GANHS PORTAL: AN ONLINE STUDENT INFORMATION SYSTEM OF GOLDEN ACRES NATIONAL HIGHSCHOOL

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TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

Background of the Study

Online activities have gone rampant nowadays as the effect of the COVID-19 pandemic, online transactions are the new bridge of our economy and education in pursuing our goals. Information attainment has become a requirement in every educational estate, it is a crucial part of one's education to acknowledge the results of their students' perseverance and hard work (Singh & Rao, 2016). Taking into account the safety of everyone, the CHED (Commission on Higher Education) and DepEd (Department of Education) proposed flexible learning that would allow the students to learn at home at their very comfortable pace (Villanueva, 2020).

Along with this issue, Innovations for Poverty Action (2020) surveyed the vicinity of Manila and how well the students are doing in this time of the pandemic and the statistic shows that the respondents of the survey stated their concern of having the lack of resources to be used during online classes.

The technological advancement in today's era has been a great help in coping with online issues in terms of transactions and convenience. Convenience is defined as fitness or suitability for performing an action or fulfilling a requirement; something (such as an appliance, device, or service) conducive to comfort or ease; designed for quick and easy preparation or use (Merriam-Webster, n.d.). With the help of the knowledge of the people who took computer-based courses and their will to provide easier access to students, they were able to develop a web portal intended for transparency of students' records (grades, scores in their activities) (Singh & Rao, 2016). An Online Portal refers to the webpage (or website) that provides users an entryway to a variety of information, tools, links, and more (Yonatan, 2020).

In light of this matter, the researchers outlined to develop a Student Information System that will aid the students' requisite of their information (grades and scores of

their activities) from their school while keeping them safe from the COVID-19 virus. The said web portal will envelop safe and exclusive browsing for students to avoid certain cyber threats that may cause them harm.

Overview of the Current State of the Technology

Golden Acres National High School started as one of the annexes of Las Piñas National High School in 1994 in the merit of Municipal resolution 277-91, the school had undergone a two-year building construction located at the former dumping site at Lot A Block IV, Macapuno Street along Marcos Alvarez Avenue, in Barangay Talon I consisting only five (5) classrooms and one (1) learning resource center that catered the library, home economics practice house, guidance and principal's office at a time (Golden Acres National High School, n.d.).

As the years went by the school and its facilities have improved, the number of classrooms and buildings (six (6) rooms three (3) story DPWH building and three (3) rooms three (3) story VILLAR BUILDING) have increased together with the rise of its students' population (Golden Acres National High School, n.d.).

Golden Acres National High School is doing its best to provide excellent learning and promote a competitive ground for both the students and teachers in a way that molds them as a better individual which highly speaks of its mission "To provide quality, relevant education through a responsive curriculum, highly motivated and competent teachers in a child-friendly environment" and its vision "Golden Acres National High School is committed in developing patriotic, functionally literate, globally competitive, and morally upright learners." as a tribute to its motherland (Golden Acres National High School, n.d.).

But as the COVID-19 pandemic arose, the school was not an exception from the establishments and organizations damaged by the spreading disease and one of its major problems is information dissemination, since we are under the lockdown and untimely threat of the virus. In line with the problem, the researchers came up with an

idea of creating a student portal (Student Information System) for safe and exclusive information dissemination to the students, wherein, they will be able to access their grades and activity scores without the need to go out.

Statement of the Problem

Overall, the main objective of the study is to develop a Student Information System for Golden Acres National High School.

Alongside this main problem, the following problems are expected to be given light throughout the study:

1. What are the existing ways of managing students' information are done by the school?

2. What are the known problems of the traditional way of managing students' information?

3. How does a Student Information System differ from the traditional way of managing students' information?

4. How does a Student Information System facilitate communication between the students and instructors?

5. How does a Student Information System aid in providing a better source of information and transparency for an educational institution?

Objective of the Study

The overall objective of the study is to be able to develop a Student Information System for Golden Acres National High School that will benefit the faculty members, students, and the administration of the said institution.

