**CHAPTER ONE**

**INTRODUCTION**

**1.1 BACKGROUND OF THE STUDY**

Misconduct is part of human activities and needs to be managed. In our societies today, misconduct activities are been practiced by so many people including those with greater influence and leadership.

Misconduct simply refers to those unacceptable or improper behaviors practiced by people in the society. This misconduct behaviors are been practiced in so many different areas and sectors of the society such as homes, schools, churches, job sites etc.

Schools are important institutions where the students receive their education formally. All students, regardless of their religion, race and background learn new values, rules, respect, compassion, ethics and cooperation from the subject being taught by well-trained and experienced teachers or lecturers. In this modern age, the schools provide a wide range of facilities, equipment, teaching and learning materials as well as implement educational activities to create the excellence in terms of physical, emotional, spiritual and intellectual for every student.

However, the reality that exist today is that of failures, weaknesses and violation of discipline in the schools. As each of the schools has different styles and ways of management, this situation is becoming worst when few of the staffs who do not understand the rules relating to discipline, coupled with the appointment of disciplines staffs who are fierce and brutal claimed to hit the students as reported by the media. The responsibilities of dealing with the disciplinary cases are relying on the committee of discipline as a problem solver without full commitment from all staffs. In fact, these scenarios have contributed to the following problems currently faced by most schools in Nigeria.

* Students discipline problems are hastily increased at a serious level and difficult to control.
* Workloads of the disciplined staffs.

This project enables the school administration to properly manage her students misconduct case in a computerized way.

**1.2 STATEMENT OF THE PROBLEM**

The problem that gave rise to this research project is faced by the case study Akanu Ibiam Federal Polytechnic Unwana, which include:

1. Generating a disciplinary filling number for each of the crime has been cumbersome because it is not easy to trace the file number for each of the student’s misconduct, and this has led to the duplication of student’s misconduct file number.
2. Making references to existing misconduct cases id difficult because of the manual mode of documentation.
3. Accuracy about dates of filling various component of the misconduct case is not readily available making references cumbersome.

**1.3 AIM AND OBJECTIVE OF THE STUDY.**

The aim of this study is to design and implement a web-based student misconduct management system that will:

1. Ensure that only authorized user gain access to documented misconduct records.
2. Improve the integrity of the misconduct database.
3. Reduce redundancies and inconsistencies witnessed in the present system
4. Enable data sharing across relevant applications.
5. Have an automatic intelligent backup of and recovery procedure of data.

**1.4 SIGNIFICANCE OF THE STUDY**

The study when completed and implemented, would no doubt increase the general efficiency of the school administration and their measures of keeping students misconduct records that would be easy to retrieve information from, by misconduct or disciplinary investigators and approved persons. It will also assist the school administration in their bid to handle misconduct with timely and useful information about students.

The importance of the study is so obvious because if misconduct is not properly handled, the students will continue to involve themselves in bad conducts such as exam malpractice, cultism activities etc. and this will in no way help in building up a good carrier for the students.

**1.5 SCOPE OF THE STUDY**

This research work will cover only on design and implementation of a web-based student misconduct management system, using Akanu Ibiam Federal Polytechnic Unwana as case study.

**1.6 LIMITATION OF THE STUDY**

The researcher had a limited time frame to conduct the proper study on the topic and the institution of choice.

The researcher was also faced with financial barriers that affected access to some resource materials and vital equipment.

**1.7 DEFINITION OF TERMS**

**I. Web Based:** A web-based application is any program that is accessed over a network connection using HTTP (Hyper Text Transfer Protocol), rather than existing within a device memory.

II. **Misconduct:** Misconduct simply refers to unacceptable or improper behaviors practiced by people in the society.

III. **Data Dictionary:** This is a centralize deposition of information about the data such as meaning and relationships to other origin

IV. **Database:** A database is an electronically stored information that is organized so that it can be easily accessed, managed and updated.

**V. Data:** A set of information describing the contents, format, and structure of a database and the relationship between its elements, used to control access and manipulation of the database.

**CHAPTER TWO**

**REVIEW OF RELATED LITERATURE**

**2.1 STUDENT'S MISCONDUCT**

According to Charles Sturt University (2019), student's misconduct can be classified as academic, research or general depending on the circumstances.

**2.2. MEANING OF STUDENT'S MISCONDUCT**

According to Ohio State University (2016), student misconduct is any activity that tends to compromise the integrity of the student and subvert the educational process of an institution.

Cases of misconduct range from deliberate acts of cheating to unintended missteps, in which students fail to distinguish their work from someone else’s.

