VARSITY PROFILING AND MONITORING INFORMATION SYSTEM

A Capstone Project

Presented to the Faculty of the

College of Computer Studies and Information Technology,

Southern Leyte State University

In Partial Fulfillment of the Requirements

for the degree Bachelor of Science in Information Technology

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The Capstone Project Study entitled **Varsity Profiling and Monitoring Information System** prepared and submitted by Team Average has been examined and is recommended for approval and acceptance.

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Date: _____

DEDICATION

The guidance of our Almighty God, our family, and our friends made this project possible. Thank you to our parents, who endlessly encourage and support us morally, spiritually, and financially.

We'd also like to express our gratitude to our adviser and friends who shared their words, assistance, and support during this process and journey, whose unwavering support enabled the project's conception and completion.

Furthermore, we dedicated this to our all-loving God, whom we will adore forever. Thank you for your wisdom, strength, power of knowledge, protection, and abilities, as well as for keeping us all healthy all year round. All of this is offered to you.

ACKNOWLEDGEMENT

We would like to express our appreciation and gratitude to all those who help and guide us in making this a success. Our completion of this could not have been possible without their guidance and support.

We acknowledge and give our warmest thanks to our one-call-away adviser Mr. Gilbert Siega who never left us every time we need his help. His dynamism, vision, sincerity, immense knowledge, and motivation have deeply inspired us. It was a great privilege and honor to work and study under his guidance. We are extremely grateful for what he has offered us.

We would also like to give special thanks to our parents for their undying support, patience, and understanding. Without them, we wouldn't make this project possible and successful.

Finally, we thank God who is the fountain of love, wisdom, and knowledge. Thank you for letting us experience your guidance every day. With a grateful heart, we glorify you and we will keep faith in your plans for our future.

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EXECUTIVE SUMMARY

Varsity Profiling and Monitoring Information System aim to develop a web-based profiling and monitoring information system intended for the varsities in the university. This system will create a profiling database of all varsity members for easy tracking of members and provide an online platform for monitoring whether varsity athletes and coaches are responding appropriately and adapting to an imposed training program, rehearsal, sports events, and competition demands. The system will create and manage profiling information of all varsity members in the University for Easy Retrieval of records. Also, it enables transactions the checking of attendance, and monitoring of the status and performance of the varsity student-athlete during rehearsal, training, competition demands, sports events, etc. The system was developed with the following Waterfall Model. Results of system evaluation reveal that the developed system is mostly functional, reliable, usable, efficient, maintainable, maintainability, portability, secure and compatible. It is therefore recommended that VPMIS be adapted and utilized so that there will be a systematic and timely way to monitor the activities of all varsity at Southern Leyte State University.

Keywords: varsity profiling, monitoring, ISO25010, waterfall model, web-based, VPMIS

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Chapter I

INTRODUCTION

Project Context

The premier team for sports at a college or university is known as varsity. Sports are quite important in a variety of schools. Numerous students attend university basketball, football, and other athletic events. The athletes somewhat on starting line-up are college athletes ("Vocabulary.com"). The value of student varsity athletes in the university is significant and cannot be overlooked. It has a profound impact on individuals, schools, and communities. Varsity athletes are powerful because they can bridge gaps, bring people who otherwise might not interact together, and provide opportunities not available elsewhere ("Meador, Derrick, 2020 August 26"). The success of varsity student-athletes sometimes may involve participants working hard, showing perseverance and determination, being self-disciplined, and being able to concentrate ("Atkinson, Wigfield, and Eccles, 2000").

In Southern Leyte State University-Main Campus, there are already established varsities in the different sporting events. These varsities are under the supervision of the Office of the Sports Development Program. Currently, there's still no systematic and timely way to monitor the activities of all varsity in the university. Up-to-date and constant monitoring is needed to understand the status and performance of every varsity member and the situation during rehearsal, training, and other important sporting activities.

Hence, the researchers developed a web-based profiling and monitoring information system intended for the varsities in the university. This system will create a profiling database of all varsity members for easy tracking of members and provide an

online platform for monitoring whether varsity athletes and coaches are responding appropriately and adapting to an imposed training program, rehearsal, sports events, and competition demands.

Purpose and Description of the Project

The main purpose of this study focused on the development of web-based profiling and monitoring information systems. The system created and managed profiling information of all varsity members in the University for Easy Retrieval of records. Also, it enables transaction of the checking of attendance and monitoring of the status and performance of the varsity student-athlete during rehearsal, training, competition demands, sports events, etc.

Objectives of the Project

Generally, this study aimed to develop a web-based monitoring information system for varsities in a university. Specifically, this study aimed to attain the following objectives:

1. To establish a database for storing and profiling varsity student-athletes and coaches.
2. To provide real-time attendance monitoring during training and other important events
3. To implement online access with a user-friendly interface for monitoring and tracking records.
4. To establish an online Client Satisfaction survey on the varsity athletes' side.

Scope and Limitations of the Project

This study is intended to be utilized by the Office of the Sports Development Program at Southern Leyte State University-Main Campus. The online system particularly focuses on profiling varsity student-athletes and coaches, attendance monitoring, delivering updates on varsity activities in the university, and establishing an online Client Satisfaction survey on the varsity athletes' side. The application can be accessed through computers and mobile phones with internet connectivity.

Chapter II

REVIEW OF RELATED LITERATURE

Related Literature / Theoretical Background

According to Pacio (2013), the university's primary objective is to "generate and disseminate new knowledge and technologies that will promote sustainable resource development and enrich the competent and effective services geared towards efficiency and economy," which is incompatible with the campus's current student information system at Kalinga State University Rizal.

According to Farhan's research, A. (2015), "Students Attendance Monitoring utilizing QR code (Quick Response Code) is a lot more easy approach to verify attendance. Students were given tags that the checker must scan on it and it is already recorded."

Based on the research of Maggay J. (2017) with regards to Cagayan State University's Biometric Attendance Monitoring System. The goal of the project is to develop a completely tailored Biometric Attendance Monitoring System (BAMS) using a biometric fingerprint reader for the Cagayan State University - Lasam Campus, Philippines (CSU - Lasam) to make it simpler to track employees' attendance. The study's objectives were set, the system was planned and created, deployed, and evaluated before the researcher presented the study's findings in line with the Design Science Research for Information Systems framework. The database management system used was MS Access, and the programming language used was Visual Basic 6.0. Due to this, users of the BAMS are able to enter data, modify and edit data, retrieve information, and store

information about data. As all transactions employ a unique fingerprint to verify users, a username and password are no longer required. Additionally, the BAMS makes a significant improvement in work ethics and ease for employees. The BAMS, which assists in monitoring staff attendance on a daily basis, is also crucial to ensuring good governance. The attributes of the biometric attendance monitoring system that was created internally. The characteristics, design, and Graphical User Interface (GUI) of the system are depicted in the following figures.

According to a research by M.A.C. Maleriado and J. R. In terms of dependability, effectiveness, accuracy, and usability (2018), the QR Code as an attendance tracking method was very highly acceptable. It was also very acceptable in terms of security and secrecy. The perspective of the participants reveals that the QR code was a user-friendly, cost-effective, creative, highly quick, and legible codes as an attendance checker.

Related Studies

Using RFID technology, Patel et al. suggested a portable, lightweight, and cost-effective student attendance system in 2012. It would track students' attendance, show it on the screen, and work well with other system components.

Balcoh et al. presented an algorithm for efficient attendance management in 2012. Facial recognition reduces the amount of effort required to record attendance. The process is done behind closed doors. The technology can identify many faces from a single image. This will ultimately put an end to attendance fraud.

In their research, Parack et al. Al-Qaeda et al. (2012) talked about how data mining and education are using student profiling and categorization. They created student profiles by employing the Apriori algorithm, one of the most widely used association rules mining techniques. The favored algorithms, which may be used in educational systems, are effective in creating student profiles. They were used to group the students using the K-means method, which divides a collection of observations into sub-groups.

In 2012, Mohammad Umair Yaqub created a technique in which pupils would tap the teacher's phone with an NFC-enabled phone before class started. The teacher will send attendance information to a server after class. The database will then be used to store it. Students have the option of submitting a final report, making fees, etc. after the semester is over.

Vishal More, Surbhi Nayak, and Minna Isomursu proposed an attendance tracking system in December 2013 by simply modifying the one that had been developed in 2010 by "Mari Ervasti," "Marianne Kinnula," and "Minna Isomursu." Adjustments were made to the time stamp, namely the entry tag and departure tag, to make it simple to determine the time a student was there. Given that everything was documented in the database, a final report may be created.

Masalha (2014) suggests utilizing a QR code to track attendance together with extra security to prevent illegal attendance registration using multi-factor authentication, which entails a login, password, and face recognition check. The location will also be examined to make sure the pupils are actually in the class when the QR code is scanned.

Asogwa et al. (2015) noted that while transforming student information systems, universities' administrative or academic transaction services, and keeping students' academic histories and profiles, paperwork is still being done at the same time.

A C/S mode monitoring system for athlete training was created by Ma et al. (2020) using mobile artificial intelligence technology. This technology employed GPS to determine athletes' current whereabouts and to offer guidance in real-time.

Chapter III

TECHNICAL BACKGROUND

The technicality of the project

The proponents used a web-based program wherein the users can access it through mobile phones, laptops, and computers. The Varsity Profiling and Monitoring Information System online monitoring for the varsity for easy and convenient access by Administrators and Varsity Coaches without using the traditional process. These are some of the technical terms that are being used in our project: The Sublime–Text Editor, Server-client side – Code Igniter 3 PHP Framework, PHP, HTML, CSS Bootstrap, Database – Xampp, MySQL, Functionality – Web Application, PHPMyAdmin and jQuery. Some of the terminologies stated above are also the technology being used in our project.

Details of the Technologies to be Used

In developing the project, the following technology tools will be used:

The Sublime – Sublime Text is a cross-platform source code editor written in C++ and python.

Code Igniter 3 – is a powerful PHP framework with a very small footprint, built for developers who need a simple and elegant toolkit to create full-featured web applications.

PHP – is a general-purpose scripting language that is especially suited to server-side web development where PHP generally runs on a web server. It can also be used for command-line scripting and client-side GUI applications.

HTML – This is the language in that Web pages are written. As far as computer languages go.

CSS Bootstrap – for designing and building the graphical user interface of a web-based application. Cascading style sheets are used to format the layout of Web pages. They can be used to define text styles, table sizes, and other aspects of Web pages that previously could only be defined in a page's HTML.CSS helps Web developers create a uniform look across several pages of a Web site.

Xampp 8.0.3 – Developers will use this as a development tool, to allow website designers and programmers to test their work on their computers without any access to the Internet.

jQuery – is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers.