The specific objectives of the system are listed as follows:

1. To identify all the existing ways of managing students' information implemented by the school.

2. To enumerate the known problems of the traditional way of managing students' information.

3. To compare the differences in way of managing students' information between Student Information System from the traditional method.

4. To identify possible ways on how a Student Information System facilitates communication between the students and instructors.

5. To identify the ways on how a Student Information System to aid in providing a better source of information and transparency for an educational institution.

Scope and Limitation

Scope

The scope of the study revolves around the following:

Access Levels

Certain limitations, permissions, and boundaries are offered by the system. This allows the system to be accessed by different user types.

Administrator. The administrator is the one who has the raw control of the system. Restrictions and boundaries are not applied to the administrator. The ability to add a new teacher profile, add a student profile, add a subject, add a new section, and add a room are all available to the administrator. In addition, making announcements for various events, as well as answering tickets opened through the ticketing system are functionalities that an administrator can do. To alleviate the management of the system, the main administrator can add other administrators and give each one a different level of accessibility over the system. This is useful if the main administrator only wants to add personnel that will handle the pending tickets.

Teacher. The teacher is the one who handles the classes in the system he/she is registered by the administrator to the system, their credentials are sent through an email, SMS, or both. The credentials can be changed afterward and be modified by

the teacher once accessed. Once the account is accessed, the teacher will be able to access functionalities such as editing or updating personal information, create classes from the list of subjects registered by the administrator, and send files or attachments and attachments over these classes that the students can access later on once they are admitted to the subject.

Student. A student is an officially enrolled learner in the school and is registered by the administrator to the system. Same as the teachers, the student will receive the credentials and can choose to edit their credentials afterward. They can also view the classes they are in, If one of the events posted by the teacher in the subject requires an output, the student can upload the output in the posted event. With the ticketing system, a student can open a ticket for different concerns. An example use is opening a ticket to request school documents such as a good moral certificate, grades, etc. Feedbacks can also be submitted by the student to the administrator.

Functionalities

Below are the general functionalities that the system can offer. These enable the system to operate in different ways and communicate well with the users involved in the system.

Overall Management. This only pertains to the ability of the administrator to add or remove certain entities in the system. Functions such as registration of room, subjects, teachers, students, and sections. These entities play a role when it comes to the other functionalities of the system. The rooms, subjects, and sections are used by the teachers when defining a class that they handle. Teachers serve as the creators of classes. Students, on the other hand, get assigned to a specific section by the administrator.

Schedule. Once a student has been successfully admitted to a subject, a schedule representing each subject will be automatically generated. The student can use the schedule as a reference.

Announcements. For certain events, the administrator can create announcements that will notify the students and teachers. This is useful for information such as class suspensions, holidays, celebrations, and more.

Class Creation. The teachers of the system are given permission to create classes. Classes created are then displayed to the students' view, and the student can decide to join these classes. To assure that the student is in the right class, teachers can decide whether to accept or decline the request of the student to join the class.

Class Events. A class that is owned by a teacher can serve as a repository for different events relevant to the subject. The teacher is allowed to post class events such as activities, announcements, etc. An event can also be set to require an output, meaning a student can submit or attach a file or link to the event that redirects to the output and able to see the graded result of it after the teacher checked the submitted file.

Ticketing System. The students of the school can open tickets regarding their concerns and issues. The opened tickets are then responded to by the personnel of the system. Both parties can then interact and send messages about the subject of the ticket. Once the conversation is done, the ticket can then be closed by the personnel involved in the ticket.

Feedback System. This is a one-way optional feature. One-way since this is only available to the students. Once feedback has been given about the performance of the system or rating and such, the administrator of the system then gets notified of the feedback. No replies on the end of the administrator. Also, optional since feedbacks are naturally optional on different platforms. This aspect of the system merely serves as a catalog of insights that the administrator can browse. This gives the administrator ideas about the things that needed to be improved or kept in the system.

