Attendance Monitoring System

A Mini Project for B.Tech Computer Engineering, Cummins College

Contents

1   Problem Statement

The Attendance Monitoring System tracks attendance for five students over a week. Key features include:

- Displaying a weekly timetable.

- Marking attendance (present/absent) for specific days and lectures.

- Retrieving attendance records by roll number and subject.

- Identifying defaulters and sending email notifications.

- Listing present or absent students.

The system is built in Java using the JavaMail API. For security, email credentials should be stored in a config.properties file, excluded from version control via .gitignore.

2   Setup Instructions

To run the system:

1. Clone the repository: git clone https://github.com/your-username/AttendanceMonitoringSystem.

2. Download the JavaMail API (javax.mail.jar) from https://javaee.github.io/javamail/.

3. Add javax.mail.jar to the classpath.

4. Create config.properties in the project root:

   smtp.email=your-email@domain.com
   smtp.password=your-password

5. Ensure Java 8+ is installed.

6. Compile and run:

   javac -cp .:javax.mail.jar Final/*.java
   java -cp .:javax.mail.jar Final.Attendance

   (Use ; on Windows.)

3   Input-Output Examples

Below are console interactions demonstrating the system's functionality.

3.1   Displaying Timetable

Enter:
1-Display time table.
2-Mark attendance
3-Access weekly attendance record of a student for a subject
4-Send email to Defaulters & Display defaulter's list
5-Display list of absent students.
6-Display list of present students.

7-Exit
1
WEEKLY TIMETABLE

Monday   MVC   OOPJ SE
Tuesday   SE   PHY   EG
Wednesday EG   SE   OOPJ
Thursday OOPJ PHY   MVC
Friday   EG   MVC   PHY

3.2   Marking Attendance

Example for Monday, MVC lecture:

Enter:
1-Display time table.
2-Mark attendance
3-Access weekly attendance record of a student for a subject
4-Send email to Defaulters & Display defaulter's list
5-Display list of absent students.
6-Display list of present students.
7-Exit
2
Which day of the week?
Enter
1 for Monday
2 for Tuesday
3 for Wednesday
4 for Thursday
5 for Friday
1
Lecture number?
1
D division students:
Today is Monday
it's MVC lecture
Enter attendance for Monday, MVC:
RNO 1 (p/a): p
RNO 2 (p/a): a
RNO 3 (p/a): p
RNO 4 (p/a): a
RNO 5 (p/a): p

3.3   Checking Attendance by Roll Number

Enter:
1-Display time table.
2-Mark attendance
3-Access weekly attendance record of a student for a subject

4-Send email to Defaulters & Display defaulter's list
5-Display list of absent students.
6-Display list of present students.
7-Exit
3
Enter the name of the course:
MVC
Enter the roll number of the student:
1
Monday   Present
Thursday Absent
Friday   Present

3.4   Identifying Defaulters and Sending Emails

For the subject EG:

Enter:
1-Display time table.
2-Mark attendance
3-Access weekly attendance record of a student for a subject
4-Send email to Defaulters & Display defaulter's list
5-Display list of absent students.
6-Display list of present students.
7-Exit
4
Enter the name of the course:
EG
Defaulter List for EG:
3
Message sent successfully

For the subject SE:

Enter:
1-Display time table.
2-Mark attendance
3-Access weekly attendance record of a student for a subject
4-Send email to Defaulters & Display defaulter's list
5-Display list of absent students.
6-Display list of present students.
7-Exit
4
Enter the name of the course:
SE
Defaulter List for SE:
1
3
Message sent successfully
Message sent successfully

3.5   Email Notifications

The system sends emails to defaulters. Below are examples styled to resemble email notifications:

\color{blue}Notice for Defaulters
\color{gray}From: [Your Email Address]
\color{gray}Sent: 8:49 PM
To: Student
Dear Student,
You have been listed in the Defaulter list for this week.
Kindly contact your support for further action.

\color{blue}Notice for Defaulters
\color{gray}From: [Your Email Address]
\color{gray}Sent: 8:50 PM
To: Student
Dear Student,
You have been listed in the Defaulter list for this week.
Kindly contact your support for further action.
\color{gray}Reply Reply All Forward

3.6   Listing Absent Students

Enter:
1-Display time table.
2-Mark attendance
3-Access weekly attendance record of a student for a subject
4-Send email to Defaulters & Display defaulter's list
5-Display list of absent students.
6-Display list of present students.
7-Exit
5
List of absent students:
Day: Monday lecture: SE   Roll no: 1
Day: Tuesday lecture: PHY Roll no: 1
Day: Wednesday lecture: SE Roll no: 1
Day: Thursday lecture: PHY Roll no: 1
Day: Thursday lecture: MVC Roll no: 1
Day: Monday lecture: MVC   Roll no: 2
Day: Tuesday lecture: SE   Roll no: 2
Day: Wednesday lecture: SE Roll no: 2
Day: Thursday lecture: OOPJ Roll no: 2
Day: Thursday lecture: PHY Roll no: 2
Day: Friday lecture: EG   Roll no: 2
Day: Friday lecture: PHY   Roll no: 2
Day: Tuesday lecture: SE   Roll no: 3
Day: Tuesday lecture: PHY Roll no: 3
Day: Wednesday lecture: EG Roll no: 3
Day: Wednesday lecture: SE Roll no: 3

Day: Thursday lecture: OOPJ Roll no: 3
Day: Friday lecture: EG   Roll no: 3
Day: Friday lecture: PHY   Roll no: 3
Day: Monday lecture: MVC   Roll no: 4
Day: Monday lecture: OOPJ Roll no: 4
Day: Tuesday lecture: EG   Roll no: 4
Day: Wednesday lecture: SE Roll no: 4
Day: Monday lecture: OOPJ Roll no: 5
Day: Tuesday lecture: PHY Roll no: 5
Day: Wednesday lecture: SE Roll no: 5
Day: Thursday lecture: MVC Roll no: 5