

# OASYS: Overall Administering System: A Work From Home Human Resource Records & Information Management System

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## OVERVIEW

This study evaluates the effect of COVID-19 on human resource management. It assesses the primary challenges and issues created by the pandemic and offers administrators and human resource personnel with insights into feasible, innovative solutions as a result of such developments.

### General Terms

Employee, Management, Performance, Record, Data, Technology, Pandemic, Work From Home, Payroll

### Keywords

Automated, Human Resource, System, Onboard, Offboard, Records Management, Attendance Monitoring

## 1. THE PROBLEM AND ITS BACKGROUND

This chapter includes the introduction, background of the study, purpose and description, general objective, specific objective, scope and limitation, and the definition of terms used.

### 1.1 Project Context

#### 1.1.1 Introduction

In the corporate world, a human resources information system, or HRIS, is a tool that is designed to assist firms in meeting their key human resource requirements while also increasing the efficiency of both management and staff. This is made feasible in great proportion by automated and synchronized information, both of which have the potential to decrease expensive inefficiencies while also providing reliable sources of decision-making information. According to Silverstein [2019], 55% of hiring staff are regularly utilizing Human Resource Records and Information Management Systems to facilitate individuals in the recruiting process. Furthermore, 19% of those questioned are not currently using a system but are contemplating on utilizing it in the future. Only 20% had never taken into account adopting one in the first place.

Owing to the pandemic, businesses have adopted a remote approach at a substantial rate never before witnessed. The elimination of face-to-face interactions in preference of email and teleconferencing places increased pressure on human resource departments to do demanding duties under poor settings. As shown in the Human Resources Statistics [2022], 78% of employees indicated that the pandemic harmed their wellbeing. One study found that even during the outbreak, roughly 51% of respondents were far more efficient working from home. [FlexJobs, 2020]. As a result of these factors, firms have opted to implement a work from home strategy.

This study involves the development of a Human Resource Records and Information Management System that is suited for use in a work-from-home environment. It also involves checking the reliability of the Human Resource Records and Information Management System with the help of the

selected beneficiary and evaluating the influence on performance in the Human Resources department.

### *1.1.2 Background of the Study*

Every individual inside the organization is a Human Resource Records and Information Management System user; users of the system include human resource administrators and managers such as human resource, payroll, onboarding, and offboarding. While a substantial number of these workers' duties need frequent interaction with the Human Resource Records and Information Management System, the major distinction among each individual is that they each have a specific task to complete.

Despite the automation of human resource-related operations and the provision of self-service entry to standards and practices, the existing Human Resource Records and Information Management System technologies are only used in a very limited capacity in the present circumstances. Disruptions to Human Resource Records and Information Management System operations on a continuous basis may cause difficulties. Companies regularly find it difficult to keep up with Human Resource Records and Information Management System changes and enhancements in an age of continual disruption. In a research relevant to the proposed system, Hamouche's "Human resource management and the COVID-19 crisis: implications, challenges, opportunities, and future organizational directions" found that remote work allows employees to put in more hours, spend less time commuting, have more job autonomy, and stay up to date on the new technology. Additionally, the results indicate that not only does new technology aid in the administration of employee health and safety but that a work-from-home system enables businesses to maximize their resource utilization and expenditures, such as office space.

To manage personnel records, money, and information, small and medium-sized firms rely on manual labor. At the moment, there is no system specifically designed for a work-from-home environment; the recruiting procedure entails involvement and deliveries from multiple departments, while data management is typically accomplished by digging through file storage; thus, the purpose of this study. A system that enables users to access employee data from any location and at any time. With a centralized database and other services, organizations can more effectively manage their data and connect with applicants in a work-from-home environment.

Beulah Land Christian College Inc. is a private school that caters to pre-school and secondary education and is located in Novaliches, Quezon City. Due to the pandemic, the institute moved to an online class setup. With that, all of the students, and teachers and staff conduct their classes online. Beulah Land Christian College Inc. is the beneficiary of this proposed project. "OASYS: Overall Administering System: A Work from Home Human Resource Information System".

COVID-19 affects a lot in Beulah Land Christian College Inc. A lot of adjustments happened within a year of the institution. The struggle that the school encountered is how to connect students to teachers and especially their Human Resource Management. The organization is still in the process of doing manual checks for their employees. It is hard for the institution to compute the salaries of the employees as well as to keep track of the records of the teachers.

## **1.2 Purpose and Description**

The study was able to provide a Human Resource Records and Information Management System for Human Resource employees to help the Human Resource department. Since the pandemic started, most companies have assigned their employees to work from home. Human Resource departments are having a hard time accommodating to doing their work since all of the employees are in their respective homes. It is hard for them to do the work since Human Resource work is supposed to be done in the office. Some of the companies have already adjusted to their setup but some are not and are still figuring out how the companies would adjust in this kind of setup.

The proposed study helps the Human Resource department in handling Human Resource tasks like payrolls, employee management, onboarding, and offboarding processes, as well as attendance monitoring while the Human Resource employees are in their respective homes and still working effectively.

## **1.3 Objectives of the Study**

### *1.3.1 General Objective*

The general objective of this study is to develop a Human Resource Records and Information Management System that focuses on the Work from Home arrangement. It has a lot of features that can assist and aid Human Resource Management for better and efficient management of the employee and workforce by saving significant amounts of time by centralizing all of the tools needed in managing. This system would be accessible online, which would be an immense help for the users to utilize it anytime and anywhere.

### *1.3.2 Specific Objectives*

In order to obtain the general objective, the following must be met.

- To design a system that would monitor the onboarding and offboarding processes of the company.
- To create a system that reduces the amount of time HR employees spend dealing with other personnel and handles queries more quickly, at any time and from any location.
- To provide a system that enables employees to gather data by making it readily accessible for working remotely.

- To create a system that would aid the generation of reports by people working in the Human resource department.
- To design a system that guarantees the security and confidentiality of information contained within the Human Resource department.
- To provide a payroll system that would aid in accurately computing the necessary aspects of the net pay of all the employees in the organization.
- To create a system with multiple user levels that incorporates all of the essential elements utilized by the human resources department.
- To test and evaluate the application using ISO 25010

## 1.4 Scope and Limitation

The proposed system is a Human Resource Records and Information Management System. This system would be used for managing the process involved in the Human Resource department of an organization. The users of the system would be the Human Resource Staff and the employees of the company. Included below would be the detailed description of the users and the description of the features of the proposed system.

The proposed system would have the following users and their corresponding user privileges:

- **Human Resource Admin**  
The Human resource admin would be able to monitor the employee's time records. They would be able to track all of the employees who are undergoing training and orientation. They would be able to upload videos that would be used for the training and orientation of onboarded employees. They would be able to manage employees who would need to undergo corrective measures.
- **Human Resource Staff**  
The human resource staff would be the user that would have access to all the entries of the applicants. They would be able to filter all of the entries for easier filtering of applicants. They would have access to the interview management feature wherein they would be able to record if an applicant has been interviewed. They would be able to reject applicants.

The human resource staff would also be the user that would be able to offboard employees that are already onboarded or regularized. They would be able to notify employees if they would be offboarded or if there is a possibility of them being offboarded. They would be able to issue corrective measures for the employees to undergo to prevent being offboarded. They would be able

to view all of the offboarded employees. They would be able to manage the offboarding clearance of employees.

- **Payroll Manager**

The payroll manager would be the user who would be able to access all of the information that would be needed to issue a payslip for employees.

- **Employees**

- **Onboarded**

Onboarded employees would be able to time in and out using the system. They would be able to access the training and orientation features of the system.

- **Regularize**

Regular employees would be able to time in and out using the system. They would be able to view their past payslips and the benefits that they are receiving.

- **Offboarded**

Offboarded employees would be able to access the clearance feature of the system only and if accomplished correctly their accounts would be removed.

- **Applicants**

Applicants would be the users who would be able to submit their personal information and their documents such as a resume. They would be notified if they are to be interviewed or if they are rejected.