**2.3 TYPES/FORMS/CATEGORIES OF STUDENT'S MISCONDUCT**

Students portray different types of indiscipline behavior among which include the following acts:

1. **Dishonesty:** Dishonesty is to act without honesty. It is used to describe a lack of probity, cheating, lying, or deliberately withholding information, or being deliberately deceptive or a lack in integrity, knavishness, perfidiousity, corruption or treacherousness.
2. **Bribery and intimidation:** Bribery is the offering, giving, receiving, or soliciting of any item of value to influence the actions of an official, or other person, in charge of a public or legal duty.
3. This happens when a student pay; offer some other inducement; or through intimidation attempt to gain an unfair advantage in an assessment. This offence may also be referred to the Student Disciplinary Procedure.
4. **Examination Malpractice:** Examination malpractice is defined as a deliberate wrong doing contrary to official examination rules designed to place a candidate at unfair advantage or disadvantage. Ayanniyi & Anya (2017), identified forms of examination malpractices to include tattoo, token, contract, expo, compute, impersonation, question paper leakage, aiding of students by lecturers, collusion among students, use of unauthorized materials in the examination hall, giraffe or extending of neck to copy from others.
5. **Rape:** Rape is a type of sexual assault usually involving sexual intercourse or other forms of sexual penetration carried out against a person without that person's consent. Rape is almost very common in our societies. Even in schools, most cases of rape are sometimes overheard. The act may be carried out by physical force, coercion, abuse of authority, or against a person who is incapable of giving valid consent, such as one who is unconscious, incapacitated, has an intellectual disability, or is below the legal age of consent.
6. **Data fabrication:** Data fabrication is making up data or results and recording or reporting them. Artificially creating data when it should be collected from an actual experiment. Unauthorized altering or falsification of data, documents, images, music, art or other work.

**2.4 HOW TO MINIMIZE STUDENT'S MISCONDUCT**

According to Perry (2018), there are quite some good measures to minimize student's misconduct. Some of these measures as posited by Perry includes:

1. The school should encourage honesty among her students.
2. Establish a strong academic integrity policy.
3. Encourage students to support the academic integrity policy.
4. Eliminate or reduce the opportunities to violate the policy.
5. Identify and refer to the dean of students those who violate the policy.

**2.5 REPORTING, INVESTIGATING AND MANAGEMENT OF STUDENT'S MISCONDUCT CASES**

**2.5.1 Reporting Misconduct Cases**

It is important to report all incidents of student misconduct. Past incidents involving the student may demonstrate a pattern of misconduct resulting in further disciplinary action. Santoro and Kumar (2018), posited the following steps below as the ideal process of reporting student's misconduct:

1. **Contact the student:** Here, a meeting is set up to discuss the alleged misconduct; specify a meeting date and time. Document efforts to contact the student. Keep a copy of all written correspondence.
2. **Meet with the student:** This involves sharing evidence of misconduct with the student, and explain how their conduct appears to violate the Student Conduct Code. Cite specific sections of the Code. Offer them the opportunity to respond to a suspected violation. If misconduct occurred, file an incident report with the Office of Student Conduct. Inform the student that the grade for the assignment or the course will not be reported until the conduct process is complete.
3. **File an incident report:** Incidents reported to the Office of Student Conduct are processed according to the Student Conduct Code. Evidence and documentation of the alleged misconduct should be sent or delivered to the Office of Student Conduct. Faculty filing the Incident Report will be notified by the Office of Student Conduct when the conduct process is complete.

**2.5.2 Investigating Misconduct Cases**

In this stage, some steps or processes are carried out. The steps below briefly explain the investigation processes as postulated by Lersch and Kunzman, (2017)

1. **Reviewing the misconduct allegation:** Here, authority to review ensures that the matter is one that falls under the jurisdiction. For example, second allegations and misconduct related to final exams and personation automatically fall under the jurisdiction of the Dean’s Office.
2. **ii. Writing and sending of misconduct allegations letter:** This part has to do with the details of the investigation. Student should be informed about the specific form of academic misconduct they are alleged to have breached. All evidence should be provided to the student within the letter so they are able to understand the allegation and prepare for the discipline meeting. A deadline by which the student must contact the decision-maker to either set up a meeting OR advise once they have scheduled a meeting with Student Advocacy is provided.
3. **Making of decision:** Here, the burden is on the instructor to show, on a balance of probabilities, that the misconduct took place. The student is not required to disprove the allegation. If this burden is met and the student’s evidence fails to satisfy the decision-makers, then the allegation should be upheld.
4. **Writing and sending of decision letter:** In this part, the decision maker weight given to information for purpose of making the decision. If there is evidence the decision-maker found untrustworthy, this should be stated clearly in the letter.
5. **Record retention:** Records retention describes the methods and practices in which the decision maker or administrators will use to safeguard important records and maintain them for the required period of time until they need to be stored, redirected or otherwise disposed of.

**2.5.3 Managing Student's Misconduct Cases**

As members of the Institution community, students must conduct themselves in a manner consistent with the standards of behavior set out in the school's Student Code of Conduct and

other related policies. These standards of behavior promote the good order and management of the school, and academic integrity.

Failure by a student to meet these standards of behavior is dealt with as misconduct and the student may be subject to disciplinary action. Disciplinary action for misconduct will be taken by the school under this policy in accordance with the following principles:

1. Misconduct procedures should be fair and just, and consistent with the requirements of natural justice.
2. Penalties imposed for substantiated misconduct should be appropriate, proportionate and consistent.
3. Decision-making on misconduct should be delegated to appropriate levels of responsibility within the University, and committees formed to consider student misconduct should include student representation and appropriate expertise.

