LEAVE MANAGEMENT SYSTEM

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CHAPTER 1

1. INTRODUCTION

Information Technology has revolutionized the life of human beings' and has made the lives easier by the various kinds of applications. In the light of the rapid changes with the use of IT, there are many tools, technologies and systems that have been produced and invented. In the modern world, time is short so if there are many processes taken place at same time within a place there is a need for integration of all the processes, creation of paperless environment also ensures efficient task management. Nowadays most of the institutions are shifting to computer based system. The purpose to having a computer based system is, it helps to increase the market share and it's very easy for customers to use. It is increasing the demand among the customer. This project was concerned with developing a **School Leave Management System (SLMS)**. In this system the leave management becomes more efficient & easier to handle with its reliable system components.

There are many types of leaves which are provided to an employee and an employee can use these leaves according to their necessity. The different types of leaves are:

TYPES OF LEAVE

All about Annual Leave, Maternity Leave, Bereavement Leave, Sick Leave, Study Leave, Compassionate Leave and Salaries on My wage Zambia. (WageIndicator2018-Mywage.org/Zambia) states and explains the following types of leaves in Zambia which an employee is entitled to

1. ANNUAL LEAVE

This is the total number of off days an employee is entitled to annually. It excludes Sundays and gazetted public holidays. These total numbers of days accrue either monthly, e.g two days per month or sometimes fixed, eg 18 days per annum. Annual leave is most often paid leave unless otherwise stated. In most institutions leave pay is equal to the monthly salary.

2. COMMUTATION

According to (wage indicator 2018) states that commutative leave is usually done at the discretion of the employer. It entails "selling" excess leave days back to the employer in exchange for cash. Excess days would constitute those leave days left over after one has proceeded on leave.

3. MATERNITY LEAVE

This leave is granted to a female employee who has delivered or is about to deliver.

In Zambia, all non-represented/non-unionised workers are allowed 120 working days unpaid maternity leave (this figure excludes weekends and public holidays). This includes soldiers, public service workers, domestic workers, police, and teachers in public or government schools.

All workers whose employers allow them to form or join unions or be represented are allowed 90 days paid maternity leave (this figure excludes weekends and public holidays), with provision to negotiate for more time (4-6 months) through collective bargaining. This includes teachers in private schools, doctors in private health facilities, accountants, bankers, miners and in journalists.

This leave does not reduce annual leave days nor affect monthly pay. Excess days arising from illness as a result of delivery are also granted at no cost or effect to the employee as provided for under law. This leave is special as it excludes access to any other leave available. One cannot be stopped from taking it even if you have no leave days or have already been on leave. It's the only leave that is purely

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exclusive.

However, maternity leave can only be taken by an employee who has completed at least two years of continuous service with her employer. (Laws of Zambia Act 18 of 2012)

4. SICK LEAVE

An employee is granted this leave for the purpose of medical reasons, either recovery from illness or to seek medical attention. Sick leave is often negotiable for unionised employees; but the statute states 90 days on full pay and the next 90 days on half pay and thereafter the employee is medically discharged from employment. (Statutory Instruments No. 2 of 2002)

5. LOCAL LEAVE (CASUAL LEAVE)

This is a type of short leave, ideally ten days, which one can take to attend to personal issues if provided for by the employment contract. These days are normally reduced from the accumulated annual leave days explained above. However, this type of leave will not in any way affect your pay cheque. (Laws of Zambia Act 18 of 2012)

6. COMPASSIONATE LEAVE

This leave is granted when one has had a bereavement of a registered family member. Mostly, the maximum is ten days and it's paid for. So, you don't lose either your annual leave days nor your pay for the absent days. (Laws of Zambia Act 18 of 1982)

7. NURSING LEAVE

This is leave taken when one has to stay home and nurse a registered child or spouse. Usually the time frame is negotiated, but where it is fixed it usually does not exceed 30 consecutive days in any given year. As above, it is also paid for and does not affect the accrued annual leave days nor monthly pay. (Laws of Zambia Act 18 of 1982)

8. STUDY LEAVE

This is time off given for the purpose of undertaking studies or sitting for exams. This varies in institutions in terms of length. Also, it's paid for and does not affect either annual leave days or monthly pay.

