MIT 632
Technology and Project Management
Project Documentation

PAYMENT AND ACCOUNT MONITORING SYSTEM (PAMS)

A Project

Submitted to Dr. Benilda Eleanor V. Comendador

A Faculty Member of the

Polytechnic University of the Philippines

By

Rose Ann Bañas
Ida Christine M. De Guia
Shirley S. Prado
Michelle Clarisse Palacios

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1.0 Company Profile

Ragay Seventh-day Adventist Multigrade School Inc (RSDAMS) is a Christian educational institution owned by the Seventh-day Adventist church in the Municipality of Ragay, Camarines Sur. It was established in June 1991 and is situated at Lower Sta. Cruz, Ragay, Camarines Sur, under the leadership of Mrs. Jovie Celestial. The school is positioned on a secure and spacious campus, featuring modern classrooms, a library, and recreational areas. The institution strongly believes that creating a conducive learning environment is pivotal for a child's holistic development.

Currently, the school is under the direction of Ma'am Normita P. Lualhati, serving as the Teacher-In-Charge. It has an enrollment of 90 students from Kindergarten to Grade 6. The school is staffed by two regular teachers, Mr. Larry Lualhati and Ms. Andrea Bello, as well as two volunteer teachers, Ma'am Mary Rose O. Arida and Ma'am Mildred Rose B. Dulfo. Mrs. Melinda I. Pormento holds the position of the current school treasurer.

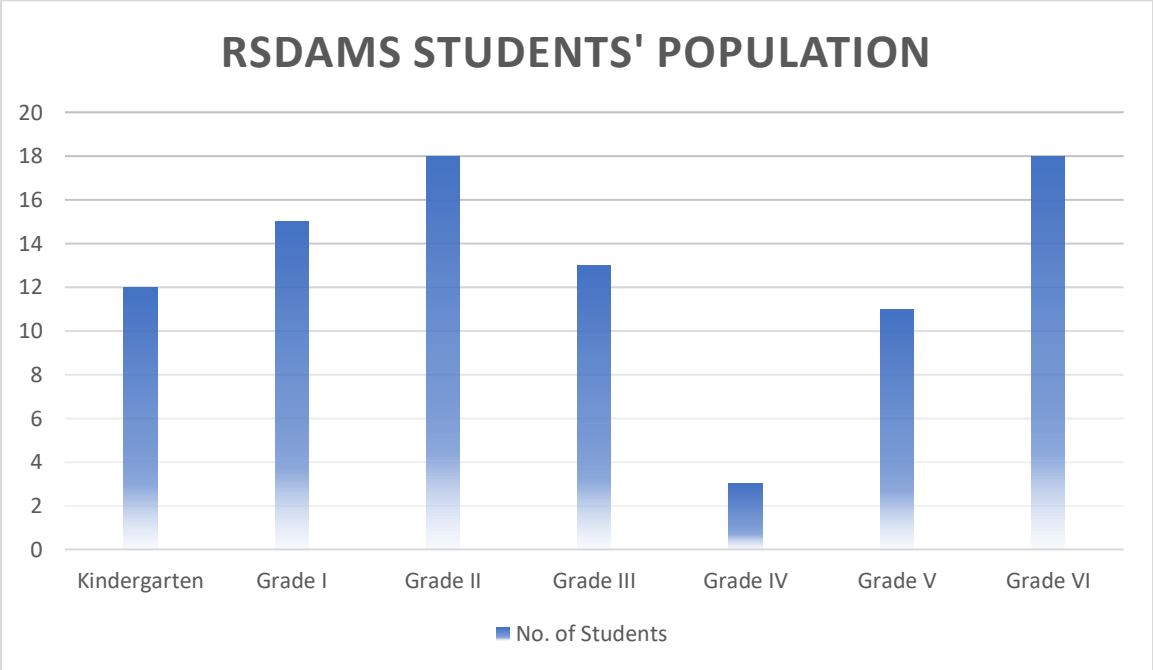


Figure 1. Students' population per grade level.

The primary objective of the school is to guide children towards a connection with Jesus. RSDAMS accommodates students from Kindergarten to Grade 6, offering a comprehensive curriculum that encompasses core subjects, arts, physical education, and extracurricular activities. This ensures a well-rounded and fulfilling educational experience for each child. The school provides a distinctive Adventist Education, emphasizing Biblical Values, Healthy Lifestyle, High Standard Education, and a Friendly Environment.

Ragay Seventh-day Adventist Multigrade School Inc. takes pride in the academic accomplishments and personal development of its students. These students consistently demonstrate excellence in standardized tests and showcase their talents by participating in various competitions and events. The school's core values, including respect, integrity, and responsibility, serve as the cornerstone of a positive and inclusive school culture. The school's objective is to instill these values in the students, equipping them to become responsible citizens and future leaders.

2.0 Business Case

Ragay Seventh-day Adventist Multigrade School Inc. currently employs a manual process for receiving payments related to students' tuition fees, books, and miscellaneous charges. The treasurer manages this by recording data and auditing individual student accounts using traditional pen-and-paper methods. However, this approach presents several challenges.

The treasurer faces difficulties due to the time-consuming nature of manually recording each student's information in a ledger. This process is prone to miscomputations of balances, and locating specific details about each student's account proves to be a cumbersome task. Additionally, concerns arise regarding the security of the stored data.

The lack of a streamlined system for securing students' financial information and organizing data may escalate into a more significant issue, especially when parents wish to check balances or access reports on the current school project and other financial details. Currently accommodating 90 students from Kindergarten to Grade 6, the manual recording process becomes excessively time-consuming and burdensome for the treasurer.

Moreover, the current treasurer, who also holds a position in the government sector as an Administrative Staff, requires an efficient solution to easily calculate, store, check, and print information for proper monitoring of students' payments. This becomes particularly crucial during meetings where she needs to provide reports and print out copies of students' balances.

The treasurer's efforts to monitor students' balances involve scanning through each page of the record book, documenting payments made by parents, and then manually subtracting this from the total amount due for each school year. Similarly, the time-consuming task of writing individual records for students further hampers efficiency, especially when producing documents for meetings or examinations.

As a result, the treasurer struggles to effectively manage her time to fulfill her duties, leading to occasional complaints from parents about payment miscomputations. The treasurer's only available time for summarizing each student's account is often during late-night hours, adding to the challenges of maintaining accurate and up-to-date financial records.

3.0 Project Charter

This chapter discusses the background of the Payment and Account Monitoring System from its stakeholders up to the important factors that affect the development of the proposed system.

3.1 Project Stakeholders

This project is proposed by four female students: Ms. Rose Ann Bañas, Ms. Shirley Prado, Ms. Ida Christine De Guia, and Ms. Michelle Clarisse Palacios. This initiative is a requisite for the Technical Project Management course under the Master in Information Technology program at Polytechnic University of the Philippines Open University System. Dr. Benilda Eleonor V. Comendador supervises the project, and the mentioned individuals hold the overall authority and responsibility for its management and execution in accordance with the project plan and its subsidiary.

The project aims to benefit the Ragay Seventh-day Adventist Multigrade School in Ragay, Camarines Sur, along with its school officials, treasurer, and all students and parents. The project manager will collaborate with available resources for effective project planning. All project and subsidiary management plans will undergo a review and approval process by the adviser and project sponsor before the execution phase, documented in a Memorandum of Agreement (MOA). Funding decisions will be the prerogative of the project sponsor, with any changes subject to review by the project manager, adviser, and sponsor. Requests for additional funds must be submitted through a paper transaction, specifying the need, and must be approved by the project manager, adviser, and sponsor. Delegation of approval authority to the project manager requires written consent from both the adviser, sponsor, and project manager.

The project team will follow a matrix structure, where members from each organization continue reporting to their respective organizational management throughout the project. The project manager bears the responsibility of keeping organizational managers informed about the progress and performance of each project resource. Any transactions or changes must be incorporated into the MOA, signed by both parties before the project's execution.

3.2 Project Description

The Payment and Account Monitoring System is a comprehensive software solution designed to streamline and enhance financial processes within the school environment. The system aims to automate payment tracking, manage student accounts, and provide real-time monitoring of financial transactions. This initiative will contribute to the efficient management of school finances, reduce administrative overhead, and improve overall transparency.

3.2.1 Project Background

In response to the increasing need for efficient financial management within RSDAMS, the Payment and Account Monitoring System project aims to develop a comprehensive software solution. Recognizing the challenges posed by manual payment tracking and account management, this initiative seeks to streamline administrative processes and enhance transparency in financial transactions. By implementing an automated system, the project intends to facilitate system-based encoding of payments, configure customizable fee structures, and provide real-time monitoring and reporting. The objective is to empower school administrators, teachers, and parents with a user-friendly platform that ensures accurate and timely financial

information, contributing to the overall effectiveness and financial health of the school.

3.2.2 Description of Challenges and Opportunity

Utilizing manual paper logs may result in data leakage and insufficient content to meet the requirements of the school treasurer in generating reports and maintaining the current status of students' accounts. This deficiency hinders the monitoring of payments made by parents and the computation of the school's total funds.

To ensure the treasurer can secure and process accurate information for each student's account, the school should implement a payment and account monitoring system. This system should encompass all sensitive account details, providing timely and informative reports that serve as a reference for parents' outstanding balances and the school's current financial status.

In compliance with Republic Act 10173 or the Data Privacy Act of 2012, which mandates the secure handling of confidential records of data subjects, the school, serving more than 90 student accounts, must adopt a secure and reliable payment and account monitoring system. This system should undergo assessment to guarantee both security and efficiency in handling the school's financial data.

