HUMAN RESOURCE MANAGEMENT SYSTEM FOR GARDAWORLD SECURITY

SCHOOL: PURE AND APPLIED SCIENCES

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CHAPTER ONE: INTRODUCTION

Human Resource Management System for GardaWorld Security

Abstract

Human Resource Management (HRM) is important to any organisation especially to those with a large and distributed workforce such as security companies (Armstrong, 2020; Dessler, 2020). Many Kenyan firms, just like GardaWorld Security Kenya, still rely on manual filing systems to manage employee records such as qualifications, licences, employment history among others. This process is slow and prone to errors. Globally, Human Resource Management Systems are adopted since they are more efficients, provide secure storage of documents and allow easy and fast retrieval of employees information as well as updating. However, these systems are often expensive and offer insufficient customisation suitable for the target organisation. This project proposes development of a HRMS for GardaWorld Security which is a digital system that unifies profiles, helps in decision making, ensures secure storage and retrieval of records. The system will improve efficiency in operations and align digital transformation within organisation's management

1.1 BACKGROUND OF THE STUDY

Human Resource departments are primarily responsible for the management of employee information and documentation, which is crucial in organisational administration (Dessler, 2020). In many Kenyan based organisations, employee records are physically stored, where each employee is assigned a folder with their personal information, academic certificates, work history and their performance records. Although this approach is widely used, it has become very difficult for organisations with large workforce and employee turnover (Armstrong, 2020).

Gardaworld security Kenya has to manage thousands of employee records that require regular updates due to frequent deployment of security personnels, their training and performance evaluations. Using a manual filing system, the HR department has to locate the documents manually, update them then store them into their respective folders, this process becomes slower and more complex as the organisation's workforce expands. This hence increases the chances of losing documents, misfilling as well as inconsistency across records in different branches (Beadles et al., 2015). Furthermore, physical records are prone to damage and unauthorised access, raising concerns of confidentiality and data security.

1.2 Problem statement

GardaWorld Security Kenya currently uses a manual, paper-based system to manage employee records. This is slow, inefficient and error-prone HR operations (Armstrong, 2020). In retrieving the files or updating the employee data, HR staffs usually have to search over filing cabinet archives manually, hence there is always a delay in these operations, loss of information and inconsistency between versions of personal history of employee (Beadles et al., 2015).

The ongoing global shift to digital systems signals the importance of information systems that provide accuracy, reliability and long term access of organisation's data (Marler & Parry, 2016). A digital HR Management System (HRMS) addresses these challenges by providing secure data storage, easy search capabilities and automated record updates across the different branches (Kavanagh et al., 2019). Large security organizations such as GardaWorld are required to adopt a digital HRMS that will improve their operation efficiency and information security (Stone et al., 2015).

1.3 Objectives of the Study

Specific Objectives

1. To analyze the existing manual employee record management processes at GardaWorld Security Kenya and identify inefficiencies within the first two weeks of the project.
2. To design a centralized digital database structure that captures employee personal details, qualifications, and employment history by the end of the first month.
3. To develop a secure document upload and retrieval module capable of reducing record search time by at least 50% within one semester.
4. To implement efficient search and filtering functionality that retrieves employee information in under five seconds before final system testing.
5. To evaluate the system's accuracy, reliability, and usability using sample HR data and achieve at least 90% successful task completion during user testing by the end of the project timeline.

1.4 Scope and Limitations of the Study

Scope

This project focuses on developing an HRMS for GardaWorld Security Kenya. It's key functionality include; employee profile management, digital document storage and retrieval, search and filtering, secure user authentication, user permissions, audit logs and notifications. These features are common in most HR Management Systems already in production (Kavanagh et al., 2019).

Limitations

This system will exclude payroll processing, attendance logging, attendance monitoring or performance evaluation. This approach prioritizes modular system development systems, where the main functionalities of the organisation's HRMS are developed first then other operational features are implemented later based on their priorities and requirements (Pressman & Maxim, 2020).

1.5 Justification of the Study

The study justifies the need to digitize operations in the HR department so that it addresses the inefficiencies with managing employees records manually (Armstrong, 2020). Digital Human Resource Management systems are widely accepted to enhance accuracy, reduce administrative workloads and support decision making processes within the company using data available (Marler & Parry, 2016).

