



ENROLLMENT SYSTEM WITH DESCRIPTIVE ANALYTICS

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Abstract: Technology has been a great help with various organizations including academic institutions in making transactions easier and faster. Schools have been incorporating information systems that could ease the difficulties on handling large amounts of data and tedious processes. This study focuses on one of the major information systems being used by these academic institutions, the Enrollment System which also includes the assigning of schedule, sectioning of classes, and monitoring of enrollment requirements. The system also utilizes descriptive analytics to provide an accurate enrollment report.

Keywords: Enrollment System, Descriptive Analytics, Registration

1. INTRODUCTION

Advancement of technology is taking its step one day at a time to provide solutions for the limitations of the human race. These innovations are made by people for the people to help in making everyday jobs easier. Information systems were being upgraded to handle more complex and large data; one of them is the Enrollment System. As the school increases in its enrollees every year, the harder it becomes to deal with, particularly in public academic institutions wherein the population of the students is massive.

The authors have conducted their research at Aplaya National High School, located in the City of Santa Rosa, Laguna. The school and its management have difficulties in monitoring the students' record due to its conventional processes of record keeping and the enrollment itself. They currently have 2,243 students in which the numbers of girls are 1,201 while the numbers of boys are 1,042 and respectively, ages ranging from 12 to 21. With this, the researchers has developed a better enrollment system for the said institution in which record keeping and retrieval is easier and faster generation of enrollment report through the use of descriptive analytics.

Elaborating more on the functions and features of the project, this Enrollment System with Descriptive Analytics intended for Aplaya National High School is a window-based application that has three modules: enrollees, registrar, and administrator. The Enrollees Module allows the student to encode their personal information and print information form. The Registrar Module records/update the information of the

students and prints the registration form. The Administrator Module creates administrator's and registrar's account including the access in Descriptive Analytics and students schedule.

2. LITERATURE SURVEY

According to the Authors, the system is developed to improve the enrollment system^[1] in terms of handling large number of enrollees including the assignment of schedule and their respective section.

The Authors also probed on the record keeping and retrieval of the enrollees' documents^[2] and compiling them to produce an official registration form.^[3]

Moreover, the study included the management of accounts^[4] and generation of enrollment report^[5] under the control of the administrator.

2.1 DESIGN OF THE STUDY

The system is designed to accommodate its three end-user types: the enrollee, registrar, and administrator. The management executes their enrollment procedures in different locations inside the school, with this a network is necessary to connect the terminals in order to send and receive the data per step; this is done through the Internet wherein the repository of data can be accessed anywhere.