3.3.3 Overview Desired Impact

This project aims to revolutionize financial processes, significantly improving overall operational efficiency and transparency of the Ragay Seventh-day Adventist Multigrade School Inc. By automating payment tracking and configuring customizable fee structures the system seeks to

streamline administrative tasks, reducing manual efforts and minimizing the risk of errors. The desired impact is to help the treasurer with real-time access to accurate financial data, thereby fostering a more transparent and collaborative educational environment. The system's integration with the school's existing database ensures data accuracy, while comprehensive reporting tools enable data-driven decision-making. Ultimately, the project strives to enhance the financial health of the school, promoting timely payments, reducing administrative burdens, and redirecting resources towards enriching the educational experience for students.

3.3 Measurable Organizational Value

The developers are planning to use a Programming Language that will produce a desktop application to be installed in a desktop computer and all data fields required will be directly saved on the corresponding database.

The treasurer is the main target user of the proposed payment and account monitoring system. Only the treasurer have the full authority and access to the proposed system.

The proposed project may take 1 month for planning and data gathering, 4 months for development, and 1 month for presentation, discussion, implementation, and evaluation.

4.0 Scope Management

The project will be limited to developing a Payment and Account Monitoring System (PAMS) for Ragay Seventh-day Adventist Multigrade School Inc. that will be utilized by the Treasurer of the said school. The continuation of the project will last for 5 months from October 2023 to February 2024 under the supervision of the first party named the Polytechnic University of the Philippines and the second party named Ragay Seventh-day Adventist Multigrade School Inc. located at Lower Sta. Cruz, Ragay, Camarines Sur.

The Payment and Account Monitoring System (PAMS) will be composed of profiling module for creation of individual accounts for students including profiles, account details and balances. Also, report generating module which will be configurable depending on the needs of the school treasurer.

The inclusions in the said project shall be limited to the use of a chosen programming language, installation of the application on the desktop computers, direct saving of all required data fields on the corresponding database, as well as the access and authority which shall be limited to the school treasurer only.

On the other hand, this project excludes any hardware upgrades or modifications as it is not part of the software development itself, training of end-users beyond the treasurer, and any ongoing maintenance after the initial implementation phase.

For the scope verification process, regular reviews and inspections will be conducted by the project manager and team to ensure deliverables align with the defined objectives. There shall also be periodic meetings with stakeholders, including the treasurer, to validate project progress and scope adherence.

For scope control, all proposed changes to the project scope must be submitted in writing, specifying the need for the change. These changes shall be assessed by the

project manager, adviser, and sponsor before approval. Approved changes will be documented in a revised MOA.

5.0 Work Breakdown Structure

The Work Breakdown Structure (WBS) for this project observes the five phases: Initiation which will have an allocation of 1 month, the planning stage which will also be 1 month, the execution phase which will be 4 months, the monitoring phase shall be ongoing and the last phase which is the closing should also be 1 month. The WBS is presented in Figure 2.

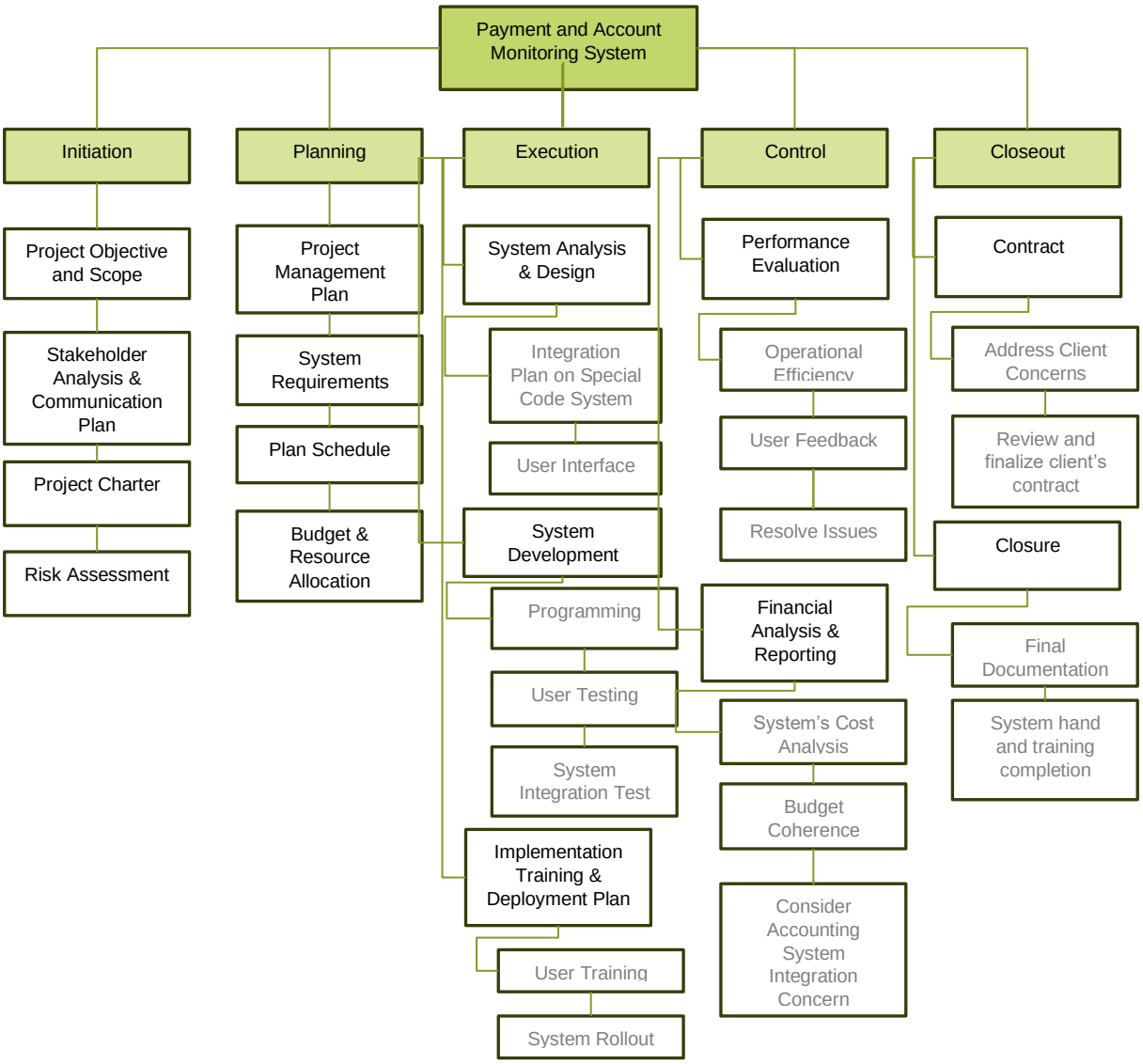


Figure 2. Work breakdown structure for the Payment and Account Monitoring System.

6.0 Project Schedule and Budget

This chapter provides prior information regarding the required budget and schedule of the project for development and proper implementation.

Table 1. Project Schedule

ID	Task Name	Start	Finish	Duration	In-charge
1	Initiation				
1.1	Selecting Team	Oct 29	Oct 29	1 day	Dr. Comendador and TPM students of PUP OU
1.2	Selecting Client	Oct 29	Oct 29	1 day	MLA
1.3	Preparation of MOA	Oct 30	Oct 30	1 day	MLA
1.4	Signing of MOA	Oct 31	Oct 31	1 day	MLA
2					
2.1	Delegation of task	Nov 19	Nov 19	1 day	MLA
2.2	Setting Deadlines	Nov 20	Nov 20	1 day	MLA
2.3	Identifying Stakeholders	Nov 21	Nov 21	1 day	MLA
2.4	Identifying of Scope	Nov 22	Nov 22	1 day	MLA
3					
3.1	Data Gathering	Nov 23	Nov 24	2 days	MLA
3.2	System Analysis	Nov 28	Nov 29	2 days	MLA
3.3	Development Setup and Configuration Module	Nov 30	Dec 12	8 days	MLA

ID	Task Name	Start	Finish	Duration	In-charge
3.4	Development of Account Management Module	Dec 13	Jan 9	28 days	MLA
3.5	Development of Report Management Module	Jan 10	Jan 24	15 days	MLA
3.6	Development of Risk Mitigation module	Jan 25	Jan 26	2 days	MLA
3.7	Testing	Jan 27	Jan 28	2 days	MLA
3.8	Documentation	Jan 29	Jan 30	2 days	MLA
4	Monitoring				
4.1	System Review	Jan 31	Feb 1	2 days	MLA
4.2	Installation	Feb 2	Feb 2	1 day	MLA
4.3	Utilization	Feb 3	Feb 6	4 days	MLA
4.4	Survey and Evaluation	Feb 7	Feb 8	2 days	MLA
4.5	Maintenance/Review	Feb 9	Feb 9	1 day	MLA
5	Closing				
5.1	Signing of Acceptance	Feb 10	Feb 18	8 days	MLA

The table above shows the project schedule of the Payment and Account Monitoring System starting October 2023 to February 2024. The project is composed of 5 phases starting from initiation to project closing.

Table 2. Project Budget

Budget Item	Description	Budgeted Cost
Hardware		
Monitor	Utility Expense	PHP 4,250.00
Motherboard	Utility Expense	PHP 6,400.00
CPU	Utility Expense	PHP 8,099.00
RAM	Utility Expense	PHP 3,188.00
Keyboard	Utility Expense	PHP 349.00
Mouse	Utility Expense	PHP 149.00
Printer	Utility Expense	PHP 7,500.00
AVR	Utility Expense	PHP 5,500.00
Total One-Time Costs		**PHP 35,435.00**
Supplies		
Bond paper	Supply for 6 months	PHP 1,800.00
Folders	Supply for 6 months	PHP 800.00
Total One-Time Costs		**PHP 2,600.00**
Grand Total		**PHP 38,035.00**

The table above shows the budget requirements for the project in case that the project involves financial support from the stakeholders. With a total of PHP 38,035.00 with the following inclusion: Personnel resources, hardware requirements, services, supplies, and maintenance support.

7.0 Risk Management Plan

This chapter tackled the risk management program prepare by the development team to utilize properly the proposed system.