MySQL – is an open-source relational database management system. MySQL will be used by the developer because it is one of the systems development-compatible databases.

How the Project Worked

Figure 1 shows the Conceptual Framework of the study. The project will work once all of the requirements, such as hardware and software, were met, as well as the proper setup. There should be a personal computer, a laptop, or a smartphone available to be used by the Administrator and Varsity Coaches to run the system. The device should be capable of profiling and monitoring the varsity athlete. A stable internet connection is not required to run the proposed system. There are three (3) types of user/account in this proposed

project, namely Administrator, Varsity Coaches, and Varsity Athlete. The Administrator is responsible for profiling and monitoring the varsity athlete and the coaches, account creation, viewing of team sports, attendance, attendance status, and images. On the other hand, the Coaches are responsible for adding events, viewing and checking of attendance of the varsity athlete during the sport's event, rehearsal, training, etc. He or she is capable of uploading images during sports events, rehearsal, training, etc. of the varsity athlete, and where all can be seen by the administrator in the entire system. While the Varsity Athlete can view attendance and leave a rating on the client's satisfaction survey.

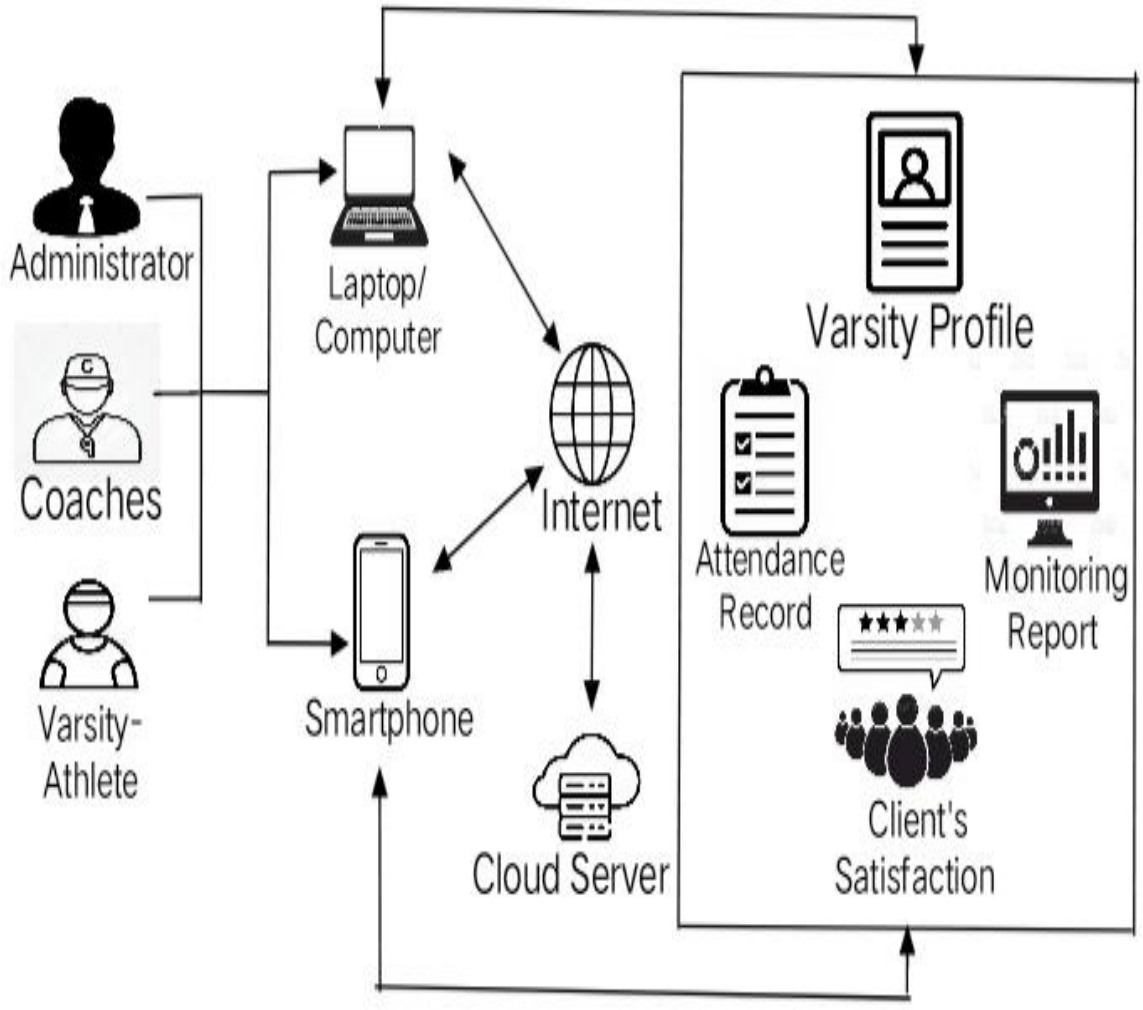

Figure 1: Conceptual Framework of the Study

CHAPTER 4

METHODOLOGY

This chapter covers the Requirement Analysis, Requirement Documentation, Design of the Software, Design of the System, System Processes, Development and Testing, Description of the System, Implementation Plan, and Implementation Results.

Requirements Analysis

This section presents the Requirements Modelling and the Risk Assessment/Analysis of the project.

System Requirements

This section presents the system requirements and modeling of the Varsity Profiling and Monitoring Information System.

Input

- The user must have the correct login credentials to use the system.
- The system administrator can create, update, and delete accounts user.
- The system administrator can view the schedule of practice.

Process

- The system must authenticate the login credential provided.
- The system administrator stores all data entered such as varsity records, schedule of practice, etc.

Output

- Display of profiling and monitoring the varsity athlete.
- The system must be able to display the images uploaded by the coaches.

- The Administrator can view all end-user accounts.
- The Varsity members can view the schedule of practice.

Performance

- The system does not need a stable internet connection to run the system.
- The system must be operational whenever needed.
- Response time must not exceed 5 seconds.
- The system must be capable of supporting 30 online users simultaneously.

Security and Control

- A Coach and Varsity record must be added, changed, or deleted only by the Office of the Sports Development Program.
- The system must maintain separate levels of security for users and the system administrator.
- If no log-in credentials are submitted, the systems are inaccessible.
- Only those with accounts are permitted to use the system.

Data and Process Modelling

Context Diagram

The context diagram shown in Figure 2 presents the basic overview of the whole system or process being analyzed or modeled.

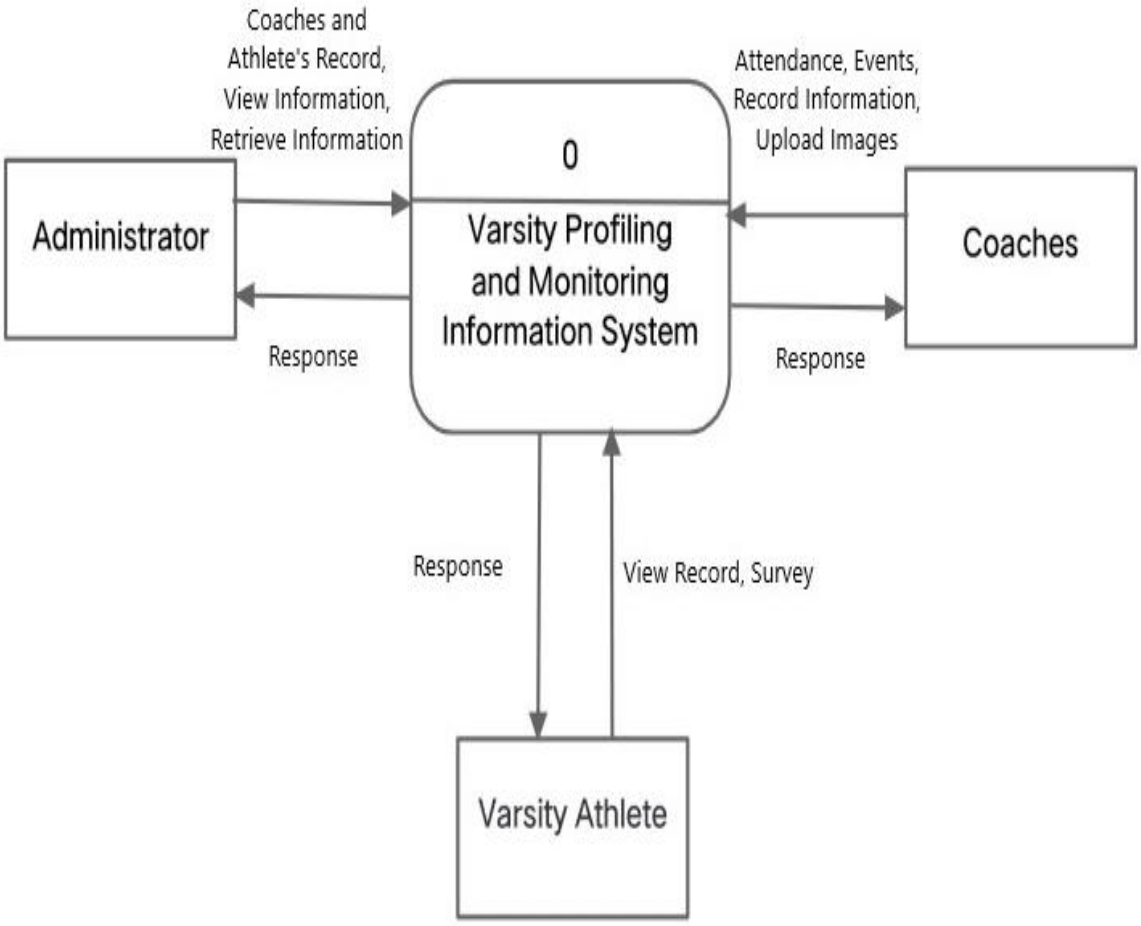

Figure 2. The Context Diagram

System Flowchart

Flowcharts are used in analyzing, designing, documenting, or managing a process or program in various fields. Its representation illustrates a solution model to a given problem. Shown in Figures 3-4 are the system flowcharts for each type of user.

