**Student Management System - User Manual**

**Introduction**

Welcome to the Student Management System! This tool helps you manage student records for various courses, such as Cyber Security and Data Science. You can easily enter and save details about students, including personal information, fees, and attendance.

**What You Need**

* **Java Development Kit (JDK)**: Ensure you have JDK 8 or later installed.
* **XAMPP**: We’ll use this to run MySQL.
* **MySQL Connector/J**: Make sure to include this in your project to facilitate the database connection.

**Running the Application**

Once everything is set up, compile and run the StudentManagementSystem class. You’ll see a window where you can select a course and start managing student records.

**How the Interface Works**

**Main Window**

* **Select a Course**: Choose a course from the dropdown menu.
* **Next Button**: Click this to open the student management screen where you can add student details.

**Student Management Screen**

Here’s what you’ll see and what to fill out:

* **First Name**: Enter the student's first name.
* **Last Name**: Enter the student's last name.
* **Email**: Enter the student's email address.
* **Phone Number**: Enter the student's phone number.
* **Organisation**: Enter the name of the student's organisation.
* **Profession**: Enter the student's profession.
* **Total Fee**: Enter the total fee for the course.
* **Fee Paid**: Enter the amount paid by the student.
* **Start Date**: Enter the course start date in YYYY-MM-DD format.
* **Completion Date**: Enter the course completion date in YYYY-MM-DD format.
* **Class Attendance**: Enter the student's class attendance percentage.
* **Cohort Number**: Enter the student's cohort number.
* **Comment**: Enter any additional comments.

**Buttons You’ll Use**

* **Save**: Click this to save the student’s information.
* **Cancel**: Exits the application.
* **Clear**: Clears all the fields if you want to start fresh.
* **Back**: Takes you back to the course selection screen.

**Using the Application**

**Selecting a Course**

1. Open the app.
2. Pick a course from the dropdown menu.
3. Click “Next” to open the management interface.

**Entering Student Details**

Fill in the fields with the student’s information. Ensure all required fields are completed.

**Saving a Record**

Press the "Save" button to store the student’s details. A confirmation message will appear if it’s successful.

**Other Features**

* **Clear Fields**: Use this button to erase everything you typed if needed.
* **Return to Course Selection**: Click “Back” to return to the prior screen.
* **Exit**: Click "Cancel" when you're done.

**Managing Your Database with phpMyAdmin**

To manage student records, we’ll use phpMyAdmin, which comes with XAMPP.

**Accessing phpMyAdmin via XAMPP**

1. **Install XAMPP**: Download and install XAMPP from [here](https://www.apachefriends.org/index.html).
2. **Start XAMPP**:
   * Open the XAMPP Control Panel.
   * Start both **Apache** and **MySQL** by clicking the “Start” buttons.
3. **Open phpMyAdmin**:
   * Open your web browser and go to http://localhost/phpmyadmin.
4. **Log In**: You will not be prompted for any passwords so the log in is automatic

**Working with Your Database**

1. **Select the Database**: In phpMyAdmin, click on StudentManagementSystem from the list on the left.
2. **View Records**: Click on the relevant table to see all student records.
3. **Edit Records**: Find the row you want to change, click the edit icon (usually a pencil), make your edits, and hit “Go” to save.
4. **Delete Records**: Click the delete icon (usually a trash can) next to a record, confirm the deletion to remove it.
5. **Add Records**: Click the “Insert” tab at the top. Fill out the form with the student’s info and hit “Go” to save.

**Important Tips**

* **Backup Your Data**: Always consider backing up your database using the “Export” tab before making significant changes.
* **Check Data Integrity**: Make sure you’re not violating any data rules when editing or deleting records.

**Troubleshooting**

* **Connection Issues**: Ensure that MySQL is running from the XAMPP Control Panel.
* **Input Errors**: Double-check that you filled in everything correctly, particularly numeric fields.
* **Error Messages**: If an error occurs, pay attention to the message; it can provide valuable hints for troubleshooting.

**Conclusion**

The Student Management System is a great tool for managing student records. Follow this manual to get everything up and running smoothly. If you encounter any issues, refer to the troubleshooting section or look for help online.