Viewing. When the administrator is finished configuring the system by adding the different entities and setting up schedules, the students are eligible to view this information on their ends. Their schedules and subjects will be displayed to them

informatively. Details about the rooms and teachers of the subjects are disclosed to the students. This allows them to contact their teachers personally, using their work contact details, if they have issues relevant to their subjects.

Notification. The notification system allows the users of the system to get exclusive notifications about certain events around the system. On the administrator's side, notifications about the feedbacks and tickets are received. Responses about the student's opened tickets and announcements made by the administrator are notified to the students and teachers.

Limitation

Putting aside the functionalities offered by the system, the following are the known limitations:

1. The application that will be used by both the students and administrator will be browser-based. This means that it's expected to work across different platforms as long as a browser is present.

2. Notifications are done through e-mails and SMS. However, SMS notification is merely dependent on the client of the system since most of the reliable SMS APIs require a subscription or payment in order to avail of their text messaging services. This means that SMS notifications will be added but will be an optional feature that the client can opt to activate.

Methodology of the Study

To employ the right process in developing the proposed system in such a short span of time. The proponents are planning to use the Waterfall Model. The Waterfall Model is useful and can provide a number of benefits where deadlines are vital (Banks, 2021). This is because the process offered by the model is very straightforward because of its linear structure (Banks, 2021).
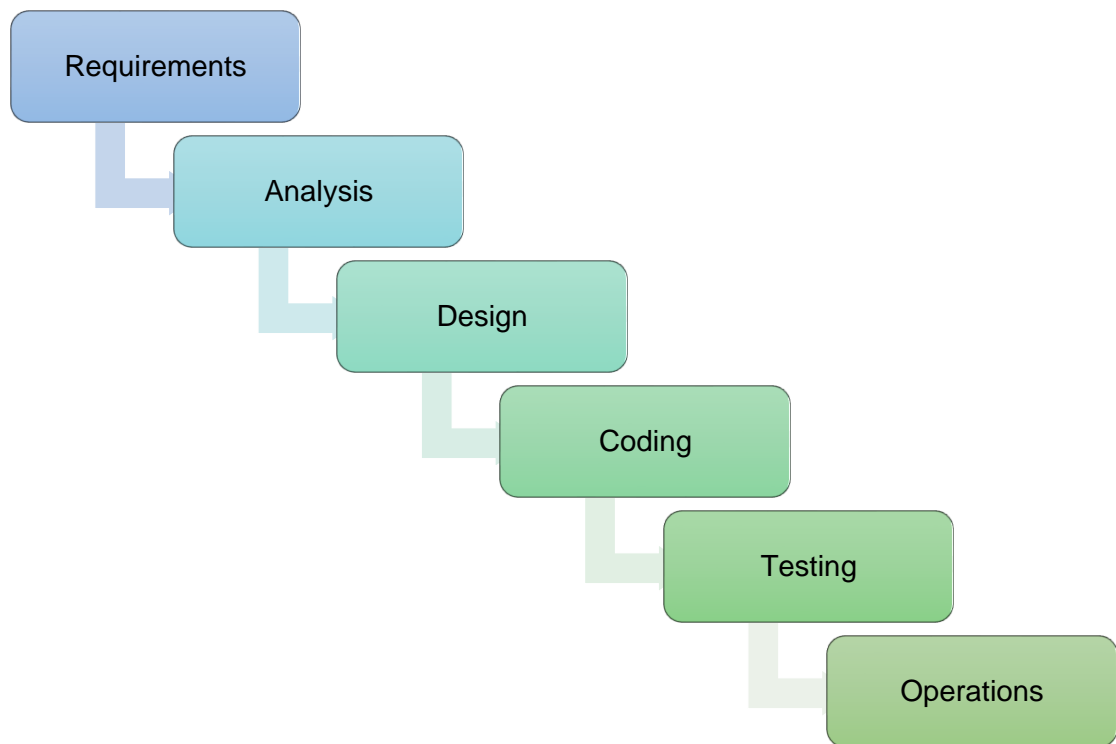
Figure 1: The Waterfall Model

The Waterfall Model encompasses six processes that are followed throughout the development.