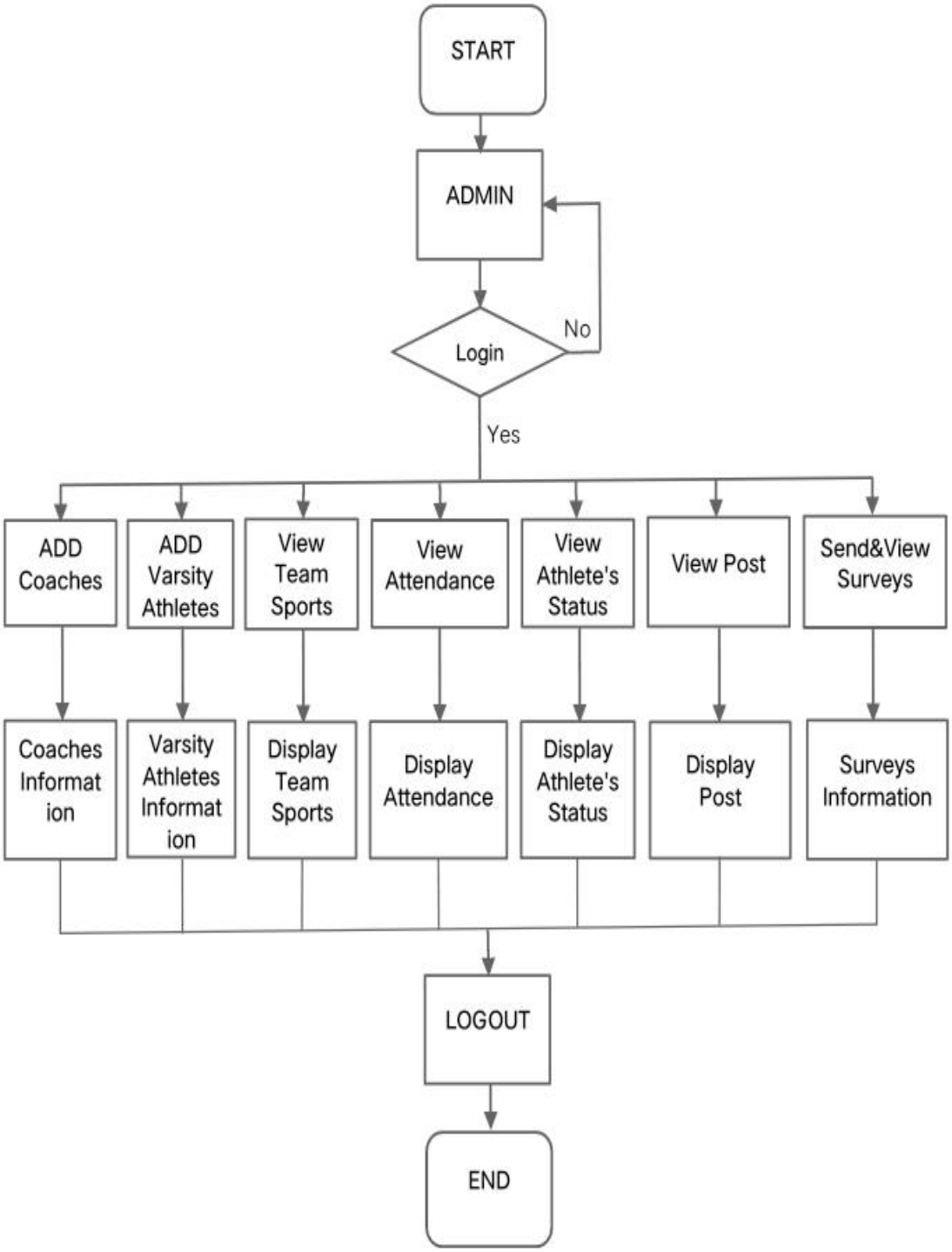

Figure 3. System Flowchart – Administrator

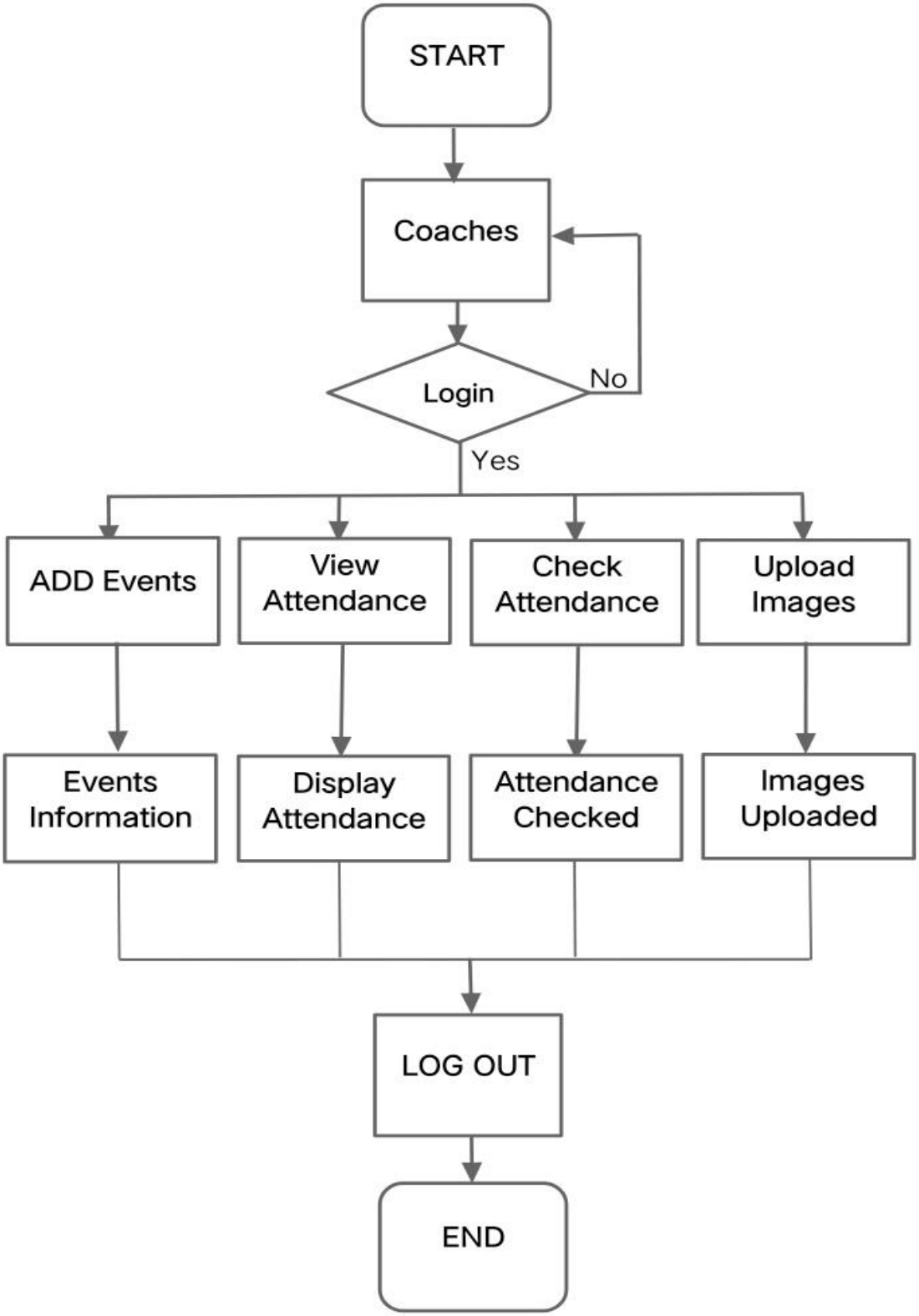

Figure 4. System Flow Chart – Coaches

Object Modelling

Use Case

Figure 5 are the Use Case Models for the proposed system. These are representations of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved.

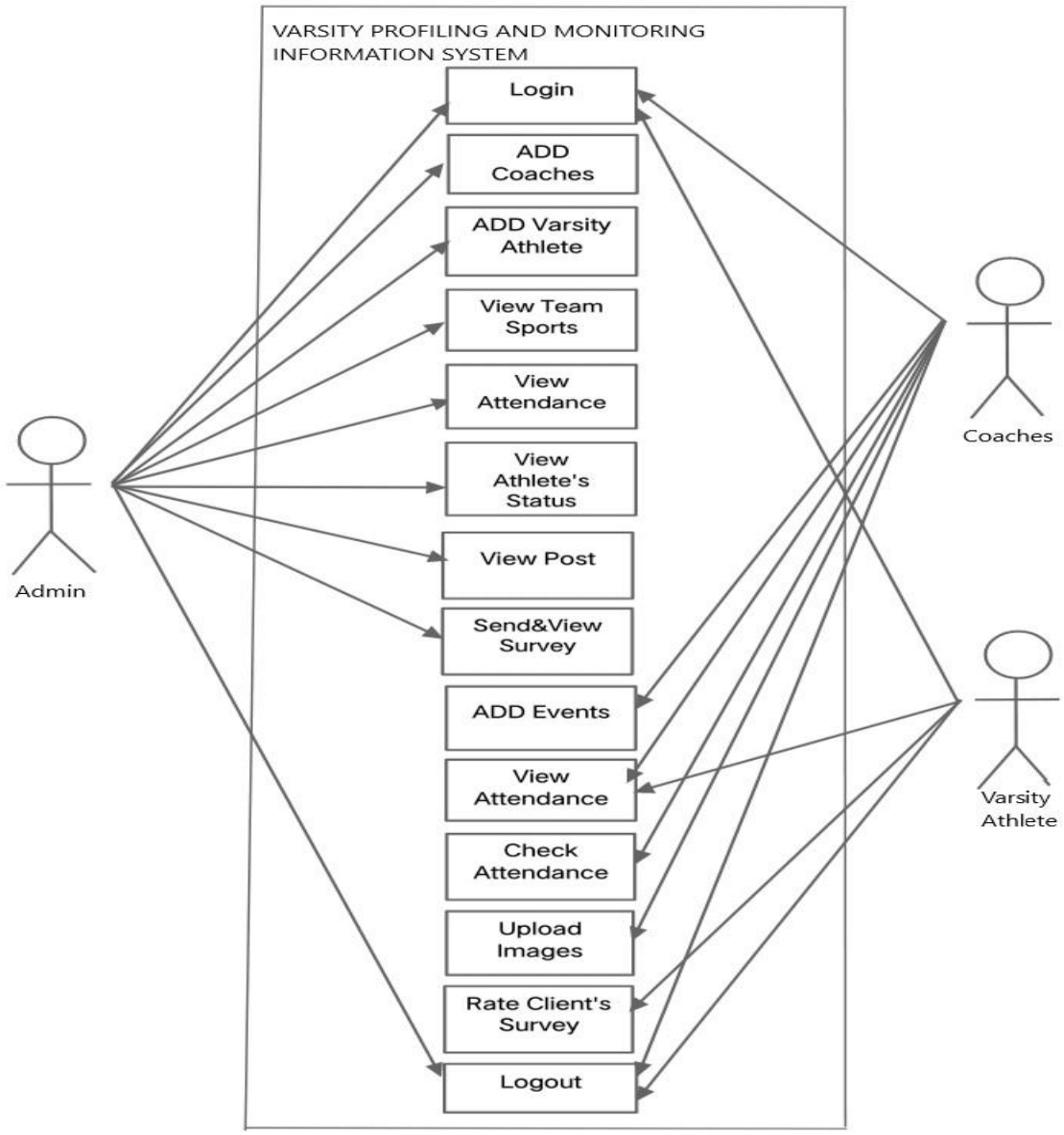

Figure 5. The System's Use Case Diagram for Varsity Profiling and Monitoring Information System

Risk Assessment/Analysis

Table 1 identifies and analyzes all of the potential risks and issues that are detrimental to the implementation of the Varsity Profiling and Monitoring Information System. The steps to prevent or minimize the occurrence of the identified risks are also presented.

