MAPÚA MALAYAN COLLEGES MINDANAO

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A Proposed Online Enrollment System

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Introduction

In today's digital age, the role of technology in our lives, work, and education has drastically changed. Educational institutions now have access to a wide range of online platforms and digital tools, making it easier to provide students with information and resources previously recorded only on paper. As a result, many schools and universities have adopted online enrollment applications to streamline their enrollment process, making it more convenient and accessible for students and their parents.

Determining the information that should be available to students is essential in creating an efficient and user-friendly online enrollment system. This information includes the school's programs and courses, admission requirements, fees, and enrollment process. Moreover, students should be able to access their personal information, such as academic records and schedules, through the application.

After establishing the information requirements, creating a list of online functionalities that students, teachers, and parents can perform is necessary. The online enrollment system should have features that enable viewing course catalogs and schedules, enrolling in classes, making payments, and accessing academic and financial records.

The school can improve its operational efficiency, enhance communication with parents, and provide a better student experience by developing an online enrollment application with these features. The system can also help the school stay competitive by keeping up with technological advancements in the education industry.

Background

The current process for enrolling students in small private schools involves paper forms and manual record-keeping. This process is not only time-consuming, but it is also prone to errors and inaccuracies. With the increasing demand for accurate and efficient enrollment processes, the school is looking to develop an online application.

One of the key advantages of using an online enrollment application is increased efficiency. The use of an online portal allows students and their families to access the enrollment forms and submit them electronically, reducing the need for physical paper forms. The application can also provide instant feedback and notifications to students, allowing them to track their enrollment status in real time. This results in a streamlined and faster enrollment process for the school and the students.

Another advantage of using an online enrollment application is increased accuracy. With manual record-keeping, there is always the risk of data entry errors or misplaced forms. An online enrollment application can ensure accurate data entry and provide a centralized database that is easily accessible and searchable. It results in a more reliable enrollment process and reduces the need for follow-up communication with students and their families.

Finally, an online enrollment application provides convenience for students and their families. They no longer have to visit the school in person to pick up or drop off enrollment forms. Instead, they can access the documents anywhere and anytime through the online portal. It provides flexibility and convenience for busy students and their families.

An online application offers several advantages over traditional paper-based enrollment, including increased efficiency, accuracy, and convenience.

List of Features

The online enrollment application will be designed to provide the following features to its users:

- Login: The login feature will allow users to access the online portal using their assigned credentials. Students will use their student ID and set passwords, while parents will log in using their child's login details. Teachers will also have their login credentials.
- Enroll: The enrollment feature will enable students to choose their courses for the term. Students can browse the available classes, view the course details, and add or drop lessons based on their preferences.
- Pay: The payment feature will allow students and parents to pay for their balances online. Students and parents can view their current balances and make payments using the online payment system.
- Viewing of students' records: This feature will allow students to view their records, such as grades, balances, and courses for their program. They can track their academic progress and monitor their financial standing with the school.

In addition to the features above, the system will also provide specific functions for each user type:

Students:
- Login using their student ID and assigned password to access their account.
- Enroll in courses for the term based on their preferences.
- Pay their balances online using the payment system.
- View their records, such as grades, credits, and classes for their program.

Parents:
- Login using their child's login details to access their child's account.
- Pay their child's balances online using the payment system.
- View their child's records, such as grades, credits, and courses for the program.

Teachers:
- Login to access their account.
- View information about their class, such as the number of units, number of students, students' year and program, and time of the course.

These features and functions will allow the school to create an efficient and user-friendly online enrollment system, benefiting the school administration and its students and parents.

Implementation Plan

The online enrollment application will be developed using PHP, a popular server-side scripting language for web development. The system will be designed to run on a web server, allowing users to access it through a web browser.
To develop the online enrollment application, the following minimal technical requirements and resources will be needed:

Hardware:
- A web server to host the application and serve web pages to users.
- A database server to store and manage the application's data.

Software:
- Web servers' software such as Apache or NGINX to serve web pages.
- A database management system such as MySQL or PostgreSQL to manage the application's data.
- PHP scripting language to develop the application's backend.

IT Support:
- IT support personnel to install and configure the web server, database server, and necessary software.
- IT support personnel to maintain the web server and database server and ensure that they are up-to-date and secure.