**2.6 TECHNOLOGICAL TOOLS AVAILABLE FOR MITIGATING AGAINST STUDENT'S MISCONDUCT**

Technology tools alone cannot foster a culture of academic integrity, nor can they prevent student's misconduct.

However, when used appropriately and in conjunction with other approaches, they may help to prevent or detect academic misconduct and support academic integrity.

Technology is always changing and these tools are readily available, along with other resources that give step-by-step instructions for specific solutions.

1. **CCTV Cameras:** The use of CCTV cameras brings about a tight surveillance system. For a long time, invigilators have been used as the conventional option for deterring candidates from committing misconduct. A CCTV surveillance system can add another layer of security to it, and act as a deterrent against any misconduct (Taylor and Gill, 2014). According to Ratcliffe (2019), modern CCTVs have the power to detect faces and as a result, can track the activity of each individual in sight. However, according to Noris and Laycock (2019), the CCTV camera still have some shortcomings in monitoring examinations. Some of these shortcomings as posited by Noris and Laycock include:
2. Unable to access every corner of the examination hall.
3. Security camera images not clear.
4. It can be a costly affair.
5. CCTV cameras can be vulnerable.
6. **The Brain-Friend Software:** According to Mikairu and Lawni (2020), an innovative educational software knows as Brain-Friend by Cinfores Limited as a self-preparatory tool to improve the academic performance of students, thereby eradicating examination malpractice. According to him, the most similar benefit of this product is that it helps to eradicate examination malpractice as proper preparation is said to prevent poor performance.

However, a common problem being witnessed as a result of using this software according to Mikairu and Lawni (2020) is that, it is limited to only computer literates.

**2.7 CONCLUSION**

This study when completed and implemented, will no doubt improve on the available tools used in reporting and managing student's misconduct in the following ways:

1. Improving the reporting and management of student's misconduct cases from the manual method (Pen on Paper) such as filling of malpractice form to an automatic method (Web Based) by completely eradicating time consumption and cost in producing reports, duplication of data entry, reduction in sharing information, ‘mis keying’ of information, room for errors etc.
2. Providing a quick report opportunity for anyone including students to report misconduct cases that occur around thereby promoting discipline and supporting the report of misconduct in a high level.

**CHAPTER THREE**

**SYSTEM INVESTIGATION AND ANALYSIS**

**3.1 INTRODUCTION**

System investigation involves true evaluation of all the aspects of the system and situations in which it operates. It also entails the enquiring into the functioning and operations of the system studied. Therefore, system analysis is the process of gathering and interpreting facts, diagnosing problems and using the facts to improve the system.

**3.2 APPLIED METHODS OF INVESTIGATION**

On the process of system study and investigation, the following methods were employed:

* Interview.
* Examination of records.
* Observation of staffs during work hours.

1. **Interview**

The researcher opts for the interview method of fact finding because the interview method will give him the firsthand knowledge of the situation and will help to realize if he is been lied and also will help to observe the body language of the person he interviews, and also give a quick response to the question asked.

Interview is used to collect and gather information verbally through questions posed by the author. This was done by the author through discussing the basic operational characteristics of the system with the dean of student affairs and thereafter with the a few head of departments of the Akanu Ibiam Federal Polytechnic Unwana. During the interview, the author verified the importance of providing a quick report opportunity in the system so as to ensure proper reporting of diverse misconduct cases.

1. **Examination of records**

During the system study, the researcher was able to examine some records that relate to the study. However, some records were inaccessible due to policy restrictions. Some of these documents examined include the organization chart, case file, case report form and misconduct report roll. Misconduct reports are prepared each semester. Through these reports, the school administration monitors misconduct activities based on the frequency of its occurrence.

1. **Observation of staff during work hours**

The author observed how some activities were carried out by the staffs at their various offices and how often some activities were repeated if need be. Observation techniques was adopted to allow the author understand how, when, where and why issues aroused certain particular activities. It is worth mentioning here that the author was not allowed for any reason to watch a misconduct suspect and staffs in their offices.

**3.3 ANALYSIS**

When a system investigation is carried out, it is worthwhile to analyze the system in its operational facts or phase to reveal the details discovered.

The Akanu Ibiam Federal Polytechnic Unwana composes of various offices and sectors that are interwoven in function and some other operations. This sectors or office includes:

* Sector 'A' Governing Council.
* Sector 'B' Rector.
* Sector 'C' Academic Board.
* Sector 'D' Deputy Rector (Academic).
* Sector 'E' Deputy Rector (Admin).
* Sector 'F' Registrar.
* Sector 'G' Bursary.
* Sector 'H' Library.
* Sector 'I’ Schools.
* Sector 'J' Departments.