The following are the features of the proposed system:

- **Onboarding**

The proposed system would help the Human Resource manager and applicants in the entire onboarding process. The system would allow them to view and filter the applications of applicants and they would be able to select the applicants who would pass the first selection. After the first selection, Human Resource would call the applicant for an interview. Using the system they would be able to record who are the applicants that need to be called and the applicants that are not yet called. After the second selection, the Human Resource manager would be able to select the applicants that would be onboarded.

- **Offboarding**

The proposed system would enable Offboarding managers to view and manage all of the offboarded employees. Offboarded employees would have to accomplish their final clearance and once they have accomplished their clearance

the managers would be notified and they would be able to clear the offboarded employees who have finished their clearance. Once cleared, the system would remove all records of the offboarded employee.

- **Job Application**

This system would have a job application feature at which point applicants would be able to submit their applications using the system. Through the system, they would be notified of the status of their application.

- **Payroll Management**

This system would have a payroll feature wherein payroll manager users would be able to create and issue payslips to all employees who are eligible for a payslip. The payroll manager would be able to create changes to the computation of the payslip. When a payslip is issued to an employee, they would be able to see their payslip in the system.

- **Employee Management**

The system would have features to manage all of the onboarded and regularized employees. Included in this feature would be the training and orientation of the newly onboarded employees. To aid in the orientation and training of newly onboarded employees, the Human Resource manager would be able to upload videos on the system for the onboarded employees to watch. This system would also enable the Human Resource manager to regularize newly onboarded employees if they meet their specific requirements. Using the system, Human Resource managers would also be able to enforce corrective measures for employees who need to be penalized. Using the system, Human Resource managers would be able to schedule regular performance assessments for the employees.

- **Attendance Monitoring**

This feature of the proposed system would allow employees to time in and time out using the system. The system would keep track of their attendance and the Human Resource manager would be able to monitor their attendance. The time tracking feature would also be used in generating the payslip of employees.

- **Health Checklist**

This feature would allow the administrator to regularly monitor the health conditions of its employees. The system would inquire about employees' health in order to conduct an assessment of their present state of wellbeing and would do so by asking relevant health-related questions. By using the system, employees would be able to determine for themselves whether or not they are suited to work or should be granted a leave of absence.

- **Information Security**

A database would be used to hold all of the information and data that would be uploaded and submitted via the system. The system would have security features to keep the information contained in the database safe and protected.

The proposed system would contain features that would involve uploading videos of the users, however, the system would not have any features that would help the users in creating the instructive videos. Online conferencing and meetings would not be covered by the proposed system. Any training and orientation that would require on-site training and cannot be taught through an instructional video would not be covered by the system. The verification of the truthfulness of the application of applicants would not be automated by the proposed software. The performance assessment feature would not automate the process but it would provide aid in recording the performance assessment of employees. The notification and messaging feature caters to the sending and receiving of messages both within the organization and to external email accounts. Examinations that would involve written exams and questionnaires would not be covered by the system.

## 1.5 Definition of Terms

Enumerate the terms used in the study. Define each term operationallyà meaning define each term according to how it was used in the system/study. Do not copy from dictionaries nor internet articles. The terms must be alphabetically arranged. For example:

The following terms are defined for easier understanding of the study.

**Admin.** An admin is a person who is responsible for overseeing all of the administrative requirements of an organization or firm.

**Automated.** computer-assisted operations that are completely functional and automated, as opposed to manual processes.

**Onboarding.** Acclimatization refers to the act or process of introducing a new employee to an organization or of introducing a new consumer or client to a company's goods or services.

**Offboarded.** personnel who have been fired, retired, or otherwise terminated.

**Offboarding.** the procedure that results in the formal separation of an employee from his or her employer via resignation, termination, or retirement.

**Payroll.** a compensation that a business must pay its employees for a specified period of time or on a specified date.

**Payslip.** a note given to an employee upon payment that details the number of payments received and the amount of tax and insurance deducted.

**Regularized.** trusted employees that have been in the company for more than 6 months and enjoy the whole benefits offered by the company.

**Remote.** employees are able to work from a place outside of the company's headquarters in this type of arrangement.

## 2. REVIEW OF RELATED LITERATURE AND STUDY/SYSTEMS

This chapter summarizes the relevant literature and studies discovered during the researchers' extensive and in-depth investigation. There are a variety of ideas, beliefs, assumptions, findings, and developments linked to the topic that are addressed in the literature and studies cited in this chapter. The researchers would use this as a reference when developing their project. In addition, this chapter's data enables students to familiarize themselves with aspects that are both opposing and comparable to the current study.

### 2.1 Local Literature

**2.1.1 The Effectiveness of 'Work from Home' In a Private Service Company.** Before the pandemic, many companies used virtual job interviews only as a last resort. Now that the pandemic occurred businesses have started shifting to a work-from-home setup. According to Marasigan [2020] <sup>1</sup>, work from home operations functioned well, and the job gets completed at a professional rate. Given the results, there had been a big difference in how well the workers functioned based on various demographic levels. Focusing on the outcome of the research, it was speculated that HR Departments should devise a way to figure out which jobs, tools, and personnel would be best for the plan.

This article illustrates that working remotely is beneficial and the performance level of workers is considered top standard. As a result, it is necessary that the HR Department establish a system that is eligible for working remotely. Additionally, effective processes for program longevity and stability might well be established, as well as maintaining the quality of work.

**2.1.2 Work Never Away From Home: Exploring the Concept of Work Among Home-based Workers.** Despite the lack of standard constraints in most physical companies, employees should exercise resilience in order to produce the anticipated organizational results. They use this as an underlying motivational tool, and they use it in both their professional and private lives. Based on a study by De la Cerna [2019] <sup>2</sup>, quality family time while still at work is indeed a good thing for people who work from home. People who work in conventional ways usually don't have this kind of flexibility in their work. Therefore this gives most businesses a clue for how to change their salary and benefits.

This article indicates that the COVID-19 pandemic has suddenly intensified the essence of home-based jobs. Additionally, the previous factors validated the importance of freedom in the majority of fields with the idea of home-based jobs.

**2.1.3 A Case Study on the Advantages and Challenges of Work From Home (WFH) Scheme During Pandemic.** According to Liwanag [2021] <sup>3</sup>, studies have found that a lot of people think that working remotely is a good thing because it gives them more control over their work plan and gives them more freedom to work when they want to. They also think that working from home saves them money because they don't have to spend more money on travel, carparks, and uniforms. One other advantage of working remotely for the staff is that they don't have to drive to work during peak traffic.

This article shows that eliminating the challenges associated with face-to-face work is perhaps the most significant benefit for many workers. This proves that if people don't have to drive to work, they would have much more time to devote to their family members.

**2.1.4 Barriers and facilitators of productivity while working from home during pandemic.** People who work from home can be more productive if their workstations are the right size and if their stress levels aren't too high. According to the study of Seva, Tejero, and Camacho [2021] <sup>4</sup>, Most of the people who took the survey said that their workstations did not satisfy ergonomic standards, especially the chairs that they have used. According to the findings of this study, many who work remotely have ergonomic concerns with their workstation.

This article demonstrates that workstation compatibility and ergonomic compatibility affect stress, and efficiency, as well as how these things affect their body.

**2.1.5 The Impact of Human Resources Management Practice amidst COVID-19.** According to Mobo [2020] <sup>5</sup>, the majority of workers are assimilating to their digitally-enabled HR management via a work-from-home arrangement, as well as the majority report feeling at peace with the new regime. COVID-19 had a massive effect on the Human Resource Practices of the majority of corporate and public organizations, particularly in terms of how workers would operate during the pandemic. Nevertheless, areas with a greater share of jobs in evidential labor, such as managerial, technical, and similar professions, were much more inclined to move towards remote working and have fewer individuals laid off or suspended.

Considering that a large percentage of individuals have internet access, this article underlines that the majority of workers are adapting to their modern digital human resource information system via working remotely, with the majority expressing satisfaction with the new structure.