7.1 Introduction to Risk Management Plan

A risk is an event or condition that, if it occurs, could have a positive or negative effect on a project's objectives. Risk Management is the process of identifying, assessing, responding to, monitoring, and reporting risks. This Risk Management Plan defines how risks associated with the Payment and Account Monitoring System (PAMS) project will be identified, analyzed, and managed. It outlines how risk management activities will be performed, recorded, and monitored throughout the lifecycle of the project and provides templates and practices for recording and prioritizing risks. The Risk Management Plan is created by the project manager in the Planning Phase of the project.

7.2 Risk Management Procedure

This sub-section provides prior information regarding the procedure in risk management used by the development team for the development and implementation of the project.

7.2.1 Purpose

The purpose of the risk management plan is to document the processes, tools, and procedures that will be used to manage and control those scenarios that could cause a negative impact on the Payment and

Account Monitoring System (PAMS) project and to establish the framework in which the project team will identify risks and develop strategies to mitigate or avoid those risks.

7.2.2 Process

The project manager working with the project team and project sponsors will ensure that risks are actively identified, analyzed, and managed throughout the life of the project. Risks will be identified as early as possible in the project to minimize their impact. The steps for accomplishing this are outlined in the following sections. The project manager will serve as the Risk Manager for this project.

7.2.3 Risk Identification

Risk identification will involve the project team, appropriate stakeholders, and will include an evaluation of environmental factors, organizational culture, and the project management plan including the project scope. Careful attention will be given to the project deliverables, assumptions, constraints, WBS, cost/effort estimates, resource plan, and other key project documents.

7.2.4 Risk Analysis

All risks identified will be assessed to identify the range of possible project outcomes. The qualification will be used to determine which risks are the top risks to pursue and respond to and which risks can be ignored.

7.2.4.1 Qualitative Risk Analysis

The probability and impact of occurrence for each identified risk will be assessed using the formula of P X I=R where P stand for

probability multiplied by I stand for impact equals R stands for Risk by the project manager, with input from the project team using the following approach:

Table 3. Impact Rating

Impact		
Rating	**Types**	**Description**
1	Negligible	The data subject will either not be affected or may encounter a few inconveniences, which they will overcome without any problem.
2	Limited	The data subject may encounter significant inconveniences which they will be able to overcome despite a few difficulties.
3	Significant	The data subject may encounter significant inconveniences, which they should be able to overcome but with serious difficulties
4	Maximum	The data subject may encounter significant inconveniences, or even irreversible, consequences, which they may not overcome.

Table 4. Probability Rating

Probability		
Rating	**Types**	**Description**
1	Unlikely	Not expected, but there is a slightly possibility it may occur at some time.
2	Possible	Casual occurrence. It might happen at some time.
3	Likely	Frequent occurrence. There is a strong possibility that it might occur.
4	Almost Certain	Very likely. It is expected to occur in most circumstances.

Table 5. Risk Rating

Risk	
Rating	**Types**
1	Negligible
2 to 4	Low Risk
6 to 9	Medium Risk
10 to 16	High Risk

Table 6. Identified Threats

#	**Threats**	**I**	**P**	**R**
1	Miscommunication of the Team	**b**	**3**	**12**
2	Natural calamities	**2**	**2**	**4**
3	Incompatibility of technology and hardware	**4**	**4**	**16**
4	Lacks of resources for the client side.	**3**	**3**	**9**
5	Lacks of computer knowledge for the client side	**4**	**4**	**16**
6	Complicated re-engineered process	**2**	**2**	**4**
7	Program error	**4**	**1**	**4**
8	Additional request for the client side	**4**	**1**	**4**
9	Data Breach for the live data	**1**	**1**	**1**
10	Application incompatibility	**4**	**2**	**8**

7.2.4.2 Quantitative Risk Analysis

Analysis of risk events that have been prioritized using the qualitative risk analysis process and their effect on project activities will be estimated, a numerical rating applied to each risk based on this analysis, and then documented in this section of the risk management plan.

7.2.4.3 Risk Response Planning

Each major risk (those falling in the Red & Yellow zones) will be assigned to a project team member for monitoring purposes to ensure that the risk will not “fall through the cracks”.

For each major risk, one of the following approaches will be selected to address it:

a. **Avoid** – eliminate the threat by eliminating the cause
b. **Mitigate** – Identify ways to reduce the probability or the impact of the risk
c. **Accept** – Nothing will be done
d. **Transfer** – Make another party responsible for the risk (buy insurance, outsourcing, etc.)

For each risk that will be mitigated, the project team will identify ways to prevent the risk from occurring or reduce its impact or probability of occurring. This may include prototyping, adding tasks to the project schedule, adding resources, etc.

For each major risk that is to be mitigated or that is accepted, a course of action will be outlined for the event that the risk does materialize in order to minimize its impact.

7.2.4.4 Risk Monitoring, Controlling, and Reporting

The level of risk on a project will be tracked, monitored and reported throughout the project lifecycle.

A “Top 10 Risk List” will be maintained by the project team and will be reported as a component of the project status reporting process for this project.

All project change requests will be analyzed for their possible impact to the project risks.

Management will be notified of important changes to risk status as a component to the Executive Project Status Report.

8.0 Project Communication Plan

This chapter provides prior information regarding the communication plan used by the development team for the development and implementation of the project.

8.1 Purpose

This Communication Management Plan serves as the overall guide for the entire project to meet the information and requirements of project stakeholders. The Payment and Account Monitoring System (PAMS) Communication Management Plan state the project's way of gathering information, identify the roles and responsibility of each individual involved in the project.

The overall objective of a Communications Management Plan is to promote the success of a project by meeting the information needs of project stakeholders. The PAMS Communications Management Plan (CMP) defines the project's structure and methods of information collection, screening, formatting, and distribution and outline understanding among project teams regarding the actions and processes necessary to facilitate the critical links among people, ideas, and information that are necessary for project success.

The intended audience of the PAMS CMP is the project manager, project team, project sponsor, and any senior leaders whose support is needed to carry out communication plans.

8.2 Stakeholders Identification and Analysis

This section provides prior information regarding the stakeholders actively involved in the development team for the development and implementation of the project.

The table below shows the active stakeholders involved in this project where the names, the position in the project, the actual positions, and their corresponding responsibilities on the stated project are displayed.

Table 7. Project Stakeholders

Stakeholders	Role	Position	Responsibilities
RAGAY SEVENTH-DAY ADVENTIST MULTIGRADE SCHOOL INC. of BRGY. LOWER STA. CRUZ, RAGAY, CAM. SUR	Project Sponsor	School Principal and School Treasurer	1. Approve or deny scope change requests as appropriate 2. Evaluate the need for scope change requests 3. Accept project deliverables 4. Provides policy definition to the Project team. 5. Resolves all policy issues with the appropriate policy owners to provide a clear, decisive definition. 6. Makes final decisions and resolves conflicts or issues regarding project expectations across organizational and functional areas. 7. Have a direct link for all communication with the project manager.
TPM GROUP 6	Project Team	Project Manager	1. Measure and verify project scope 2. Facilitate scope change requests 3. Facilitate impact assessments of scope change requests 4. Organize and facilitate scheduled change control meetings 5. Communicate outcomes of scope change requests 6. Update project documents upon approval of all scope changes
TPM GROUP 6	Project Team	Business Analyst	1. Gathers data. Detailed Client Information 2. Define Requirements 3. Identify Client High-Level Roles with the Project Manager 4. Develop High-Level Budget with the Project Manager 5. Develop High-Level Control Strategies with the Project Manager

Stakeholders	Role	Position	Responsibilities
			6. Develop a Communication Plan with the Project Manager 7. Review Test Plan with the Client and Project Manager 8. Announce the availability of the System
TPM GROUP 6	Project Team	Developers	1. Develop Logical and Technical Design with the Project Manager 2. Database development and Prototype - System Development. 3. Implementation (Going Live from test environment to production)

8.3 Communication Matrix

The following table identifies the communications requirements for this project:

Table 8. Communication Matrix

Communication Type	Objective of Communication	Medium	Frequency	Audience	Owner	Deliverable
Kickoff Meeting	Introduce the project team and the project. Review project objectives and management approach.	Face to Face	Once	Project Sponsor Project Team Stakeholders	Project Manager Business Analyst	Agenda Meeting Minutes
Project Team Meetings	Review status of the project with the team.	Face to Face Web Conference Call	Weekly As Needed	Project Team	Project Manager	Agenda Meeting Minutes Project schedule

Communication Type	Objective of Communication	Medium	Frequency	Audience	Owner	Deliverable
Technical Design Meetings	Discuss and develop technical design solutions for the project.	Face to Face Web Conference	As Needed	Project Technical Staff	Developer	Agenda Meeting Minutes
Monthly Project Status Meetings	Report on the status of the project to management.	Face to Face Web Conference	As Needed	PMO	Project Manager	Project schedule
Project Status Reports	Report the status of the project including activities, progress, costs and issues.	Email Private Group Social Media Account	As Needed	Project Sponsor Project Team Stakeholder s PMO	Project Manager	Project Status Report Project schedule

9.0 IT Project Quality Plan

At the highest of levels, Quality Management involves planning, doing, checking, and acting to improve project quality standards. PMI PMBOK breaks the practice of Quality Management into three process groups: Quality Planning (QP), Quality Assurance (QA), and Quality Control (QC). The following sections define how this project will apply each of these practice groups to define, monitor, and control quality standards.

9.1 Purpose

The Quality Management Plan for PAYMENT AND ACCOUNT MONITORING SYSTEM (PAMS) documents the essential data obliged to adequately wrist bindings undertaking nature starting with project arranging should conveyance. It characterizes a project's quality policies, procedures, criteria for areas of application, also roles, responsibilities, and authorities.