**3.4 THE ORGANISATION AND ITS ENVIRONMENT**

GOVERNING COUNCIL

RECTOR

PERSONAL SEC TO THE RECTOR

ACADEMIC BOARD

DEPUTY RECTOR ADMIN

DEPUTY RECTOR ACADEMIC

POLYTECHNIC LIBERIAN

POLY GUEST HOUSE

**s**

DEAN SET

DEAN SBS

REGISTRAR

DIRECTOR ACAD. PLAN. & DEV EDS

DEAN SSCS

DEANSBS

DEANS SIT

DIR.ENL. WORKS

DEANS ID AFFARS SIT

DIR. MED. SURV.

DIR. PLANING & DEV.

DIR. ICT

BAM RT

PERSONAL SEC TO REGISTRAR

COUNCIL MATTERS CENTRAL MGT

MIS

PRO

CHIEF INT AUDIO R

DEP. REC. STD AFFAIRS

DEP. REC. ESTAB

DEP.REC. ACADEMICS

DEP. REC. RECORDS

DEP, REC. ADMINSSIONS

DEP. REC. ADMIN

J.S.E

HODS 6 DEPTS

HODS 6 DEPTS

SPORTS UNIT

STAFF SCH MCT

HOSTELS

HODS 6 DEPTS

HODS 4 DEPTS

HODS 4 DEPTS

**Fig 3.1 THE ORGANIZATION AND IT’S ENVIRONMENT**

The Akanu Ibiam Federal Polytechnic is an academic institution that is basically created by the law of the federal government of Nigeria to be concerned with vocational and technical training. The academic institution is not just about research and teaching of theories like the universities, but has attention or focuses more on practical aspect of learning.

Thus, the primary purpose of the institution is to promote technical and vocational education and training, technology transfers as well as skills development to enhance the socio-economic advancement of the country.

The Akanu Ibiam Federal Polytechnic is located at Unwana City, Afikpo South, Ebonyi State, Southeast of Nigeria.

The institution runs two (2) academic programs which are the National Diploma (ND) and Higher National Diploma (HND). On this process of study the researcher realized that 75% of the students are aged between 18 to 40 years.

The institution is made up of several bodies such as the Student Union Government (SUG), National Association of Cross River State Students (NACRISS), National Association of Akwa Ibom State Students (NAAKISS) and a lot more which protects the welfare of the students.

After necessary investigation and research, the new system gives room for two categories of users which are the students and the staffs whereby the staffs are highly entitled to manage the system.

**3.5 DEMOGRAPHIC AND OWNERSHIP VARIABLES**

On the process of system study and investigation, the researcher discovered that the work force of the institution is made up of mostly young people. The institution contains both junior and senior staffs. During the research, the researcher discovered that age bracket of the work force of the institution ranges between twenty (20) and sixty-five (65) years of age. However, majority of the work force is made up of staffs or workers under the age of 45 years.

The researcher also discovered that the institution is owned by the federal government of Nigeria and as such, is not a gendered based institution. The institution is made up of both male and female gender of staffs and students.

The students of the institution are made up of 60% females and 40$ males while the staffs are made up of 60% males and 40% females. However, majority of the staffs are young people aging between 30 to 50 years.

The researcher also discovered that majority of the work force and students of the institution are the of the Igbo ethnic nationality. However, this could be as a result of the location of the institution. Nevertheless, anybody can actually work be it from the Igbo ethnic group or not. The researcher also discovered that more than 97% of the workers are Nigerians and only a few of the work force are foreigners.

Also, the qualification or academic level of the staffs working in the institution is quite outstanding. About 80% of the staffs are graduates while about 20% of the staffs are not graduates (Junior Staffs).

During the research, the researcher went ahead to investigate about the students of the institution. The researcher could discover that out of the entire population of the students of Akanu Ibiam Federal Polytechnic Unwana, about 70% of the students are mostly drawn from the southeast. Out of the 70%, more than 50% are from Ebonyi State, and the rest from other states of the southeast. However, about 30% of the remaining students are from other states like the Cross-River State and Akwa Ibom State.

According to the above investigated statistics, there is a clear proof that most of the staffs and students in the institution regularly communicate using the Igbo language and as such most staffs or lecturers of the institution teach using the Igbo language.

**3.5.1 The Regulatory Bodies**

The Akanu Ibiam Federal Polytechnic is regulated by the National Board for Technical Education (NBTE) and the ministry of education. The staffs of the institution are been paid by the Federal Ministry of Finance. Furthermore, the researcher also discovered that the institution is made up of some pressure groups such as the Student Union Government (SUG) on the students arm while on the staff arm, there are pressure groups that protects the welfare of their staff members such as the Academic Staff Union of Polytechnics (ASUP), NASUP (Non-Academic Staff Union of Polytechnics) etc.

However, the new system gives room for two categories of users which are the staffs and students where the staffs are highly entitled to manipulate the system.

**3.6 ORGANIZATIONAL STRUCTURE**

The figure below shows the organizational structure of the Akanu Ibiam Federal Polytechnic Unwana and the relationships and relative ranks of the institution.

