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ONLINE STUDENT ID SCANNING AND CHECK-IN SYSTEM FOR ISPSC STA. MARIA CAMPUS

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Chapter 1

INTRODUCTION

Background of the Study

The capstone project, entitled "Online Student ID Scanning and Check-in System for ISPSC Sta. Maria Campus" is purposely designed to be used by the educational institution. The attendance system will only require the students to scan the Student ID to record their attendance during arrival and departure in school. The said project also has an SMS feature that is used to notify the parents of the students about their attendance.

Checking student's attendance is an essential day-to-day activity in school. It is done to ensure that students are always present and attend classes. Student's attendance is also critical in tracking and monitoring students in school. Conventionally, student's attendance is checked and recorded manually. Some of the most common manual methods of attendance are roll calling, use of class records, and letting students sign an attendance sheet. The mentioned methods are prone to human errors and are not highly accurate and reliable. The manual method is not ideal for it requires a lot of time and effort from both the students and the instructors. There are also loads of paperwork and it is very time-consuming. The manual process is very ineffective and outdated.

Securing campuses and protecting students has become a critical operation for all educational institutions and so the researchers decided to do a study about it. How they can help the institutions improve and be more efficient. Based on the research made, attendance is widely used for the following reason: security among students and teachers, restriction of outsider access, makes the school campus life efficient for

everyone. Teachers will be notified about their students, students and teacher will be tracked and monitored using the ID card linked and attendance system, and stored personal information. One of the problems in educational institutions is the students' irregular attendance. It becomes even worse when parents were not informed of their absences in classes. This usually happens to higher education institutions, wherein the students are geographically far from their parents.

Previous studies (Fadelelmoula, 2018; Oghuvbu, 2017) correlated students' attendance and overall academic performance. Hence, absenteeism can cause the institution to lose its reputation as well as resulting in inadequate learning on the part of the student. In educational institutions in Bohol, conventional attendance system requires teachers to use pen and paper for class attendance or students to manually sign the attendance sheet during school events. This system lacks automation, where several problems may arise. For instance, time is unneccesarily consumed by teachers or students when manually inserting, validating data to attendance sheets. Furthermore, a hardcopy form of attendance sheet could easily be misplaced. Hence, it is important for educational sectors to have solutions that simplify and increase the speed of attendance monitoring.

Notwithstanding, web-based applications have been prolific in education and others sectors due to its portability, adaptability and flexibility. They have now become one of the preferable technologies that are used to ease the process of managing data and records (Rjeib et al., 2018).

Conceptual Framework of the Study

Figure 1 shows the conceptual framework of the study. It will serve as the outline on how the researchers will conduct the study.

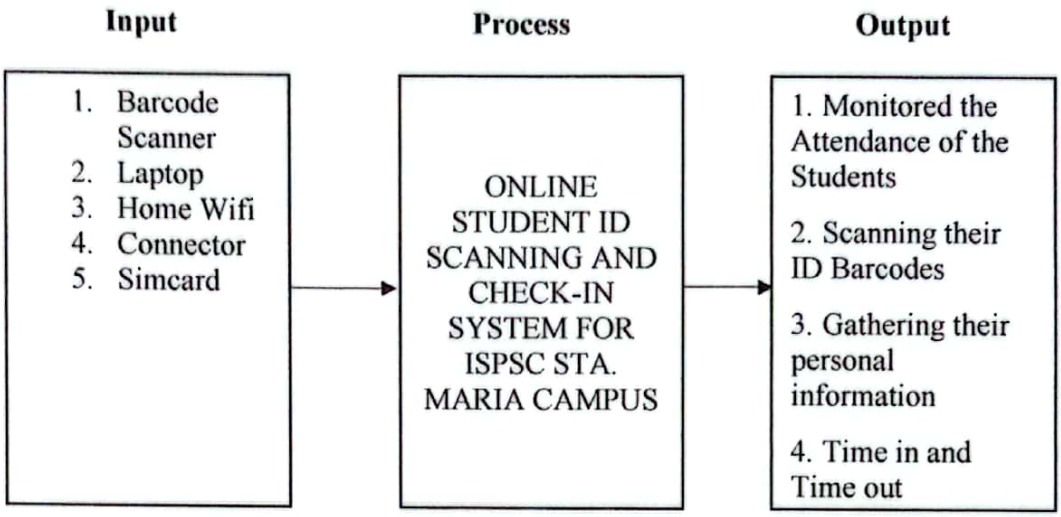

Figure 1. Conceptual Framework

The Figure 1 illustrates the study of Online Student ID Scanning and Check-in System of the input-process-output method. From the list of input was the laptop, barcode scanner, Home Wifi and simcard that can access and provide to our system. The student attendance has a list to gathered a personal information regarding to their name, age, courses and the flexible time in and time out. In the output it can specify the uses of our system it can help to provide the easily access of the attendance and accommodate the list of names of the student that has a record for the everyday time in and time out.