Table 1. Risk Assessment

Risk Description	**Effect**	**Risk Grading (Low, Medium, High)**	**Recovery Measure**
Malware infection	Malfunction of system Data loss	High	Install anti-virus software
No internet connection	Inaccessible application/website	Medium	Subscribe to another ISP

Design of the Software

This section discusses the design and implementation of the data structures and algorithms used in the software. It presents the data design that produced the detailed data model of the database such as the Database schema in Figure 6 and the data dictionary in Table 2-4.

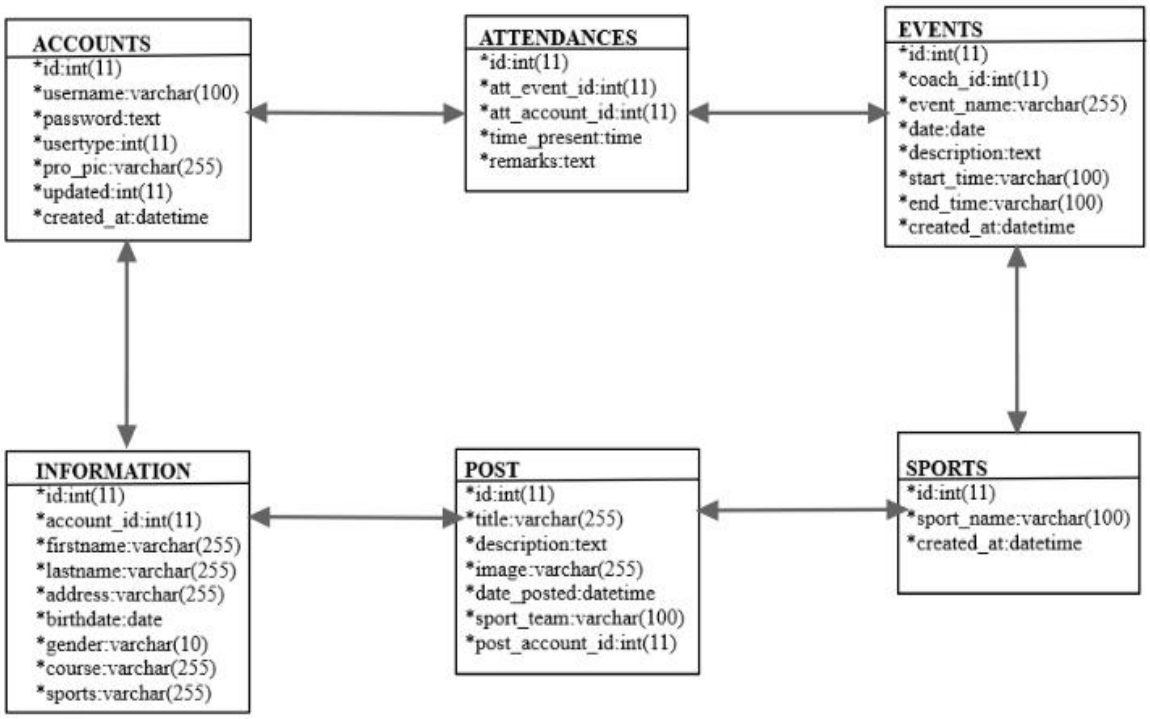

Figure 6. Database schema of the developed system

Table 2. Data Dictionary – tbl_accounts

Column	**Type**	**Comment**
id	int (11) AUTO_INCREMENT	Unique ID of the current table
username	varchar (100)	Fullname of the person
password	text	A string of characters uses to identify the identity of a user
usertype	int (11)	Defines a class of users
pro_pic	varchar (255)	Actual image of the person

updated	int (11)	Adding and changing information
created_at	datetime	Exact time and date created

Table 3. Data Dictionary – tbl_attendances

Column	**Type**	**Comment**
id	int(11) AUTO_INCREMENT	Unique ID of the current table
att_event_id	int (11)	List of all the events
att_account_id	int(11)	Unique name a user chooses when they registered
time_present	time	Exact time
remarks	text	Comment

Table 4. Data Dictionary – events

Column	**Type**	**Comment**
id	*int(11)* AUTO_INCREMENT	Unique ID of the current table
coach_id	int(11)	Unique ID of the coach
event_name	varchar(255)	Name of the events
date	date	Exact date
description	text	Detailed information of the events
start_time	varchar(100)	The starting time of the events

end_time	varchar(100)	Is the time when the events end
created_at	datetime	Exact time and date created

Design of the System

The developed system is an online web-based system that runs on web platforms using different browsers. Figures 7-9 are the screenshots taken from the developed system.

Interface Design

Login. Figure 7 provides the form used to enter login credentials. This authenticates the users of the system.

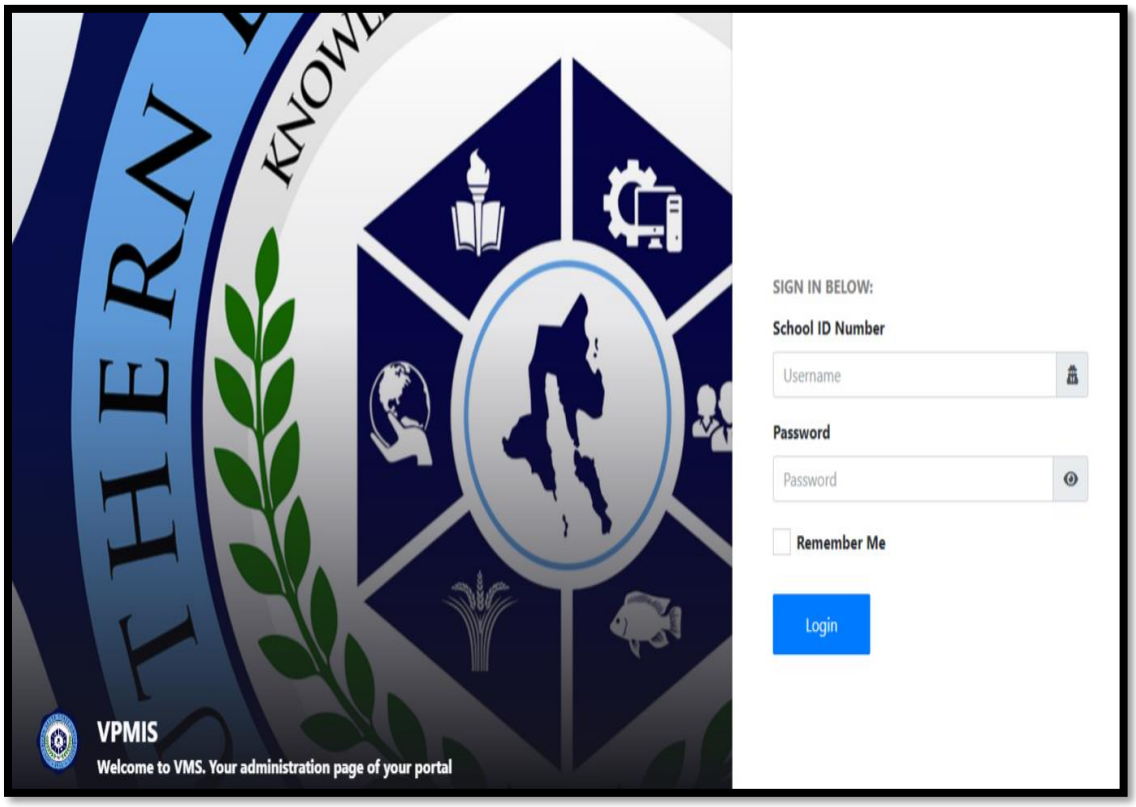

Figure 7: Login Form

Coaches. Figure 8 provides records of Coaches' data such as Username, Name, Team Sport, Gender, Profile Picture, and Actions in the form of rows and columns. The Add New Coach button enables the Admin to enter new entries similarly Edit button enables the Admin to edit/modify, whereas, the delete button is used for deleting the record.

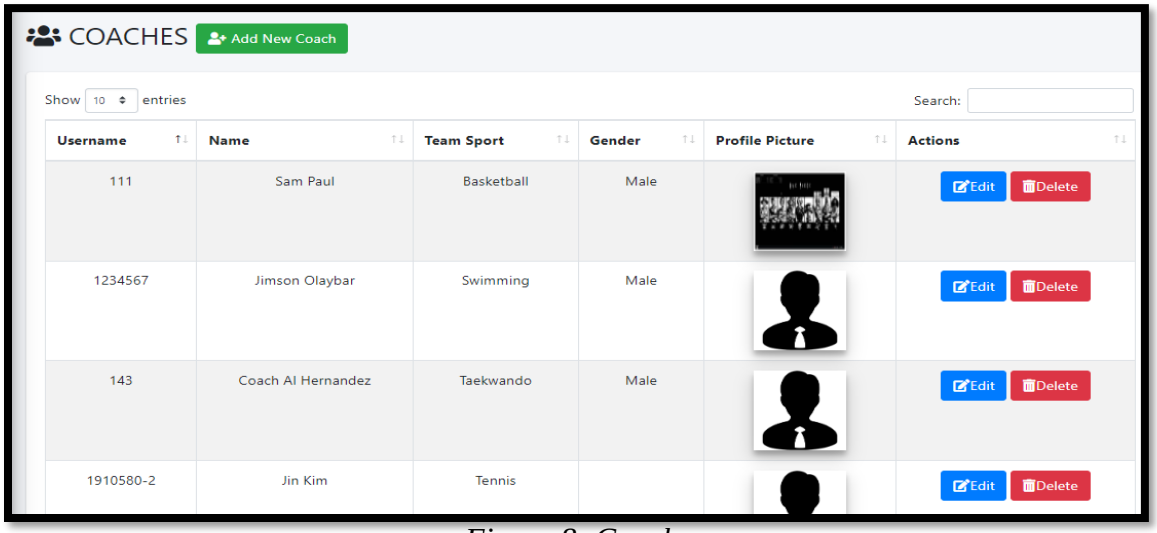

Figure 8: Coach

Athletes. Figure 9 provides records of Varsity Athlete data such as Athletes' Info, Profile Picture, Address, Date of Birth (Age), Team Sport, and Actions. There is also an Add New Athlete button which can add new entries for athletes.