### 2.2 Foreign Literature

**2.2.1 The Use and Effect of Human Resource Information Systems on Human Resource Management Productivity.** Technology nowadays helps a lot of people doing their work, one of the technology systems invented by humans is the Human Resource Information System (HRIS). According to the study of Shahreki [2019] <sup>6</sup>, the findings show that HRIS-enabled HR conventional management activities like career development, performance awards, communication, and management have the greatest impact on HRM productivity. In this way, the correlation value between HRM productivity and the previously described HRIS-empowered HR conventional exercise is higher than typical. It indicates that this study suggests that a business intentionally adopts PMS, a key HRIS aspect, in order to properly deal with personnel. The current study investigates the link between HRIS impact and HRM productivity in order to gain a better understanding of how ICT installation affects BPM.

It is obvious that technology aids many employees and workers nowadays, and this article demonstrated how organizations are attempting to increase HRM performance through the usage of HRIS-enabled HR activities. Also, it affects employee job experience, output, service standards, and client satisfaction.

**2.2.2 Human Resource Information Systems (HRIS) of Developing Countries in the 21st Century: Review and Prospects.** A lot of countries nowadays are advancing in terms of technology, there are a lot of new technologies revolving around the world and one of them is HRIS. According to Quaasar & Rahman [2021] <sup>7</sup>, this is the period of Strategic HRM's Technological Advancement and HRIS is critical for developing and updating HR activities. The threefold implications of ICT on HR functions. Today's business recognizes that creative and inventive people are critical to sustaining a competitive edge, as they are difficult to replicate by competitors, unlike other resources. The human resource balanced scorecard was created as a result of these developments, and it is highlighted by the return on investment (ROI) of human resource functions and its program.

The authors also added that the respective firms' HR managers become crucial business partners. HR technology (specifically, HRIS) is developing as an emerging field that might take human resource management into an unforeseeable and contemporary era, based on the interplay between IT and HR. HR managers nowadays disregard the potential of IT-based human resource operations, resulting in widespread adoption of HRIS.

Organizations are becoming increasingly interested in HRIS acquisition, implementation, and exploitation as their awareness of its capabilities and activities grows. This article only shows that this procedure necessitates awareness, in which firms must comprehend the extent of HRIS and investigate how it may be used efficiently.

**2.2.3 Adoption of Human Resource Information Systems in Developing Countries: An Empirical Study.** Adapting and implementing the newest technologies in

other countries would be a big factor for the country to improve more and be efficient. Based on the study of Quaasar [2018] <sup>8</sup>, the model established in this study may simply be used to investigate HRIS uptake in other developing nations. Because it highlighted the important elements that drive HRIS adoption in developing nations, the study's findings are critical for the creation of policies and strategies for HRIS adoption in developing countries. Before implementing any technology, such as HRIS, decision-makers in a business should consider staff engagement and training support. The increasing incidence of HRIS implementation across firms in developing nations has created a huge potential for HR departments to employ information technology.

This article signifies that when it comes to organizations and governments enhancing HRIS adoption in the public sector in developing nations is important. Thus, users with no prior familiarity with HRIS should be given special consideration.

**2.2.4 Human Resource Information Systems (HRIS) - The New Role of HR in the Giant Data Age.** Software applications abates to help people to accommodate and accomplish a lot of things. Based on the study of Das & Barman [2019] <sup>9</sup>, Human Resource Management has undertaken a substantial reorganization of its HR operations, with the goal of becoming a core business partner in Strategic HR, rather than just a people administrator in transactional HR. HR's focus has shifted from making HR operations more efficient and effective through process standardization and technology to formulating business strategies that add value to the organization; this includes anticipating critical workforce trends, shaping and executing business strategies, identifying and addressing people-related risks and regulations, improving workforce performance and productivity, and offering new HR initiatives to the organization.

As is the case throughout many regions, this article demonstrates how crucial HR's collaboration with IT has been in empowering HR to assume the position of a reliable asset in boosting total organizational effectiveness.

**2.2.5 Impact of COVID-19 on Human Resource Practices.** COVID-19 affects a lot of businesses, people, and companies by means of adjusting schedules, profits, working systems, and how to handle supplies and employees. According to Subha [2022] <sup>10</sup>, remote working necessitates the availability of technological tools that facilitate communication between employees and managers, such as Zoom, Microsoft remote desktop, team viewer, and Microsoft team, which cannot be afforded by all organizations due to financial constraints, human resources practitioners have faced significant challenges in managing remote working, including ensuring that employees on flexi-time have the necessary tools to perform their jobs. Second, workers who work from home have good communication, supervision, help, and performance tracking.

The author also added that HR leaders should think about data-tracking tactics and technologies like an applicant tracking system or other HR systems for reporting hiring. Some of the KPIs HR practitioners should keep an eye on include time to hire, cost per hire, minimize time to hire, early turnover, sourcing channel efficacy, a visitor to applicant conversion rate, quality of hiring, revenue per employee, and so on.

Over the years, there has been a widespread assumption in the city that employees must be physically present in the workplace to do their duties. This study explains that for a great deal of individuals, this is their first time working remotely, and it is proving to be successful to a significant part now that the pandemic has forced a trial run for WFH in the city.

## 2.3 Local Study/Systems

**2.3.1 Human Resource Information System for Recruitment of Better Children of Saint Clare Montessori Center.** School was one of the most affected when the pandemic started. Education in the Philippines slowed for a reason. The students struggled adjusting to the new normal. According to the study of Orane et al. [2020]<sup>11</sup>. A human resource (HR) information system is essentially the marriage of human resources and information technology via human resource software. A manual system is one in which data/information is entered without the use of a computer, but it may take longer than anticipated. The researcher would demonstrate the value of having a human resource information system focused on recruitment and how it would simplify one's work by typing and saving it in the database. The proponents began the project by identifying a client who would entertain them and provide the information necessary for system development. Second, they sought out a company that would be a good fit for the system project.

As the study explains, it can be concluded that every piece of information is crucial in each and every way. It has been demonstrated that making one's work easier by allowing the users to retrieve data from any location makes it more efficient.

**2.3.2 Design And Development Of Human Resource Information System (HRIS) For Private HEIS.** According to the study of Ruth Luciano [2020]<sup>12</sup>, the school, like any other institution, employs staff and maintains personnel files. A company's greatest asset is its people. Whether the product is automobiles or cosmetics, it doesn't matter. It's only as good as the people it employs. Staff is a resource that must be utilized to its full potential, just like any other. In either a paper-based or computerized setting, an effective personnel records system must be in place. The HRM function of an organization focuses on the management of people. Including pre-hire, staffing, and post-hire processes, it aids the business in dealing with its personnel in an effective manner throughout the employment cycle. It is the HRM department's

responsibility to oversee all aspects of an organization's human resource management (HR).

An outstanding method for meeting the needs and demands of the school's department of human resources is described in detail in this study. These are identifiable qualities of systems which include: long-term reliability, high precision and compatibility, privacy, reusability, resilience and scalability, as well as flexibility. That is to say, the system is user-friendly and may be deployed to meet the demands of the beneficiary in a variety of ways, given that the client is knowledgeable of all the system's functions and characteristics.

**2.3.3 Student Information System Bulacan: Human Resource 3 (Time and Attendance, Timesheet Management, Shift and Schedule Management, Leave Management, Claims and Reimbursement).** Another thing that has been affected by the pandemic is the students and the school they are studying at. According to the study of Balbino et al. [2019]<sup>13</sup>, because of the absence of security, the traditional method of logging Attendance by using a logbook is too risky for management. As a result of a manual process for allocating shifts and schedules, both employees and administration are burdened with additional paperwork and confusion. Filing of time off and expense claims, for example, is time-consuming because it requires requesting approval from multiple departments or individuals. Clients who want immediate results from a system can benefit greatly from the Agile Method. In this way, people have been suffering because of the sudden change in the last few years. People have lived their lives for so many years and unfortunately, they aren't prepared for unexpected changes.

This study explains the major drawbacks of the conventional approach via manual method, which usually result in significantly more documentation and uncertainties for both employees and managers, while also being excessively time-consuming due to the necessity to go through various departments or personnel to obtain authorization. Alternatively, an advanced and modern system is introduced to simplify old practices by merely pressing a few keys without exerting much effort.