Objectives of the Study

The main objective of this study is to develop a Online Student ID Scanning and Check-in System for fast transactions when the student entered and exited the school.

Specifically, the study aims to:

1. To identify the current process of Student ID Scanning and Check-in for ISPSC Sta. Maria Campus.
2. To determine the features integrated within the developed system the acceptability and usability.
3. To evaluate the acceptability of the developed system.

Scope and Limitation of the Study

The proposed system managed the process of attendance monitoring that will be save in a specific database.

Online Student ID Scanning and Check-in System for ISPSC Sta. Maria Campus is a system that is being developed by the researchers to improve security purposes for the students of ISPSC Sta. Maria and notifies the parents for the arrival of their children at school. The students will swipe their ID (Identification) on the barcode scanner then the system automatically sends a message to the parents or guardians that their children went in or went out of the school premises using PLDT SMS modem as the system. In addition, it has a summary information of the time and date that the students has logged.

However, in this application there are different limitations that will never be granted in the said application such as; the system only covers the arrival and departure of the students. The system could not monitor or record the students. the system notifies only the parents or guardians with regards in the student's attendance. The teachers will still have to check the attendance manually. This system occurs only on the said school premises and exclusively for the students who are studying on College ISPSC Sta.

Maria. Also, the SMS part is only available to local cellular phone numbers. Numbers from outside the country will not be able to receive text notifications of the said system.

Importance of the Study

The study would benefit the following:

The **Administrators** can check whether the faculty of the school are religiously checking the attendance of the students. This will serve as their basis in looking interventions for those absenteeism to come to school regularly.

The **Dean/Program Head** can easily monitor and check the results and responses based on the information provided.

The **Faculty** can help them in monitoring their student's attendance.

The **Researchers** will enhance their knowledge and skills in the development of the Online Student ID Scanning and Check-in System.

The **Future Researchers** can serve as their guide in developing updates for the system, and they can expand such study by considering the recommendations made in this present study.

Chapter 2

METHODOLOGY

This chapter discussed the research design, software model, project plan, project assignments, population and locale, research instruments, data analysis and the statistical tools utilized to interpret the acceptability of the system.

Research Design

The researchers conducted the presentation, prescription, and interpretation of the data using the descriptive developmental type of research, and the findings served as a basis for the developed system, the Online Student ID Scanning and Check-in System for ISPSC Sta. Maria Campus.The interview and Wammi questionnaires of the Student ID Scanning and Check-in System are all gathered information through this method was analyzed, and interpreted into the proposed system.

The developmental method research was on the development of the system. Developmental method of research has defined as the systematic study of the design, development, and evaluation of the activities while also discussing the process, assessment in the whole or specific process components, and acceptability of the system (Richey & Klein, 2014). This research will assist the method of the developers. Various programming Languages and packages suitable for the system were also identified. The most skilled user. To ensure smooth data flow, an interface will be designed and integrated into the system.

Software Model

The researchers paved the way for the formulation of the methodology called Rapid Application Development (Rad) (Sean S. Peek, 2023). The RAD accelerates software

development using prototypes, fake graphical user interface, and back-end databases.