However, this usually has a condition in terms of eligibility (you must have served the company for a

specified period) and then the study programme must have relevance to your job. And one can usually only access this once a year, unless otherwise negotiated. (Laws of Zambia Act 18 of 1982)

Application of leave in Zambia has been a long process and time consuming since it is done manually hence the data for the current system is easily manipulated and is having challenges to keep track of the records. Some employees have reported that when an application leave is made, the application form gets lost before reaching in the office to the relevant people for approval hence the applicant is made to apply for leave again which is stationery wastage and time consuming. In the current system it takes time to notice who is on leave and who is not on leave which leads to shortage of man power in an institution. This has brought about difficulties in report generation.

The above mentioned problems will be resolved with the development of Leave Management System. The system has been designed as a Relational Database Management System (RDBMD). A relational database management system is a database management (DBMS) that is based on the relational model as invented by E.F.C. Codd, of IBM's San Jose Research Laboratory. Many popular databases currently in use are based on relational model.

RDBMS has become a predominant choice for the storage of information in new databases used for different types of record. Relational databases have often replaced legacy hierarchical databases and network databases because they are easier to understand and use. However relational databases have been challenged by object databases, which were introduced in an attempt to address the object-relational impedance mismatch in relational database, and XML databases.

The project comes under RDBMS category. The project handles the huge data in an institution subjected to employee, their leave detail. The RDMS is capable of creating storage, keeping data, manipulating data and retrieving data in desired manner. The physical leave form has guided the database architecture design and all the database information will be manipulated by the system. The system is able to generate a unique id which will help the user to login into the system and request for leave. The system will also be able to generate reports and email notification, approval or reject leave.

The mentioned problems which includes: manipulation of data, misplacement of records, high cost on buying stationery, time consuming for the procedure to finish and receive the reply whether approved or rejected or pending.

1.1 PROBLEM STATEMENT

The current manual system is suffering from a series of drawbacks. Since the whole of the system is maintained with hands the process of keeping, maintaining and retrieving the information is very tedious and lengthy. The records are not in order, there are difficulties in associating any transaction or process in particular context. If any information is found it required to go through different departments, and documents do not exist like report generation. There is unnecessary consumption of time while the leave process approval is being processed and also retrieving records. One problem is that it is difficult to find errors while entering or filing the records. Once the records are filed, it is difficult to update or once the file is misplaced it is difficult to find it. (Choudhury 2005)

The reason behind is that there is a lot of information to be maintained which leads to some errors and time consuming during the process of leave application. It is for this reason that the system is automated (computerized).

1.2 .General objective

To automate and update leave information of the employees

Specific objectives include:

- To handle proper and full information of every leave which have been provided by the institution.
- To manipulate leave information of employee for the institution.
- To generate reports for management from various modules

1.3. SIGNIFICANCE OF THE STUDY

The web based automated school leave management system is expected to improve the management of leave applications in the organization since currently the organization is using a manual system to manage leave applications. The automated system will improve the existing system and be beneficial to the members of staff in the sense that they would not have to apply for leave manually, the authorities in charge of the approval also will not approve /reject leave manually and all leave records and reports are generated online.

All the technologies i.e. PHP, Apache and MySQL used for current system design are open source and hence freely available for download. PHP provides a strong platform for creating the visual front-end of the web application and PHP combined with HTML provides a very flexible development environment. For fulfilling Web Server requirements XAMPP was used, which is again Open Source and is supported across multiple platforms. In order to maintain visual consistency jQuery was used for simpler implementation of certain features. For constant testing, analysis and execution needs, Firefox and Google Chrome web-browsers were used. With a combination of all these technologies, we were able to create a web application environment that is efficient and consistent enough.

