



## ONLINE ADOPTION FORUM SCHEDULLER ATTENDANCE AND MONITORING SYSTEM

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### Abstract

The Online Adoption Forum Scheduler Attendance and Monitoring System aimed to streamline the adoption process for Child Care Office V through a system with integrated modules. These modules included a Management Module for administrators to manage user accounts, an Event Management Module for users to generate and select pre-adoption forums, and a Client Management Module for accessing forums and receiving digital certificates. Additionally, SMS and Email Notification Modules enhanced communication by sending reminders, schedules, and meeting links. The system was evaluated using the ISO/IEC 25010 standard, focusing on functionality, reliability, usability, and other quality attributes. The study excluded advanced features like analytics and scalability to maintain a focused scope.

The Rapid Application Development (RAD) Methodology was used to develop the system. This iterative approach allowed for rapid prototyping, continuous feedback, and refinement, ensuring the system met user requirements effectively and efficiently. The methodology enabled swift development while accommodating necessary adjustments throughout the process.

During the development, as well as after testing and evaluation of the developed system, several key findings were established. The Online Adoption Forum Scheduler Attendance and Monitoring System successfully included a Management Module that enabled administrators to register, log in, update profiles, and manage user accounts effectively. The system also integrated an Event Management Module, allowing users to generate, navigate, and select

their pre-adoption forums seamlessly. Additionally, a Client Management Module was successfully incorporated, enabling users to access the online pre-adoption forum and receive their digital Certification of Attendance. The study further added an SMS Notification Module that ensured clients were notified via SMS about their scheduled online adoption forum. Finally, the system included an Email Notification Module that sent clients an email containing the Google Meet link and the scheduled time for the online pre-adoption forum.

Based on the findings of this study, the following conclusions were formulated. The implementation of the Management Module demonstrated the system's ability to streamline administrative tasks, enhancing efficiency and improving user account management for administrators. The integration of the Event Management Module highlighted the system's effectiveness in providing users with a seamless and user-friendly experience for managing pre-adoption forum schedules. The incorporation of the Client Management Module showed the system's capability to facilitate user access to online pre-adoption forums and streamline the issuance of digital Certificates of Attendance. The addition of the SMS Notification Module effectively enhanced communication by ensuring clients were promptly notified about their scheduled online adoption forums. Finally, the inclusion of the Email Notification Module improved client communication by sending timely emails containing the Google Meet link and the scheduled time for the online pre-adoption forum.

Based on the conclusions drawn from this study, the following recommendations were formulated. First, the Management Module should be further optimized by incorporating additional features such as role-based access control and advanced reporting, which would enhance administrative efficiency and security. Second, the Event Management Module should be expanded by adding features like calendar synchronization and reminder notifications to improve the user experience and better manage forum schedules. Third, the Client Management Module should be enhanced by integrating a tracking system for user progress and enabling real-time updates on certificate issuance, which would improve user engagement and overall system functionality. Fourth, the SMS Notification Module should be improved by incorporating customizable message templates and delivery time settings to better accommodate

client preferences and time zones. Fifth, the Email Notification Module should be enhanced by adding features such as automated follow-up reminders and the ability to resend the meeting link in case of delivery issues, ensuring better client communication and engagement. Lastly, it is recommended to implement a feedback mechanism within the system, allowing clients and administrators to provide suggestions or report issues, thereby contributing to continuous improvement in system functionality and user experience over time.

**Keynotes:** *Aemilianum College Inc., Adoption Forum Management, Adoption Process Coordination, Automated Scheduling System, Digital Public Service Platforms, Forum Attendance Monitoring, Notification System Integration, Online Adoption Forum Scheduler*

## Introduction

Modern society is largely dependent on information technology, which powers almost every facet of commerce, healthcare, education, communication, and entertainment. By utilizing digital tools and systems, IT helps businesses to innovate, run profitably, and make data-driven choices. Software development, cybersecurity, network administration, data management, and cloud computing are just a few of the many topics covered in this subject. The process of "digitalization," which involves integrating digital technologies into all facets of society and business, radically alters how businesses function and provide value to their clients. To improve efficiency, accessibility, and scalability, it entails converting conventional systems and procedures into digital representations. Businesses can use digitalization to automate processes, enhance decision-making using data analytics, and provide more convenient and individualized services. It affects how people communicate, shop, work, and access information in their day-to-day lives (Javaid, M., 2024).