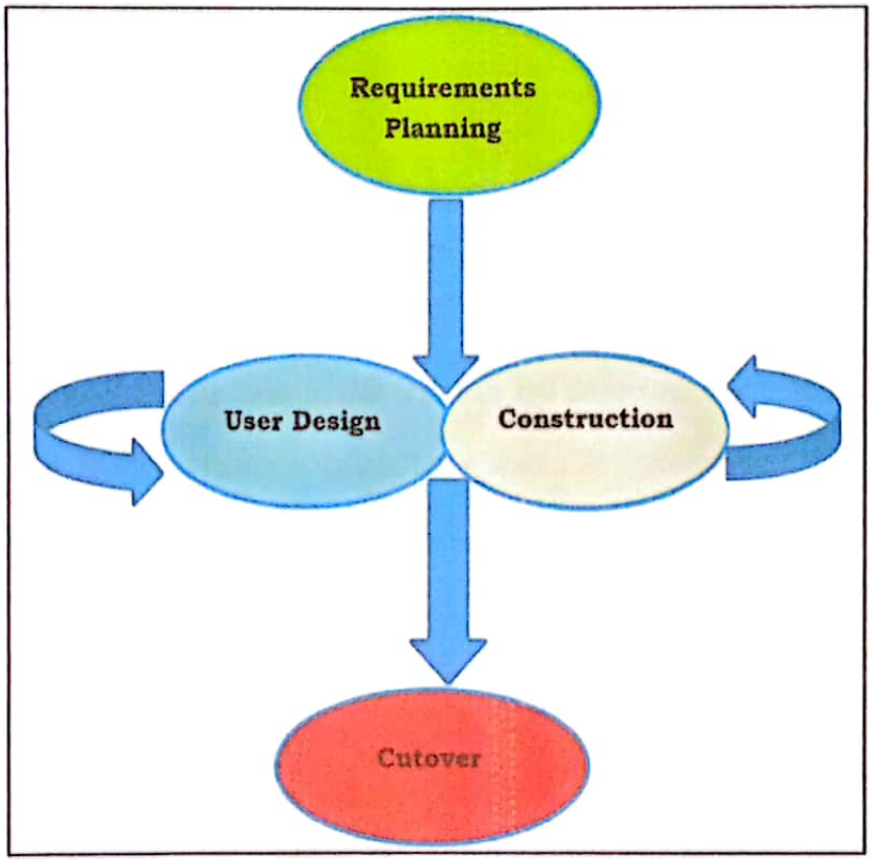

Figure 2. RAD Model

The four phases were used to implement (RAD) are as follows:

Requirements Planning. The researchers prepared a letter with the approval of the Campus Administrator, and the College of Computing Studies Dean to permit the gathering of the data needed for the study.

Distribution of questionnaire was conducted in order to gather necessary data for the proposed system such as knowing the problems being that would be encountered. Observation was carried to supplement the gathered data during the surv···· Additionally, the researchers acquired data through internet research, as well as historical documentation and projects that are important to the system.

User Design. The software's flow as well as formalizing the system requirements and the application's main components were identified.

Construction. The researchers worked together using PHP and MySQL.

Cutover. Dry run was conducted to test the proposed system's functionality and to identify any issues that may arise during use.

Project Plan

Figure 3 shows the timeline that was used as a project management tool to clearly illustrate the status of the process of Online Student ID Scanning and Check-in System for ISPSC Sta. Maria Campus and it displays the sequence and the duration of each of the RAD Model.