The Project Quality Management Plan documents the necessary information required to effectively manage project quality from project planning to delivery. It defines a project's quality policies, procedures, criteria for and areas of application, and roles, responsibilities, and authorities.

The Project Quality Management Plan is created during the Planning Phase of the project. Its intended audience is the project manager, project team, project sponsor, and any senior leaders whose support is needed to carry out the plan.

9.2 Project Quality Overview

This sub-section provides prior information regarding the project quality overview observed by the development team for the development and implementation of the project.

9.2.1 Organization, Responsibilities, and Interfaces

The table below shows the list of responsible staff in maintaining the quality of the proposed software where the name of staff, role, and responsibility was displayed on the table.

Table 9. Project Quality Staff.

Name	Role	Quality Responsibility
MLA	Project Manager	Quality mentoring & coaching
MLA	Business Analyst / Tester	Quality audits
MLA	Programmer / Tester	Quality audits
MLA	Programmer / Tester	Quality audits

9.2.2 Tools and Environment

The table below shows the tools and environment used by the project team to ensure the quality of the proposed system. The table shows the name of the tool and its description.

Table 10. Tools and Environment

Tool	Description
MS Excel	Worksheet for logging identified scenarios and if it Passes or Fail the testing (Manual Testing)

9.3 Quality Planning

The product quality standards and requirements will be determined by the project team and quality group. These standards will primarily be based on the company's documented standards. The project team will also document any newly identified quality standards into the PAMS project plan and ensure communication with all stakeholders.

9.4 Quality Assurance

The quality assurance of the PAMS Project focuses on the information given by the school principal and the school treasurer. To ensure quality, an iterative quality process will be used throughout the project life cycle. This iterative process includes measuring process metrics, analyzing process data, and continuously improving the processes.

9.5 Quality Control

The quality control of the PAMS project focuses primarily on the information given by the residence of the barangay. The quality performance standards for the PAMS Project are following the organizational standards that are implemented within the organization.

10.0 Project Procurement and Outsourcing Plan

This chapter provides prior information regarding project procurement for the development team for the development and implementation of the project.

10.1 Purpose

This Procurement Management Plan is created to establish the requirements for the project and how it will be handled from procurement documentation staging through contract closure. This also describes the following:

1. List of items to be procured with justification details and timelines
2. Type of contract to be used
3. Risks related to procurement management
4. Procurement Risks Mitigation
5. Cost Determination as Evaluation Criteria
6. Procurement template and/or Standardized documents
7. Multiple Suppliers Management
8. Contract Approval Process
9. Decision Criteria
10. Establishing Contract Deliverables and Deadlines
11. Relation of Procurement and Contracts with Project Scope, Budget, and Schedule
12. Procurement related Constraints
13. Vendor Management
14. Prequalified Sellers Identification (If applicable)
15. Performance Metrics for Procurement activities

10.2 Procurement Management Approach

The project manager will work for hand in hand with the project team; contact person from stakeholders who are associated with the contracts/purchasing department and other related personnel to manage the procurement activities. The project manager will also identify every single step and responsibility for procurement from start to finish of the project. Keen monitoring of the procurement plan will be observed as well by the project manager to ensure completion of the project with the defined scope and boundaries

10.3 Procurement Definition

The objective of procurement definition is to identify each item to be procured based on the specified project schedule and budget to meet timely project completion. This section also enlists items to be procured together with justification, personnel who needed the item, and the approver.

Table 11. Hardware Requirements.

Item/Service	Justification	Needed By	Approved By
1 Computer sets with OS	1 for encoding of the records of the students	School Treasurer	School Principal and the School Board Members
1 Printer	For printing of students' account information	School Treasurer	School Principal and the School Board Members

The table above shows the hardware requirements of the project to implement properly the proposed software and maximize its capabilities to increase the productivity level of the barangay staff.

10.4 Type of Contract to be used

The project team together with the project sponsor and purchasing department agreed to use a Firm-fixed price type of contract since the project needs to conform with the budget and the price agreed upon to supply the items needed. If in case, it cost more than expected contractor will adjust and the team will still get the agreed price. On the other hand, if it cost less than the expected price the contractor will still get the agreed price and a profit on their end.

10.5 Procurement Risks

The project team listed down all possible procurement risks and possible consequences to handle each complexity.

Table 12. Procurement Risk Matrix

Risk	Possible Consequences
Insufficient funding	Delay in making the purchase
Impractical timeframe	Delivery schedule not met
Biased specification	Inadequate response from the tenderer
Failure to identify potential sources	Lack of offers from the suitable tenderer
Terms and conditions unacceptable to the tenderer	Having to modify terms and conditions

Risk	Possible Consequences
Insufficient number of responses	Delayed delivery to the client
Offers fail to meet needs	Need to call tenders again Delay in delivery
Selecting an inappropriate supplier	Failure to fulfill the contract
Not matching the expectations of buyer and tenderer	Purchase of the less suitable product
Loss or damage to goods in transit	Delays in delivery Downtime Liability disputes
Failure to identify and address problems	Procurement objectives not achieved
Inadequate tender management	Claims of bias and favoritism to organizations or individuals

The table above shows the possible risk that appears because of the proposed procured item that may help the project team to implement properly the proposed software and maximize its capabilities to increase the productivity level of the barangay staff.

10.6 Contract Approval Process and Decision Criteria

All procurement activities are being reviewed by the project manager. The project manager will then coordinate with the project sponsor for their approval. The Project sponsor will coordinate with the purchasing department to check all possible vendors who could bid, provide quotes and proposals. The purchasing

department will present all vendor proposals and after which careful selection will be done by the project team. Once a decision has been made a contract will be prepared by the purchasing department and the project sponsor and other signatories will have the contract approved and sign.

10.7 Performance Metrics for Procurement Activities

This section defines the metrics to be used for procurement activities related to the project. These metrics may be used to guarantee the project keeps on schedule about procurement activities. This will also be used to keep track of the vendor's performance for future procurement activities. Below will be the template to be used.

Table 13. Vendor Matrix

Vendor	Product Quality	On Time Delivery	Documentation Quality	Development Costs	Development Time	Cost per Unit	Transactional Efficiency
Vendor A							
Vendor B							

The table above shows the vendor matrix used for bedding purposes for acquiring necessary materials that will be used in the project implementation.

Rating Scale:

1 – Unsatisfactory

2 – Acceptable

3 – Exception

11.0 Implementation Plan

This chapter provides prior information regarding project implementation used by the development team for the development and implementation of the project.

11.1 Purpose

TPM Group 6 provides training and implementation to ensure that project leader and/or stakeholders of Ragay Seventh-day Adventist Multigrade School Inc. gain a thorough understanding of the PAYMENT AND ACCOUNT MONITORING SYSTEM (PAMS). End-users of the application will be able to obtain and understand the whole system process and its relation to their process own through a classroom-type training where discussion among process owners about the software's functionality is encouraged. A hands-on practice session to reinforce system familiarization is conducted afterward.

11.2 System Overview

The Payment and Account Monitoring System is a comprehensive software solution designed to streamline and enhance financial processes within the school environment. The system aims to automate payment tracking, manage student accounts, and provide real-time monitoring of financial transactions. This initiative will contribute to the efficient management of school finances, reduce administrative overhead, and improve overall transparency.

11.2.1 System Description

Manual logs using papers may cause data leakage and insufficient data content to support the needs of the school treasurer in generating reports and the current status of students' account that will help monitor the

payment made by parents as well as compute for the total fund of the school.

To secure and process accurate information of each students' account by the treasurer, the school must use a payment and account monitoring system that will cater to all sensitive account information of the students that will provide informative timely reports that may serve as a reference for the balances to be paid by the parents and the current financial status of the school.

Republic Act 10173 or Data Privacy Act of 2012 mandate all offices to secure all confidential records of a data subject. The school caters to more than 90 students' account, therefore the school must have a secure and reliable payment and account monitoring system that undergo an assessment to ensure security and efficiency.

11.2.2 Assumptions and Constrains

The project leader assumes that all stakeholders will make themselves available on the target schedule of implementation and for them to review, accept and sign the system before handover. The identified constraints at the moment are budget and or availability of the materials or equipment to be used during the training and the schedule.

11.2.3 System Organization

The System is organized into a major user right. The school treasurer will have the right to access system and all the functions included. The school treasurer as the user of the system has the access to the interface of the system.

11.3 Management Overview

11.3.1 Description of Implementation

This portion defines each activity of the Project Implementation Plan for PAMS. The Implementation will have only 1 phase, and that would be for the School Treasurer regarding Technical Training and the Systems Training as the actual end-user of the system.

11.3.2 Point of Contact

In this portion, the project team together with the stakeholders will identify all System Proponents, according to their responsibilities, role, position, name, contact number, and email. The Admin will keep this record on the system database as a reference. (If needed add, another field).

11.4 Major Tasks

This section of the Project Implementation Plan provides descriptions of the major system implementation tasks. Add as many subsections as necessary to this subsection to describe all the major tasks. The tasks described in this subsection are not site-specific, but generic or overall project tasks that are required to install hardware, software, and databases, prepare data and validate the system

If several implementation approaches are being reviewed, then identify the advantages, disadvantages, risks, issues, estimated time frames, and estimated resource requirements for each option considered. These options could include:

1. Incremental implementation or phased approach
2. Parallel execution
3. One-time conversion and switchover

4. Any combinations of the above.

Include the following information for the description of each major task, if appropriate:

1. What the task will accomplish
2. Resources required to accomplish the task
3. Key Person(s) responsible for the task
4. Criteria for successful completion of the task (e.g., “user acceptance”)

Examples of major tasks are the following:

1. Provide overall planning and coordination for the implementation
2. Provide appropriate training for personnel
3. Ensure that all manuals applicable to the implementation effort are available when needed
4. Provide all needed technical assistance
5. Schedule any special computer processing required for the implementation
6. Perform site surveys before implementation
7. Ensure that all prerequisites have been fulfilled before the implementation date
8. Provide personnel for the implementation team
9. Acquire special hardware or software
10. Perform data conversion before loading data into the system
11. Prepare site facilities for implementation

Consider addressing the changes that may be necessary once the system has been implemented. These changes may include but are not limited to, personnel and technology equipment alignment, and contractor support.

