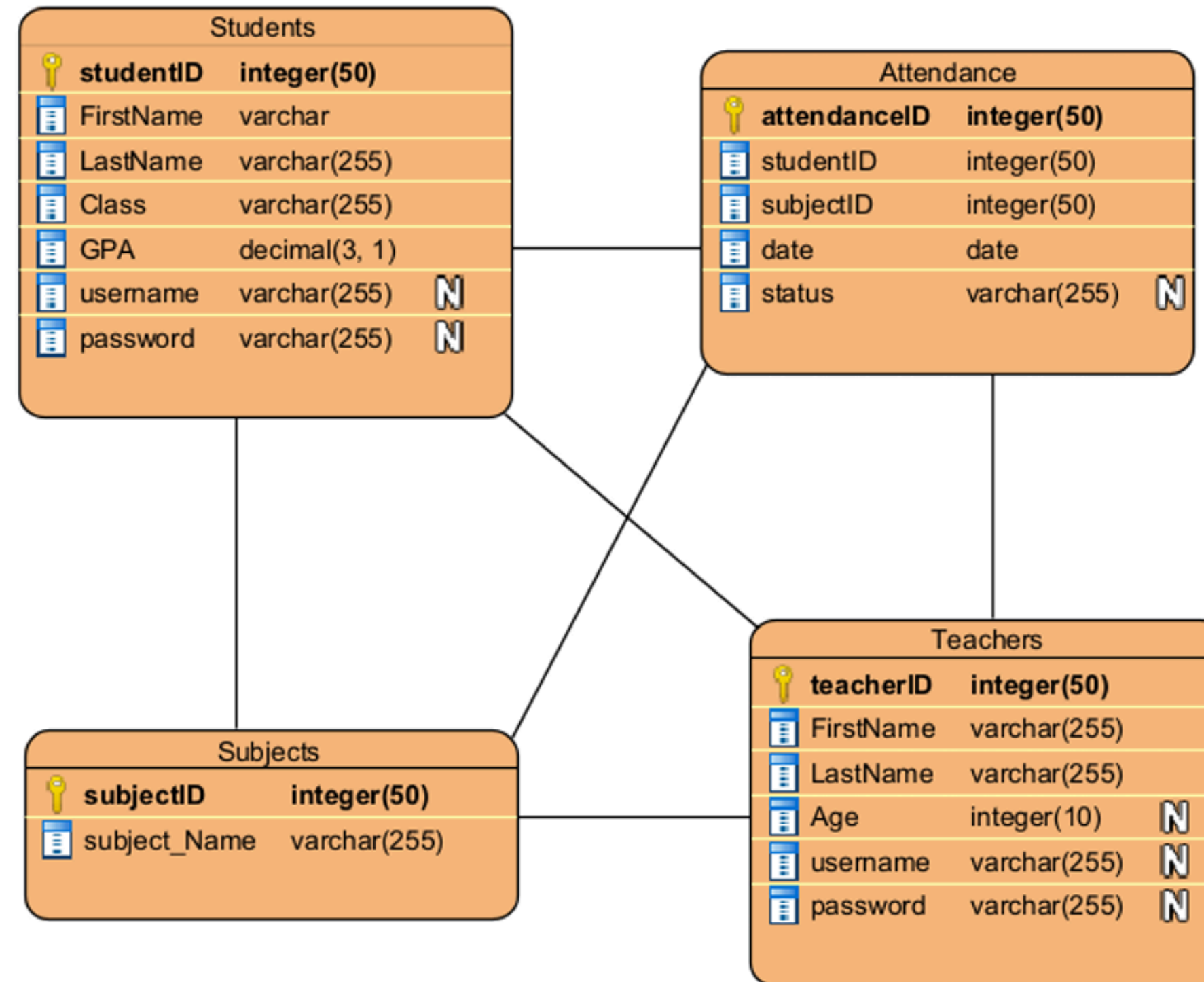
Software Structure

- LoginGUI.java → Handles login authentication.
- StudentGUI.java → Displays student attendance.
- TeacherGUI.java → Displays and manages attendance for teachers.
- Edit_Attendance_byTeacher.java → Allows teachers to edit attendance records.
- Database (Microsoft SQL Server) → Stores all student, teacher, and attendance records.





5. Database Schema





6. Error Handling and Troubleshooting

Common Issues and Fixes

Error	Cause	Solution
Database connection failed	SQL Server is not running or incorrect credentials	Verify database is running and credentials are correct
Invalid username or password	Incorrect credentials entered	Ensure correct credentials are used
Cannot fetch attendance records	Student/teacher not found in database	Verify records exist in the database
Verify records exist in the database	Uninitialized database connection	Ensure <u>connectToDatabase()</u> is called before executing queries



Attendance
Management

Documentations



← → 🔍 🔍 Insert your topic here

THANKYOU



Jar file path : AttendanceManagementSystem\out\artifacts\AttendanceManagementApp_jar\AttendanceManagementApp.jar"