Requirements. In this phase, the necessary pieces of information are gathered from the client. This information will serve as the specification that needed to be followed by the system.

Analysis. The information gathered at the Requirements phase is thrown into the analysis stage of the study. The specifications will be analyzed in order to come up with a possible model and workflow for the system. At the end of this phase, the logical process of the system is produced.

Design. Technical requirements are provided in the Design phase. Specifications such as the programming language to use, the tools to be incorporated, the services to be used, and more will be specified at this phase.

Coding. The source code for the system is finally written. Using the produced outputs from the earlier stages, the code is built from the ground up. Each specification will be used and implemented while creating the source code for the system.

Testing. Once the writing of source code is finished, it is important to see whether it is fully functional or not. This is where the Testing phase kicks in. The system will be tested by various testers. Testers will report any issues that needed to be resolved, such as bugs, performance issues, and more. Once the issues are identified it is common to go back to the coding phase and eliminate these issues in the system.

Operations. This will be the last phase of the model. At this point, the system is ready for deployment to a working environment. The process does not stop at the deployment, since maintenance is also a part of this. Maintenance will be done as a regular checkup and update to the system. This ensures the functional state of the system.

Significance of the Study

The development of GANHS Portal: An Online Student Information System of Golden Acres National High School is believed to be beneficial to a certain individual, group of individuals, or organizations.

Students. This study is significant to the students as they are the main beneficiary of the system wherein they will be offered accessibility and convenience supported by the features of the system. Also, through this system, students will be able to augment their knowledge by having sufficient resource materials and receive important information from the school or their instructors.

Teachers. This study is significant to the teachers or instructors as they can provide all the necessary information and resources to their students efficiently, with that being said, they can post activities, exams, or even announcements that will benefit their students in any possible means.

School. This study is important for the school as they are administered to manage the system itself. It may help them track and manage all their students' information including grades, attendance records, and more.

9

Educational Institutions. This study is important to other educational institutions or establishments as it might serve as a basis in promoting a new platform to be implemented on them particularly in creating a Student Portal to help in managing and track students' information.

Researchers. This study is important to the researchers for them to apply and to gain more knowledge in creating a Student Portal as well as to help them to enhance their skills in developing a web-based application and for their professional career in the future.

Future Researchers. This system is also important for future researchers and developers as it will be used to become a groundwork in developing a new application relevant to the concepts of the system.

REFERENCE LIST

Banks, F. (2021, January 21). *Waterfall Model: What Is It and When Should You Use It?* Retrieved from Airbrake: https://airbrake.io/blog/sdlc/waterfall-model

Golden Acres National High School. (n.d.). *Golden Acres National High School - About.* Retrieved from Golden Acres National High School: https://sites.google.com/view/goldenacresnhs/about

Innovations for Poverty Action. (2020). *Philippines RECOVR Survey.* Innovations for Poverty Action. Retrieved from https://www.poverty-action.org/sites/default/files/Philippines-RECOVR-Survey-Analysis.pdf

Merriam-Webster. (n.d.). *convenience.* Retrieved from Merriam-Webster: https://www.merriam-webster.com/dictionary/convenience

Singh, T., & Rao, J. (2016, February). A STUDY OF WEB PORTAL FEATURES AS A KNOWLEDGE MANAGEMENT SYSTEM IN SCHOOL EDUCATION. *Review of Research ISSN No : 2249-894X, 5*, 1-4. Retrieved from https://www.researchgate.net/publication/296846222_A_STUDY_OF_WEB_PORTAL_FEATURES_AS_A_KNOWLEDGE_MANAGEMENT_SYSTEM_IN_SCHOOL_EDUCATION

Villanueva, M. A. (2020, September 9). *DepEd, CHED too distant to learners.* Retrieved from Philstar: https://www.philstar.com/opinion/2020/09/09/2041052/deped-ched-too-distant-learners

Yonatan, R. (2020, September 6). *What is an Online Portal? | GetVoIP.* Retrieved from GetVoIP: https://getvoip.com/library/online-portal/