11.5 Implementation Schedule

During the implementation, the following Outline Schedule will be observed and documents such as User's Manual 2 copies will also provide to the end-user for their reference. Each Participant would be acknowledged and advised to introduce themselves roles and responsibilities. The environment would be a classroom-type training wherein the user will be considered as a student and at every end of the discussion per module, questions are highly encouraged. The training is expected to be completed within 3 hours including the live hands-on exercise.

Part I. Technical Training

1. System Set-up
2. Configuration and Control Set-up
3. User Access Maintenance
4. Utility a. Audit Trail
5. Keeping (Backup and Purge)
6. Database Backup Routine

Part II. System Training

1. Login Page
2. Transaction
    a. New Transaction
    b. Update Transaction
3. Queries
    a. Pending Transactions
    b. Finished Transactions

4. Reports
    a. Transaction Routing History (per transaction)
    b. Routing History (all transactions)
    c. Statistics (Number of request/submission per requirement)
    d. Utilities
    e. Change Password

Part III. System Hands-On

11.6 Implementation Support

The project team of PAMS is available for help in the following terms and conditions. During Initial Stage (2 weeks after the system handover Monday to Friday 11:00 am to 1: 00 pm and 6 pm to 8 pm). Kindly send an email to the following addresses and calls will be entertained at the specified time above.

Table 14. Roles and Contacts

Role	Name	Phone	Email
Business Analyst	Shirley S. Prado	09291293871	shirleyprado1626@gmail.com
Project Manager	Rose Ann C. Bañas	09273013663	broseann40@gmail.com
Programmer	Ida Christine M. De Guia	09178735155	icmdeguia@gmail.com
Programmer	Michelle C. Palacios		

The table above shows the list of the names of stakeholders active on the development part of the proposed system as well as their technical position and contact information.

11.7 Hardware, Software, Facilities, and Materials

This subsection of the Project Implementation Plan lists all supported hardware, software, facilities, and materials required for the implementation.

1. Software Requirements
    a. MySQL
    b. MySQL Workbench
    c. Xampp Server
    d. Php 5 or higher version
    e. Windows 8 or higher version
2. Materials
    a. The school treasurer to be trained
    b. Training Equipment Requirement (at least 1 set of computer to be used by the participant)
    c. Available training room with internet connection
    d. Available projector and white screen
    e. Available whiteboard

11.8 Documentation

The project team will be providing the user's manual for their reference. Aside from this, they will also be given a DVD softcopy of the document in case they need to reproduce it within their company premises since this document is confidential and restricted.

11.9 Acceptance Criteria

The User Acceptance Document is provided to the client after the activity. This form is executed to provide the list of expected deliverables given enabling the users to learn and use the system after the Project Management Team. The basis of the user's acceptance is the list of functionality and features of the PAMS that has been presented to the users and are presented below. Deliverables: The following are the deliverables by the Project Management Team.

For functionality based on the post-evaluation survey. The treasurer as the user of the system answered the survey questionnaire. On most of the questions the respondent rated 5 which means highly acceptable. The parameter with the lowest rating is under compatibility various kinds of web browser such as Chrome, Firefox, Edge, and Opera. This may happen when there is a problem with the software application installed in the computer. On the other hand, the features needed to track or determine the current account balance of the students as well as their payment and the feature of printing account summary report of the software has the highest rating. This feature helps the school treasurer of the Ragay Seventh-day Adventist Multigrade School Inc especially during meetings and examination period. The overall rating for functional is 4.31 meaning it is highly acceptable**.** Table 15 shows the details of the result.

Table 15. Post System Evaluation for Functionality

Functionality Metrics	Range	Verbal Interpretation
1. PAMS web application has all the features needed to track or determine the current account balance of the students as well as their payment.	4.43	Highly Acceptable
2. The PAMS determines the summary of the account and payments of students and can print a report per student.	4.43	Highly Acceptable
3. The PAMS web application is capable of securing students account and payment	4.27	Highly Acceptable

information and only the authorized persons have the access of those data as one of the security measures.		
4. PAMS demonstrate a compatibility various kinds of web browser such as Chrome, Firefox, Edge, and Opera.	4.07	Moderately Acceptable
5. All the required procedures for recording student payment, account monitoring and generating reports of PAMS meets the expectation.	4.33	Highly Acceptable
Overall	**4.31**	**Highly Acceptable**

According to the data furnished, the mean rating of PAMS's level of acceptability in terms of functionality resulted to 4.31 and with a verbal interpretation of highly acceptable. This implies that PAMS performs its capabilities across its computational and operational components.

Table 16. Post System Evaluation for Usability

Usability Metrics	Range	Verbal Interpretation
1. The PAMS web application is easy to understand and use.	4.47	Highly Acceptable
2. The PAMS is logically organized and fully considers the needs of the users.	4.40	Highly Acceptable
3. The user of PAMS web application exerts only minimal effort in monitoring the payment and account of the students.	4.03	Moderately Acceptable
4. The user interface of PAMS has accurate labelling and information; the color scheme was pleasing to the user's eyes.	4.30	Moderately Acceptable
5. The PAMS web application provides and extensive features that users used like generating reports and payment and account monitoring that meets the existing usability standards.	4.37	Highly Acceptable
Overall	**4.31**	**Highly Acceptable**

The usability metrics measures how easy and effective the system is for users. In accordance with the information given, the PAMS's level of acceptability in terms of usability score a mean rating of 4.31, with a highly acceptable as its verbal interpretation. This result indicates that the users perceive PAMS as user-friendly, usable and functional. A mean rating of 4.31 proves a positive evaluation, signifies that PAMS aligns well with user expectations and requirements.

Table 17. Post System Evaluation for Reliability

Reliability Metrics	Range	Verbal Interpretation
1. PAMS able to perform well without crashing and resolves the minimal errors overtime.	4.03	Moderately Acceptable
2. PAMS was able to handle errors effectively, ensuring smooth operation and provides a useful message for the user's reference.	4.07	Moderately Acceptable
3. PAMS can recover to any unexpected failure like connection failure while requesting a service and it will be able to restore the data inputted by the user.	4.20	Moderately Acceptable
4. The PAMS has validation for inputs and schemes or feature before proceeding to the next transaction to ensure the inputs was right.	4.27	Highly Acceptable
5. PAMS is a reliable source in monitoring the payment and account of each student.	4.30	Highly Acceptable
Overall	**4.17**	**Moderately Acceptable**

In line with the data presented, it reveals a mean rating of 4.17, signaling a moderately acceptable level in terms of reliability. It indicates that it shows a commendable degree of consistency and dependability in its performance. It can

be interpreted as a positive reflection of the system's ability to reliably meet its expectation.

Table 18. Post System Evaluation

#	CRITERIA	WEIGHTED MEAN	INTERPRETATION
1.	Functionality	4.31	Highly Acceptable
2.	Usability	4.31	Highly Acceptable
3.	Reliability	4.17	Moderately Acceptable
Average Weighted Mean		**4.26**	**Highly Acceptable**

As for the recommendations of the respondents in the system. The respondent suggests to make an android version of the Payment and Account Monitoring System. This is very timely in today's situation. This recommendation is basis for future development of payment and account monitoring system.

In the evaluation, the respondents suggested that the software should be connected to the internet. This feature is important because the data can be access anywhere. Android application and web application are also suggested by the respondents which is for portability.

Table 19 shows the results of the evaluation for clientele satisfaction. Four out of five parameters have the average of 5 rating which mean outstanding. The parameter with the lowest rating is about proper information equivalent to 4.9 which mean outstanding. Overall, the average rating is 4.95.

Table 19. Clientele Satisfaction

#	CRITERIA FOR CLIENT SATISFACTION	WEIGHTED MEAN	INTERPRETATION
1.	The extension proposal/plan is based on the needs/problems of the clients (there is a consultation with the client	4.91	Outstanding

	during the conceptualization of the extension plan).		
2.	Meets and discusses with the clientele the know how of the extension activity(ies) for its usability and/or clients benefits.	4.91	Outstanding
3.	There is an information campaign for proper information of the clientele about the extension activity(ies).	4.91	Outstanding
4.	Monitors and evaluates the quantity and quality of services provided to clientele.	4.91	Outstanding
5.	Extension activity(ies) really helps and/or address the clients needs or problems.	4.91	Outstanding
Average Weighted Mean		**4.91**	**Outstanding**

Table 20 shows the results of the evaluation for leadership. The average rating is 4.91 which is equivalent to very satisfactory. Suggestions and introduction to strategies that enhanced skills has rating of 5 which is equivalent to outstanding. This is the parameter with the highest rating.

Table 20. Leadership

#	CRITERIA FOR LEADERSHIP	WEIGHTED MEAN	INTERPRETATION
1.	Regularly communicates quality output of the extension proceeding to colleagues/staff/clientele/subordinates.	5	Outstanding
2.	Manages priorities to get the job done and able to look for better ways to confront conflict situations in an honest and direct manner.	5	Outstanding
3.	Encourage/motivates participation/cooperation of the people involved in the extension activity(ies).	5	Outstanding
4.	Suggests/Introduces strategies that enhanced colleagues/staff/ clientele/subordinates' skills and	5	Outstanding

	abilities to perform the extension activity(ies) in a more efficient manner.		
5.	Communicates directly, openly, honestly and shares information with the concerned individual or people involved in their extension activity(ies).	5	Outstanding
Average Weighted Mean		**5**	**Outstanding**

Table 21 shows the results of the evaluation for partnership development. The average rating is 5 which is equivalent to outstanding. All of the parameters were rated 5 being outstanding. The overall rating for partnership development is 5 which is equivalent to outstanding.

