USER GUIDE – Student Management System

Table Of Contents

1. Introduction
2. System Requirements
3. Installation and Setup
4. Getting Started
5. Managing Students
6. Managing Courses
7. Search Functionality
8. User Interface
9. Troubleshooting
10. Frequently Asked Questions
11. **Introduction**

The Student and Course Management System is a comprehensive application designed for educational institutions to manage student records, course information and enrolment data efficiently. This guide will help you install, configure and use all features of the system

**Key Features**

* **Student Management:** Add, update and manage student records
* **Course Administration**: Create and maintain course catalog
* **Advanced Search:** Find students and courses quickly
* **Data Export:** Generate CSV reports
* **Theme Support:** Light and dark mode options

1. **System Requirements**

* **Operating System:** Windows 10/11, macOS 10.14+ or Linux Ubuntu 18.04+
* Python: Version 3.8 or higher
* **RAM:** 4GB minimum
* **Storage:** 500MB free space
* **Display:** 1290x720 resolution
* **Recommended Requirements**
* **Operating System:** Windows 11, macOS 12+ or Linux Ubuntu 20.04+
* **Python:** Version 3.9 or higher
* **RAM:** 8GB or more
* **Storage:** 1GB free space
* **Display:** 1920x1080 resolution

1. **Installation and Setup**

* **Step 1: Install Python**
* Download Python
* Run the installer
* Check ‘Add Python to PATH’ during installation
* Verify installation by opening Command Prompt/Terminal and typing:

‘’’bash

Python –version

* **Step 2: Download the Application**
* Clone or download the application files to your desired location
* Ensured all project files are in the same directory
* **Step 3: Install Dependencies**
* Open Command Prompt/Terminal in the application directory
* Run the following command:

bash

pip install -r requirements.txt

* **Step 4: Launch the Application**
* Navigate to the application directory in Command Prompt/Terminal
* Run the main application file:

bash

python main.py

* The application window will open automatically

1. **Getting Started**

* **First Launch**

When you first open the application, you will see the main dashboard with 2 main tabs:

* Students Tab: Manage student Records
* Courses Tab: Manage course information

1. **Managing Students**

* **Adding New Student**
* Click on the Students tab
* Click “Add New” button
* Fill in the required information:
  + Student Number: Unique Identifier
  + Full Name: Student’s complete name
  + Email: Valid email address
  + Selected Course: Choose from dropdown
* Click “Save” to add the student
* **Editing Student Information**
* Select a student from the list
* Click the “Edit” button
* Modify the necessary fields
* Click “Update” to save changes
* **Deleting a Student**
* Select the student from the list
* Click the “Delete” button
* Confirm deletion the dialog box

1. **Managing Courses**

* **Creating a New Course**
* Click on the Courses Tab
* Click the “Add New ” button
* Provide course details:
  + Course Code: Unique code
  + Course Name: Full course title
  + Description: Course overview
  + Maximum Capacity: Student limit
* Click “Save” to create the course
* **Updating Course information**
* Select a course from the list
* Click “Edit”
* Modify the required information
* Click “Update” to save changes
* **Removing a Course**
* Select the course from the list
* Click the “Delete” button
* Confirm the deletion

1. **Search Functionality**

* **Basic Search**
* Locate the search box at the top of either tab
* Enter your search term (name, course code)
* Press Enter or clicl the Search button
* Results will filter in real time
* **Search Tips**
* **Student Search:** Search by name, student number or email
* **Course Search:** Search by course code or course name
* **Partial Matches:** System supports partial text matching

1. **User Interface Features**

* **Theme Switching**
* Click the Theme toggle button in the top right corner
* Choose between Light and Dark mode
* The theme applies immediately to all tabs
* **Data Export**
* Navigate to either Students or Courses tab
* Click the “Export CSV” button
* Choose save location for the exported file
* The system generates a CSV file with all current data
* **Responsive Design**
* The interface adapts to different window sizes
* Lists scroll automatically when content exceeds display area
* Form layouts adjust for optimal readability

1. **Troubleshooting**

* **Common Issues and Solutions**

**Application Won’t Start**

* Problem: “Python not found” error
* Solution: Ensure Python is installed and added to PATH
* Solution: Verify you are in the correct directory when running the command

**Database Errors**

* Problem: “Database connection failed” messages
* Solution: Check if database file exists in application directory
* Solution: Verify write permissions in the application folder

**Search Not Working**

* Problem: No results returned for valid searches
* Solution: Verify data exists in the system
* Solution: Check for extra spaces in search terms

**Theme Not Applying**

* Problem: Theme changes don’t persist across tabs
* Solution: This is a known issue being addressed in future updates
* Workaround: Manually switch theme in each tab

**Export Function Issues**

Problem: CSV files not generating

Solution: Check disk space and folder permissions

Solution: Ensure no other programs are using the export file

Error Messages

* “Invalid email formats”: Ensure email contains ‘@’ and valid domain
* “Duplicate student number”: Student IDs must be unique
* “Course not found”: Verify course exists before student enrolment
* “Database locked”: Close and restart the application

**Frequently Asked Questions**

**Q: Can I import data from existing spreadsheets**

**A:** Currently, manual entry or CSV export/import is supported. Bulk import features are planned for future releases

**Q: Is there a limit to how many students or courses I can add?**

**A:** The system is limited only by available storage space. Performance may slow with very large datasets

**Q: Can multiple users access the system simultaneously?**

**A**: The current version is designed for single user operation. Multi-User support is under development.

**Q: How do I backup my data?**

**A:** Regularly use the Export feature to create CSV backups. The database file in the application directory can also be copied for backup.

**Q: What should I do if I encounter a bug?**

**A:** Current version supports basic navigation with Tab and Enter keys.

Enhanced keyboard shortcuts are planned.

**Support Contact**

For technical support or additional assistance, please contact your system administrator or the development team with the following information:

* Application version
* Operating system
* Detailed description of the issue
* Steps to reproduce the problem
* Any error messages received