**ENROLLMENT SYSTEM FOR SENIOR HIGH SCHOOL**

**IN CAVITE NATIONAL HIGH SCHOOL, CAVITE**

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**INTRODUCTION**

Technological advancement brought the humanity into a revolutionary enhancement of duties and works, whether part of organization, businesses or even institutions. One of the essential business transactions in every institution is enrollment, it is a process that students must undergo to get in an institution that they want.

In order to acquire formal education, the child should be enrolled in an educational institution duly recognized by the Department of Education. Both public and private schools have a different process of enrollment. In public high school, many are still using the manual procedure of enrollment. Enrollment system (ES) is one of the most important, not only in a university, but also in lower levels of education. ES is used particularly to record and retrieve student’s information.

Currently, Senior High School – Cavite National High School is all the work at the time of admission of the students is done manually by ink and paper, which is very slow and consuming much efforts and time. Due to increase in enrollment every year, the manual process is no longer effective in registering students. It is required to design of a computerized automated student enrollment system, to speed up an accurate and efficient data records. The purpose of this Enrollment System for Senior High School, Cavite National High School is to support the new, old and transferee students’ admission and registration process, and to track personal information and academic data.

**Statement of the Problems**

The general problem of Senior High School of Cavite National High School is how to improve the process of enrollment.

Specifically, the study seeks to answer the following question:

1. How to secure reliable student’s records and files?
2. How to avoid the redundancy of the records?
3. How to generate reports in a timely matter?

**Objectives of the Study**

This study aimed to develop an enrollment system for Senior High School in Cavite National High School.

Specifically, it aims to:

1. develop a system with the following features:
2. Add and Edit Student Records;
3. Assessing the student’s taken course;
4. Print reports and records;
5. Backup files;
6. create the system using Microsoft Visual Studio 2013 for Integrated Development Environment, Visual Basic.NET for program and MySQL for backend;
7. test and improve the system; and
8. evaluate the system based on ISO 25010.

**Significance of the Study**

The study will be beneficial to client for their process of enrollment of Senior High School of Cavite National High School. The increase in population of the students signifies that need for faster and more effective enrollment process. The proposed system helps to register student’s, update record’s and to track information in more convenient ways.

Further, it will also be beneficial to the researcher for it will enhanced their programming capacity.

Lastly, the study will be beneficial to the future researcher in conduct of a similar and related study.

**Time and Place of the Study**

This study was being conducted at Cavite National High School at Cavite City, Cavite May 2020 to May 2020.

**Scope and Limitation**

The study helped the students as well as the client in providing faster, easier, and more accurate information on subjects that would be enrolled by the student for a particular semester and year level.

The system is comprised of log-in module, admission module, evaluation module reports module and settings module. The First module is capable of adding new student’s personal information and track/strand that they will be taking. It can also edit the student’s information as well the track/strand they take. The second module has sub module where in capable to input grade’s and edit grades. Third module has also sub module that is capable to view all the records of the student enrolled and also to generate reports like printing grades, master list and registration form. And lastly, the fourth module also has sub module where in capable of add and edit accounts, adding school year, view activity log and to backup all the records stored.

The proposed system is design to run on Windows 7 up to Windows 10 operating system and supports runtime on a network environment

**Operational Definition of Terms**

This part of the study operatively defines terms that were used in the study.

**Automated** refers to automatic processing of documents.

**Back Up** refers to recovering and restoring data in relation to database.

**Computerized** refers to automatic method of processing using a computer or machine.

**Check List** refers to the all subject of a course or strand.

**Database** refers to a collection of an integrated collection of logically related records.

**Develop** refers to the creation of new system that replaces the old method.

**Enrollment** refers to act of enrolling at an institution or a course.

**Enrollment System** refers a system that record and retrieve a student’s information.

**Evaluation** refers to the process of knowing the student’s competencies.

**Manual** refers a step by step procedure using manual process.

**Security** refers protection or security of the data.

**Conceptual Framework**

The conceptual framework of the study is illustrated in Figure 1. It showed the input, process and the output of how the study will be done.