The development of the online enrollment application will follow a structured approach. The project will be divided into several phases: requirements gathering, system design, development, testing, and deployment.

During the requirements gathering phase, the school's administration, students, and parents will be consulted to identify their specific needs and requirements. The system design phase will follow, where the technical specifications and system architecture will be determined. The development phase will include the actual coding of the system, while the testing phase will ensure that the system functions correctly and meets the requirements. Finally, the system will be made available to users during the deployment phase, and any necessary training will be provided.

In conclusion, the online enrollment application will be developed using the PHP programming language and require a web server, database server, and necessary software. IT support personnel will be needed to install, configure, and maintain the system. The development will follow a structured approach to ensure the system is developed according to user needs and requirements.

Main Objective: This work aims to propose solutions to improve the university's student enrollment process, enhance the overall student experience, and increase efficiency.

Specific Objectives:
1. To identify the current process of student enrollment in the university.
2. To determine the challenges faced by students during the enrollment process.
3. To investigate the factors that contribute to delays in the enrollment process.
4. To analyze the impact of the current enrollment process on the overall student experience.

User Information:

Understanding the users of the software is crucial in designing and developing a user-friendly and efficient system. In this regard, the following characteristics of the users of the software should be considered:

1. Students - The software's primary users are students enrolled in academic institutions. Students have varying levels of technical proficiency and may require different levels of guidance and support in using the software. The software should be designed to cater to the needs of students with diverse academic backgrounds and levels of technical proficiency.
2. Faculty and Administrators - Faculty and administrators will also use the software to manage and track student academic records, course schedules, and other related tasks. They require more advanced access and functionality to carry out their roles effectively.
3. IT staff - The software must be developed and maintained by IT staff with expertise in software development, database management, and security. They will be responsible for maintaining the software and ensuring it operates efficiently and securely.
4. Parents/Guardians - The software may also be used by parents or guardians who wish to monitor their children's or wards' academic progress. The software should be designed to provide easy access to relevant educational information and progress reports.
5. External partners - External partners such as government agencies or academic institutions may require access to certain software parts for data sharing or integration purposes. The software should be designed with sufficient security measures to ensure the confidentiality and integrity of the data shared.

Overall, the software should be designed to cater to the needs of all users with different levels of technical proficiency and ensure that the information shared is secure and easily accessible.
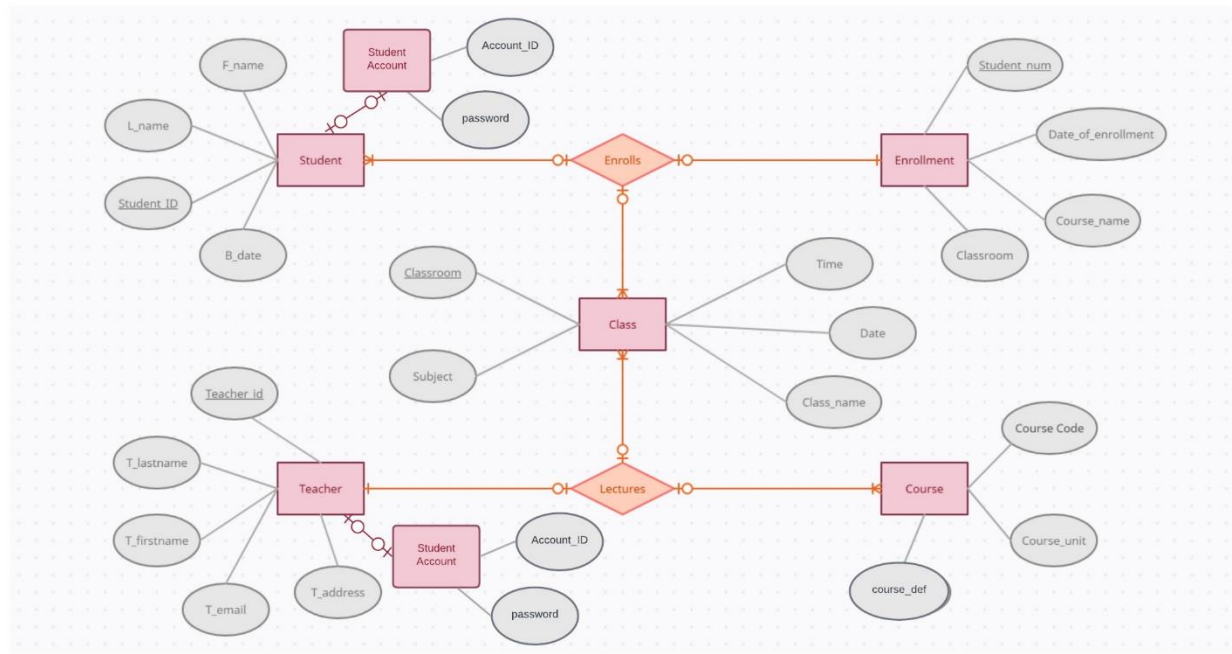
Software Diagrams:

Diagram 1. Entity Relationship Diagram (ERD)

The ERD specification provided above represents the relationships and properties of the entities in the system.

The system has two primary relationships: "Enrolls" and "Lectures." The "Enrolls" relationship connects the entities "Student," "Class," and "Enrollment." The "Lectures" relationship connects the entities "Class," "Teacher," and "Course."

The "Enrolls" relationship represents that a student can enroll in one or more classes, and each class can have many students enrolled. The "Lectures" relationship means that a teacher can lecture one or more courses, and each type can have only one teacher lecturing.

The entities have various properties or attributes associated with them. The "Student Account" entity has "Account_ID" and "password" attributes, while the "Teacher Account" entity has "Account_ID" and "password" attributes as well. The "Student" entity has "F_name," "L_name," "Student_ID," and "B_date" attributes. The "Enrollment" entity has "Student_num," "Date_of_Enrollment," "course_name," and "Classroom" attributes. The "Class" entity has "Classroom," "Subject," "Class_name," "Date," and "Time" attributes. The "Teacher" entity has "Teacher_id," "T_lastname," "T_firstname," "T_email," and "T_address" attributes. The "Course" entity has "Course Code," "Course_unit," and "Course_def" attributes.
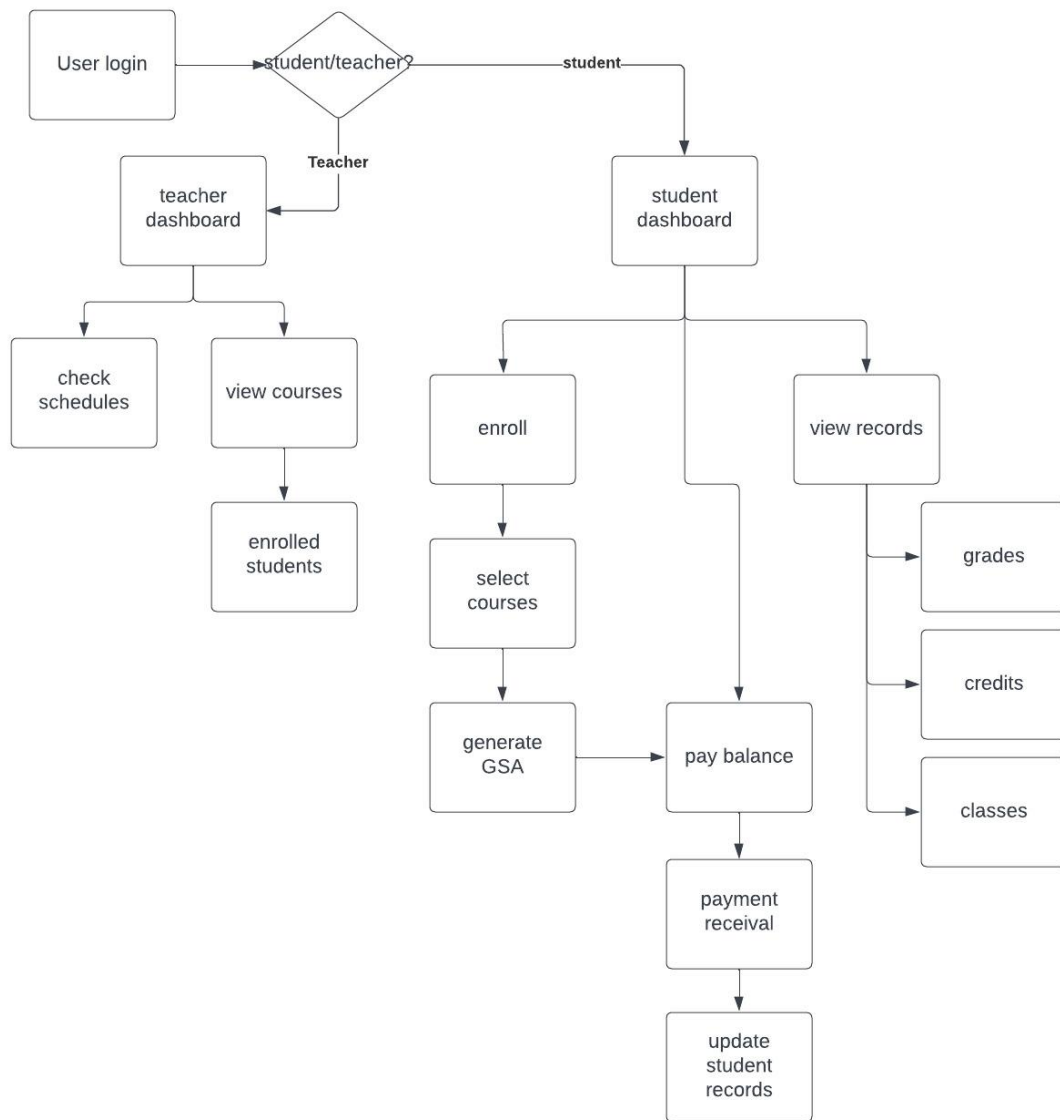
Diagram 2. System Flowchart