Scheduling in project management is the listing of activities, deliverables, and milestones within a project. A schedule usually includes a planned start and finish date, duration, and resources assigned to each activity. Effective project scheduling is a critical component of successful time management, especially for professional service businesses (Wrike, 2019).

Implementing a scheduling system in an organization in the Philippines is crucial for several reasons, each contributing to improved operational efficiency, employee satisfaction, and overall business success. A scheduling system streamlines the allocation of resources, including time, personnel, and equipment. By automating scheduling tasks, organizations can reduce manual errors, avoid conflicts, and ensure that resources are used optimally. This is particularly important in the Philippines, where businesses often manage large workforces across multiple locations (Carpio., 2021). In the Philippines, where the workforce is a key driver of economic growth, maintaining high levels of

employee productivity and satisfaction is vital. A scheduling system allows for more flexible work arrangements, helping employees balance their professional and personal lives. This flexibility can lead to higher job satisfaction, reduced absenteeism, and increased retention rates (Rivera, 2020).

In the province of Albay, like in many regions, organizations face challenges managing appointments and attendance due to a lack of automated systems. Many offices, particularly those involved in public services, rely on manual processes that result in delays and inefficiencies. The pandemic highlighted the limitations of these traditional systems, as there was a need for more agile solutions to monitor attendance and facilitate virtual or in-person meetings effectively (Frontiers, 2021). These experiences reflect the growing importance of adopting online scheduling and monitoring platforms at the local level.

In connection to the challenges encountered by many organizations with manual scheduling system, this study

proposed the development of a Web-based Online Adoption Forum Scheduler Attendance Monitoring System. Enhanced efficiency and productivity by understanding this system helps in streamlining scheduling tasks, reducing the time and effort required for manual scheduling. Having automated notifications eliminate the need for manual reminders, allowing staff to focus on more critical tasks. To improve communication with email and SMS notifications, users can choose their preferred method of communication, ensuring they receive information in the most convenient way. Centralized information on online scheduling systems provides a centralized platform for managing user data, appointments, and communications, ensuring that information is easily accessible and organized. These systems often come with robust security measures to protect sensitive user data, ensuring compliance with privacy regulations.

### Specific Objectives

Specifically, the study aimed to:

1. Develop an Online Adoption Forum Scheduler Attendance and Monitoring System with a Management Module that allows the administrator to;
  - 1.1. Register
  - 1.2. Login
  - 1.3. Update profiles
  - 1.4. Manages user accounts
2. Integrate an Event Management Module that allows users to;
  - 2.1. Generate
  - 2.2. Navigate
  - 2.3. Select their pre-adoption forum
3. Incorporate Client Management Module to;
  - 3.1. Access the online pre-adoption forum
  - 3.2. Receives their digital Certification of Attendance to Pre-Adoption Forum
4. Add SMS Notification Module that notifies clients through SMS regarding their scheduled online adoption forum
5. Include Email Notification Module;
  - 5.1. System that sends clients an email containing the Google Meet link
  - 5.2. Schedule time for the online pre-adoption forum
6. Evaluate the system using ISO/IEC 25010 in terms of:
  - 6.1. Functionality Suitability;
  - 6.2. Reliability;
  - 6.3. Performance Efficiency
  - 6.4. Usability;
  - 6.5. Security;
  - 6.6. Compatibility
  - 6.7. Maintainability;
  - 6.8. Portability.

## Scope and Delimitations

This study aimed to develop an Online Adoption Forum Scheduler Attendance and Monitoring System to streamline the adoption process through several integrated modules. The Management Module enabled administrators to register, log in, update profiles, and manage user accounts. The Event Management Module allowed users to generate, navigate, and select pre-adoption forums, while the Client Management Module facilitated forum access and provided digital certificates of attendance. To enhance communication, the system incorporated an SMS Notification Module for reminders and an Email Notification Module to send Google Meet links and schedules. The system's effectiveness was evaluated using the ISO/IEC 25010 standard, focusing on functionality, reliability, performance, usability, security, compatibility, maintainability, and portability, with feedback from ten (10) IT professionals and

six (6) RACCO5 personnel ensuring a thorough assessment.

The study strictly excluded the development of additional features beyond those outlined, such as advanced analytics, integration with external systems, or multilingual support. It deliberately avoided addressing hardware requirements or ensuring compatibility with devices beyond the specified parameters. Additionally, the study did not incorporate user training or ongoing support beyond the initial implementation phase. The evaluation focused solely on feedback from IT professionals and DSWD personnel, excluding insights from other stakeholders like end-users or administrators. Moreover, the system's scalability and performance under extremely high user loads were intentionally left out of the study's scope. This narrow focus ensured the project remained aligned with core objectives, avoiding scope creep and unnecessary complexities.