The primary objective of my project and development was to automate leave management application procedure. It has been achieved successfully and the system is tested to be working efficiently.

Online application of the whole system helps easy access to the system anywhere. There is no need of collecting the leave application forms and apply manually. The time taken for process completion is now largely reduced. After application, the database is automatically updated at the end of process completion removing the hassle for department officials who had to enter the data manually. As the database is managed through MySQL, data duplication is eliminated and thereby reducing chances of error. In addition, data can be now be easily retrieved, edited and printed whenever required. Authentication based access proves to be more secure than manual system. The data is maintained on a central server and is distributed among different departments as per requirement and copies of this database are maintained on backup servers. In addition, database access is authorised and cannot be viewed or edited by unauthorized personnel. This automated and computerised system has security (safe), user friendly and fast.

1.4 Operational definitions of terms

Some terms that are specifically identified by this project used in the management of leave application include

1. Online
2. Application
3. Database
4. Management
5. Forms

1.5 AIM OF THE PROJECT

The aim of the project is to reduce on paper work by applying online and also to save the time of the applicant by applying online.

1.6 Hardware specification

COMPUTER	HP
HD led LCD	15.6
HDD	1000 GB
DDR3 memory	4 GB
Processor	Intel core I5

Figure 1   Linda Malomo, 2018

DEVELOPMENT TOOLS	PROGRAMMING LANGUAGES
SUBLIME TEXT EDITOR	PHP - BACK – END
XAMMP SERVER	MYSQL – DATABASE – The database of the system
	HTML, CSS & JavaScript - FRONT – END - What user / admin see

Figure: 2   Linda Malomo, 2018

The bootstrap framework provides a dynamic website. The system was engineered to be flexible and extensible. This means that future developers will have the capability to build new modules for different database engines and transfer protocols.

CHAPTER TWO: LITERURE REVIEW

2.1 Existing system

The existing system is manual. It is a lengthy process and this process is not optimized. (Ansari 2017)
The applicant has to collect a leave form for a specific leave application and write the details then take
to relevant authorities for approval either to be granted, rejected or pending. The applicant is left in
suspense because the response will not be received there and then after the application is made and it
should be done three months before to the relevant authority.

Disadvantages of the existing system

- ❖ Misplacement of papers
- ❖ manipulation of papers
- ❖ Time wastage
- ❖ Natural disasters

Why was the System designed?

- ➢ The system was designed to automate the existing system.
- ➢ It decreases the paper work and easier record maintenance by having a database for leaves maintenance.
- ➢ Leave management system reduces the over work and time duration. It provides an easy maintained and systematic environment for the higher panel (HOD/ principle) for approval of leave

Advantages of the system designed

- ➢ Reduction of paper work
- ➢ It is cheaper
- ➢ Reduction of over work and time
- ➢ Easy access of records
- ➢ Good record keeping
- ➢ Visibility of employee availability
- ➢ Accurate information

2.2 Analysis of the proposed system

Leave Management system was designed/ developed for an employee to apply for leave online. The application forms have been designed to be user friendly and fill in easily hence there will be no time consuming and also less expenses on stationery compared to the process of filling in the forms manually. The system was developed in web bases completely and was required to use web technologies appropriately.

Feasibility studies aim to objectively and rationally uncover the strengths and weaknesses of the existing system or proposed venture. In its simplest term, the two criteria to judge feasibility are cost required and value to be attained. As such, a well-designed feasibility study should provide historical background of the project. Generally, feasibility studies precede technical development and project implementation. The assessment of feasibility study is based on the following factors:

➢ Technical Feasibility
➢ Operational Feasibility

Generally, feasibility studies precede technical development and project implementation. The assessment is based on a system requirement in terms of Input, Processes, Output, Fields, Programs, and Procedure. This can be quantified in terms of volumes of data, trends, frequency of updating, etc., in order to estimate whether the new system will perform adequately or not. Technological feasibility is carried out to determine the capability, in terms of software, hardware, personnel and expertise, to handle the completion of the project.

