**CHAPTER ONE**

**INTRODUCTION**

**1.1 Background of the Study**

Management information system refers to the complementary networks of hardware and software cooperating to collect, process, store, and disseminate information in order to support the managerial role of leveraging information technology to increase business value and profits. Management Information Systems can be used in that context for decision making, coordination, control, analysis, and visualization. MIS is a subset of [Information Systems](https://en.wikipedia.org/wiki/Information_system) with its own numerous and increasingly specific subsets. A management information system (MIS) is a computerized database of financial information organized and programmed in such a way that it produces regular reports on operations for every level of management in a company. It is usually also possible to obtain special reports from the system easily (Taylor, 2016).

The main purpose of the MIS is to give managers feedback about their own performance; top management can monitor the company as a whole. Information displayed by the MIS typically shows "actual" data over against "planned" results and results from a year before; thus it measures progress against goals. The MIS receives data from company units and functions. Some of the data are collected automatically from computer-linked check-out counters; others are keyed in at periodic intervals. Routine reports are preprogrammed and run at intervals or on demand while others are obtained using built-in query languages; display functions built into the system are used by managers to check on status at desk-side computers connected to the MIS by networks. Many sophisticated systems also monitor and display the performance of the company's stock. Most MIS developed process sensitive data such as financial data used in various payment solutions. An important aspect these system is to verify the receipt of payments among several users in the system (Dingle, 2018).

A payment verification solution for online activity that can be used to demonstrate a simple use case validating an online transaction is a known need of many businesses. A customer visits a website and initiates a purchase, which in turn activates a process or an application to assess the transaction validity. As a minimum security check, businesses must determine whether the card holder is eligible to make the transaction.

There is a certain amount of logic the application must process, such as checking whether the customer's account is active, whether the customer has sufficient credit, and checks on the cardholder's credentials by using the expiration date and card ID. This is done basically to process staff remuneration in several organizations.

Remuneration is the monetary compensation that one receives exchange for the work or services performed. Typically, this consists of monetary rewards, also referred to as wage or salary. A number of complementary benefits and financial compensation received by an officer/employed/staff of an organization. It typically a metric of salary, bonuses, shares of and/or call options on the company stock, benefits, and perquisites, ideally configured to take into account government regulations, tax law, the desires of the organization and the executive and rewards for performance (Kendal, 2018).

In large organization such as Adekunle Ajasin University, the finance and account system is the life wire of the administration. In other words, it is the process of controlling finance activities of the establishment with the aim achieving the organization goal. The activities done in the bursary unit regarding the payment and confirmation of staff’s salaries is challenging. After the school had ensured that all payment of salaries to workers has been done. Each staff is meant to respond to the payment slip for each month, failure to do this before the deadline, the victim won’t have access to the next salary.

This automated system has promising prospect for educational institutions in order to enhance the bursary management system. The proposed system would manage the major activity done in the bursary department efficiently(alerting staff salary as been paid , staff confirming he/she as received the fund and a confirmation status is sent to the bursary unit). These processes are carried using specialized systems that can conduct simple operations like billing, ticket transactions, record maintenance, security analysis etc. However, when this new mode of operation is implemented in the bursary department of Adekunle Ajasin University using computer, the process will be efficient and free from error. And eradicate time wasting and other challenges encountered in the manual process.

**1.2 Statement of Problem**

The process of using a manual system for staff salary payment slips has led to several challenges to both the bursary personnel and staff. This include untimely delivery of payment slip at the appropriate quarters, staff are notified lately for payment. The effect of these problems would lead to staff been denied the salary for the next month. Failure to sign the pay slip, bursary unit would count the staff absent meanwhile the form was just delayed. Another problem been faced is that there is no way the personnel at the bursary unit would know if a staff is not present in school. Therefore, the design of this automated salary payment slip processing system will aid in processing files on time, and as well as the achieve proper management staff payment records.