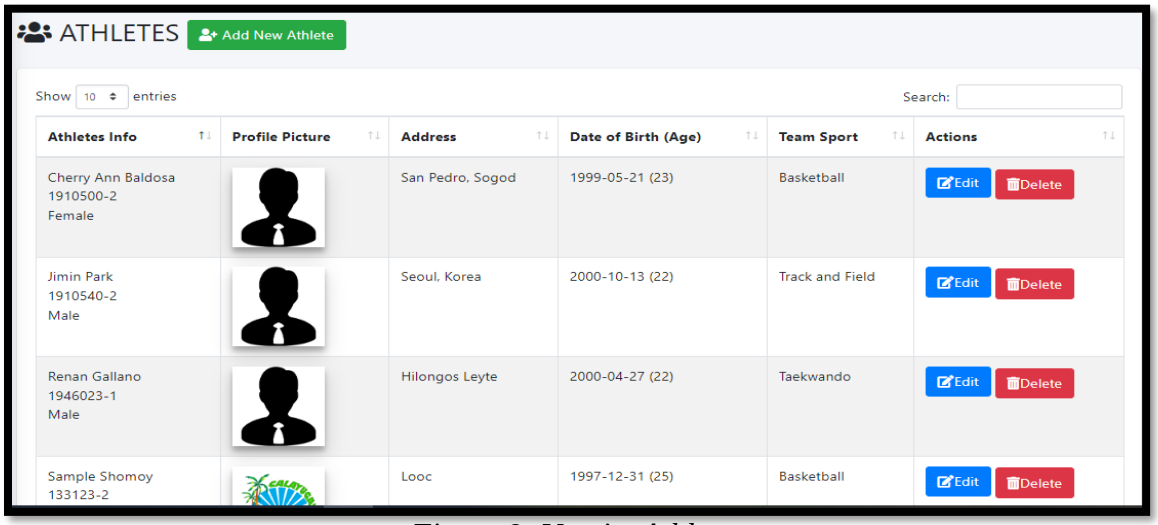

Figure 9: Varsity Athlete

System Process

The IPO Model shown in Figure 10 represents the Varsity Profiling and Monitoring Information System in three stages which are input, process, and output. In Input, all the problems encountered by the system are analyzed and the previous studies related to the system was gathered. In the process, this is the part where the software development life cycle model was chosen that will fit the project outputs. After the necessary steps were done, the project comes to life and was implemented in the actual environment.

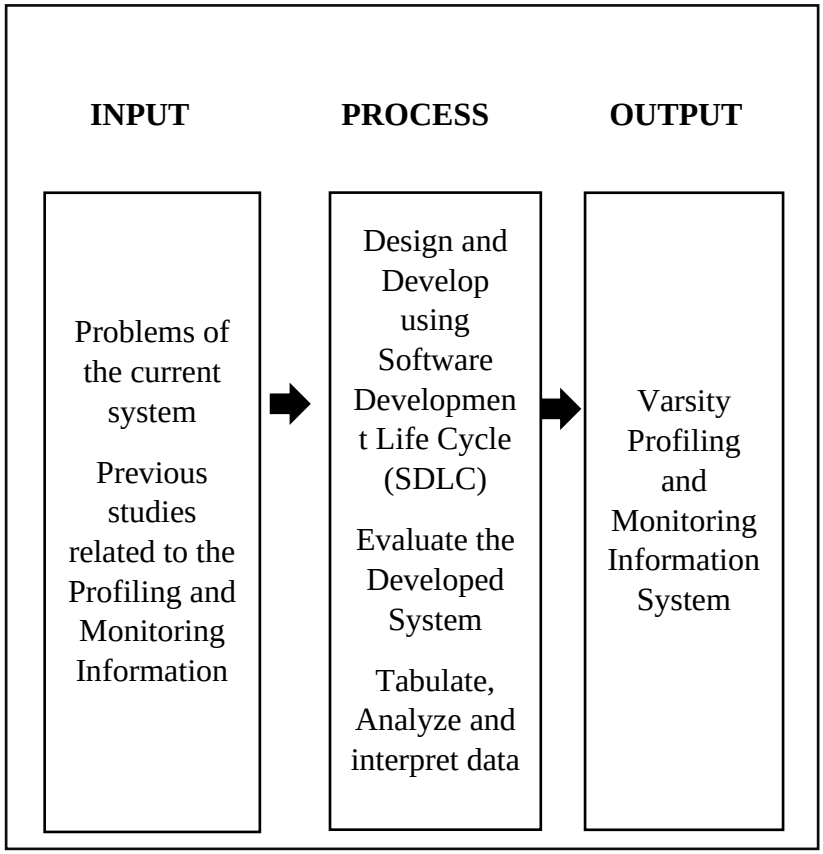

Figure 10. The IPO System Process

Development and Testing

Software Development

The system development process is anchored to the System Development Life Cycle (SDLC) waterfall model as shown in Figure 11. The first phase is analysis, where the developer carefully studied the nature of the proposed system. While the Second phase is system design, where the developer has grasped its realization, in terms of what structure to follow and part to improve, and all considerations as considered. Then after that, the Third phase is implementation wherein, the requirements and system design were applied. After the implementation phase was the testing of the system, wherein the weaknesses and bugs were addressed and catered to accordingly. The next step was to deploy the system based on the nurtured nature of the system. And for the system to accomplish success, it should maintain possible bugs, errors, and failure that comes after and should be addressed accordingly.

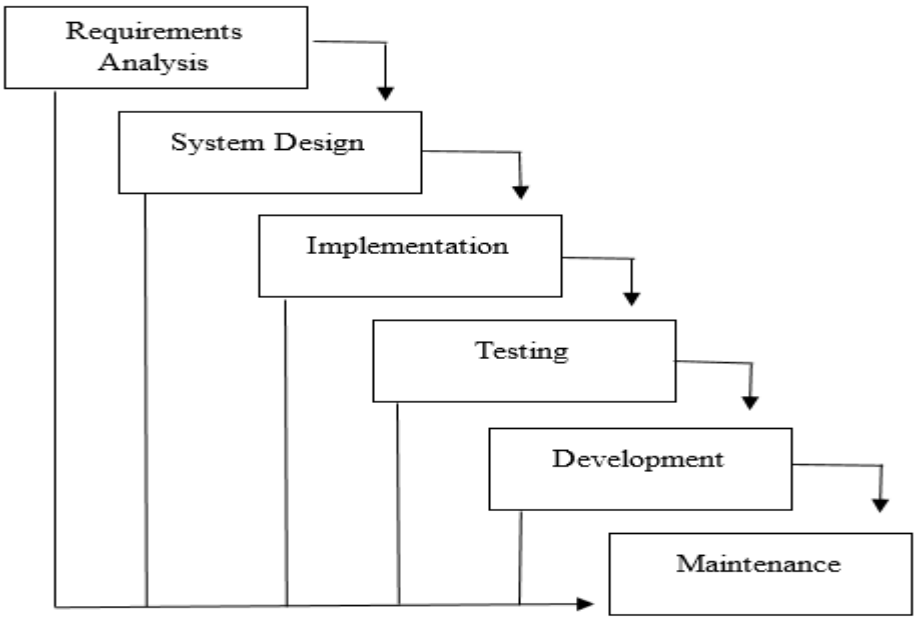

Figure 11. System Life Cycle Specification

Hardware Specification

Table 5 presents the minimum hardware specifications in developing the Varsity Profiling and Monitoring Information System.

Table 5. Hardware Specification

Hardware	**Description/Specification**
Processor	Intel(R) Core (TM) i5-7200U CPU @ 2.50GHz 2.70 GHz
RAM	8 GB
Hard Drive	64 GB
System Type	64-bit operating system, x64-based processor

Software Specification

Shown in Table 6 is the software specifications for the development of Varsity Profiling and Monitoring Information System.

Table 6. Software Specification

Software	**Description/Specification**
Operating System	Windows 10 Pro
Browser	Google Chrome, Internet Explorer, Microsoft Edge and etc.
Application Software	VS Code, PHP, Xampp, MySQL, Apache, HTML, CSS, Bootstrap

Testing

After development, testing of the developed Varsity Profiling and Monitoring Information System was done. Unit testing was conducted to ensure that the system functions as designed. Compatibility testing was also done to ensure that the web-based system can run using different browsers such as Google Chrome or on a Windows-based computer. The system was not tested to run on other operating systems.

System testing was also conducted with the target clients as the evaluators. The members of the Panel Evaluation Committee also evaluated the project. Feedback during testing was utilized to help enhance the developed system. The instrument used in the evaluation was adapted from ISO 25010 to assess the system's functionality, efficiency, usability, maintenance, reliability, portability, security, and compatibility.

Description of the System

The developed system creates a user-friendly design for all types of users. The front end of the system utilizes CSS Bootstrap and HTML for web programming. The developed system is web-responsive and data-driven powered by PHP, MySQL, and JavaScript Framework (jQuery) for database functionality.

The system will create and manage profiling information of all varsity members in the University for Easy Retrieval of records. Also, it enables transaction of the checking of attendance and monitoring of the status and performance of the varsity student-athlete during rehearsal, training, competition demands, sports events, etc.

Implementation Plan

Figure 12 presents the implementation plan of the project. This covers the planning phase to deployment and evaluation of the project.