## Gap Bridged by the Study

The reviewed related systems were all important in the development of the system. All of those systems have goals of better scheduling and appointment system with Email or SMS notifications technically they included this to their system for better efficiency of work and taking advantage of digitalization. They have similar features for SMS and Email notification and the main goal is to provide notification to staff members and clients for updating and monitoring.

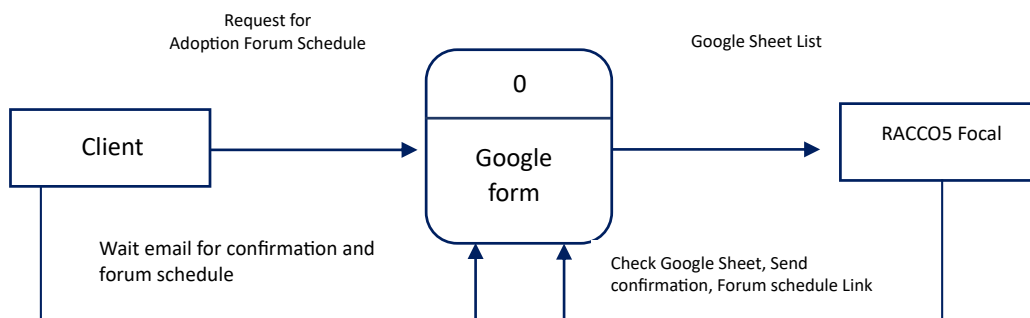
What the present study developed was the use of Google workspace (Google

meet, Google calendar and Google Mail) and SMS as an embedded to the proposed system using API. Additionally, an Attendance Monitoring System is covered with the system that will enhance the staff in monitoring the client's registration to online adoption forum. The new feature is the use of both Email and SMS notification and module for attachment of the Certificate of Attending the Adoption Forum being combined together for the use of Regional Alternative for Child Care Office 5 in Bicol Region.

## Requirements Planning

The initial stage of the development process is requirements planning. The researcher collected all the information required to determine the current issue and come up with a practical and achievable solution. Questionnaires were created by the researcher and interviewed with the Regional Alternative for Child Care Office V in order to comprehend the current adoption forum scheduling flow operation and determine the current issue that

has been faced. The user/employees played a big part in the process of gathering data. They gave inputs and suggestion to the researcher that helped him develop the system that met their needs and requirements. The researcher also did an extensive browsing on the internet and research on the various websites to gather data that were significant to the study. All references, studies, articles and existing application provided by the internet were vital to the conducted study.



**Figure 4.1 – Existing System DFD**

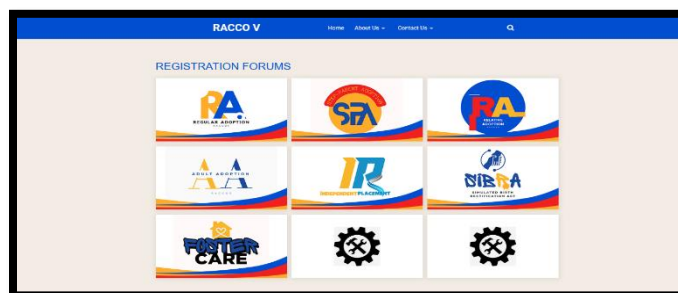
Figure 4.1 showed the existing system diagram of Regional Authority for Child Care Office V. The existing adoption forum scheduler process is manually done through manual encoding of client’s google

form then the RACCO 5 focal will check the google sheet result from time to time. There is no notifications in both client and RACCO 5 focal and because of that there are time they forget about their scheduled forum.