**1.3 Research Motivation**

Many organizations have adopted the use of one automated system or the other. For instance AAUA uses a wide range of platform to reduce paper work. But with little attention to staff payment slip processing. Several authors have also reported different works on payment solutions and are presented as follows:

**1.3 Research Objectives**

The specific objectives of this research are to:

a. Develop an automated system that manages an AAUA Staff Salary payments.

b. Verifies the presence of staff being in school.

c. Confirm staff payment on request and feedback.

* 1. **Limitation**

Several steps will be taken to cover this project, algorithms used, material etc. This project is limited to the aspect of forwarding of messages. In the aspect of getting a standardized SMS gateway and trying to avoid important mails forwarding to spam. This is a task that needs to be minimized. And network not delaying instant delivery of text messages. But I guarantee a successful and instant mail delivery to allow staffs get the notification on time, this is a limitation my work would cover and all other objective being stated above.

**1.6 Methodology**

The waterfall model is adopted for this research work. It is a model that implements a linear-sequential life cycle model.

In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases. The model is shown in Figure 1.1 as follows:

**Requirement Analysis**

**Testing**

**Implementation**

**System Design**

**Maintenance**

**Deployment**

**Waterfall Mode**

Figure 1.1: Waterfall Model adopted for the Research

The components of the model are presented as follows:

**a. Requirement Gathering and Analysis**

All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification document. This requires the research going to the Bursary Unit to seek for necessary information need to develop the system.

**b. System Design**

The requirement specifications from first phase are studied in this phase and the system design is prepared. This system design helps in specifying hardware and system requirements and helps in defining the overall system architecture.

**c. Implementation**

With inputs from the system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality, which is referred to as Unit Testing.

**d. Integration and Testing:**

All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration exists when the entire system is tested for any faults and failures.

**e. Deployment of System:**

Once the functional and non-functional testing is done, the product is deployed in the customer environment or released into the market. In this case, the proposed system is deployed at the Bursary Unit and used by the personnel and staff of the University.

**f. Maintenance:**

There are some issues which come up in the client environment. To fix those issues, patches are released. Also to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

The Conceptual Model of the proposed System is presented in Figure 1.2 as follows:

**Teaching Staff**

**Bursary Personnel**

Figure 1.2: Conceptual Model of the Proposed System

The component of the Conceptual Model is explained as follows:

**Bursary Personnel (BP)**

This user has a master control over the software. The admin can perform all the function the staff can perform with the software as well function of an admin as well.

i. **Add Staff:** The BP would need to add staffs data to the database for proper functionality of the software.

ii. **Notification:** After staff data has been recorded in the database of the software. The admin also have the power to send notification to the staff including an electronic pay slip for each staff to sign.

iii. **Confirmation:** BP would have a section where he would be able to see staff that has signed his/her documents and as well view each staff electronic pay-slip.

iv. **Staff Confirm Payment:** A staff in this proposed system would receive a notification on phone via sms that his/her pay -slip is ready and to login to his/her mail to get a confirmation code and login details. After the staff has gotten the code and login detail. He then proceed to the software to sign the document been sent to his/her page.

v. **Send Response to BP:** After the payslip has been signed. Instantly the table containing pending transactions would be updated.

1. **Print signed slip:** This is a voluntary feature. Staff can decide whether to print the slip or not.

**1.7 Scope of the Study**

This study is carried out in Adekunle Ajasin University, Akungba Akoko. It covers staff payment processes at the Bursar Unit of the Institution. It also looks into the feedback mechanism adopted by staff to confirm their salary payments.

**1.8 Significance of the Study**

The research is expected to provide a system that can eliminate the manual system of verifying salary payment in AAUA. It will help in the Bursary Unit for faster and efficient payment processing and also give staff an easy feedback platform.

**1.9 Definition of Terms**

a. Payment: The act of paying.

b. Institution: An established organization, especially one dedicated to education, public services, culture or the care of the destitute.

c. Pay slip: A document included with an employee employee’s wage or salary giving details of money earned and tax an institution paid.

d. Salary: A fixed amount of money paid to a worker, usually measured on a monthly or annual basis, not hourly, as wages.

e. Organization: A group of people consciously cooperating.