Table 21. Partnership Development

#	CRITERIA FOR PARTNERSHIP DEVELOPMENT	RATING	INTERPRETATION
1.	Coordinates with local residents, businesses and other government functionaries for possible extension collaboration.	5	Outstanding
2.	Conducts consultative meetings and/or dialogues with stakeholders on priority extension plan supporting their needs.	5	Outstanding
3.	Regularly meets concerned sector to discuss ways in which the extension undertaking can create better working environment, and full cooperation and participation.	5	Outstanding
4.	Establishes linkages with local/national agencies for possible funding of extension undertakings (sourcing of funds).	5	Outstanding
5.	Communicates directly, openly, honestly, and shares information with the concerned sectors and considering comments, and	5	Outstanding

	suggestions for improvement if necessary.		
Average Mean		**5**	**Outstanding**

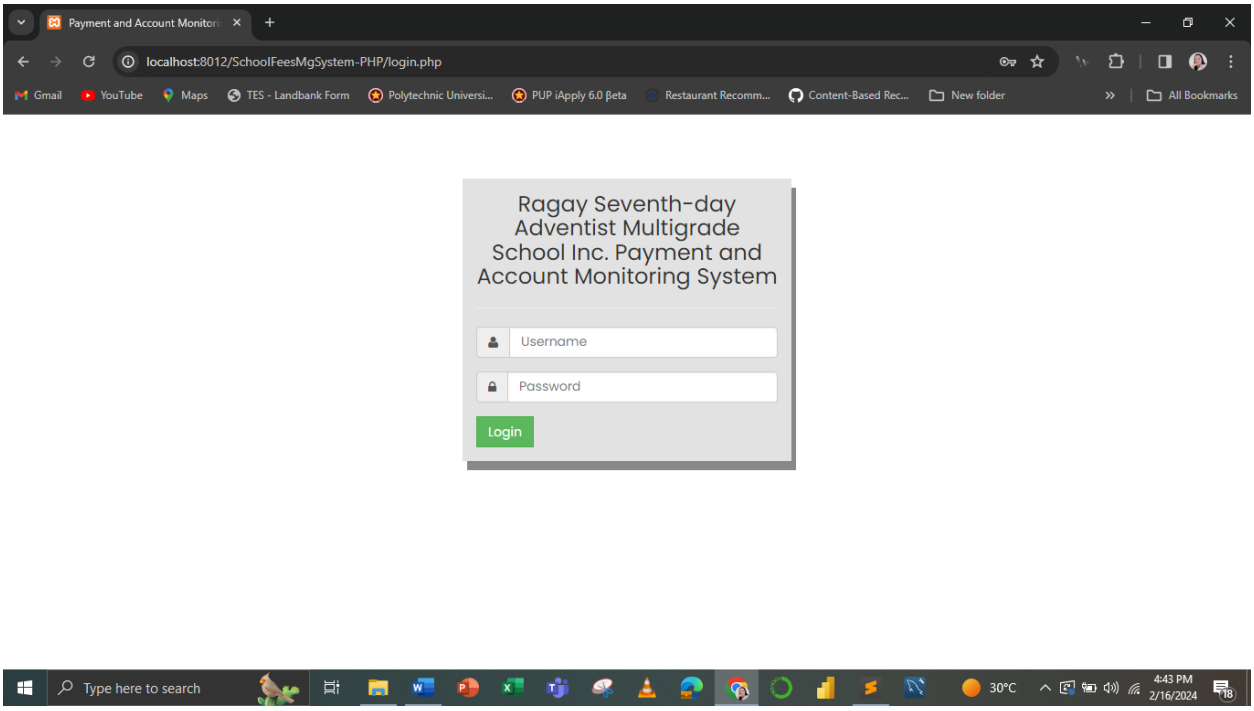
Table 22 shows the results of the evaluation for community responsibility. The average rating is 4.91 which is equivalent to outstanding.

Table 22. Community Responsibility

#	CRITERIA FOR COMMUNITY RESPONSIBILITY	WEIGHTED MEAN	INTERPRETATION
1.	Creates safe research environment where activities conducted consider the ethical and moral predicament of the community and/or the sector involved.	4.91	Outstanding
2.	Conducts extension activity(ies) where the responsibilities of the concerned sectors to the community are addressed.	4.91	Outstanding
3.	The extension activity(ies) conducted with significant contribution to the community and increase awareness on community issues and concerns.	4.91	Outstanding
4.	The extension activity(ies) is/are instrumental and/or in of consideration of public safety, environmental safety, and sharing of quality-related information with the sector involved.	4.91	Outstanding
5.	Assumes impartial responsibility and accountability on the extension proceeding and its effect or impact to the community and/or other sectors involved.	4.91	Outstanding
Average Weighted Mean		**4.91**	**Outstanding**

PICTURES OF THE PAYMENT AND ACCOUNT MONITORING SYSTEM

I. LOGIN PAGE



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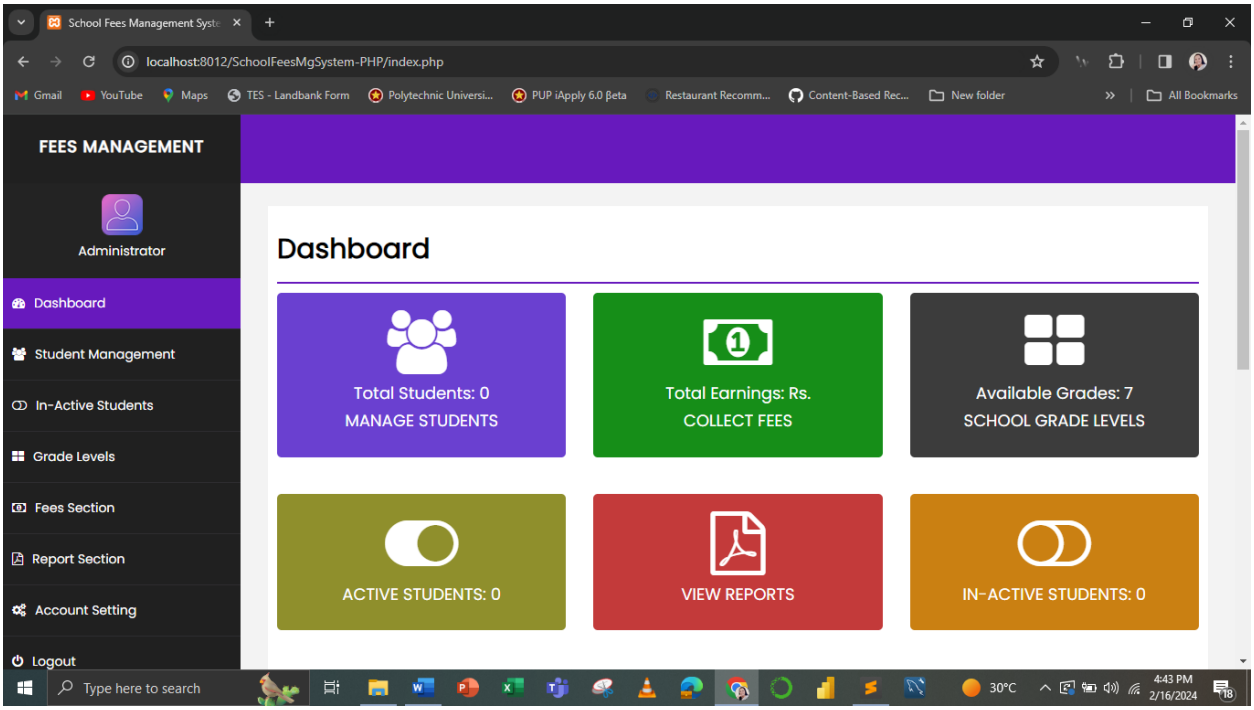

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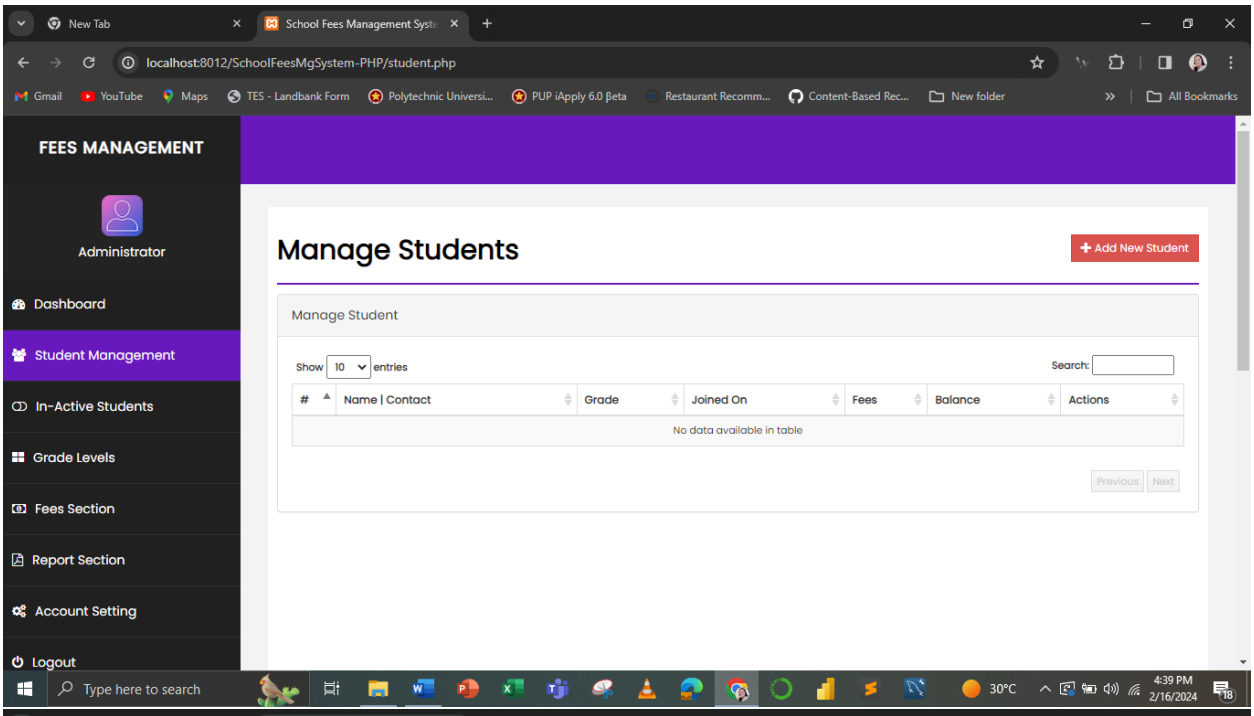