**User Design**

Online Adoption Forum Scheduler Attendance with Monitoring System for Regional Alternative for Child Care Office V was developed. It was developed to enable the fast process, fast scheduling, fast monitoring and fast generation of reports. Some benefits of the system were providing

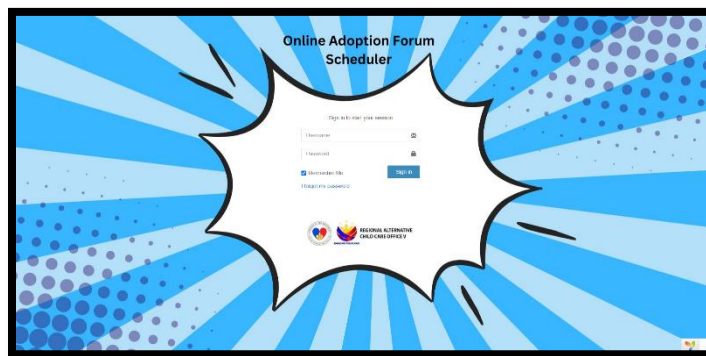
an enhance computer base notification system with the use of Email and SMS technology. The system also lessens the manual processes, it improved the existing system, and the system was able to store and generates efficient reports.



**Figure 4.4 – Client User Interface**

Figure 4.4 illustrates the Client/PAP (Prospective Adoptive Parent) User Interface, which is designed to provide a user-friendly platform for clients to interact with the system. This interface allows clients to select the appropriate category for their inquiries, ensuring that their specific needs are addressed efficiently. The intuitive design

of the interface ensures ease of navigation, enabling clients to seamlessly access relevant features such as registration, forum schedule selection, and notification preferences. By prioritizing simplicity and functionality, the client interface enhances user experience and ensures a streamlined process for participating in pre-adoption forums.



**Figure 4.5 – User Login**

Figure 4.5 illustrates the Log-in interface, which serves as the primary security feature of the system, safeguarding it against unauthorized access or potential intrusions. This module requires users to input their correct username and password to gain access to the system's main functionalities. By enforcing this

authentication process, the log-in interface ensures that only authorized personnel, such as system administrators, employees, or registered clients, can interact with the system. This layer of security is crucial for protecting sensitive data and maintaining the integrity of the system.

### **Rapid Construction**

To meet stakeholders' and users' expectations, the system must align with its intended objectives. During the design phase, prototypes and a beta version were developed, gradually evolving into a working model that ultimately shapes the final product. The third phase of development is particularly significant, as it allows continuous client feedback throughout the

process. Clients can suggest alterations, changes, or even new ideas to address emerging challenges, ensuring the system evolves in response to real-world needs.

The system underwent evaluation by a group of 10 IT experts and 6 stakeholders, all of whom were familiar with the system's operations. The evaluation focused on key performance metrics, including functionality,

reliability, usability, efficiency, maintainability, and portability. These criteria helped assess the system's overall

performance and its alignment with user needs and expectations.

To analyze the collected data, frequency analysis was applied to identify the most dominant variables, such as the current methods used. Additionally, ranking techniques were employed to establish the order of priority for the variables under consideration. A scaling system was used in conjunction with a weighted mean to track

and evaluate the respondents' interpretations of various system features, ensuring a clear understanding of how each aspect of the system was perceived by the evaluators. This comprehensive evaluation process provides valuable insights into the system's strengths and areas for improvement.

**Table 4.9 – Summary of the System Evaluation**

Sections of Evaluation	IT Experts (10)	Users/Stakeholders (7)	Mean	Interpretation
Functionality	4.11	4.16	4.13	More than what is expected
Efficiency	4.00	4.05	4.02	More than what is expected
Compatibility	3.90	3.91	3.90	Presence of the expectation
Usability	4.03	4.04	4.03	More than what is expected
Reliability	4.13	4.04	4.08	More than what is expected
Security	4.01	4.07	4.04	More than what is expected
Maintainability	4.08	4.23	4.15	More than what is expected
Portability	4.08	4.19	4.13	More than what is expected
Overall Mean = 4.06				More than what is expected

Table 4.9 summarized the results of the system evaluation, showing the ratings provided by 10 IT experts and 7 users or stakeholders across various sections of the system. In terms of Functionality, the IT experts gave an average score of 4.11, while the users/stakeholders rated it 4.16, resulting in a mean score of 4.13, which was interpreted as "More than what is expected." The system also received a positive evaluation in Efficiency, with scores of 4.00 from IT experts and 4.05 from

users/stakeholders, leading to a mean of 4.02, indicating that the system performed "More than what was expected."

For Compatibility, the average ratings were 3.90 from IT experts and 3.91 from users/stakeholders, giving a mean of 3.90 and an interpretation of "Presence of the expectation." In Usability, the system earned a mean score of 4.03 with evaluations from both groups indicating it was "More than what was expected." Reliability was another strong area, with IT experts rating it 4.13 and

users/stakeholders giving it 4.04, resulting in an overall mean of 4.08, again interpreted as "More than what was expected."