**2.3.4 Human Resource Information Management System.** The study of Emmanuel Navarro [2019] stated that today's technology is critical to every aspect of human life, whether personal or professional<sup>14</sup>. Computers and related technologies such as the internet have dramatically improved how people do activities and store, retrieve, transfer, and change data or information. In the workplace, the most difficult sector to manage when it comes to vital data and information is the human resource department (HRD). Thus, regardless of the size of the firm, the human resources department is a crucial, if not critical, component of any business. It is responsible for locating, screening, recruiting, and training job applicants, as well as administering employee benefit programs and performing performance evaluations on employees.

It is explained in this study that improving human resource management is crucial for vital positions in the human resources department. Since the advent of technology, humans have depended on it. It simplified people's lives like never before. It aided a large number of people in a significant way.

**2.3.5 Adoption and Implementation of Human Resource Information System in a Private Higher Education Institution of the City of Santiago.** Based on the study by Adducul, R., Domingo, W., Gonzales, V. [2020] <sup>15</sup>, the Human Resources Information System (HRIS) is a computer-based application that enables human resource managers to generate, organize, store, update and retrieve the data necessary to maintain employee information. A technique used by human resource managers to optimize both the performance of the human resource department and the overall productivity of the company's workforce. In this way, human resource management can easily handle the employee's needs and files without any hassle. As it is known, employee data is critical for any business. Despite this, the majority of human resource departments continue to save data in spreadsheets and on paper. Spreadsheets and paper are not intended to be used to store human resource data. HR data is frequently stored in multiple locations by various departments for a variety of functions, resulting in data duplication. By centralizing data management and decreasing human error, an HRIS eliminates data duplication.

This study discussed how an HRIS that is designed to centralize all human resource data, allowing you to readily locate employee information without having to sift through multiple sheets and files, can optimize both the performance of the human resource department and the overall productivity of the company's workforce.

## **2.4 Foreign Study/Systems**

**2.4.1 The impact of pandemic covid -19 in Workplace.** The virus outbreak all over the world leads to drastic changes in the way people work. According to the study, "The impact of pandemic covid -19 in Workplace", For an undetermined amount of time, all social and economic activity in the afflicted nations was required to be halted in order to prevent the epidemic from spreading further. As a means of overcoming the present issue, businesses are experimenting with "Work from Home" models for running offices and administrative roles. Companies are attempting to deal with the economic turmoil produced by COVID 19 by using disruptive technologies, such as the notion of working from home. [Kaushik & Guleria, 2020] <sup>16</sup>

This study shows the impact of the pandemic to the workforce. Workers have been impacted by the tremendous changes in the workplace in the last several years. Because work, before the epidemic started, was primarily face-to-face, on-site, or in the office and does not need tight social distance. Processes on the organization are not appropriate to be done remotely. Also establishments are

forced to lessen the people they accommodate which is a problem for workers

**2.4.2 The potential impact of the COVID-19 pandemic on occupational status, work from home, and occupational mobility.** Since the changes in work norms because of the pandemic, there were different reactions from different work sectors. When it comes to visible changes that have happened as a consequence of the COVID-19 epidemic, the migration of many workers to work from home arrangements across a wide variety of vocations is one of the most notable. Individuals from some occupational groups who had little experience with working from home (for example, teachers in primary education) were shifted to such arrangements, while individuals from all occupations who preferred not to work from home are now forced to do so due to the nature of the work. [Kramer & Kramer, 2020] <sup>17</sup>

Workers have been forced to work from home in the past few years. Because workers are not used to this kind of work-from-home arrangement, it causes a variety of issues for them. Some sectors of the profession are not suitable for remote work or have not been modified to accommodate remote work prior to the epidemic, resulting in issues for workers.

**2.4.3 View of The Importance of Human Resource in Nigerian Organizational Development.** Human resources are the people who work for the company and manage it. The workforce is one of the key reasons a company or a business reaches success and creates profit. That is why it is crucial to select and take care of the workforce. According to a study by Ifeanyi and Omena, Human resource management is a critical department in every firm since it has a direct impact on all other departments. They are in charge of staff motivation, as well as all recruiting and selection for all departments. [Ifeanyi and Omena, 2022] <sup>18</sup>

This research demonstrates how critical it is to effectively manage an organization's human resources, demonstrating why the Human Resource department is so crucial. Human resource management is responsible for overseeing a business's personnel, which is considered to be one of the most valuable assets an organization has. The workforce is the group of individuals that are responsible for the operation of the business, and as such, they should be treated with respect and managed effectively.

**2.4.4 Managing organization effectiveness through E-HUMAN resource management tool-e-learning: Indian cases a qualitative approach.** According to the study of Sucheta Agarwal and Usha Lenka, in this age of information technology, firms are expressing a strong interest in implementing e-HRM, in which technology and human resource management practices are combined to provide workers with the possibility to access additional self-service options. [Agarwal & Lenka, 2018] <sup>19</sup>

This research reveals that in the current period, industries and firms are developing an interest in automating and



integrating new technology into their workflow to simplify their work process. This growth in interest in new technologies may also be seen in the human resource business. E-human resource management is the instrument that supports the workflow of Human resource.

**2.4.5 The effect of E-human resource management (E-HRM) on cost.** According to the results of tests conducted by Nadiailhaq Nurshabrina and Riza Adrianti. There would be a quantitative investigation conducted using the SEM-PLS approach. In this research, the technique of sampling was purposeful sampling, which was employed to collect data. Individuals who conducted this research using SEM-PLS discovered that the E-Compensation and E-Performance Appraisal variables had a favorable and statistically significant impact on cost efficiency. Employees' productivity is greatly influenced by the variables in their e-training. Meanwhile, the E-Recruitment variable has no effect on how much money individuals make or how much labor they put in over the course of a year. [Nurshabrina & Adrianti, 2020]<sup>20</sup>

In this research, it was discovered that E-human Resource Management produces statistically significant and good outcomes when tested for its efficiency in teaching workers remotely, and the findings have a favorable impact on employee productivity. Despite the fact that it produces favorable outcomes, the cost-effectiveness of the solution did not demonstrate a statistically significant difference.

### 3. METHODOLOGY, RESULTS, AND DISCUSSION

This chapter summarizes the methodology used to conduct the study "(OASYS) Overall Administering System: A Work-from-Home Human Resource Records and Information Management System." The study's results are also provided and discussed in relation to the study's objective, which was to evaluate the relevance of providing a Human Resource Records and Information Management System suitable for home-based arrangements for employees in the HR Department.

#### 3.1 Requirements Analysis

##### 3.1.1 Software Development Life Cycle

The researchers used the spiral model due to the system's nature. Attributed to the fact that the approach requires interaction and collaboration from the beneficiary, and because the beneficiary needs to evaluate the prototype at each point of the system development, the likelihood of client satisfaction substantially increases. Owing to the beneficiary's significant involvement in our system, the program requires their input and suggestions in order to tailor the system to their specific needs. Figure 1 illustrates the spiral model.

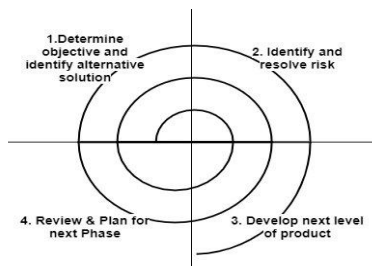


Figure 1. SDLC - Spiral Model

##### 3.1.2 Conceptual Paradigm

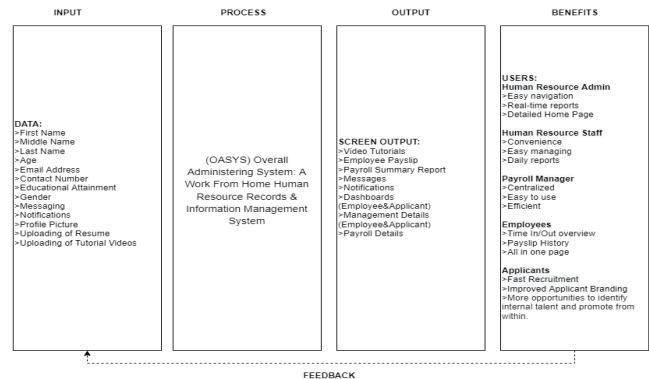


Figure 2. Conceptual Paradigm

The conceptual diagram found in Figure 2 shows the user details that they can input, our targeted users, as well as what outputs they can see and their benefits to both applicants, employees, and the administrator. They are segmented into four categories: Input, Process, Output, and Benefits.