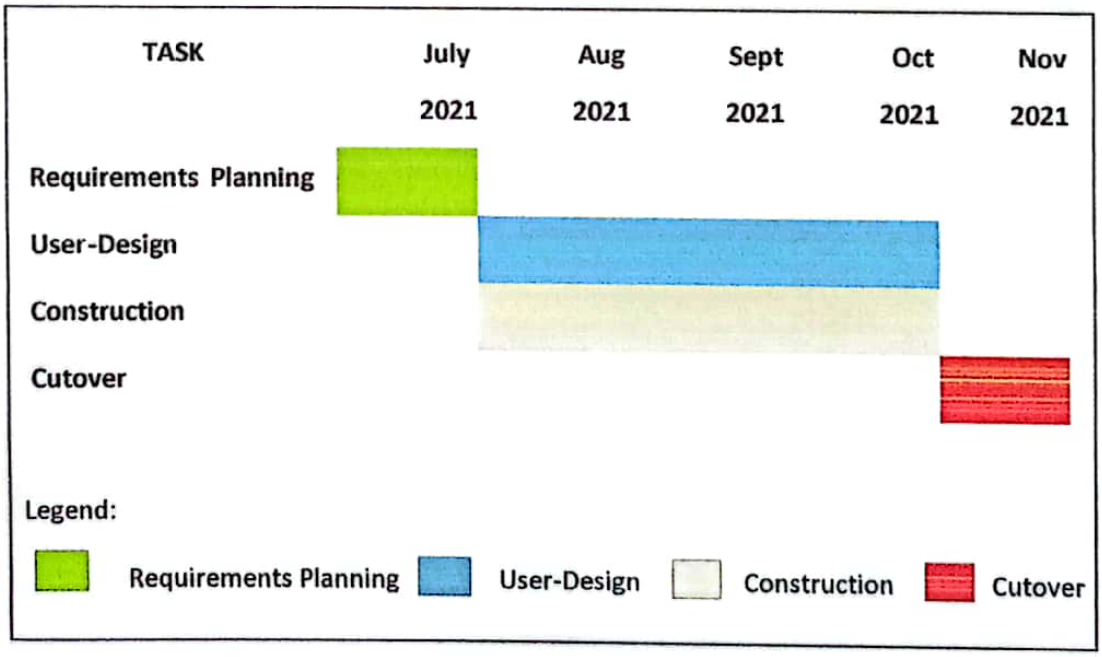

Figure 3. Project Schedule

In this figure 3 it stated that the project schedule are shown the planning of this thesis regarding on how the responsibilities on every member of this group through managing and coordinates every detailed and gathered information.

Project Assignments

The projects team member's roles and responsibilities within the proposed system of Online Student ID Scanning and Check-in System for ISPSC Sta. Maria Campus.

Roles	Name	Responsibility
Project Manager	Alaika C. Aguot	Responsible for coordinating with the project team
	Alaika C. Aguot Almar Angelo V. Dayap Roshelie Erica P. Barangay	Maintain open communications with all the members
System Analyst and Designer	Christian G. Cabjuan Almar Angelo V. Dayap	Coordinates the technical team's efforts in resolving challenges and ensuring that solutions are practical and consistent.
Programmer and Developer	Almar Angelo V. Dayap Christian G. Cabjuan	Responsible for managing systems planning design team and building the project.
QA / Tester	Alaika C. Aguot Roshelie Erica P. Barangay Almar Angelo V. Dayap	Responsible for checking the debugging queries of the project.
	Christian G. Cabjuan	Evaluate software needs and communicate findings to the project team.
Documenter/Technical Writer	Alaika C. Aguot Roshelie Erica P. Barangay	A status report on the whole project. Publish project plan timeline and project requirement sheet

Table 1. Role Requirements and Responsibility

Population and Locale of the Study

The researchers utilized purposive sampling to determine the respondents of the study. Table2 shows the distribution of the selected respondents to participate in the acceptability of the proposed system. There were one hundred (100) respondents, twenty (20) CCS students, twenty (20) CAFED students, twenty (20) CBME students, twenty (20) Agricultural Engineering students and twenty (20) CTE students.

Respondents	N
CCS Students	20
CAFED Students	20
CBME Students	20
Agricultural Engineering Students	20
Teacher Students	20
TOTAL	**100**

Table 2. Distribution of Respondents

Research Instrument

Interview, documentary analysis, internet research/library research and survey questionnaire were the tools that are used in the study, which also involved the participation of the College ISPSC Sta. Maria.

WAMMI (Website Analysis and Measurement Inventory) is a Web analysis that measure user satisfaction by having website visitors contrast their expectations with what they actually encounter (WAMMI.com, 2020)

Data Analysis

Questionnaires and interviews were served as tools in gathering the data. To identify the acceptability of the proposed system Online Student ID Scanning and Check-in System for ISPSCS Sta. Maria Campus.

Table 3 shows the descriptive interpretation of the proposed system's level of acceptability.

Scale Value	Statistical Range	Descriptive Rating
5	4.20 – 5.00	Strongly Agree
4	3.40 – 4.19	Moderately Agree
3	2.60 – 3.39	Agree
2	1.80 – 2.59	Moderately Disagree
1	1.00 – 1.79	Strongly Disagree

Table 3 Descriptive Interpretation as the Level of Acceptability of Online Student ID Scanning for ISPSC Sta. Maria Campus

The date gathered were categorized from Strongly Disagree to Strong Agree. Mean Ranges from 1.00-1.79 described as Strongly Disagree, 1.80-2.59 described as Moderately Disagree, 2.60-3.39 described as Agree, 3.40-4.19 describe as Moderately Agree and 4.20-5.00 described as Strongly Agree. Table 3 shows the descriptive rating on usability of the proposed system.

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