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| --- | --- | --- | --- | --- | --- |
| **Input Process Output**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | * Student Information * Subjects * Grades |  | * Add, Edit, Save of Information * Generate Reports * Viewing of Information * Stored Information |  | Efficiency of Senior High School in Cavite National High School | |

Figure 1. Conceptual Framework of Senior High School in Cavite National High School

Figure 1 shows the different attributes in the accomplishment of the objectives of the study. The input phase consisted of inputting information of the student in the system. The process phase is what the system capability to do and in this process phase includes the software requirements includes the software used to create the study: Microsoft Visual Studio 2013 (above) for frontend and MySQL for backend. The study developing its concept and programs and testing as part of the process phase. The Enrollment System of Senior High School in Cavite City was the output phase of the study and will evaluate using the ISO 25010.

**REVIEW OF RELATED LITERATURE**

In this review of related literature, the study focused on how to create an enrollment system of Senior High School of Cavite National High School in Cavite. The following studies were found on different websites and articles on the internet.

**History of Cavite National High School**

According to Wikipedia (2019). On January 21, 1901, the Provincial Board, then authorized by Act No. 372 were to establish secondary schools. The first campus was located at in the town of San Roque where Garita Elementary School now stands. Hon. Mariano Trias, suggested that a High School be established in Cavite, San Roque or Caridad. The school was established on June 19, 1902 with 25 students only and mostly from the towns of Cavite, San Roque and Caridad. However, they can’t start classes due to spreading of cholera, the buildings are in bad condition, there were no desks, and the building was unsanitary because it was used as a pig pen. Principal Sydney K. Michelle and Mr. Hammond H. Buck raised 100 pesos for the needed repairs on the school. On July 1, 1902, the school became operational with 30 students. The students increase on September and November. In 1903, Cavite High School transferred to an old but government land where a Spanish hospital stands. Student population continued to increase. In 1904 and 1905, a baseball team and a track and field team were established. The Supreme Court however ordered that the land be returned to the Catholic Church. Again, the school had to relocate at P. Gomez St. where the Spanish Provincial Governor used to reside. In 1908, the High School saw its first five graduates, four males and one female. In 1928, the school had to move to Caridad Preparatory before transferring to its present lot, 6-hectare lot located donated by Caridad Estate of Cavite, Inc. through Mr. Hammond Buck who was engaged in the Bureau of Education prior to being engaged in real estate. The 2-2 Plan, the new curriculum, was implemented in 1957. Back then, Junior and Senior High School students were given the choice whether they preferred vocational, college preparatory or an elective curriculum. Junior students were often sent to Cavite Naval Operating Base (now Cavite Naval Base) for their on-the-job training. They could choose mechanical repairs, machinery operations, practical electricity, welding, sheet metal, shipfitter, pipefitter or foundry. Boys underwent on woodworking courses which were done in the school shop while girls underwent hair science and dressmaking and design courses in the Home Economics Laboratory. Republic Act No. 3694 converted Cavite High School into Cavite National High School as approved by President Diosdado Macapagal on June 22, 1963. The budget appropriated for such purpose was P250,000.00. In school year 1973-1974, student population was 5,959 while there were 207 teachers and employees.

**Manual Process**

Accordingto Thesisbook (n.d.), in traditional way of enrolling, manual enrollment system is commonly used as a way of enrolling students to and is continuing to be used nowadays. In manual way of registering and enrolling students they must have to fill up first using ball pen and an enrollment form sheet given by their teachers. By the help of different developers and programmers, they have developed different system about the registration and enrollment process. Computerized, online registration and online enrollment systems that helps the school for having an easier process of managing student information.

**Computerized Process**

Enrollment is one of the busiest schedules on every institution especially on the cashier’s section. It is a challenge for them on how to make the enrollment process smooth and with precision. A manual process of enrollment procedures is time consuming and are prone to errors. The both sides are affected with these problems (students and the cashier personnel), thus the researchers would like to study, design and develop an automated enrollment system that will provide a more convenient ways to cater the needs of the students and as well as the cashier personnel.