##### 3.1.3 Flow of Existing System

###### 3.1.3.1 Flowchart of the Existing System or Wireframe of the Existing HR System

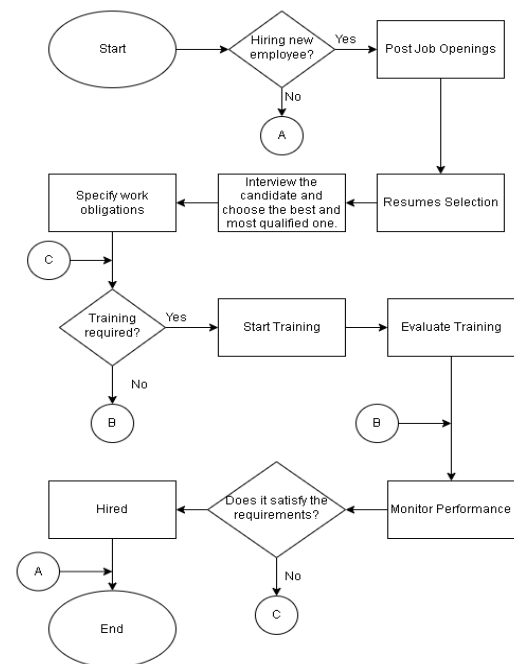


Figure 3. Flowchart of the Existing System

### 3.1.3.2 Data Flow Diagram of the Existing HR System

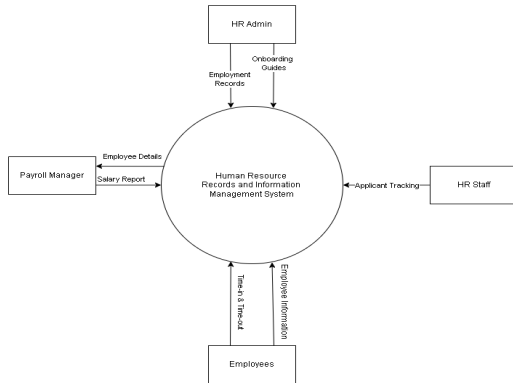


Figure 4. Context Diagram of the Existing System

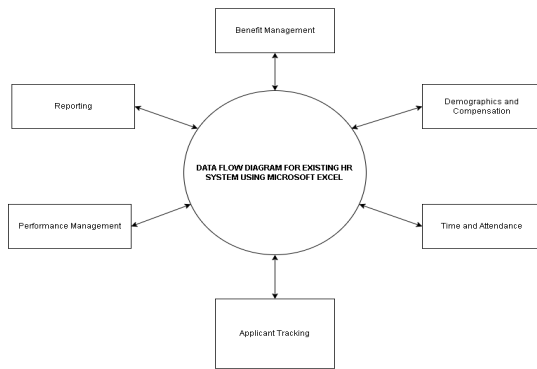


Figure 5. Data Flow Diagram of the Existing System (Level 0)