Governing council

Rector

Academic board

Deputy rector admin

Registrar

Deputy rector academic

Liberian

Bursary

Pro

Liaison

Student’s affair

Audit

Schools

Departments

Directorates

Units

**Fig.3.2: Organizational structure of the system**

**3.7 PROCEDURE CHAT FOR THE CURRENT SYSTEM**

Misconduct committed

Report written

Report submitted

Student summoned

Report investigated

Student punished if report is true

Student liberated if report is false

**Fig 3.3 Procedure chart**

**3.8 INPUTS TO THE CURRENT SYSTEM**

In the misconduct report procedure, the reporter or staff reports by writing or filling a misconduct form against the case.

In this case, the report is done manually and thereby causing problems such as wrong data inputting, time wastage, and many other error related problems.

**3.9 OUTPUT TO THE CURRENT SYSTEM**

The misconduct report is being put into the case file. In most cases, the case file also serves as the input and at the same time the output. This happens because all the investigation reports and recommendations are kept inside the case file. At any point of time for any reason, the case file is consulted to establish the next action due to the recommendation of the report.

**3.9.1 Problems of the Old System**

The old system takes more effort and physical space to keep track of the misconduct case files, to find information and to keep details secure.

Also, when mistakes are made or corrections and changes are needed, it often requires a manual transaction or operation to be completely redone rather than to just update the report.

The report has to be written down and copied or entered more than once. ‘Systemization’ can reduce the amount of duplication of data.

**3.9.2 Proposing a New System**

The new system is an improvement to the existing system. However, knowledge and skill has shown that using a new system will bring light to its shortcomings.

This suggest improvement especially in the case where the system is no longer satisfactory to the user. In this case, a computerized student’s misconduct management information system is proposed for the user and also in replacement of the manual based system which already exist. A computerized student misconduct management information system will help in providing timely, secure, efficient, accurate and effective information as well as reduce or eliminate the problems associated with the current system.

**3.9.3 Benefits of the Proposed System**

This system will help impact positively on the on managing the cumbersome procedures of reporting misconduct in the old system.

It will provide timely, accurate, efficient and effective misconduct reporting in the Akanu Ibiam Federal Polytechnic Unwana. The new system will also aid in the investigation of the report case and also help in the establishment of policies.

**CHAPTER FOUR**

**SYSTEM DESIGN**

**4.1 INTRODUCTION**

System design is aimed at producing a specification that will enable the completion and accurate implementation of the requirement to the new system. The design is a solution i.e. the translation requirements into ways of meeting them. The features of the new system are stated at the two level of logical and physical design.

The logical design entails the writing of detail specification of the new system i.e. describing the output files, input files, databases and procedures in a manner that meets the requirement. The physical designs for the system under study consist of program steps that actualize the logical design.

**4.2 OBJECTIVE OF THE DESIGN**

The following shall be the objective of the new system:

1. To develop a platform that will store in an electronic database student misconduct for future references especially in the cases of unsettled misconducts or unseen culprit.
2. To develop a platform that will completely eradicate the militating factors encountered in the manual misconduct system such as missing misconduct files.
3. To develop an online platform that will effectively prevent the students from falling victim of misconduct through an awareness module developed in the system.

**4.3 DESIGN CONSIDERATIONS**

During the design of the new system, some factors were considered. These factors include:

1. **Economic Benefits:** Designing a system that will be of economic benefit to the management of the Akanu Ibiam federal polytechnic by using a centralized electronic database which allows data to be shared rather than duplicated.
2. **Accuracy:** A system that will eliminate unintentional errors in input by users

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through the use of scripts to automate repetition tasks.

1. **Scalability:** A system that should be scalable when the need arises.
2. **Efficiency:** A system that should be able to produce a well-organized and comprehensive output through the use Structured Query Language (SQL) for insertion, retrieval, and update of records.
3. **Maintainability:** A system that will be easily maintained by developing the system in modules.
4. **Security:** A system with the ability to guard against intrusion from unauthorized person which may lead to loss of data. This is achieved by the use of login script as well as licensed anti-virus from a reputable vendor.

**4.4 SYSTEM BLOCK DIGRAM**

User (head of department)

GUI

SERVER

REPORT

Admin

DATABASE

**Fig. 4.1: System block diagram**

**4.5 USE CASE DIAGRAM**

Student

View Report

Staff

Admin

View Report

Add user

Add Student

Search Report

Report

Login/Logout

**Fig 4.2: Use case diagram**

**4.6 OUTPUT DESIGN**

PASSPORT

STUDENT’S NAME

REG NUMBER

CATEGORY

LEVEL

EMAIL ADDRESS

MISCONDUCT CASE

DESCRIPTION

DATE

PUNISHMENT

UPDATE

DELETE

**Fig 4.3: Output design**

**4.7 INPUT DESIGN**

|  |  |  |  |
| --- | --- | --- | --- |
| **FIELD NAME** | **DESCRIPTION** | **FIELD TYPE** | **FIELD WIDTH** |
| NAME | Name | Varchar | 30 |
| REG NUMBER | Registration Number | Varchar | 20 |
| DEPARTMENT | Department | Varchar | 50 |
| LEVEL | Level | Varchar | 10 |
| CATEGORY | Category | Varchar | 20 |
| PHONE NO. | Phone Number | Varchar | 14 |
| IMAGE | Image | Varchar | 50 |
| EMAIL | Email Address | Varchar | 50 |
| CASE | Misconduct Case | Varchar | 30 |
| DESCRIPTION | Description | Varchar | 200 |
| DATE | Date | Date | 12 |
| SAMPLE IMAGE | Sample Image | Varchar | 50 |

