

User Requirements Specification

for

StudentHub: Student Database Management System

Version 1.0 approved

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<09/10/2023>

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1 Introduction

1.1 Purpose of project

The primary objective of this project is to create an intuitive and user-friendly student database management system that effectively eliminates data redundancy, offering a synchronized and centralized repository of student information. Our system will prioritize data security by implementing login and password methods, minimizing the chances of information leakage. Additionally, it will facilitate swift storage and retrieval of data, streamlining administrative tasks and improving coordination among students. Ultimately, our goal is to significantly reduce paperwork and create a more efficient, modernized student management solution.

1.2 Scope of project

The scope of this project encompasses the development of a centralized and user-friendly student database management system that will streamline data entry processes, enhance data security through login and password methods, facilitate efficient report generation, and significantly reduce paperwork in educational institutions. The system's scalability and potential for integration with other educational systems will ensure adaptability to evolving needs. Additionally, comprehensive training and support will be provided to ensure seamless adoption and continued efficient operation within the educational institution.

StudentHub will be extremely useful for students.

1.3 Limitations

- Time-consuming data entry due to manual record maintenance, imposing a significant burden on faculties.
- Extensive paperwork involved in record-keeping, with data stored in physical files and registers.
- Increased storage requirements as files and registers accumulate, taking up physical space.
- Low reliability, as using paper for storing valuable data information is not a secure or dependable method.

2 Database Design

2.1 Software Requirements Specification

- Frontend - HTML, CSS, JavaScript, Bootstrap
- Backend - Python flask (Python 3.7)
- SQLAlchemy

Operating System

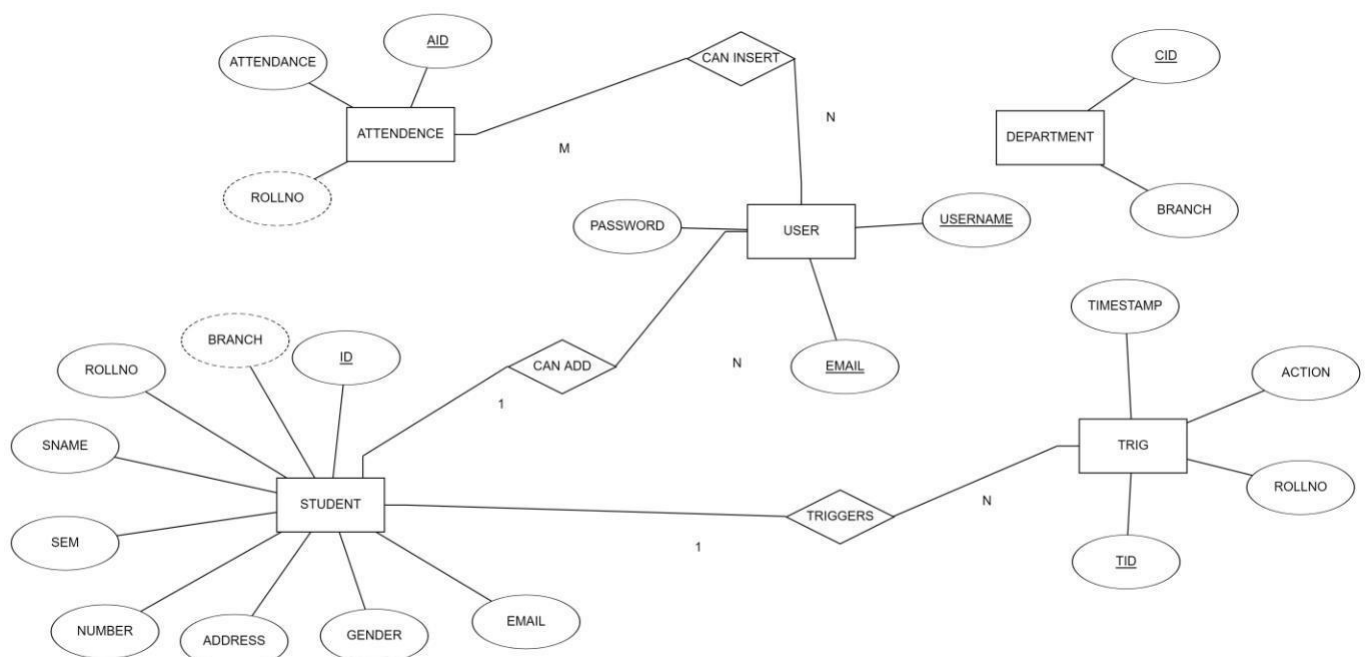
- Windows 10
- Google Chrome/Internet Explorer
- XAMPP (Version-3.7)
- Python main editor (user interface): PyCharm Community
- workspace editor: Sublime text 3