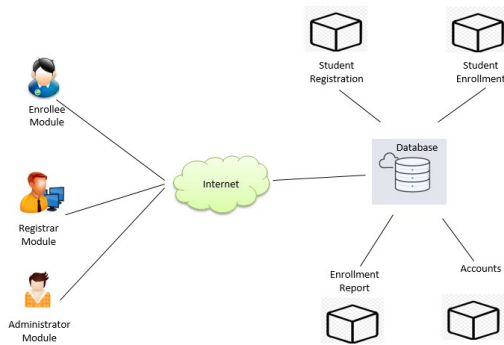


Figure 1. System Architecture

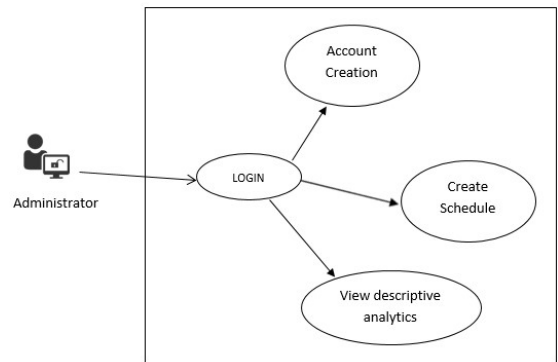


Figure 4. Use Case Diagram of SMS Notification Module

2.2 USE CASE DIAGRAM

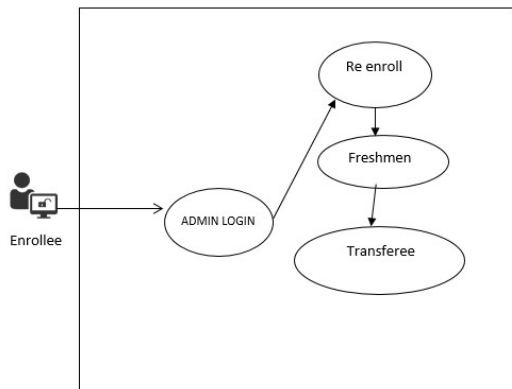


Figure 2. Use Case Diagram of Enrollee Module

The figure shows the enrollment schemes of the Enrollee user which is re-enroll, freshmen, and transferee. Re-enroll sub-module is for old students eager to enroll again in the school. The freshmen sub-module is for elementary graduates who wish to enroll in the school as a freshman or grade 7 in the new K-12 curriculum; as for the Transferee sub-module, it applies for the students who desire to transfer from other schools to Aplaya National High School.

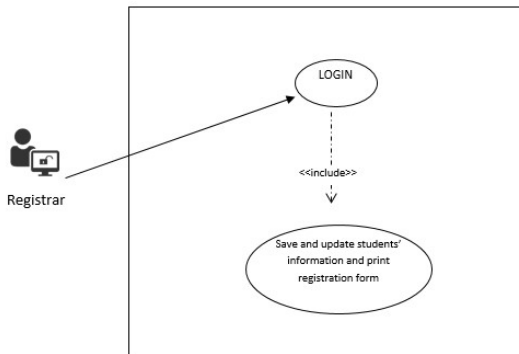


Figure 3. Use Case Diagram of Registrar Module

The figure shows how the registrar can save and update information of the students and print the registration form.

The figure shows how the Administrator can create the accounts and view the enrollment report provided on the system through the descriptive analytics dashboard.

3. PROJECT STRUCTURE

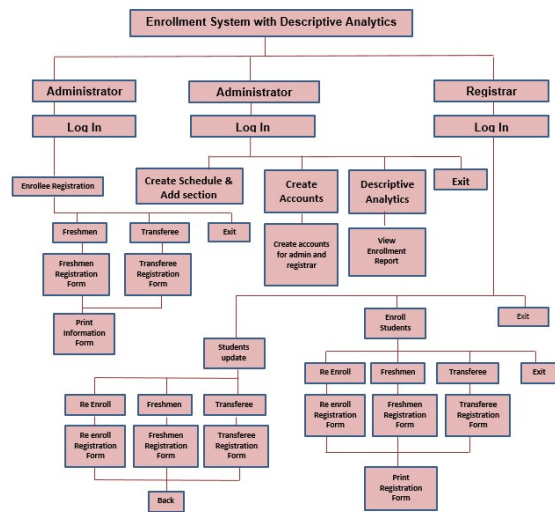


Figure 5. Enrollment System with Descriptive Analytics Site Map

Figure 5 shows the site map of the Enrollment System with Descriptive Analytics. The system has three platforms, the Administrator's Log-in for Enrollee, Registrar's Log-in and the Administrator. Administrator clicks the Log in for the enrollees to start encoding process, next is the Administrator's account wherein the administrator clicks Log-in to access sub-modules like create accounts, student schedule and Descriptive Analytics. While in the registrar account, the user will Log-in and the enrollment student page will show the student schemes and will print the registration form after accomplishing all the enrollment steps.

4. RESULTS AND DISCUSSION

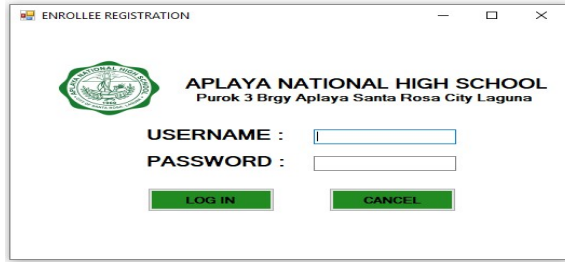


Figure 6. Administrator Login

The figure above shows the administrator login window that requires a username and password to start the process of encoding for the enrollees.