**Visual Studio 2013**

According to ITProToday (2014), Visual Studio 2013 is the next-generation integrated development environment (IDE) for developers of Microsoft platform applications—Windows 8.x and .NET Framework. Visual Studio 2013 provides enhanced support for prototyping, designing, and modeling and improved testing tools that let developers build Windows, web, and cloud applications. In this article, I'll provide a high-level view of the top new features and enhancements in the Visual Studio 2013 IDE. I will also briefly discuss new features introduced in .NET Framework 4.5.1, which was released concurrently with Visual Studio 2013 in mid-October 2013.

**Local Studies**

According to the article posted by Garcia (2002) in the Inettutor, the study can be a great help to persons concerned during the enrollment period, the registrar, instructor of the students as they retrieval necessary information when needed and lessen the burden manually browsing over enrollment slip for record purposes.

**Security**

According to Mooren Bourne Security is to the processes and methodologies which are designed and implemented to protect print, electronic, or any other form of confidential, private and sensitive information or data from unauthorized access, use, misuse, disclosure, destruction, modifications, or disruption.

**Education System in Philippines**

According to StudyCountry (n.d.), the education system of the Philippines has been highly influenced by the country’s colonial history. That history has included periods of Spanish, American and Japanese rule and occupation. The most important and lasting contributions came during America’s occupation of the country, which began in 1898. It was during that period that English was introduced as the primary language of instruction and a system of public education was first established—a system modeled after the United States school system and administered by the newly established Department of Instruction.

The United States left a lasting impression on the Philippine school system. Several colleges and universities were founded with the goal of educating the nation’s teachers. In 1908, the University of the Philippines was chartered, representing the first comprehensive public university in the nation’s history.

Like the United States, the Philippine nation has an extensive and highly inclusive system of education, including higher education. In the present day, the United States continues to influence the Philippines education system, as many of the country’s teachers and professors have earned advanced degrees from United States universities.

Although the Philippine system of education has long served as a model for other Southeast Asian countries, in recent years that system has deteriorated. This is especially true in the more remote and poverty-stricken regions of the country. While Manila, the capital and largest city in the Philippines, boasts a primary school completion rate of nearly 100 percent, other areas of the country, including Mindanao and Eastern Visayas, have a primary school completion rate of only 30 percent or less. Not surprisingly, students who hail from Philippine urban areas tend to score much higher in subjects such as mathematics and science than students in the more rural areas of the country.

Below we will discuss the education system of the Philippines in great detail, including a description of both the primary and secondary education levels in the country, as well as the systems currently in place for vocational and university education.

**K-12 Education**

According to K12Philippines (2015), k to 12 (also K-12) is an education system under the Department of Education that aims to enhance learners’ basic skills, produce more competent citizens, and prepare graduates for lifelong learning and employment. “K” stands for Kindergarten and “12” refers to the succeeding 12 years of basic education (6 years of elementary education, 4 years of junior high school, and 2 years of senior high school).

At present, the Philippines is the last country in Asia and one of only three countries in the world with a 10-year pre-university program.

**Enrollment System**

According to Inettutor (2015), enrollment is one of the busiest schedules on every institution especially on the cashier’s section. It is a challenge for them on how to make the enrollment process smooth and with precision. A manual process of enrollment procedures is time consuming and are prone to errors. The both sides are affected with these problems (students and the cashier personnel), thus the researchers would like to study, design and develop an automated enrollment system that will provide a more convenient ways to cater the needs of the students and as well as the cashier personnel.

**MySQL**

According to Template Toaster (2019), it is one of the most popular database management systems originally launched way back in 1995. SQL is the core of MySQL. And ‘My’ with ‘SQL’ is there because it’s the name of its co-founder Michael Widenius’ daughter. It is an open-source relational database management system. MySQL is a freely available database system. However, there are several paid editions also available with which you can use advanced functionality. MySQL is easy to use as compared to another database software such as Microsoft SQL Server and Oracle database etc. It can be used with any programming language, but is largely used with [PHP](https://blog.templatetoaster.com/what-is-php/). MySQL can run on multiple platforms such as Linux, Windows, Unix, and an information schema to define and manage your metadata. You can either install it on your local system or even on the server as well. It is a really flexible, scalable, fast, and reliable solution.