Given the large number of employee records Gardaworld has to deal with, it makes HRMS more like a necessity rather than an optional improvement. Research approves that adoption of HRMS is significant in any large organisation since it improves data accessibility, security and processing (Stone et al., 2015). Furthermore, this project also contributes in the field of Information System, where HRMS are implemented in large organisations operating in developing countries, where the cost and poor infrastructure limit the use of commercial enterprise systems (Bondarouk & Ruël, 2013).

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter looks at research about how to make a Human Resource Management System (HRMS) for GardaWorld Security. It looks at how new HRMS technologies have changed how companies keep track of their employees' records, the pros and cons of popular systems, and the biggest problems that companies have when they start using digital HR tools. The chapter is divided into several main parts: the features and benefits of HRMS, security and privacy issues, problems with implementation, current HRMS solutions on the market, gaps in those systems, and finally, how these findings show that GardaWorld Security needs a custom HRMS.

2.2 HRMS Capabilities and Core Benefits

HRM systems have revolutionized the entire process of business data management for employee information storage and retrieval and data handling operations. Digital systems which store all employee information in one location now substitute the previous paper-based system that required employees to complete paper work and maintain physical records and organize documents. The HRMS platform automates all standard work processes which include record maintenance and leave administration and employee attendance tracking and payroll system maintenance. The system ensures all company records maintain accuracy and consistency while reducing human mistakes which shortens overall processing time.

Digital HRMS systems enhance operational efficiency through their ability to eliminate excessive paperwork which enables HR personnel to dedicate their time to strategic workforce planning and employee development activities. Real-time dashboards and analytics tools serve as essential components within numerous contemporary systems. These tools enable managers to rapidly identify workforce patterns which enables them to create effective strategic choices (OMR Research, 2023). The system includes essential features which benefit organizations that employ numerous staff members because hands-on operations become slower and less reliable.

Cloud-based HRMS solutions enhance all these benefits. Cloud technology enables workers and HR personnel to access the system through any location which supports team collaboration across different work sites and system flexibility. Cloud services enable businesses to reduce their dependence on physical servers because they offer flexible storage solutions which expand according to business requirements. Cloud

HRMS provides companies with an affordable solution for their extensive employee documentation needs according to the SyncSci Journal (2023).

2.3 Security, Privacy, and Cloud Storage Considerations

Cloud-based HRMS platforms provide users with simple operations but they create major security and privacy-related challenges. Employee data is very private. The database contains personal documents which include national ID numbers and contact details and employment records and disciplinary files and compensation information and additional sensitive data. Research exists about the necessity to defend users through encryption and multi-factor authentication and secure password systems and restricted system permissions.

Organizations must adhere to data protection laws including GDPR and their local regulations to ensure proper storage and handling of employee information. Cloud systems become vulnerable to data breaches when organizations lack proper rules and perform insufficient security checks and maintain weak internal controls regardless of their cloud service provider's reputation (SyncSci Journal, 2023). Any organization that wishes to implement digital HRMS systems must prioritize cybersecurity as their main concern.

Implementation Challenges and Organizational Barriers

The process of establishing a new HRMS system proves to be challenging for most organizations. Multiple research studies identify multiple business problems which organizations need to address.

1. **Change is hard:** people who are used to doing things by hand may not want to start using digital tools. People tend to oppose change because they fear technology and they dislike new systems and they lack computer skills.
2. The process of data migration creates multiple problems which need to be addressed by HR departments that want to transition from paper-based files to digital systems. The process requires extended periods of work because any errors will occur when proper attention is not given to the task.
3. **Problems with integration:** Many organizations currently operate with separate systems which handle attendance tracking and payroll management and financial operations. The new HRMS system needs to integrate properly with existing systems to prevent work process disruptions and maintain operational consistency.
4. **Training and user adoption:** The proper training of employees becomes essential because an HRMS system will not succeed when staff members

receive inadequate instruction. The success of implementation depends on continuous user support and direct communication and sufficient time for staff members to adapt to new operational methods.

The implementation of HRMS systems requires organizations to overcome both technological barriers and internal organizational obstacles. The success of projects depends on three critical elements which include effective change management and leadership support and user engagement (Airlangga, 2024).

2.5 Review of Existing Systems

Multiple HRMS platforms exist in the market today because each system offers distinct capabilities together with its own set of benefits and limitations. The following systems represent popular options which provide essential data to develop a GardaWorld Security solution.