The system's Security was rated 4.01 by IT experts and 4.07 by users/stakeholders, leading to a mean of 4.04 and a rating of "More than what was expected." In terms of Maintainability, the IT experts scored it 4.08, and the users/stakeholders gave it a slightly higher score of 4.23, resulting in a mean score of 4.15, also rated as "More than what was expected." Finally, Portability received

### Cutover

This phase marked the implementation stage of the project, where the primary objective was to deliver a fully functional and well-documented system. The developed system was successfully installed and deployed to the agency's server, ensuring that it was integrated into the operational environment. Following the installation, initial training sessions were conducted to familiarize the users with the system's

### Findings

During the development and after testing and evaluation of the developed system the following findings have been established:

1. The Online Adoption Forum Scheduler Attendance and Monitoring System effectively included a Management Module, enabling the administrator to register, log in, update profiles, and manage user accounts with ease and efficiency.
2. The Event Management Module successfully allowed users to generate, navigate, and select their preferred pre-adoption forum, providing a seamless and intuitive experience.
3. The Client Management Module effectively enabled users to access the online pre-adoption forum and receive

ratings of 4.08 from IT experts and 4.19 from users/stakeholders, leading to a mean of 4.13 and an interpretation of "More than what was expected."

The overall mean score was 4.06, which reflected that, across all sections, the system generally exceeded the expectations of both IT experts and users/stakeholders. The consistent positive ratings across multiple evaluation criteria highlighted the system's strong performance in meeting and surpassing the required standards.

features and functionalities. However, each module remained subject to ongoing re-evaluation and testing to ensure its performance met the required standards. If any issues or bugs were identified during the training, the researcher took prompt action to revise the system and deploy patches, ensuring the system's stability and smooth operation moving forward.

their digital Certification of Attendance, streamlining the process and enhancing user satisfaction.

4. The SMS Notification Module successfully notified clients via SMS about their scheduled online adoption forum, ensuring timely communication and improving user engagement.
5. E-mail Notification Module efficiently sent clients an email containing the Google Meet link and the scheduled time for the online pre-adoption forum, ensuring clear communication and facilitating easy access to the event.
6. The system was evaluated using ISO/IEC 25010 across various quality attributes, including Functionality Suitability, Reliability, Performance Efficiency, Usability, Security, Compatibility,



Maintainability, and Portability, with an overall mean score of 4.06, indicating that

### Conclusions

Based on the findings of this study the following conclusions were formulated:

1. The Online Adoption Forum Scheduler Attendance and Monitoring System successfully integrated a comprehensive Management Module, ensuring smooth administrative functions such as user registration, login, profile updates, and account management.
2. The Event Management Module effectively provided users with an intuitive platform to generate, navigate, and select their pre-adoption forum, improving the overall user experience.
3. The Client Management Module streamlined the process for users to access the online pre-adoption forum and receive their digital Certification of Attendance, enhancing efficiency and user satisfaction.

### Recommendations

Based on the conclusions drawn from this study, the following recommendations were formulated:

1. Include additional user management features, such as multi-user roles and permissions, to provide more flexibility for system administrators.
2. Incorporate additional customization options within the Event Management Module, allowing users to personalize their pre-adoption forum experience further.
3. Improve the Client Management Module, consider adding automated reminders and updates for clients to ensure they stay informed about any changes to their forum participation.
4. Integrate more advanced SMS notification features, such as

the system exceeded expectations in all evaluated areas

4. The SMS Notification Module played a crucial role in ensuring timely communication by notifying clients via SMS about their scheduled online adoption forum, which improved user engagement.
5. The Email Notification Module efficiently communicated essential information, including the Google Meet link and the scheduled time for the online pre-adoption forum, facilitating seamless access to the event.
6. The system's evaluation using ISO/IEC 25010 across key quality attributes demonstrated its excellence, with an overall mean score of 4.06, confirming that it surpassed expectations in functionality, reliability, and performance.

customizable templates and the ability to notify users about changes in scheduling, to improve the communication process.

5. Enhance the Email Notification Module, consider including a reminder feature that sends periodic updates about the event to ensure clients are well-prepared for the online forum.
6. Continuously monitor user feedback and performance metrics to identify opportunities for future enhancements, ensuring the system remains effective and up-to-date.
7. Enhance the system's overall user experience, it is recommended to implement a feedback mechanism after each session to gather insights on user satisfaction and identify areas for continuous improvement.

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