## 3.1.4 Flow of Proposed System

### 3.1.4.1 Flowchart of the Proposed HR System

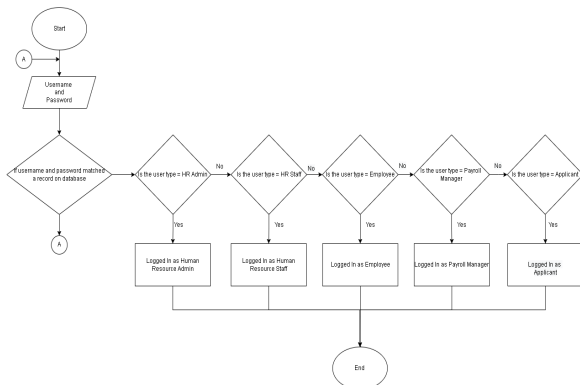


Figure 6. Flowchart of the Proposed System-Log In

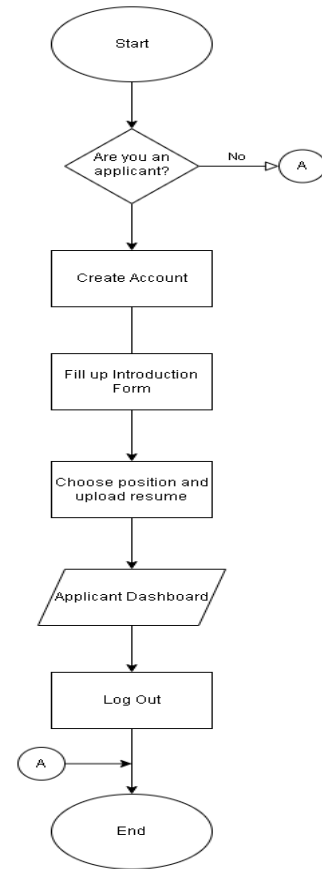


Figure 7. Flowchart of the Proposed System-Applicant

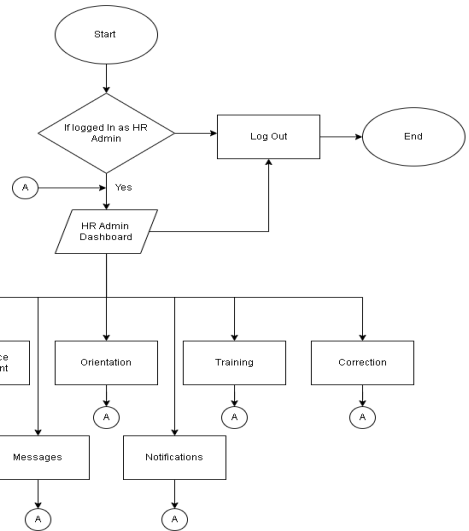


Figure 8. Flowchart of the Proposed System-HR Admin

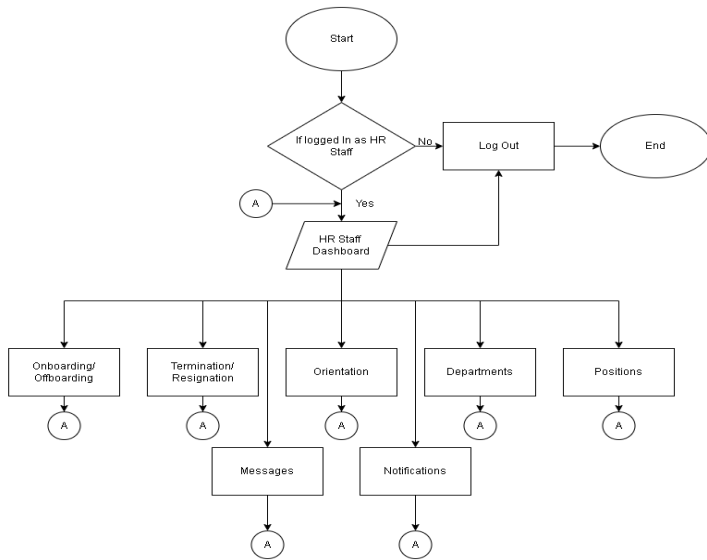


Figure 9. Flowchart of the Proposed System-HR Staff

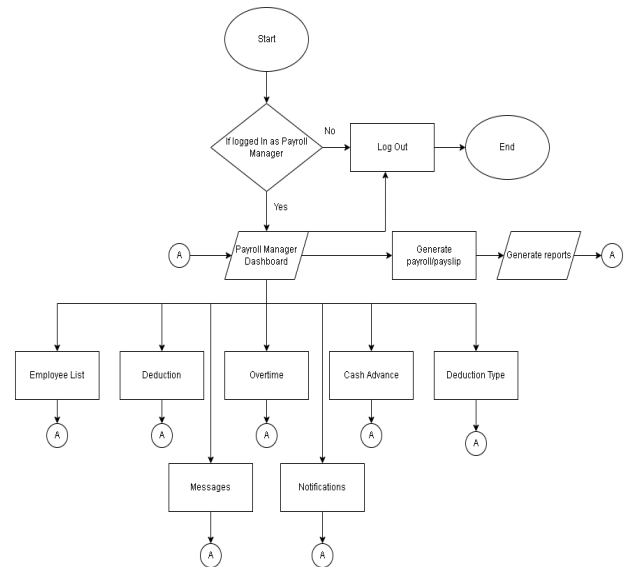


Figure 11. Flowchart of the Proposed System-Payroll Manager

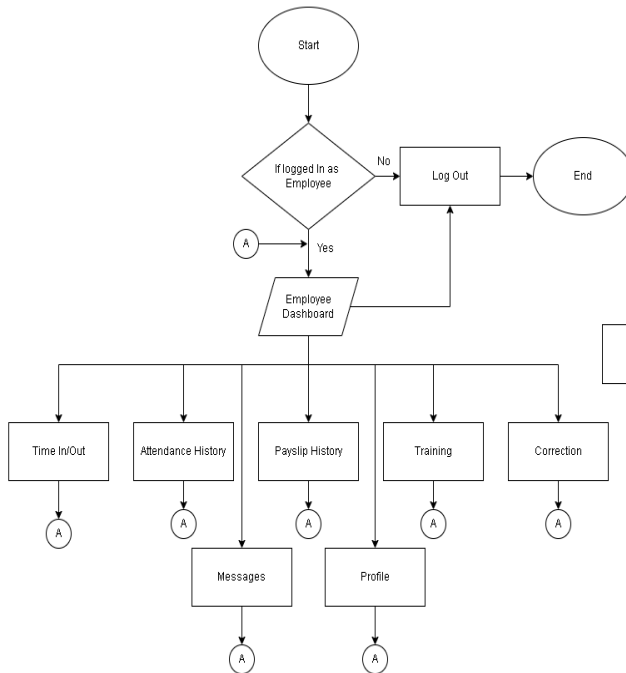


Figure 10. Flowchart of the Proposed System-Employee

### 3.1.4.2 Data Flow Diagram of the Proposed HR System

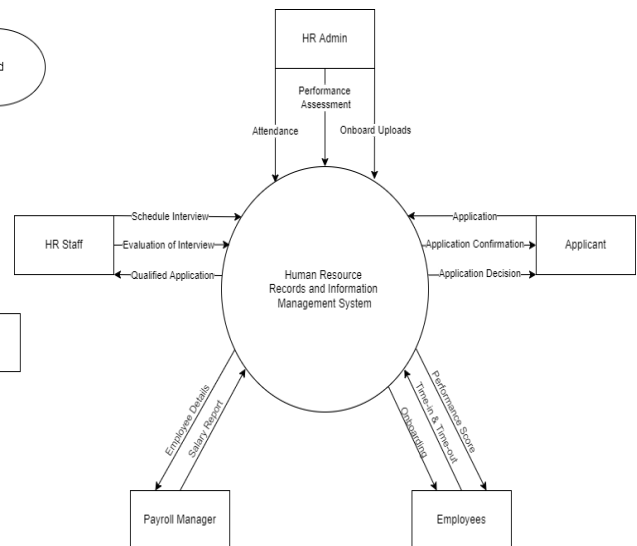


Figure 12. Context Diagram of the Proposed System

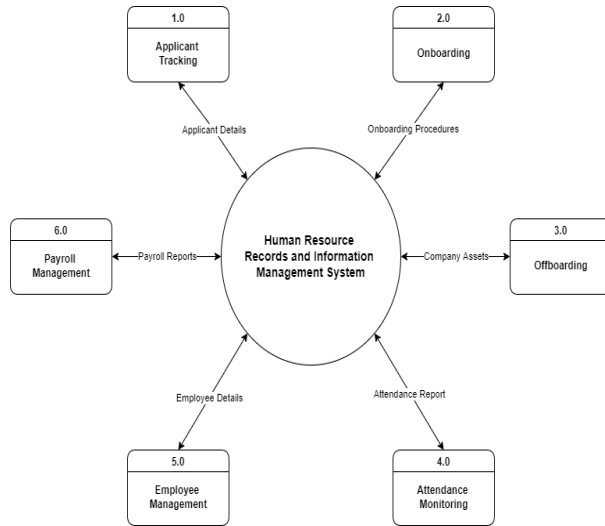


Figure 13. Data Flow Diagram of the Proposed System (Level 0)

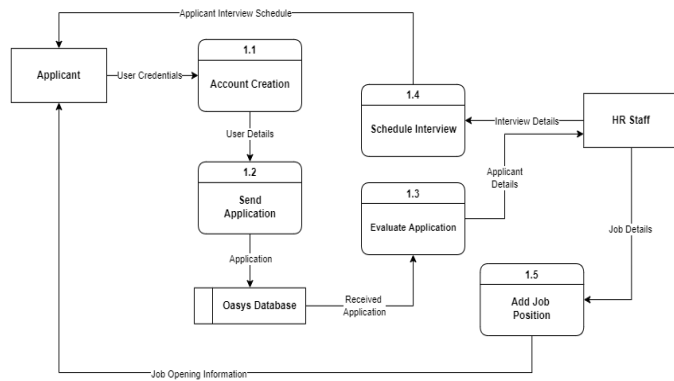


Figure 14. Data Flow Diagram of the Proposed System-Applicant Tracking (Level 1)

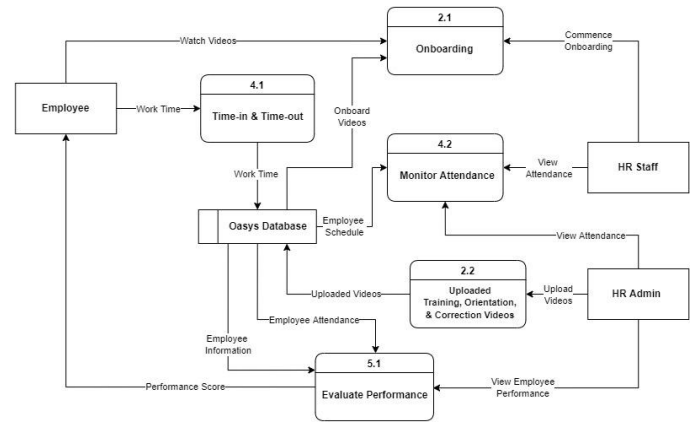


Figure 15. Data Flow Diagram of the Proposed System-Onboarding, Employee Management & Attendance Monitoring (Level 1)

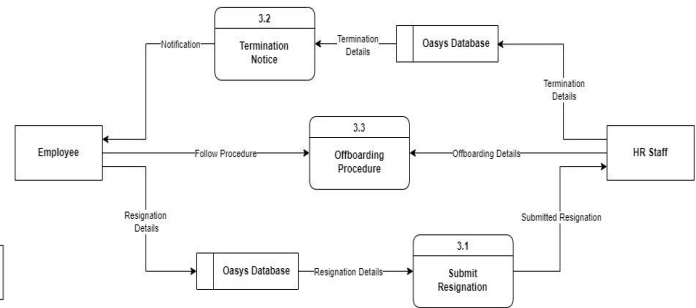


Figure 16. Data Flow Diagram of the Proposed System-Offboarding (Level 1)

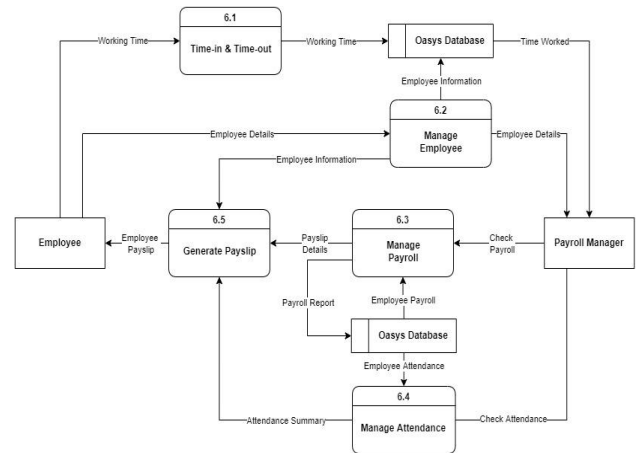


Figure 17. Data Flow Diagram of the Proposed System-Payroll Management (Level 1)