**Table 4.1: Input design of the new system**

**4.8 PROGRAM DESIGN**

This program is in modules using top down approach which makes debugging easy. The modules contained in the program include:

1. **Access Module:** This module interrogates the users in order to grant or deny access to other modules.
2. **Misconduct Reporting Module:** This provides the interface for adding new misconduct reports.
3. **View Module:** This module on its own part accepts a valid user ID and displays corresponding information about the user.
4. **Chat Module:** This module enables the users of the system to communicate by

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sending messages to each other. Here, the admin can send notifications to the staffs (HOD) of the student's department in

1. question. This message or notifications could be decisions taken by admin on a student's misconduct case. The system also allows the staff to reply the notifications received from the Admin
2. **Settings:** This module gives access to update details and also change password.

**4.9 DATABASE DESIGN**

MySQL was chosen to design the database, for easy correction of bugs and querying of the database. Database was intergraded to the system so that the system can access, update and delete information stored in the database and it contains the following tables:

* Admin
* Staffs
* Student
* Report
* Appeal
* Feedback
* Quick report
* Staff notification
* Admin notification

**Admin Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| AdminID | String | 20 | Stores admin id |
| Password | String | 30 | Stores password |

**Table 4.2 database for Admin**

**Staffs Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| StaffID | Integer | 11 | Generates Id |
| Name | String | 40 | Stores names |
| Department | String | 40 | Stores staff departments |
| Password | String | 30 | Stores password |
| Image | String | 50 | Stores staff images |

**Table 4.3 database for staffs**

**Students Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Id | Integer | 11 | Generates Id |
| studentName | String | 40 | Stores names |
| RegNumber | String | 20 | Stores registration number |
| Department | String | 30 | Stores departments |
| Category | String | 10 | Stores student category |
| Image | String | 40 | Stores images |
| Password | String | 30 | Stores password |

**Table 4.4 database for student**

**Report Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Id | Integer | 11 | Generates Id |
| StudentName | String | 30 | Stores names |
| RegNumber | String | 15 | Stores registration number |
| Department | String | 30 | Stores department |
| Level | String | 10 | Stores level |
| Student\_Category | String | 10 | Stores category of student |
| Mobile | String | 11 | Stores phone number |
| Email | String | 30 | Stores email address |
| Case | String | 30 | Stores misconduct case |
| Description | String | 200 | Stores description |
| Date | Date | 12 | Stores date |
| Report\_Image | String | 30 | Stores image |
| Punishment | String | 20 | Stores punishment |
| Punishment\_Date | String | 12 | Stores date |

**Table 4.5 database for report**

**Appeal Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Id | Integer | 11 | Generates Id |
| RegNumber | String | 15 | Stores registration numbers |
| Appeal\_Message | String | 150 | Stores appeal message |
| Date | String | 12 | Stores date |

**Table 4.6 database for Appeal**

**Table for Feedback**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Id | Integer | 11 | Generates Id |
| FeedbackMsg | String | 150 | Stores feedback message |
| RegNumber | String | 150 | Stores registration number |
| Date | String | 12 | Stores date |

**Table 4.7 database for Feedback**

**Quick report table:** Since misconduct in schools appears in different forms, it is important to figure out how these misconducts can be managed. These system gives room for a quick report in cases of misconduct that are beyond the notice of staffs. In this system, a student is allowed to report a misconduct of another student. What about cases of a rape? A typical example of a misconduct case that can best be related to this concept is a rape case. There could be badly behaved students that are likely to involve in rape. This system gives the opportunity for someone who is likely to come across issues like this, and might manage to get a proof of a snapshot. This can be helpful as such manner of reports can be seen through this system.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Id | Integer | 11 | Generates Id |
| Unique\_id | Integer | 6 | Stores unique id |
| Mobile | String | 11 | Stores phone number |
| Report | String | 200 | Stores report |
| Image1 | String | 40 | Stores image |
| Image2 | String | 40 | Stores image |
| Date | String | 12 | Stores date |

**Table 4.8 database for Quick report**

**Database for Staff notification**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Id | Integer | 11 | Generates Id |
| Department | String | 30 | Stores department |
| Message | String | 150 | Stores message |
| Date | String | 12 | Stores date |

**Table 4.9 database for Staff notification**

**Table for Admin notification**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Id | Integer | 11 | Generates Id |
| Department | String | 30 | Stores department |
| Message | String | 150 | Stores message |
| Date | String | 12 | Stores date |

**Table 4.10 database for Admin notification**

**4.9.1 ENTITY RELATIONSHIP DIAGRAM (MS VISIO ERD)**

Push

Admin

Staff

View

Push

Report

View

Student

**Fig 4.4 Entity relationship diagram**

**4.9.2 CLASS DIAGRAM**

-id: int

-studentName: String

-department: String

-regNumber: String

-category: String

-Image: String

-password: String

+view\_report()