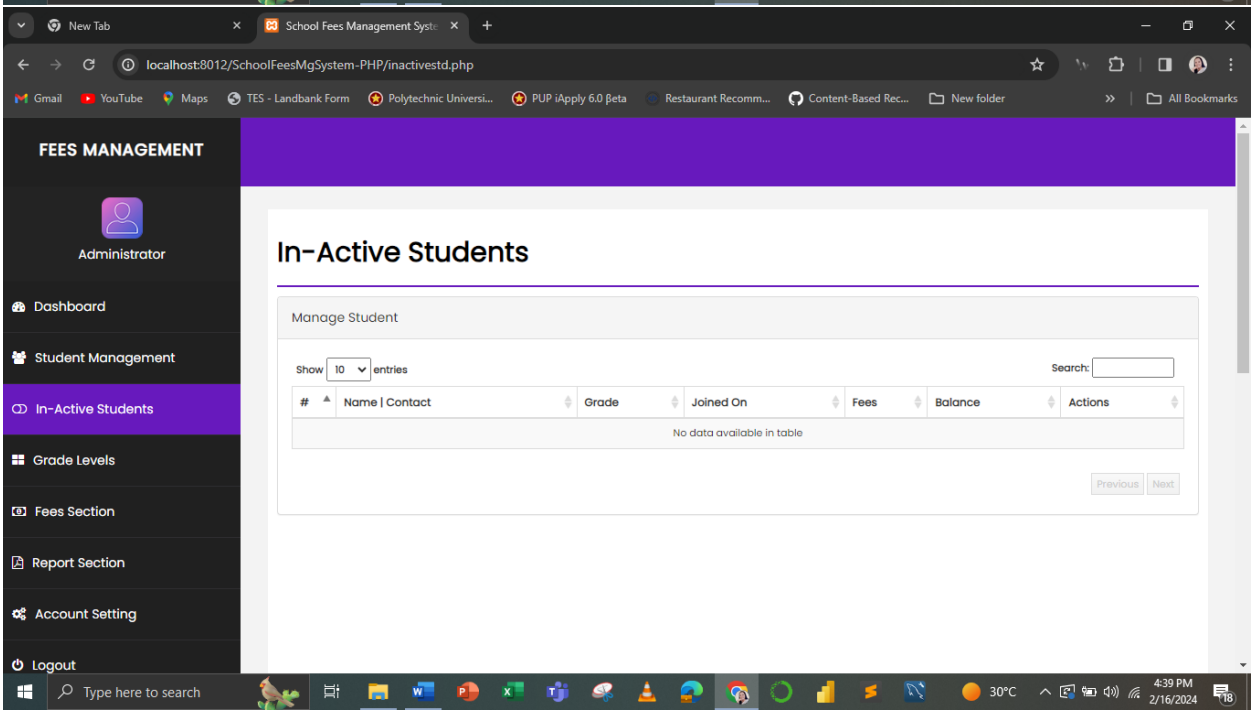

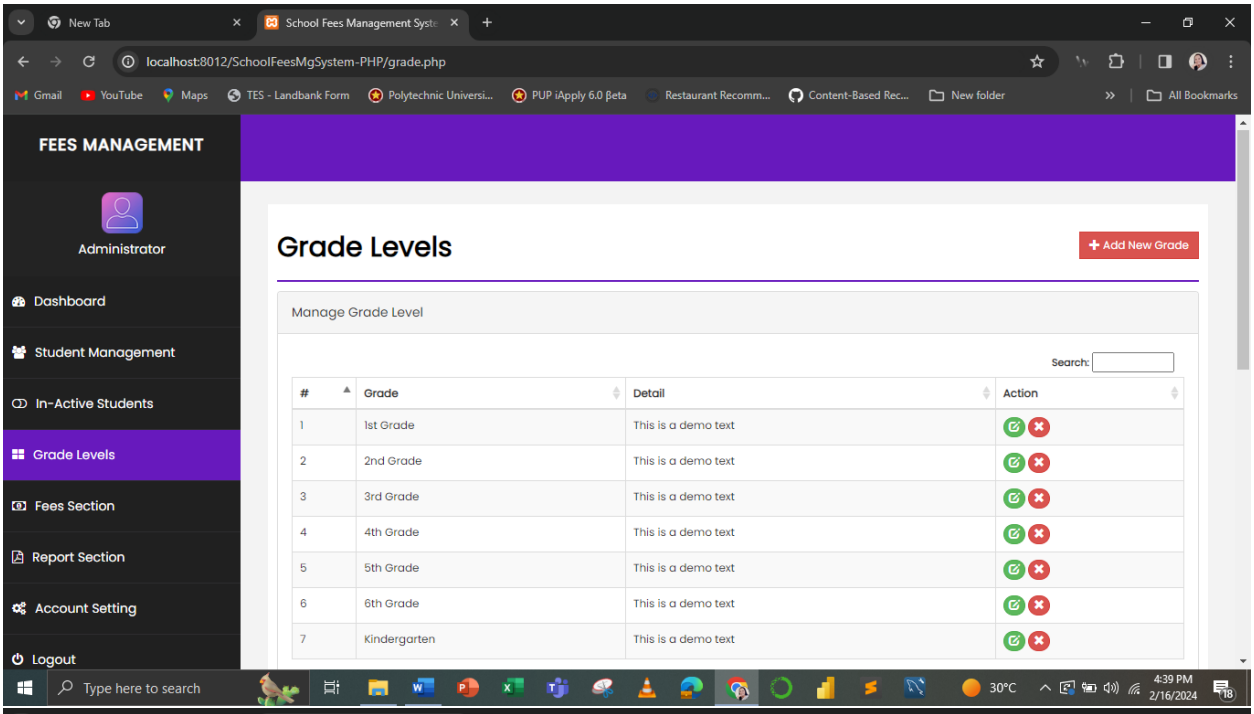
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Restaurant Recomm...
Content-Based Rec...
New folder
All Bookmarks
FEES MANAGEMENT
Administrator
Dashboard
Student Management
In-Active Students
Grade Levels
Fees Section
Report Section
Account Setting
Logout
Grade Levels
+ Add New Grade
Manage Grade Level
Search:
Grade Detail Action
1 1st Grade This is a demo text
2 2nd Grade This is a demo text
3 3rd Grade This is a demo text
4 4th Grade This is a demo text
5 5th Grade This is a demo text
6 6th Grade This is a demo text
7 Kindergarten This is a demo text
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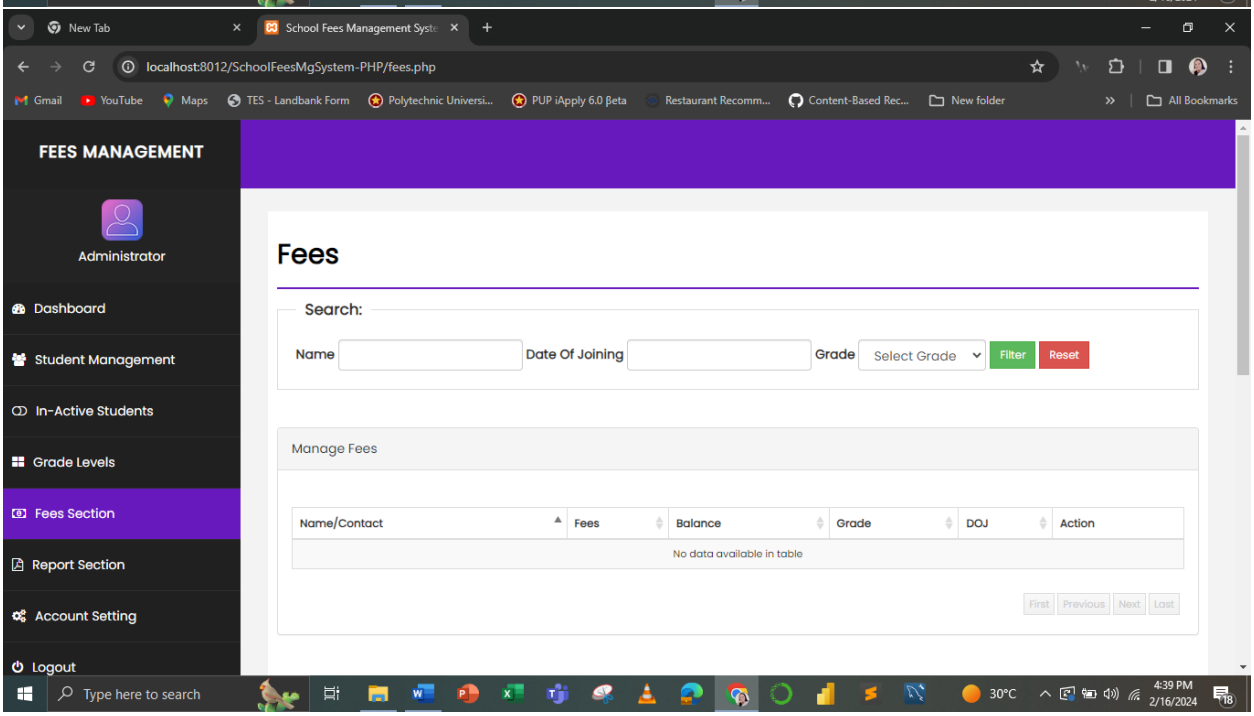
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Restaurant Recomm...
Content-Based Rec...
New folder
All Bookmarks
FEES MANAGEMENT
Administrator
Dashboard
Student Management
In-Active Students
Grade Levels
Fees Section
Report Section
Account Setting
Logout
Fees
Search:
Name
Date Of Joining
Grade
Select Grade
Filter
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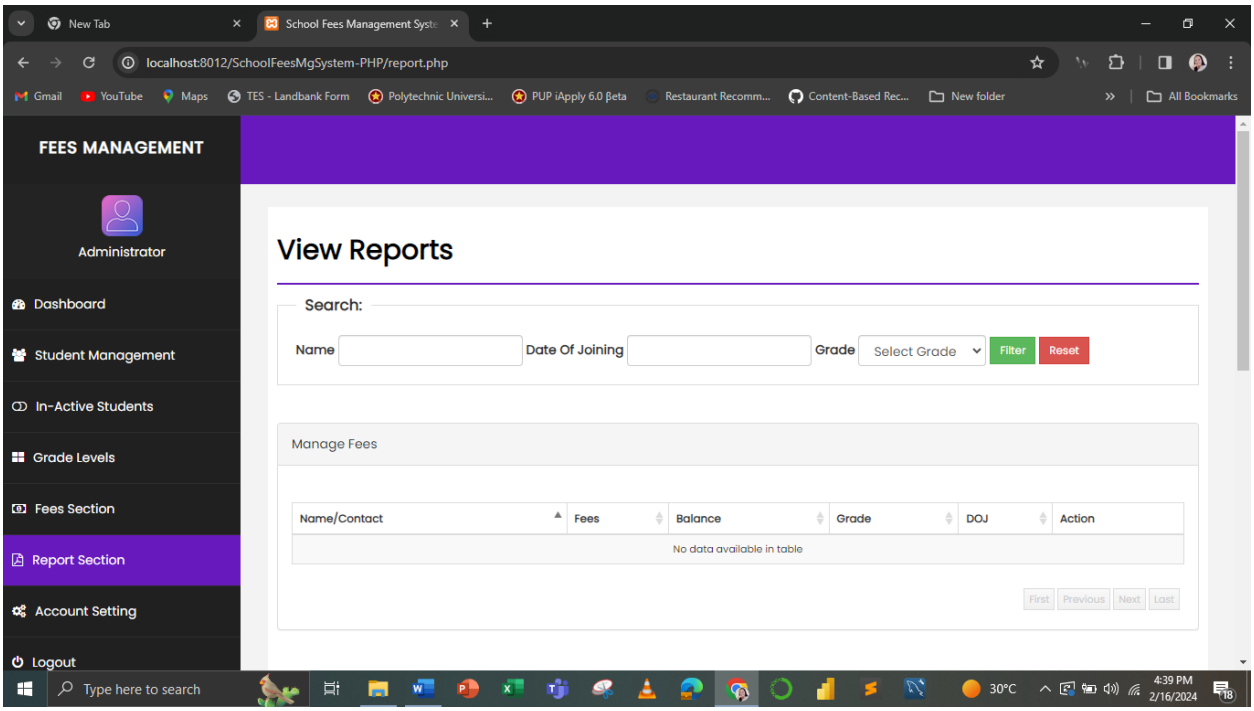
2/16/2024