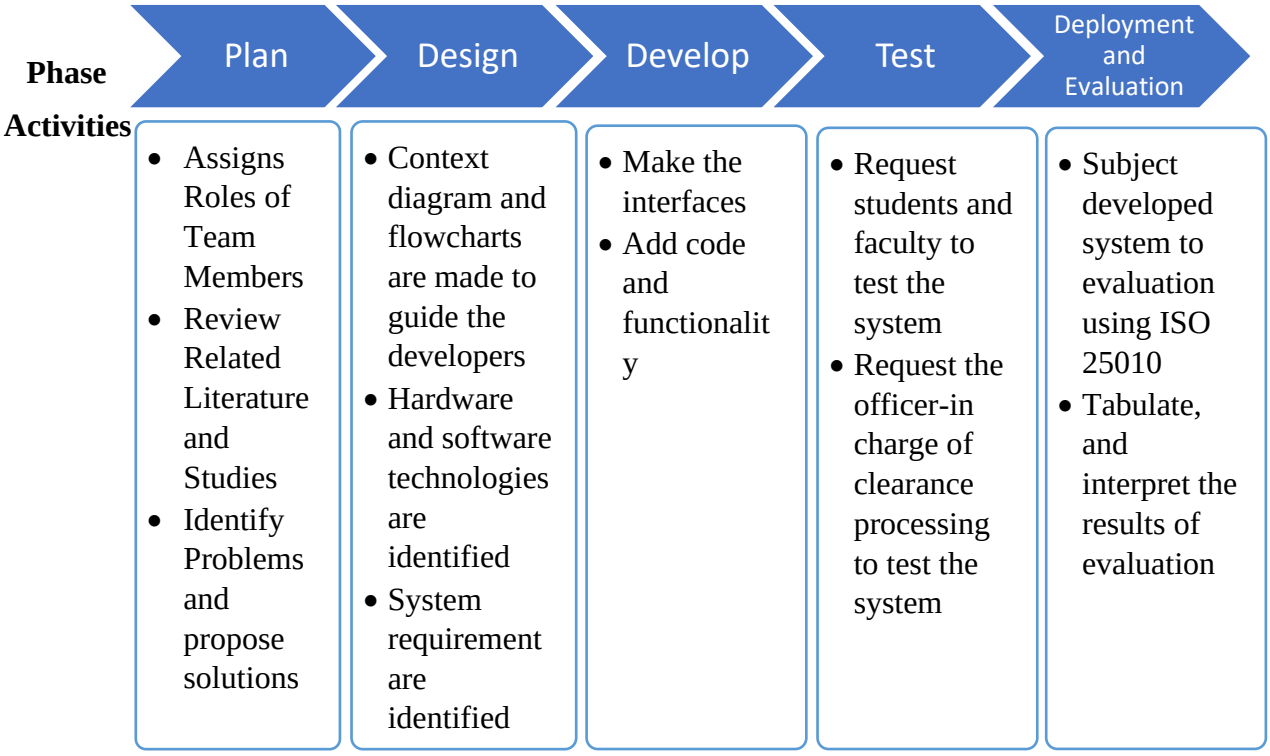

Figure 12. Implementation Plan

Implementation Result

Table 7 is the result of the evaluation using ISO 25010. Frequency, mean, and modal interpretation are used in the treatment of data using the corresponding Likert Scale provided below.

Functionality Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Fully Functional
3.21-4.20	Mostly Functional
2.61-3.20	Functional
1.81-2.60	Slightly Functional
1.0-1.8	Not Functional

Efficiency Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Efficient
3.21-4.20	Mostly Efficient
2.61-3.20	Efficient
1.81-2.60	Almost Efficient
1.0-1.8	Not Efficient

Usability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Usable
3.21-4.20	Mostly Usable
2.61-3.20	Usable
1.81-2.60	Almost Usable
1.0-1.8	Not Usable

Maintainability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Strongly Agree
3.21-4.20	Mostly Agree
2.61-3.20	Agree
1.81-2.60	Slightly Agree
1.0-1.8	Strongly Agree

Reliability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Reliable
3.21-4.20	Mostly Reliable
2.61-3.20	Reliable
1.81-2.60	Almost Reliable
1.0-1.8	Not Reliable

Portability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Strongly Agree
3.21-4.20	Mostly Agree
2.61-3.20	Agree
1.81-2.60	Slightly Agree
1.0-1.8	Strongly Agree

Security Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Secure
3.21-4.20	Mostly Secure
2.61-3.20	Secure
1.81-2.60	Almost Secure
1.0-1.8	Not Secure

Compatibility Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Compatible
3.21-4.20	Mostly Compatible
2.61-3.20	Compatible
1.81-2.60	Almost Compatible
1.0-1.8	Not Compatible

Table 7. User Evaluation of Varsity Profiling and Monitoring Information System

Criteria	1	2	3	4	5	Mean	Interpretation
Functionality						**4**	**Mostly Functional**
The system performs the tasks required.			1	3	1	4	Mostly Functional
The result is as expected.				4	1	4.2	Mostly Functional

The system interacts with another system.			2	2	1	3.8	Mostly Functional
The system prevents unauthorized access.			1	3	1	4	Mostly Functional
Reliability						**3.75**	**Mostly Reliable**
Most of the faults in the system have been eliminated over time.			3	1	1	3.6	Mostly Reliable
The system is capable of handling errors.			2	2	1	3.8	Mostly Reliable
The system notifies the user about wrong data entry.			2	2	1	3.8	Mostly Reliable
The software resumes working and restores lost data after a failure.			2	2	1	3.8	Mostly Reliable
Usability						**3.9**	**Mostly Usable**
The user comprehends how to use the system easily.			2	2	1	3.8	Mostly Usable
The user learns to use the system easily.			1	3	1	4	Mostly Usable

The user utilizes the system without much effort.			1	3	1	4	Mostly Usable
The system's interface looks good.			2	2	1	3.8	Mostly Usable
Efficiency						**4.07**	**Mostly Efficient**
The system responds quickly to the user.			1	3	1	4	Mostly Efficient
The system's execution time is appropriate.			1	3	1	4	Mostly Efficient
The software utilizes resources efficiently.				4	1	4.2	Mostly Efficient
Maintainability						**3.6**	**Mostly Agree**
The system faults can be easily diagnosed.			2	3		3.6	Mostly Agree
The system continues functioning when changes are made.			2	3		3.6	Mostly Agree
The software can be tested easily.			2	3		3.6	Mostly Agree
Portability						**4.13**	**Mostly Agree**
The system can be moved to other environments.				4	1	4.2	Mostly Agree
The software can be installed easily. *(For administrator)*			1	3	1	4	Mostly Agree

The software can replace easily other software. *(For administrator)*				4	1	4.2	Mostly Agree
Security						**3.75**	**Mostly Secure**
The software ensures confidentiality of data			3	1	1	3.6	Mostly Secure
The software prevents unauthorized access and modification to computer programs and/or data			2	2	1	3.8	Mostly Secure
The software requires authentication of users			2	2	1	3.8	Secure
A system log is maintained.			2	2	1	3.8	Secure
Compatibility						**3.8**	**Mostly Compatible**
The software performs its required functions efficiently while sharing a common environment and resources without negatively impacting any other product/s.			2	2	1	3.8	Mostly Compatible
The software allows two or more systems, products, or components to exchange and use the information.			2	3		3.6	Mostly Compatible

The results shown in Table 7 demonstrated that the Development of a Varsity Profiling and Monitoring Information System is mostly functional as a result of the mean of 4 of the functionality-related criteria. This implies that the system operates by its intended and anticipated functionality. Based on the reliability score of 3.75, which denotes that the system is Mostly Reliable, it seems to operate correctly within the allotted time frame. The system scores a mean of 3.9 for usability, a quality feature that assesses how

the user interacts with and uses the environment's interface, suggesting that it is Mostly Usable. Due to the system's total efficiency score of 4.07, which shows that it is Mostly Efficient, it responds quickly to user input and completes tasks on schedule. According to the maintainability criteria, which has a mean of 3.6 and is classified as Mostly Agree, the system operates with demonstrable ease and speed and it continues to operate even when adjustments are made. The performance well in a range of circumstances, as indicated by its mean portability score of 4.13, which suggests that it is Mostly Agree. With a mean score of 3.75 across all criteria, it is Mostly Secure in terms of security, suggesting that the system ensures the confidentiality of user data and protects against unauthorized system access. Finally, in compatibility, the system effectively carries out its required functions while sharing a shared environment, and it allows two or more system components to communicate and use information. Its average across all categories is 3.8, indicating that it is Mostly Compatible.

CHAPTER V

RECOMMENDATIONS

The Varsity Profiling and Monitoring Information System is very useful to utilize because it is a big help to the Office of the Sports Development Program.

Based on the results of the system evaluation it is therefore recommended that Varsity Profiling and Monitoring Information System be adapted and utilized so that there will be a systematic and timely way to monitor the activities of all varsity at Southern Leyte State University. Furthermore, for future development of the system more enhancement and more features will be added.

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Appendices

Relevant Source Code

Database Connection

```
$active_group = 'default';
$query_builder = TRUE;

$db['default'] = array(
      'dsn'    => '',
      'hostname' => 'localhost',
      'username' => 'root',
      'password' => '',
      'database' => 'vpmis',
      'dbdriver' => 'mysqli',
      'dbprefix' => '',
      'pconnect' => FALSE,
      'db_debug' => (ENVIRONMENT !== 'production'),
      'cache_on' => FALSE,
      'cachedir' => '',
      'char_set' => 'utf8',
      'dbcollat' => 'utf8_general_ci',
      'swap_pre' => '',
      'encrypt' => FALSE,
      'compress' => FALSE,
      'stricton' => FALSE,
      'failover' => array(),
      'save_queries' => TRUE
);
```

Add

```
function insertData($table,$accounts_data){
    $this->db->insert($table,$accounts_data);
    return $this->db->insert_id();
}
```

Save

```
$check = $this->Adm_model->insertData('information',$info_data);
if($check != NULL){
  $message = base64_encode('success~New user successfully added.');
} else {
  $message = base64_encode("errorrr~There's an error in saving the data. Please contact the
    Developer.");
}
```

Edit/Update

```
function updateData($table,$data,$where){
    $this->db->where($where);
    return $this->db->update($table,$data);
}
```

Delete

```
    function deleteData($table,$where){
        $this->db->where($where);
        return $this->db->delete($table);
    }
}
```

Evaluation Instrument

System Evaluation (ISO 9126)

Instructions: Please evaluate the "Varsity Profiling and Monitoring Information System" using the scale shown below. Check (/) the appropriate score. Thank You.