-id: int

-name: String

-department: String

-Image: String

-Password: String

+register\_student()

-id: int

-studentName: String

-regNumber: String

-department: String

-level: String

-student\_category: String

-moblie: String

-email: String

-misType: String

-description: String

-date\_of\_misconduct: String

-sample\_image: String

-punishment: String

-punishmentDate: String

-date\_added: String

+add\_crime()

+check\_crime\_record()

+delete\_crime\_record()

-id: int

-Admin\_id: int

Password: String

+login\_user()

+register\_user()

+delete\_crime()

**Admin class**

**Report class**

**Student class**

**Staff class**

**Fig 4.5 Class diagram**

**4.9.3 ACTIVITY DIGRAM**

No

Yes

No

Yes

Add another misconduct report

End

End

Update/Delete misconduct report

View misconduct report

Add misconduct report

Login

**Fig 4.6 Activity diagram**

**4.10 DATA DICTIONARY**

This is a centralized depository of information about the data such as meaning and relationship to other data origin, usage and format.

|  |  |
| --- | --- |
| **VARIABLE** | **DESCRIPTION** |
| Student-Name | Stores the name of student who commits misconduct |
| Reg-Number | Stores student’s registration number |
| Department | Stores the department of the student |
| Level | Stores student’s level |
| Student-Category | Stores student’s category (Regular/Part-Time) |
| Mis-Type | Stores the misconduct case committed by student |
| Description | Stores the description of the misconduct |
| Date | Stores the date of misconduct |
| Report-Image | Stores a sample image of misconduct activity (Optional) |
| Punishment | Stores the punishment of the student for misconduct case. |

**Table 4.11 Sample data dictionary**

**4.11 CHOICE OF PROGRAMMING LANGUAGE**

A lot of programming languages exist but the hypertext pre-processor (PHP) was chosen for the implementation of this design due to the under listed reasons:

1. It’s compatibility with MySQL (Structured Query language) which is the standard that makes insertion and retrieval of information fun and fast.
2. PHP codes are easy to maintain.
3. It is a free source language
4. It can be integrated into html and vice versa.

**CHAPTER FIVE**

**SYSTEM DOCUMENTATION AND IMPLEMENTATION**

Documentation is the description, specification and operating instruction of a system. It is written material that describes a system and how to use it.

The process of implementation follows immediately after a successful design network. The implementation is to put the design into practices. Implementation involves:

1. Program coding
2. System testing
3. Change over procedure
4. Training.

**5.1 SYSTEM REQUIREMENTS**

The system requirement of this work is categorized into hardware and software requirements.

**5.1.1 Hardware Requirements**

1. **A personal computer** with the following minimum requirements:

* 2.5GHz processor fast.
* 4GB RAM memory.
* 500GB internal storage drive.
* Monitor of 15” LCD.

1. **UPS (Uninterrupted Power Supply):** The UPS must have a storage battery of at least 20 minutes, 50Hz and 202Vac.
2. **Printer**

**5.1.2 Software Requirements**

1. Operating system (Windows 7 and above)
2. Web browser (Opera, Firefox, Chrome)

**5.2 COMPONENT DIAGRAM**

Homepage.php

Admin.php

Report.php

Staff-Dashboard.php

**Fig 5.1 Component Diagram**

1. **Homepage.php:** This page introduces the system. It serves a welcome page and provides a suitable welcoming presentation for the users.
2. **Staff-Dashboard.php:** This provides the staff with a good dashboard to manipulate the system. On this page, the staff can review all report cases he or she has posted to the admin. On this page, the staff can also perform actions such as updating reports, change login credentials etc.
3. **Report.php:** On this page, the staff is allowed to report the misconduct cases.
4. A form is being provided with required input fields for staffs to fill in necessary information.
5. **Admin.php:** This component enables the Admin to view all reports posted by the staffs and also to perform several operations such as registering staffs, sending email notifications to the student’s email, updating records, tagging punishment to misconduct cases after investigation etc.

**5.2.1 DEPLOYMENT PROCEDURE**

The application is deployed to the web server and thus requires the use of internet services to have access to the system. The following processes involves the deployment of this system to the web server. The AWS EC2 is the chosen host for this application.

The following procedures are used to deploy the system to the AWS EC2 web server:

1. A server will be launched as per requirements and traffic needs of the application.
2. Select PHP Custom Web Application from the dropdown.
3. Chose a name for the manage app and manage server.
4. Select cloud provider-AWS
5. Select server size, Bandwidth, Storage for the application.
6. Select server location
7. Launch the application.

After all necessary processes, an application link will be provided where users can get access to the application.

<<Device>>

DB Server

<<Artifact>>

Database

<<Device>>

User client

<<Device>>

Browser

<<Artifact>>

PHP 8.0

<<Device>>

Webserver

<<Artifact>>

Website

**Fig 5.2 Deployment diagram**

**5.3 PROGRAM TESTING**

Program testing is a level of software testing where a complete and integrated software is tested. The purpose of this test is to evaluate the system compliance with the specified requirement.