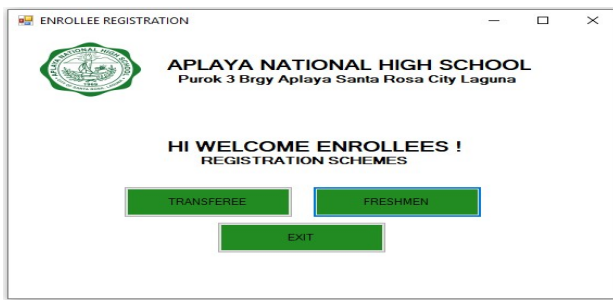


Figure 7. Enrollees Menu

The figure shows the Enrollees Menu of the system. The screen contains the two schemes of the enrollees, the Transferee and freshmen this is because this window only allows encoding of new information as the old students need not to provide their information since it is already recorded on the database.

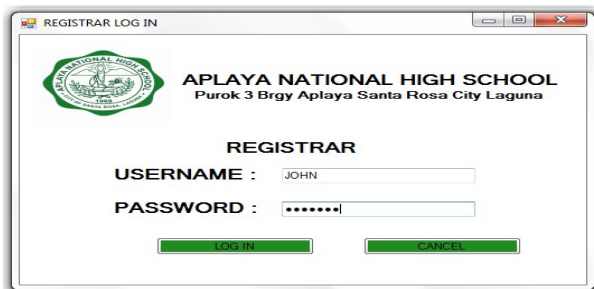


Figure 8. Registrar Login

Figure 8 shows the Registrar Login window wherein the registrar can access the sub modules related to confirming the enrollment details of the incoming student, whether old, transferee, or freshman.

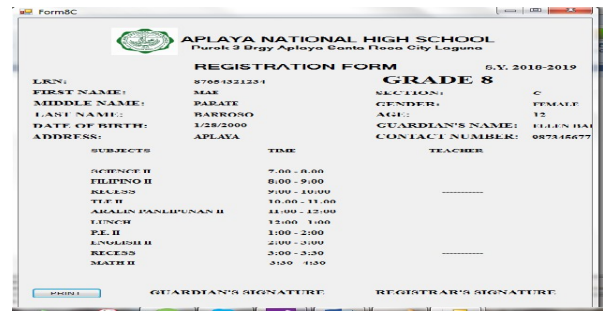


Figure 9. Registration Form

The figure shows the enrollment details of the incoming student and allows printing of his or her registration form.

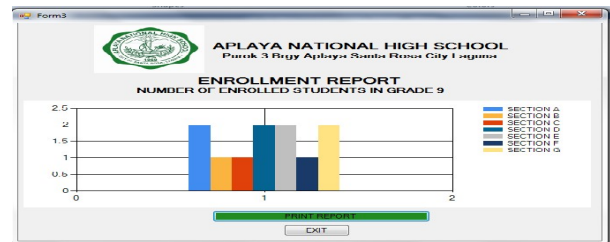


Figure 10. Enrollment Report

Figure 10 shows the sample enrollment report through a bar graph with the use of descriptive analytics.

5. CONCLUSION

The Enrollment System with Descriptive Analytics is a big step in advancement of a school specifically those who are dealing with a large student population. This type of transaction processing system can make the procedures faster and easier. With this, it can also lessen the manpower needed during enrollment dates.

The system benefits every vital entity during the enrollment; the students, registrar and the administrator. The students can ensure the data they have provided to the school as the record keeping and retrieval has been improved. The registrar can easily confirm the students enrolling in the upcoming school year, and provision of registration forms has been easier. The administrator can easily generate the enrollment report as a requirement for every academic year and through this reporting feature, they can also forecast the number of enrollees for the upcoming school year.

5.1 RECOMMENDATIONS

The researchers of the study further recommended the following:

1. Make the system available for other platforms like web-based and mobile devices.
2. Make the class scheduling automated with room assignment.
3. Add generation of fees in the student enrollment.
4. Add more features that will benefit the administrator, registrar and students to effortlessly use the system.

6. REFERENCES

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