Cherry Ann Pol	Gilbert Siega
Project Leader	Adviser

Functionality Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Fully Functional
3.21-4.20	Mostly Functional
2.61-3.20	Functional
1.81-2.60	Slightly Functional
1.0-1.8	Not Functional

Efficiency Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Efficient
3.21-4.20	Mostly Efficient
2.61-3.20	Efficient
1.81-2.60	Almost Efficient
1.0-1.8	Not Efficient

Usability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Usable
3.21-4.20	Mostly Usable
2.61-3.20	Usable
1.81-2.60	Almost Usable
1.0-1.8	Not Usable

Maintainability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Strongly Agree
3.21-4.20	Mostly Agree
2.61-3.20	Agree
1.81-2.60	Slightly Agree
1.0-1.8	Strongly Agree

Reliability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Reliable
3.21-4.20	Mostly Reliable
2.61-3.20	Reliable
1.81-2.60	Almost Reliable
1.0-1.8	Not Reliable

Portability Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Strongly Agree
3.21-4.20	Mostly Agree
2.61-3.20	Agree
1.81-2.60	Slightly Agree
1.0-1.8	Strongly Agree

Security Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Secure
3.21-4.20	Mostly Secure
2.61-3.20	Secure
1.81-2.60	Almost Secure
1.0-1.8	Not Secure

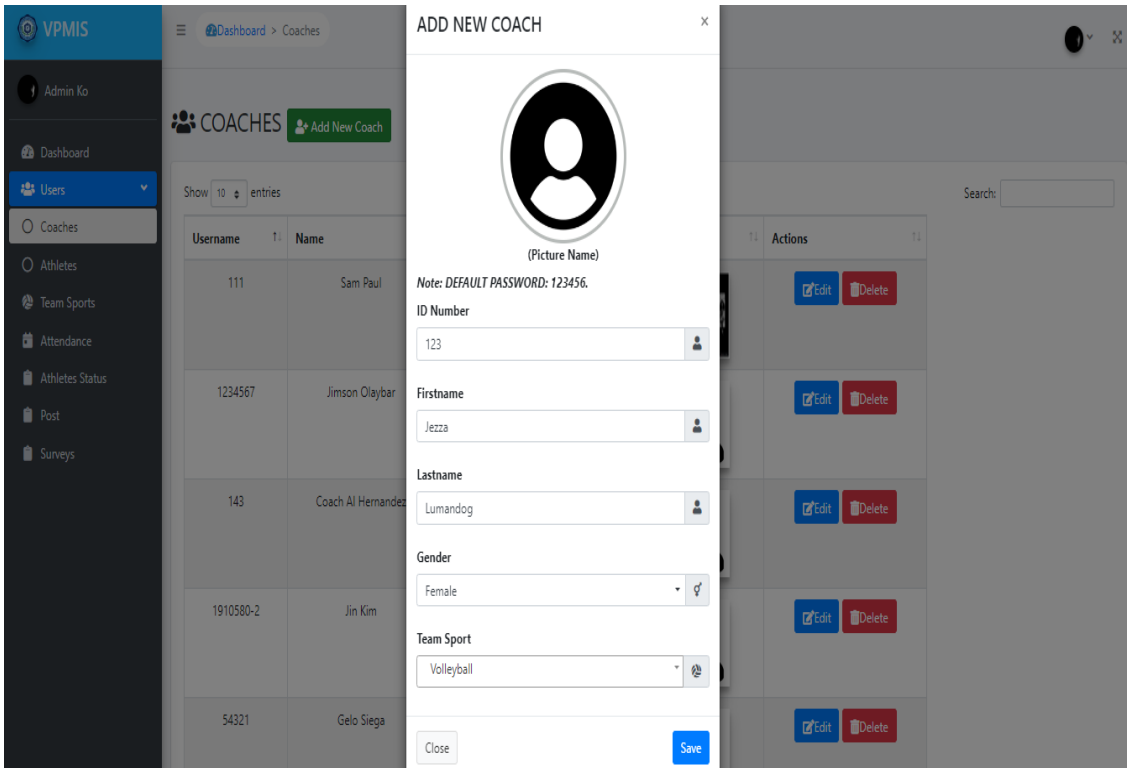
Compatibility Indicator

Limits of Scale	Qualitative Description
4.21-5.00	Very Compatible
3.21-4.20	Mostly Compatible
2.61-3.20	Compatible
1.81-2.60	Almost Compatible
1.0-1.8	Not Compatible

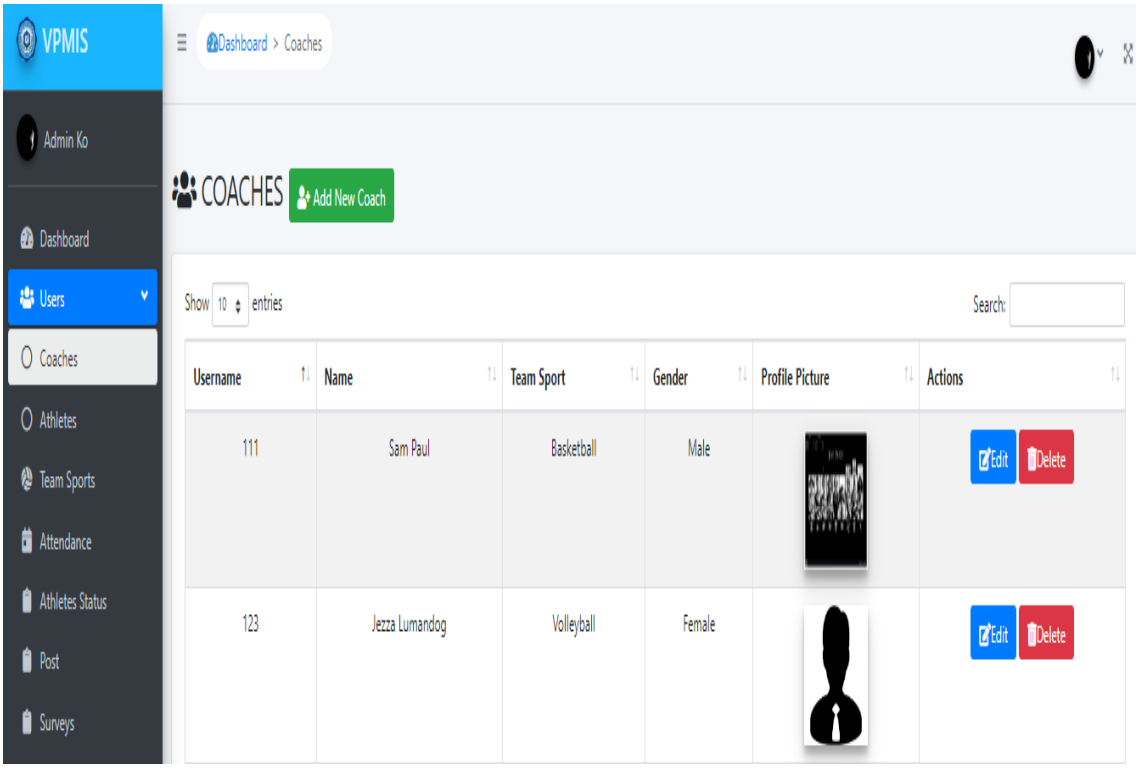
Criteria		Score				
Characteristic	*Sub Characteristic*	***1***	***2***	***3***	***4***	***5***
1. Functionality	The system performs the tasks required.					
	The result is as expected.					
	The system interacts with another system.					
	The system prevents unauthorized access.					
2. Reliability	Most of the faults in the system have been eliminated over time.					
	The system is capable of handling errors.					
	The system notifies the user about wrong data entry.					
	The software resumes working and restores lost data after a failure.					
3. Usability	The user comprehends how to use the system easily.					
	The user learns to use the system easily.					
	The user utilizes the system without much effort.					
	The system's interface looks good.					
4. Efficiency	The system responds quickly to the user.					
	The system's execution time is appropriate.					
	The software utilizes resources efficiently.					
5. Maintainability	The system faults can be easily diagnosed.					
	The system continues functioning when changes are made.					
	The software can be tested easily.					
6. Portability	The system can be moved to other environments.					
	The software can be installed easily. *(For administrator)*					
	The software can replace easily other software. *(For administrator)*					
7. Security	The software ensures confidentiality of data					
	The software prevents unauthorized access and					

Criteria		Score				
Characteristic	*Sub Characteristic*	***1***	***2***	***3***	***4***	***5***
	modification to computer programs and/or data					
	The software requires authentication of users					
	A system log is maintained.					
8. Compatibility	The software performs its required functions efficiently while sharing a common environment and resources without negatively impacting any other product/s.					
	The software allows two or more systems, products, or components to exchange and use the information.					