**ISO 25010**

According to Codacy (2017), code quality frameworks describe code quality characteristics and their decomposition. For Enterprise software development, one model stands out: the ISO/IEC 25010, which was launched in 2011. In ISO/IEC 2510, software quality is divided in two broad dimensions: (1) product quality and (2) quality in use.

**System Administrator**

According to Cyberciti (2014), the person who is responsible for setting up and maintaining the system or server is called as the system administrator. System administrators may be members of an information technology department. Most of the following discussion also applies to network and Windows system admins.System Admin jobisgood it’s kindofchallenging jobtomanaging serversinalways upandrunning fineandresolving customerquiresintimelymanner.

**Programming Language**

According to Computerhope (2019), a programming language is a computer language programmer use to develop software programs, scripts, or other sets of instructions for computers to execute. Although many languages share similarities, each has its own syntax. Once a programmer learns the languages rules, syntax, and structure, they write the source code in a text editor or IDE. Then, the programmer often compiles the code into machine language that can be understood by the computer. Scripting languages, which do not require a compiler, use an interpreter to execute the script.

**LRN (Learning Reference Number)**

According to ABS-CBN News (2017), the LRN is a permanent 12-digit number that the pupil shall keep while completing the basic education program, regardless of transfer to another school – whether public or private, including the student’s promotion to secondary level. Each student will have an LRN that will be indicated in the pupil’s permanent record, report card, examinations, certificate or diploma and other documents.

**Importance of Enrollment System**

According to Essaybasics (2017), most schools have benefited from (online) enrollment systems, it saves time, improves accuracy and help school organize its operations effectively. Advanced enrollment systems are becoming one of the essential tools for many employers who want to improve their levels of efficiency.

**Advantage of Existing Enrollment System**

According to Talgen (2018). The existing enrollment system can’t recover files of the students rapidly because they usually go find the files or records manually that may cause wasting of time. Delayed report generation. The facilitators of the enrollment are using a manual system so they cannot generate a complete report about the enrollment system at the allotted time given to them. Lack of security for files. The files and records of a student are at risk because they are only stored on a storage room and that makes someone who is interested at the student’s files can get the files because of lack of security for files.

**Designing of Enrollment System**

According to Inettutor (2019), the design and features suit the needs of the target users (administrator, registrar, and cashier) to provide a fast, accurate and effective enrollment and record keeping machine that provides the users of the system an accurate and reliable reports.

**METHODOLOGY**

This chapter presents the steps of how the system will be developed. It discusses the procedures for generating information on the system, enumerates how the system will be tested, and indicate its criteria for evaluation. It also describes the research methodology of the study, explains the sample processes with the aid of the Data Flow Diagram, and to describe the procedure used in designing the system.

**Project Design**

The developers considered several concepts for the development of the system. Everything was consolidated and presented using a context diagram shown below.

CC, ML, SPR, RF

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Administrator

SPI

Administrator

CC, ML, SPR, RF

SPI

Clerk

Clerk

Enrollment System of

Senior High School

CC, ML

In Cavite National

GR

High School

User

User

LEGEND:

SPI – Student Personal Information CC – Course Card

SPR – Student Progress Report ML – Master List

RF – Registration Form

GR – Grades

**Functional Decomposition Diagram**

The module of decomposition identifies each of the modules and briefly outlines their purpose, type, functions, and list of submodules consisting of this module.

Enrollment System of Senior High School

In Cavite National High School

Reports

Settings

Evaluation

Admission

Print Registration Form

Assessing

Register Student

Add School Year

Activity Log

Edit Student Records

Print Grades

Add/Dropping Subjects

Form 1

Database Backup

Form 5A

Grade Management

Grade Management

Form 5B

Form 6

Input Grades

Add Account

Form 10 (TOR)

Edit Grades

Edit Account

Checklist

Figure 3. Functional Decomposition Diagram of Enrollment System of Senior High School in Cavite National High School