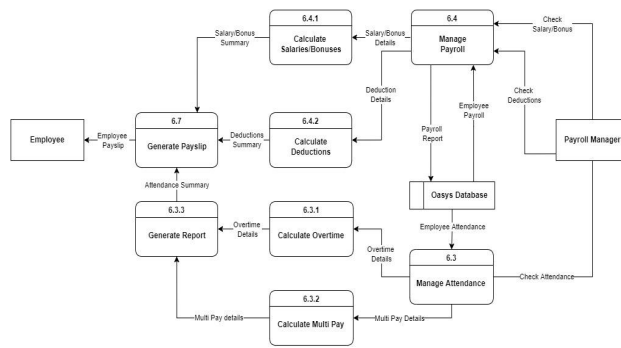


Figure 18. Data Flow Diagram of the Proposed System-Payroll Management (Level 2)

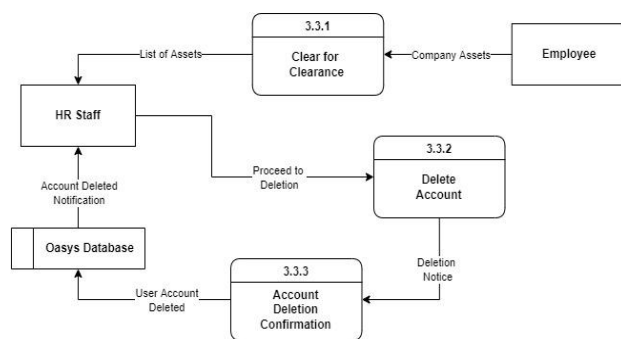


Figure 19. Data Flow Diagram of the Proposed System-Offboarding (Level 2)

## 3.2 Requirements Documentation

### 3.2.1 Methods of Research

This study has used the quantitative method to meet the criteria of consistency and effectiveness of the proposed system. For the purpose of gathering information on the beneficiary, the researchers would use interviews, and surveys in order to obtain information. This method would produce accurate data that would be useful to the researchers in the development of a user-friendly computer system.

### 3.2.2 Research Instruments

ISO 25010

Using the software evaluation tool, the researchers can determine whether or not the proposed system is the optimal solution for meeting the requirements of the beneficiary. This offers a collection of standards that developers and researchers could find helpful when conducting their own evaluations of the overall effectiveness of the program, as well as its usability and overall continuity.

Interview

Human and system information requirements can be gathered in large part through the use of interviews. Interviewee thoughts, emotions, aspirations, and responses can all be gleaned from this method. The researchers performed interviews to see how current system users felt about it. The interviewer had a list of open-ended and closed-ended questions for the Director of Human Resources. Identifying the issues and their causes allowed the researchers to develop features and objectives for the system they had in mind.

### Questionnaire

Questionnaires were distributed to the beneficiaries. This information assists researchers in determining whether or not the beneficiary is experiencing problems with their current situation. The researchers used questionnaires to acquire profound and diverse feedback from the respondents.

## 3.3 Technical Background

### 3.3.1 Product Description

The Overall Administering System (OASYS) is a work-at-home human resource records and information management system designed for managers and employees, as well as system administrators and others who rely on the system. It includes an information management system, payroll administration, employee management, attendance monitoring, onboarding, and offboarding to aid the human resource department utilize data more effectively.

### 3.3.2 Economic Use of the Product

All organizations have a significant impact on the lives of people. The selected organization has a reasonably broad scope. There are several aspects to this, such as improving the effectiveness of the institution, obtaining benefits through methodological approaches, clarifying the functions of an organization, communication, stress-free planning, effective guidance, and orderly and efficient implementation. As a result, there's a greater sense of collaboration, delegation of responsibilities, and a more flexible approach.

In order for an organization's human resources department to function properly, it must have a system in place that simplifies the responsibilities at hand.

### 3.3.3 User Requirements

The following are the user requirements for the proposed system that have been established by the end user. These requirements specify both the method in which the system, equipment, or process should be conducted and the conditions under which the proposed system should be performed.

#### Human Resource Admin

- Knowledgeable about HR-related issues.

- Experience with HR software, like HRIS or HRMS
- BS in Human Resources or relevant field
- Able to organize and maintain personnel records.
- Update internal databases.

#### Human Resource Staff

- Compiling and updating employee records
- Process documentation and prepare reports relating to personnel activities.
- Strong communication skills
- Degree in Human Resources or related field
- Hands-on experience with an HRIS or HRMS
- Coordinate communication with candidates and schedule interviews.
- Conduct initial orientation for newly hired employees.
- Provide clerical and administrative support to Human Resources executives
- On-boarding and off-boarding of employees

#### Payroll Manager

- Ability to process payroll account transactions.
- Coordinating timekeeping and payroll systems
- Oversee processing of payroll changes
- Maintain accurate records and prepare reports.
- Resolve issues and answer payroll-related questions.
- Proven experience as a payroll manager or similar role.
- Current knowledge of payroll procedures and related laws
- Excellent understanding of multi-location payroll and taxes
- An analytical mind and good math skills
- Outstanding communication skills (written and oral)
- Organizational and leadership skills
- BSc/BA in Business Administration, Accounting, Human Resources or related field

#### Employees

- Knowledge and ability to use computers and related technology efficiently

#### Applicants

- Computer literacy
- Qualified applicants for the job positions

### 3.3.4 System Requirements

The following are the system requirements for the proposed system that have been established by the developers. These requirements specify both the software and hardware system requirements that are needed for the users to smoothly run the said web-based application.

#### Hardware type:

#### Requirements:

Processor family	Intel x86 or x64 (minimum) Intel i3 or above (recommended)
------------------	---

Processor speed	1-2 Ghz (minimum) 3 Ghz-above (recommended)
-----------------	--

Memory ram	4 GB Ram (minimum) 8 GB Ram (recommended)
------------	--

Display	1024 x 768 (minimum) 1920 x 1080 (recommended)
---------	---

**Software type:** Any web browser

**Minimum bandwidth required:** 20mbps

## 3.4 Development and Testing

Visual Studio Code and phpMyAdmin would be used for the development of the proposed system. Visual Studio Code is a lightweight but powerful source code editor for Windows, macOS, and Linux. The visual studio code incorporates all of the components needed to build the suggested system. Additionally, it contains built-in compatibility for JavaScript, TypeScript, and Node.js, and also a variety of extensions that add functionality for additional languages and third - party tools. Additional features include debugger, intellisense, snippets, refactor, and integrated Git. The other software program that would be utilized is phpMyAdmin, which is designed to manage a MySQL database server. The researchers would use phpMyAdmin to execute the majority of administrative activities, including database creation, query execution, and user account creation.

The proposed system is intended for use by individuals within their homes. The testers are selected from within the chosen beneficiary's human resource department. The system would be tested in each employee's residence; because the system is a web application, it can be visited from any location via a browser such as Microsoft Edge or Google Chrome. To access the web application, the user can select the computer or devices that he or she would use. Following the system's testing, the researchers would perform an evaluation survey using a Google form.

## 3.5 Description of the Prototype

This would be the home page of the proposed system, on which the title of the system itself would be present, along with its functionality and purpose. It is also present here the login button and send application where users can choose the appropriate action that suits their needs.

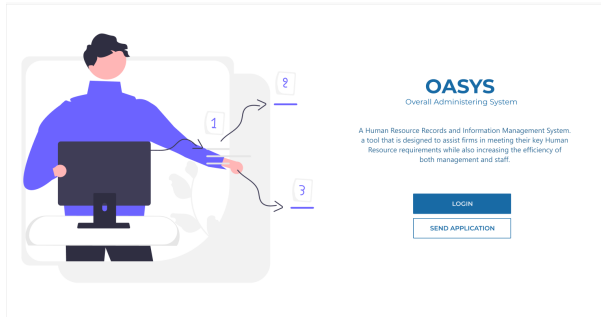


Figure 20: Home Page

This is the user selection page. It would include the five user levels that depend on the position. Users can login according to their user type.