**System Testing Types:**

1. **White box testing:** This is a method of testing used to ensure and validate the entire framework, mechanism, object and component of software application. White box testing verifies code according to design specification and uncovers application vulnerability.
2. **Black box testing:** This is a software testing technique that focuses on the analysis of software functionality versus internal system mechanisms. Black box testing was developed as a method of analyzing client, requirement specification and high-level design strategies.

**5.3.1 CHOICE OF TEST TOOLS/JUSTIFICATION**

After critical examination of the system testing, the white box testing was recommended because of the following reasons:

1. It facilitates code optimization
2. It removes unnecessary line of code
3. It enables fast case reusability and delivers greater stability
4. Facilitates effective application testing

**5.3.2 DISCUSSION OF RESULTS**

After critical examination of the system testing, the following analyzes the result of the test:

1. It facilitates code optimization
2. It removes unnecessary line of code
3. It enables fast case reusability and delivers greater stability
4. Facilitates effective application testing

**5.4 SYSTEM SECURITY**

System security is so much important to this application as it prevent unauthorized access to the system. Some reliable measures were taking to ensure proper security to this system. These measures include:

1. **Password Protection:** This is one of the most important security measures taken to avoid unauthorized access to the system. Actually, every student is entitled to have access to this system and as such, a default password which is “**password**” is given to ensure that students can log in to the system. However, the system gives room for every student to change his or her password to any choice. This ensures unauthorized access from other students. This system also ensures that login credentials are provided to recognize every user of the system including the Staff and Admin before giving access to login.
2. **Screening and Background Checks:** This was carried out to ensure proper security.
3. **Use of virus scanner (Antivirus):** This measure is important and was put in place avoid viruses and other threads from damaging the system.

**5.5 TRAINING OF OPERATORS**

System failure in some case occurs as a result of ignorance and expression of fear associated with computerized of which most users display. It is obvious from the new system design specification that the operational procedure of the new system will be slightly different from the previous system. Therefore, the user will need to have basic computer training for comprehensive guide on how to use this system.

**5.6 SYSTEM CONVERSION**

The method of system conversion used in this work is the parallel method. This entails the operation of both the new and old system concurrently. Because of the simultaneous operation of both systems, the management enjoys the following:

1. Data and system to fall back if the new system fails.
2. The performance of the two systems can be compared
3. Also, the old system stands as a backup in case of unforeseen situation.

**5.7 MAINTENANCE DETAILS**

For adequate maintenance, the following should be carried out:

1. Ensure that the system is operated under specification
2. Ensure that the system is updated to cope with the dynamic demands.
3. Examine the output of the website command regularly
4. In case of hardware malfunction or breakdown. Expert should be consulted.
5. Prevention and detection of virus infection

**CHAPTER SIX**

**SUMMARY, CONCLUSION AND RECOMMENDATION**

**6.1 SUMMARY**

This project titled Design and Implementation of a Web-based Student Misconduct Management Information System involves a thorough study of the current system manual method of misconduct management information system. The problem inherent in the current system such as loss of important information, keeping of misconduct record books for different misconduct cases, the tediousness of tracing misconduct records was resolved. The work presents the analysis of the existing system and design of a new system and how it will overcome the drawbacks in the old system. These were achieved through adopting the careful method of data investigation by using interview and observation methods which gives birth to a relevant information for designing a web-based student misconduct management information system by using object-oriented analysis design methodology (OOADM), programmed using PHP, HTML, and styled with CSS. The white box testing method was used to examine the functionality of application without interfering into its internal structure. Haven proved itself worthy of adoption, the parallel change over the system was suggested for a safe implementation.

**6.2 CONTRIBUTION TO KNOWLEDGE**

This system brings to the body of knowledge a unique concept as it provides the opportunity for the administration of the Akanu Ibiam Federal Polytechnic to also improve themselves in effective counseling and community service programs.

**6.3 SUGGESTION FOR FUTHER RESEARCH**

Due to the constraint of developing the system, the researcher could not cover every aspect

of solving some task recommended to be achieved by the researcher. The binomial system of data collection such as finger print, face recognition should further be implemented in other to have more security and accurate data that can not be easily manipulated.

**6.4 CONCLUSION**

As a result of this research, this new system (Design and Implementation of a Web based Student Misconduct Management Information System) was able to achieve efficient management of information, greater flexibility in searching for misconduct information and makes students misconduct control easier for the administration of the Akanu Ibiam Federal Polytechnic Unwana by eliminating the problems of repetition of misconduct information, stress in searching for misconduct files cases and also reduces stress on staff of their routine manual record management.

**6.5 RECOMMENDATION**

The following are the recommendations

1. That this system be implemented by the Akanu Ibiam Federal Polytechnic.
2. The staff should be trained and retained to meet up with the requirement for operation.
3. The backup files should be constantly maintained
4. Good programmers/analyst should be employed to manage the system.
5. Finally, since this project unable to cover all area of Akanu Ibiam Federal Polytechnic Unwana, due to time constraint, this project is still open for further improvement and development.

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