Sample Input

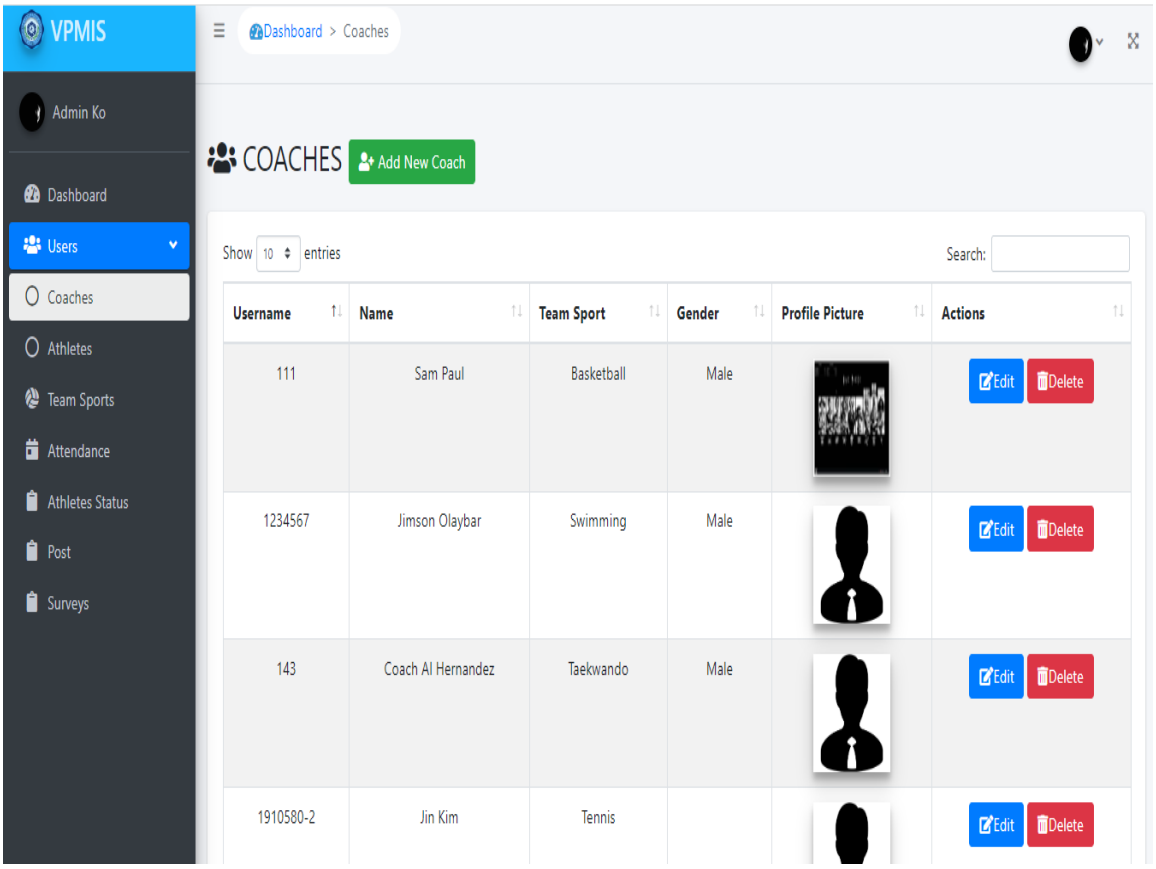


Sample Output



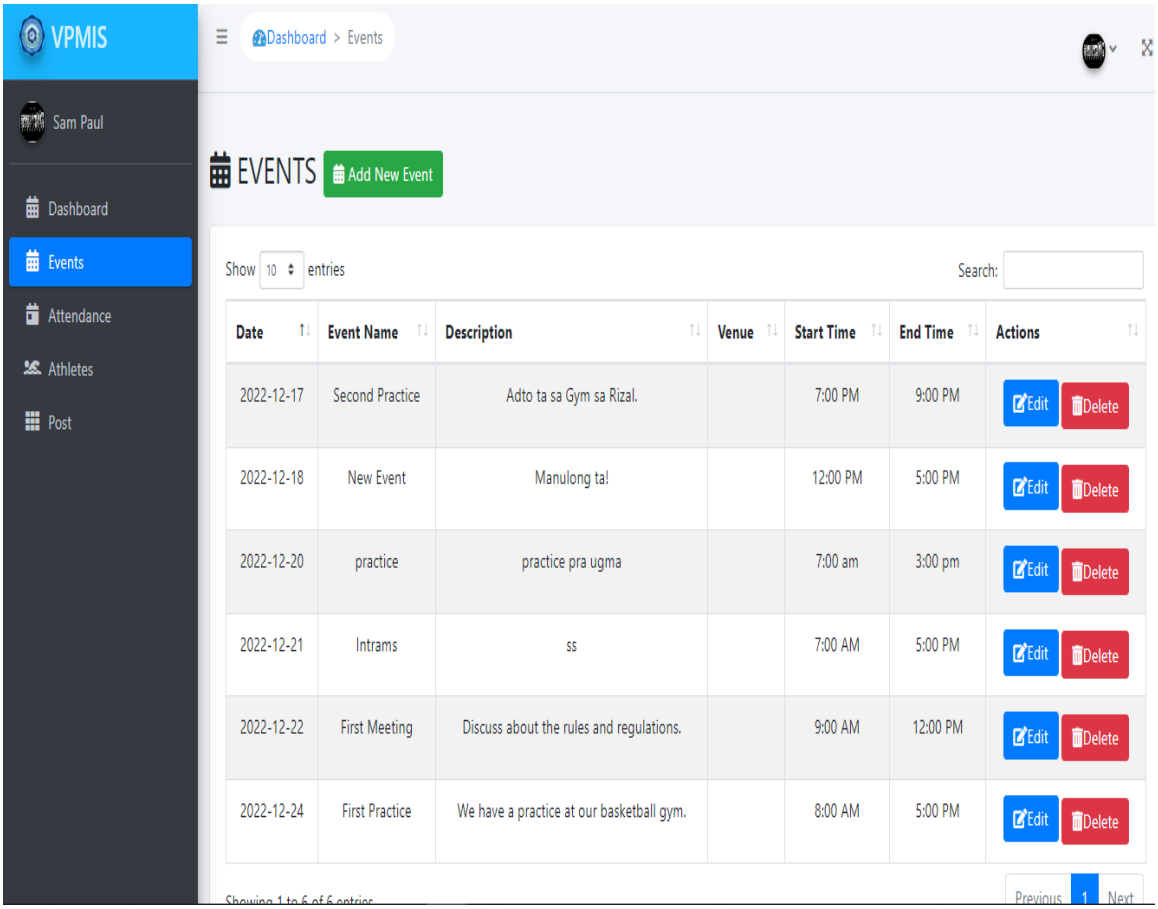
Users Guide

Administrator Manual

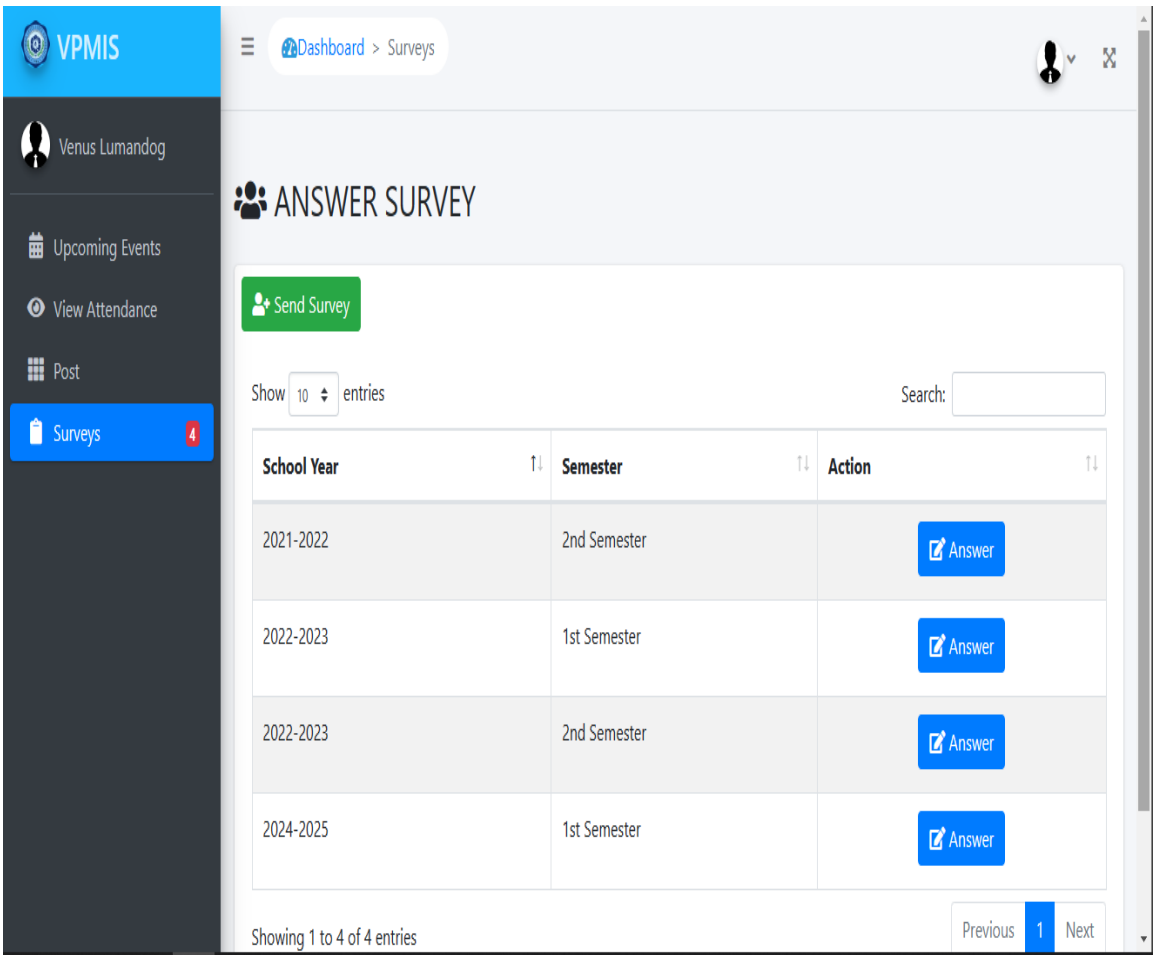


1. The user must enter valid information to log in and click Log-in Button.
2. The Add New Coach/Varsity button enables the user to enter new entries.
3. The edit button enables the user to edit/modify.
4. The delete button is used for deleting the record.
5. On the right side, there is a search bar where you can view specific data.

Coaches Manual



1. The user must enter valid information to log in and click Log-in Button.
2. The user must update the default password to proceed.
3. The Add New Event button enables the user to enter new entries of events.
4. The edit button enables the user to edit/modify.
5. The delete button is used for deleting the record.
6. On the right side, there is a search bar where you can view specific data.



1. The user must enter valid information to log in and click Log-in Button.
2. The Send Survey button enables the users to send a survey to the administrator.
3. The answer button enables the user to answer the survey sent by the administrator.
4. On the right side, there is a search bar where you can view specific data.

Documentation

CURRICULUM VITAE

PERSONAL DATA

Name: Cherry Ann S. Pol

Age: 21 years old

Address: San Pedro, Sogod So. Leyte

Birth Date: December 25, 2000

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EDUCATIONAL BACKGROUND

Tertiary	Southern Leyte State University -Main Campus	
	Bachelor of Science in Information Technology	
	Major in Networking	
Secondary		
Senior High School	Southern Leyte State University -Main Campus	
	San Roque, Sogod Southern Leyte	2018-2019
Junior High School	Sogod National High School	
	Zone 1, Sogod Southern Leyte	2016-2017
Primary	San Pedro Elementary School	
	Brgy. San Pedro, Sogod So, Leyte	2012- 2013

CURRICULUM VITAE

PERSONAL DATA

Name: Sarah Grace A. Millan

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Tertiary	Southern Leyte State University -Main Campus	
	Bachelor of Science in Information Technology	
	Major in Networking	
Secondary		
Senior High School	Sogod National High School	
	Zone 1, Sogod Southern Leyte	2018-2019
Junior High School	Sogod National High School	
	Zone 1, Sogod Southern Leyte	2016-2017
Primary	Sta. Cruz Elementary School	
	Sta. Cruz Bontoc Southern Leyte	2012- 2013

CURRICULUM VITAE

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Senior High School	Sogod National High School	
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Secondary		
Senior High School	Sogod National High School	
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Junior High School	Sogod National High School	
	Zone 1, Sogod Southern Leyte	2016-2017
Primary	San Pedro Elementary School	
	Brgy. San Pedro, Sogod So, Leyte	2012- 2013

CURRICULUM VITAE

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Tertiary	Southern Leyte State University -Main Campus	
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Secondary		
Senior High School	Hilongos National Vocational School	
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Junior High School	Hilongos National Vocational School	
	R.V Fulache St. Hilongos, Leyte	2016-2017
Primary	Hilongos South Central School	
	R.V fulache St. Hilongos, Leyte	2012- 2013

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4. Sarah Grace Millan
5. Margie Baldoza

Proposed Project Title:

Varsity Profiling and Monitoring Information System

Submitted by:	**Noted:**
CHERRY ANN POL (Signature of Project Manager over printed name) Date: _____	**GILBERT SIEGA** (Signature of Adviser over printed name) Date: _____
Recommending Approval:	**Approved:**
_____ (Signature of Patent Searcher over printedname) Date: _____	_____ (Signature of the Dean over printed name) Date: _____

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