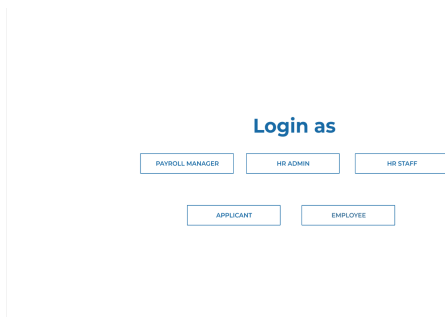


Figure 21: User Selection Page

This would be the login page where users can input their username and password. Users must enter those two to be eligible to use the proposed system.

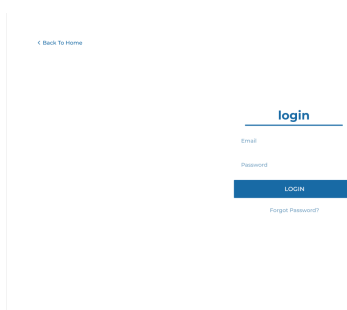


Figure 22: Login Page

This is the Payroll Manager Page of the proposed system, in which the user can issue the payroll and payslips for the employees. This would also include specific details of the payroll of each employee.

Employee ID	Picture	Full Name	Position	Total Hours	Rate/hr	Gross Pay	Deduction	Cash Advance	Net Pay
#10F02045		Juan Dela Cruz	Teacher	80 hours	P1,000	P80,000	P000	P000	P80,000
#10F02045		Juan Dela Cruz	Teacher	80 hours	P1,000	P80,000	P000	P000	P80,000
#10F02045		Juan Dela Cruz	Teacher	80 hours	P1,000	P80,000	P000	P000	P80,000
#10F02045		Juan Dela Cruz	Teacher	80 hours	P1,000	P80,000	P000	P000	P80,000
#10F02045		Juan Dela Cruz	Teacher	80 hours	P1,000	P80,000	P000	P000	P80,000
#10F02045		Juan Dela Cruz	Teacher	80 hours	P1,000	P80,000	P000	P000	P80,000
#10F02045		Juan Dela Cruz	Teacher	80 hours	P1,000	P80,000	P000	P000	P80,000
#10F02045		Juan Dela Cruz	Teacher	80 hours	P1,000	P80,000	P000	P000	P80,000
#10F02045		Juan Dela Cruz	Teacher	80 hours	P1,000	P80,000	P000	P000	P80,000

Figure 23: Payroll Manager Page

This would be the Human Resource Admin Page of the proposed system, in which the HR Admin would be handling all the administration rights of the proposed system.

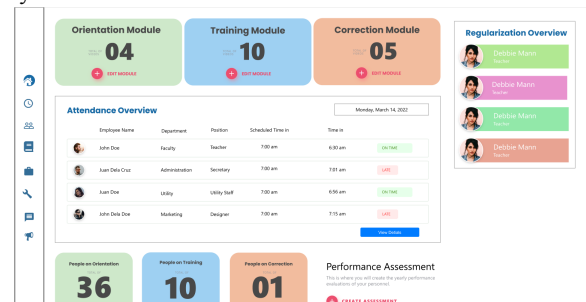


Figure 24: HR Admin Page

This is the Human Resource Staff Page of the proposed system. This is where the HR Staff would be handling necessary tasks for the employees' management functionality. This includes some stats that can help the user ease their workload.

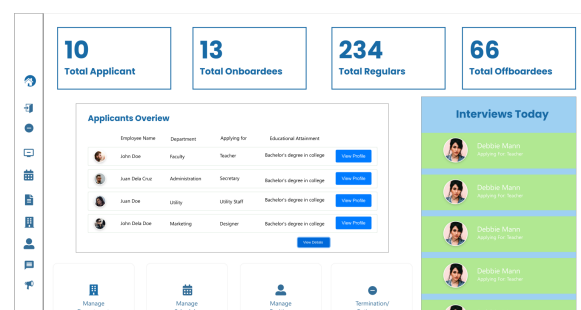


Figure 25: HR Staff Page

This is the applicant page. This is where the user can view the details of their profile. This would include the notification box that would serve as a guide for the next step of the application process.

**Welcome Applicant**

**Applying for Teacher**

**VIEW RESUME**

**Notification**

You are scheduled for an interview on March 14, 2022. You will be the meeting link: <https://us02zoom.us/j/9123456789>

**Logout**

Figure 26: Applicant Page

This would be the employee page that would include the employee's dashboard, attendance monitoring, payslip history, and some necessary details for the employee's current details.

**Employee Dashboard**

**Time In**

Schedule Time Date  
7:00 am 8:00 am Mon, 3/14/2022

**Time out**

Schedule Time Date  
5:00 pm 6:00 pm Mon, 3/14/2022

**Attendance History**

Schedule	Time in	Scheduled	Time out
Mon, 3/14/2022	Scheduled	7:00 am	8:00 pm
Mon, 3/14/2022	Scheduled	7:00 am	8:00 pm
Mon, 3/14/2022	Scheduled	7:00 am	8:00 pm
Mon, 3/14/2022	Scheduled	7:00 am	8:00 pm
Mon, 3/14/2022	Scheduled	7:00 am	8:00 pm

**Payslips History**

Payslip	Time in	Scheduled	Time out
Payslip 03/14/2022 - 03/14/2022	7:00 am	8:00 pm	5:00 pm
Payslip 03/14/2022 - 03/14/2022	7:00 am	8:00 pm	5:00 pm
Payslip 03/14/2022 - 03/14/2022	7:00 am	8:00 pm	5:00 pm
Payslip 03/14/2022 - 03/14/2022	7:00 am	8:00 pm	5:00 pm

**Notification**

**Annual Performance Assessment**

You are scheduled for a performance assessment on March 14, 2022. You will be the meeting link: <https://us02zoom.us/j/9123456789>

Figure 27: Employee Page

This is the Application Page on which the steps of being an applicant are present. This would also include the creation of an account and filling out the introduction form.

**Create your Account**

Step 1 out of 3

Email

Password

Repeat Password

**SIGN UP**

**CANCEL**

Step 1: Creation of Account

**Introduce your Self**

Step 2 out of 3

First Name

Middle Name

Last Name

Sex

Age

Contact Number

Email Address

**PROCEED**

**CANCEL**

Step 2: Filling out the Introduction Form

Figure 28: Application Page

### 3.6 Implementation Plan

The implementation plan would include basic user training, such as an introduction to the proposed system's operation and numerous features. Web applications are programs running on remote servers and are transmitted via the Internet to the client device. More so than software applications, web applications do not require downloading and can be accessed via a web browser from any location.

Because the proposed system must be operational and functioning prior to implementation, technical support would be administered by the organization's technical support specialist. They are responsible for identifying and repairing malfunctions, as well as resolving software issues. Any problems encountered that cannot be resolved would be handled by the researchers.

### 3.7 Implementation Results

The implementation's anticipated outcomes would provide a multitude of relevant feedback. These results may include problems that require increased software efficiency and performance. Other results may arise, including textual or graphical data presentation, concerns related to database updates, status changes, linkages, as well as transmitting data.

## 4. SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter summarizes the findings, provides conclusions, and makes recommendations regarding the research study.

## 5. ACKNOWLEDGMENT

This project would not have been possible without the help of both our class adviser, Dr. Leonard Alejandro, and our technical adviser, Mr. Archie Santiago. It was thanks to their counsel and support that we were able to complete the project. We would also like to commend the members of



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In addition, we would like to express our gratitude to all of our close friends and family members for their unwavering patience and encouragement throughout the course of our studies. Their prayers for us were what kept us going this far.

Finally, we'd like to express our gratitude to God for allowing us to persevere in the face of adversity. We have been experiencing your guidance on a daily basis. They are the ones who allowed us to work hard to complete our degree. We would continue to put our faith in you for our future.

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