BambooHR

BambooHR stands out because it provides users with a straightforward interface that is easy to operate. The system enables organizations to perform essential human resource operations which include performance management and onboarding processes and leave management and employee record maintenance. The system provides easy operation which suits operations of small and medium-sized businesses. The system lacks effective payroll capabilities and restricted customization options which could prevent BambooHR from serving organizations that need complex operational systems (PeopleForce, 2023).

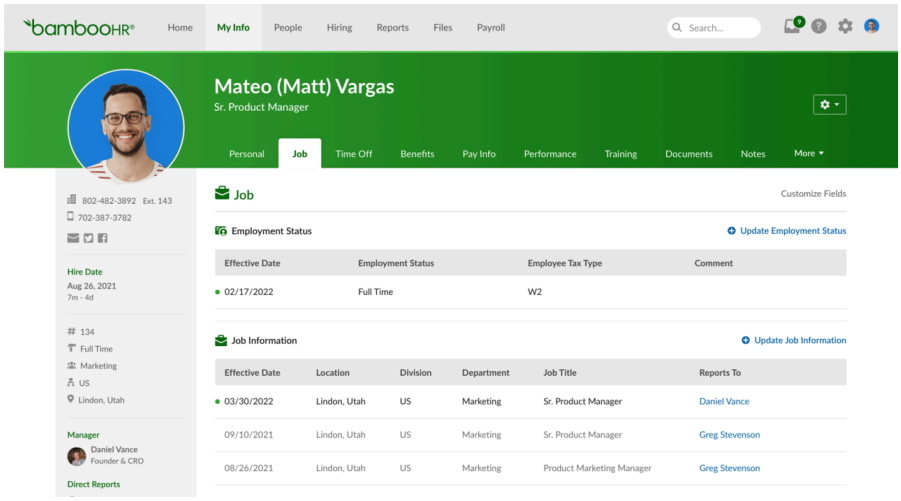

Figure 1: A Screenshot of BambooHR Human Resource Management System

Zoho People

The system includes three main modules which enable users to monitor employee attendance and maintain personnel information and perform performance assessment tasks. The system operates effectively with all Zoho applications while providing affordable pricing options. The platform imposes limitations on businesses which need customized workflows and advanced analytical capabilities because it lacks powerful analytics features (GeeksforGeeks, 2024).

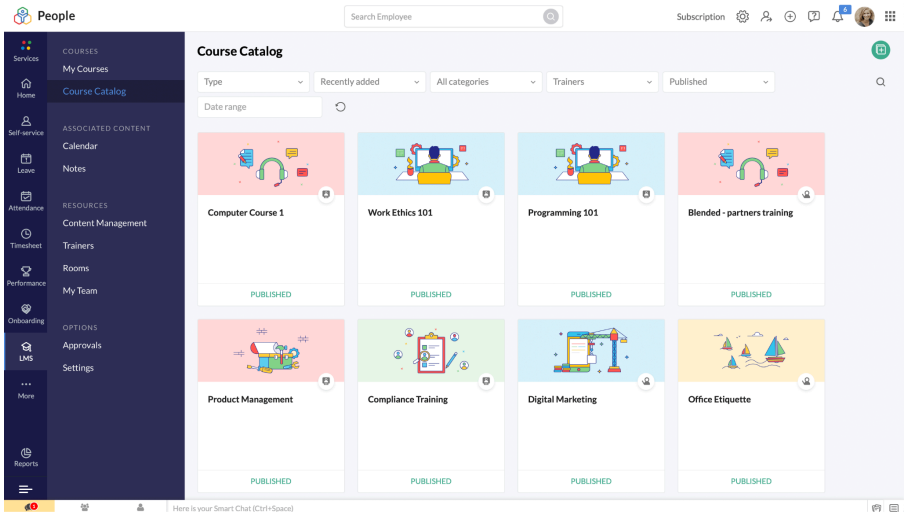

Figure 2: A Screenshot of Zoho People Human Resource Management System

SAP SuccessFactors

The enterprise-level HRMS SAP SuccessFactors provides its users with multiple features which include talent management and hiring and onboarding and compliance monitoring and advanced analytics. Numerous multinational corporations use it. The system proves unsuitable for organizations which need basic cost-effective solutions because it comes with high expenses and complex deployment requirements and needs experienced IT personnel (Zimyo, 2023).