IV. REPORTS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Restaurant Recomm...
Content-Based Rec...
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FEES MANAGEMENT
Administrator
Dashboard
Student Management
In-Active Students
Grade Levels
Fees Section
Report Section
Account Setting
Logout
View Reports
Search:
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Grade
Select Grade
Filter
Reset
Manage Fees
Name/Contact
Fees
Balance
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Type here to search
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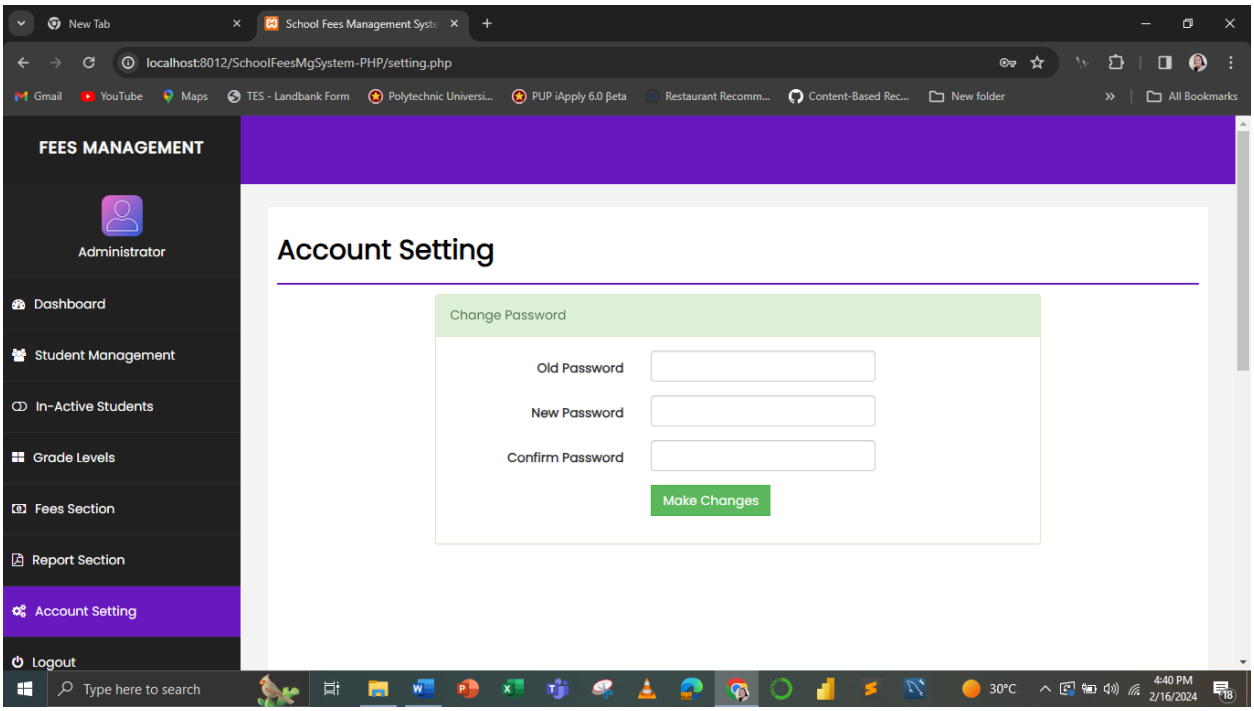
V. LOGOUT PAGE



Polytechnic University of the Philippines

Open University System

Master of Information Technology

RESEARCH INSTRUMENT

Dear Respondent,

The students of Master in Information Technology of PUP – Open University System currently enrolled in Technology Project Management need to conduct a project management as one of the subject requirements. The project is entitled **PAYMENT AND ACCOUNT MONITORING SYSTEM (PAMS) for RAGAY SEVENTH-DAY ADVENTIST MULTIGRADE SCHOOL.**

In this regard, may we sincerely ask your time and cooperation to help the researchers by filling-out this research-made survey questionnaire as the researchers see you as one of the target users of the system. All personal information gathered will remain confidential and will only be use in academic purpose.

Thank you very much for your kind-heartedness and support!

Sincerely,

MIT Students, Researchers

Name: (Optional) _____

Instruction: Kindly put a check ☑ mark on the box below that corresponds to what type of user you are.

☐Principal

☐Treasurer

DIRECTION: Please indicate your level of functionality, overall satisfaction with the usability, and the level of reliability of tracking the presence of the personnel of **PAYMENT AND ACCOUNT MONITORING SYSTEM (PAMS) for RAGAY SEVENTH-DAY ADVENTIST MULTIGRADE SCHOOL.** Put a check (✓) mark in the checkbox below.

Legend:

Scale	Scale Value
5	Highly Acceptable
4	Moderately Acceptable
3	Acceptable
2	Fairly Acceptable
1	Poorly Acceptable

Section 1: Level of acceptability of the IPPT web application based on functionality, reliability, and usability of the proposed web application derived from the ISO 9126: Quality Model.

Level of acceptability in terms of functionality	5	4	3	2	1
PAMS web application has all the features needed to track or determine the current account balance of the students as well as their payment.					
The PAMS determines the summary of the account and payments of students and can print a report per student.					
PAMS demonstrate a compatibility various kinds of web browser such as Chrome, Firefox, Edge, and Opera.					
The PAMS web application is capable of securing students account and payment information and only the authorized persons have the access of those data as one of the security measures.					

All the required procedures for recording student payment, account monitoring and generating reports of PAMS meets the expectation.					
Level of acceptability in terms of reliability	**5**	**4**	**3**	**2**	**1**
PAMS able to perform well without crashing and resolves the minimal errors overtime.					
PAMS was able to handle errors effectively, ensuring smooth operation and provides a useful message for the user's reference.					
PAMS can recover to any unexpected failure like connection failure while requesting a service and it will be able to restore the data inputted by the user.					
The PAMS has validation for inputs and schemes or feature before proceeding to the next transaction to ensure the inputs was right.					
PAMS is a reliable source in monitoring the payment and account of each student.					
Level of acceptability in terms of usability	**5**	**4**	**3**	**2**	**1**
The PAMS web application is easy to understand and use.					
The PAMS is logically organized and fully considers the needs of the users.					
The user of PAMS web application exerts only minimal effort in monitoring the payment and account of the students.					
The user interface of PAMS has accurate labelling and information; the color scheme was pleasing to the user's eyes.					
The PAMS web application provides and extensive features that users used like generating reports and payment and account monitoring that meets the existing usability standards.					