Hardware Requirements

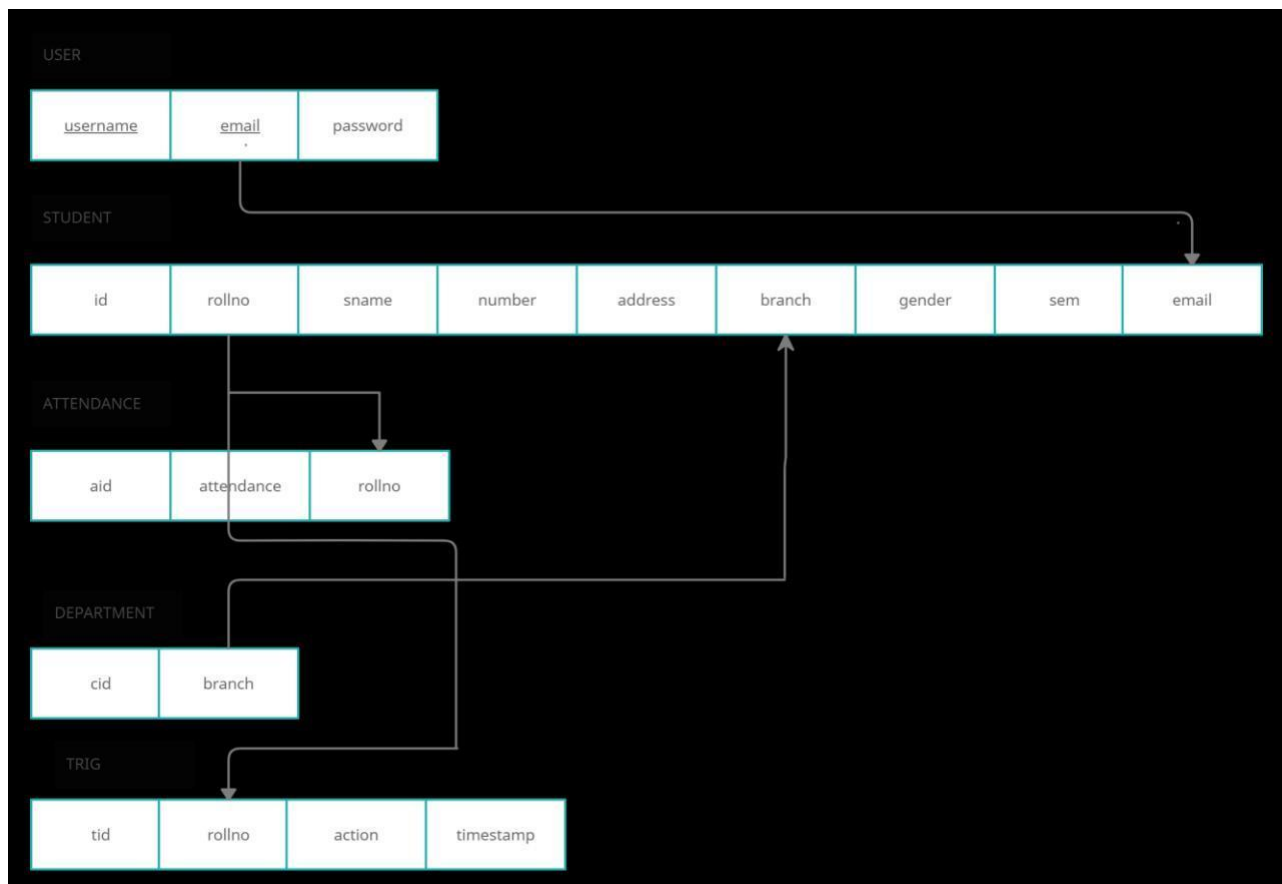
- Computer with a 1.1 GHz or faster processor
- Minimum 2GB of RAM or more
- 2.5 GB of available hard-disk space
- 5400 RPM hard drive
- 1366 × 768 or higher-resolution display

3 Conceptual Design

3.1 ER Diagram



3.2 Schema Diagram



4 Miscellaneous

4.1 Conclusion

STUDENT DATABASE MANAGEMENT SYSTEM successfully implemented based on online data filling which helps us in administering the data user for managing the tasks performed in students. It's evident that the implementation of the Student Management System using online data entry, Xampp, Python Flask, and MySQL has been successful in enhancing the efficiency of data administration and task management for students. Leveraging MySQL as the database of choice not only adds to its accessibility but also allows for easy retrieval and manipulation of data using SQL, making it a practical and cost-effective solution. Beyond the technical aspect, this Major Project has provided valuable practical experience to the developers, emphasizing the importance of project planning, organization, teamwork, and coordination. It has equipped them with essential skills and knowledge that complement their theoretical education, making them more adept computer engineers.

4.2 FUTURE ENHANCEMENT

- Enhanced database storage facility
- Enhanced user friendly GUI
- more advanced results systems
- online feedbacks forms

5. User Interface