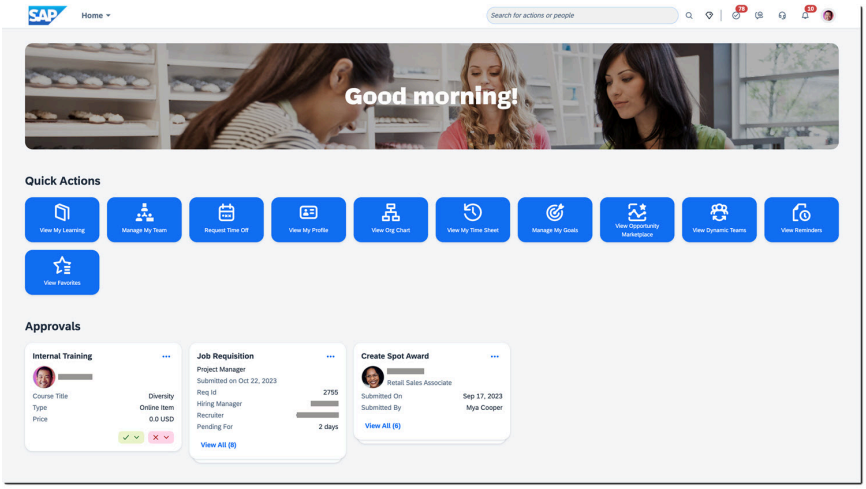

Figure 3: A Screenshot of SAP SuccessFactors Human Resource Management System

Oracle Fusion Cloud HCM

Another all-inclusive HR solution is Oracle Fusion Cloud HCM. Payroll, analytics, workforce management, and HR are all covered. Despite its strength, it is difficult to modify and usually needs specialized knowledge for installation and upkeep. Because of this, the system may be costly and challenging for smaller businesses to operate (Zimyo, 2023).

2.6 Gaps and Disadvantages in Current Systems

Though the HRMS systems that exist provide great functionality, they do not necessarily provide everything that is required by unique businesses, such as private security companies.

1. **Interpreting security/relevance:** A number of systems provide enhanced levels of security, though this compromise or confuse their interface.
2. **Costs and complexity:** Enterprise systems are very costly for implementation, maintenance, and customizing. This makes it difficult for mid-size security companies to afford such systems.
3. **Adequate workflow:** The current HRMS solutions fail to provide adequate workflow support for security sector operations. The system lacks essential tools which prevent users from tracking guard deployment records and security clearance management and document revision processing.
4. **Integration issues:** Local finance, scheduling, and attendance tools just won't work well with other systems.

5. **Heavy data migration requirements:** The process of transitioning from paper-based records to digital documentation requires more effort than most organizations anticipate. The process becomes delayed while data inconsistencies occur because of this method (Scribd Research, 2024).

That's why organizations such as GardaWorld Security require an HRMS built specifically for their operations and internal setup.

2.7 Research Gap

Most of the current HRMS systems exist for general business purposes and do not address the needs of security firms completely. There are some special tasks involved in private security that include deployment scheduling, license updating, certification updating, and maintaining a large number of personal documents. Most of the current HRMS systems do not provide such special functionality. These systems are expensive and complex, which makes it difficult for mid-sized security firms to implement them. This creates an urgent need for a custom-made HRMS system for security personnel that is both secure and cost-effective.

2.8 Summary

In conclusion, it is evident that the literature suggests the need for automation of current HR practices by implementing digital HRMS for their enhanced accuracy, efficiency, and reporting features. It is evident that current systems such as BambooHR, Zoho People, SAP SuccessFactors, Oracle Fusion Cloud HCM, are robust in their functionalities but lack in their application to security firms requiring specialized HR solutions. Therefore, there is great need for developing a custom-made HRMS for GardaWorld Security that is reliable, flexible, cost-effective, with adequate functionality for processing the voluminous personnel documents of the organization (SyncSci Journal, 2023).

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter describes the design and development of the HRMS for GardaWorld security Kenya. It illustrates the system development approach, data collection methods, analysis, implementation technologies, testing strategies, project schedule and the budget allocation which is an estimate. The methodology we intend to use ensures a systematic and user-centered development process majorly used already established by information systems in production (Pressman & Maxim, 2020).