The system flowchart begins with the user login screen, where users are prompted to enter their account credentials. If the user is a student, the system will redirect them to the student user interface (UI) dashboard, which provides several functions, including enrolling in courses and viewing student records. To enlist, the student selects their preferred courses, generates the General Student Application (GSA), pays the balance, waits for the receipt notification, and then the system will automatically update the student records. Students who are already enrolled can view their grades, credits, and classes. If the user is a teacher, the system will redirect them to the teacher dashboard, where they can view their class schedules and courses they are teaching and the list of enrolled students for each class. The flowchart provides a clear and logical representation of the system's primary functions and the steps involved in each process, ensuring that users can easily navigate and use the system.
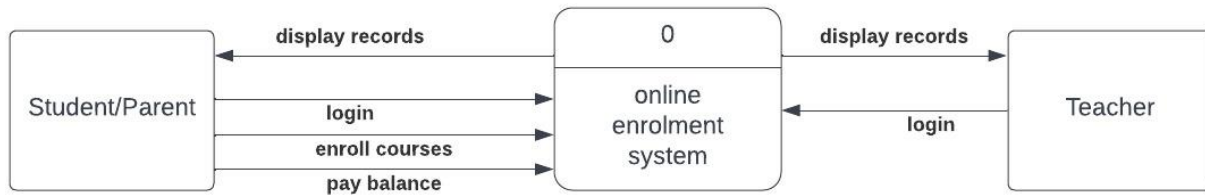
Diagram 3. Data Flow Diagram (DFD) of the proposed System

In this diagram, the data flows in two directions between the student/parent and the online enrollment system, and between the online enrollment system and the teacher. The student/parent can perform processes such as login, enroll courses, and pay balance to the system while the system can perform display records to the student/parent. The teacher can login to the system while the system can display records to the teacher.

Conclusion

The development of an online enrollment application can bring several benefits to educational institutions, students, and parents. By adopting an online enrollment system, schools can improve operational efficiency, enhance communication with parents, and provide a better student experience. Online enrollment also enables students and their families to access and submit enrollment forms electronically, reducing the need for physical paper forms and providing real-time feedback on enrollment status.

The online enrollment application will provide essential features to users such as login, enroll, pay, and view records. The system will be designed to run on a web server and developed using PHP scripting language and a database management system. By implementing the plan, students and parents can enjoy the convenience of accessing the online portal anywhere and anytime, reducing the need for follow-up communication with students and their families.

The development of the online enrollment application will follow a structured approach, from requirements gathering to deployment and maintenance. The project team will work closely with the school administration and IT support personnel to ensure that the system meets the needs and is secure and reliable.

In conclusion, developing an online enrollment application is a significant step toward improving the enrollment process in schools. The benefits of an online enrollment system, such as increased efficiency, accuracy, and convenience, make it a valuable investment for educational institutions, students, and parents.