3.1 System Development Methodology

This project will use Agile Software Development Methodology. Agile is an approach that emphasizes a flexible, continuous stakeholder involvement and constant delivery of system components (Pressman & Maxim, 2020). This approach is suitable because an HRMS requires user involvement in the early version of the system.

It will include the following phases:

Requirement Elicitation: Requirements will be gathered from GardaWorld Security Kenya HR personnel through observation, interviews, and document review. Both functional requirements (e.g., employee profile creation and document upload) and non-functional requirements (e.g., system response time and data security) will be identified.

System Design: Based on the elicited requirements, the system architecture and database structure will be designed. This phase will involve the development of Unified Modeling Language (UML) diagrams and Entity Relationship Diagrams (ERDs) to model system behavior and data relationships.

Implementation: The HRMS will be developed in modular components using Laravel for backend development and React Native for frontend development. Modular implementation will allow each component to be developed, tested, and refined independently.

Testing: Continuous testing will be conducted throughout the development cycle. Unit testing and integration testing will ensure functional correctness, while user acceptance testing will validate system usability and performance using real HR data.

Deployment: The completed system will be deployed in a cloud environment, with Amazon S3 used for secure document storage. Final deployment will be followed by user training and system evaluation.

3.2 Fact-Finding Techniques

In order for this HRMS to accurately solve the problems faced by the current system used in GardaWorld Security Kenya, accurate information about the process will be collected using the following techniques:

3.2.1 Observation

Direct observation within the organisation's HR Department will be carried out to understand the existing manual management procedures. This will enable us to understand the bottlenecks, study the physical file organisation and measure the average time taken to retrieve employee records.

3.2.2 Interviews

Interviews will be carried out for various HR personnels and employees to understand their expectations, identify frequently updated records, determine the access control for different roles and document the specific challenges in each stages

3.2.3 Document Review

Existing HR documents such as training records will be reviewed to ensure the system database design includes all the required fields during digitization (Kavanagh et al., 2019).

3.3 Data Analysis and Design Tools

- **UML:** Use case diagrams will show user-system interactions, and sequence diagrams will illustrate data flow.
- **ERDs:** Used to design the MySQL database schema, defining relationships between key entities: Employees, Documents, Users, and Departments.
- **Diagramming Tools:** Microsoft Visio and Draw.io will develop flowcharts and system architecture diagrams.

3.4 Implementation and Testing Tools

3.4.1 Implementation Tools

- **Integrated Development Environment:** Visual Studio Code will be used for writing and debugging code.
- **Backend Framework:** Laravel (PHP) will be used to implement server-side logic, authentication, and security controls.
- **Frontend Framework:** React Native will be used to develop a mobile-accessible user interface.
- **Database Management System:** MySQL will be used to store structured employee records.
- **Cloud Storage:** Amazon S3 (AWS) will be used for secure storage of uploaded documents.
- **Local Development Server:** XAMPP will be used during the local development phase.

3.4.2 Testing Tools

- **Postman:** For testing API endpoints and data exchange between system components.
- **PHPUnit:** For unit testing backend functions.
- **Jest:** For testing React Native interface components.
- **Browser Developer Tools:** For debugging and performance analysis.

3.5 Time Schedule

Phase	Activity	Timeline
Planning	Topic Selection & Approval	1 Week
	Concept Paper Development	1 Week
Analysis	Data Collection (Interviews)	1 Week
	Requirements Analysis	1 Week

Phase	Activity	Timeline
Development	Database Implementation (MySQL)	1 Week
	Backend API Development (Laravel)	3 Weeks
	Frontend Development (React Native)	2 Weeks
	Cloud Integration (AWS S3)	1 Week
Testing	Unit & Integration Testing	1 Week
	User Acceptance Testing (GardaWorld)	1 Week
Documentation	Final Report Writing & Submission	1 Week

3.6 Budget

Item	Description	Estimated Cost (Ksh)
Internet, hosting and software	Internet bundles for research Shared Hosting / AWS Credits Domain Name Registration (1 Year)	9000
Data Collection Materials	Questionnaires, system evaluation forms and report drafts.	1500
Printing and Binding	Printing the final proposal, progress reports and project documentation for submission.	1500
Contingency	Covers minor unforeseen costs such as replacement accessories, USB drives, or stationery.	1500
Total		**13,500**

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