Operational feasibility is a measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development. The operational feasibility of the system can be checked as it solves the problems and reduces the complications occurring in the paper work.

➢ Technical Feasibility: The system can be implemented using computer software & hardware
➢ Operational Feasibility: The system efficiently operates & reduces manual computation and time of processing, reducing cost of paperwork and human errors.

ICT is a generic term referring to technologies which are being used for collecting, storing, editing and passing on information in various forms (SER, 1997).

How use of ICT is essential for human life? ICT does not drain. Where is its place in our country? How can it be utilized in various matters? What is the reason behind of the third world information technology? The use of IT can be a part of the country's backwardness in the field of science, industry and agriculture was the compensation? Questions and these questions in the minds of managers and experts, including academic centers and institutions of higher education have to work. Fields of study, including the role of ICT in developing countries can be examined, particularly its impact on the organization and the impact of the training process in the organization will be. Today we see the rapidly changing environment threatens the life of many organizations Global economic pressures are pushing forward the regional economy, new media and new technology, the global consumer culture, the emergence of global standards and possibility of sharing the costs, impact of environmental changes that exist in today's organizations. (Goudarzi, Gmynyan, 2003) threatened the survival of many organizations to adapt to environmental changes. Evolution theory suggests that the environmental variable and uncertain environmental, require a variety of different organizations that environmental changes have coincided with the high flexibility topics such as education and improvement have become a very important strategy for organizations. In fact, training is considered assets are considered stable. Because measuring return on investment in education and development, especially in the short time it may be difficult. This particular type of employees, their skills and knowledge bases to achieve its strategic objectives are due to changes in work and organizational context in which work is performed as prerequisite organizations requires the position of continuous innovative training and strategic development certain to run The views Decenzo and Robbins (1988) "Education is experience-based learning and to make changes in a relatively stable, so he can work and improve the ability to change the skills, knowledge, attitudes and social behavior. The concept of education is to change knowledge, attitudes and interaction with colleagues (Decenzo. Robbins 1988). The Singer's view (1990) "requires the use of training programs is expected to strengthen the competence of the staff and the knowledge, skills and abilities in a person is, in a way that facilitates improved job performance to. (Singer, 1990) Whether this new perspective on the use of ICT in the learning process has increased the satisfaction levels of employees, enhance knowledge and improve their skills, increase process efficiency and ultimately increase the effectiveness of the training process been effective?

ICT and Literacy in Schools

Research shows that proper use of ICT can change the location of the content and educational technology in the 21st century in the heart of educational reform are in place, will accelerate. ICT-supported education, if well designed can be acquired knowledge and skills needed for lifelong employees, to promote. ICT If it is used (especially the "computer and Internet technology it properly, rather than just teachers and students allow those who have "performed better overall performance, they provide new ways of education. These new ways of teaching and learning by teaching learning theories fundamentalists and a transfer of technology from science teacher to the student-centered education has been created implementation of a traditional educational methods and educational methods by emerging ICT) Active Learning - ICT enhanced learning tools for testing, calculation and analysis of the mobilization of as a tool through which organizations can determine the range in which their human capital

information, therefore, an agenda for examining, analyzing and learning about new offers, so students can learn to work as and whenever be appropriate on real world issues in depth work, and the summary below and to the learners Collaborative learning ICT -based learning interaction and cooperation among teachers and professionals regardless of their location can be strengthened. Apart from bilateral relations, ICT-based learning opportunities for employers to work with people of different cultures, and thereby provides the communication skills of employees to improve their team classification (such as global awareness) helps. ICT Education based on ICT, training was conducted throughout the life of the employers with the development educational space to not only peers but also for educators and experts in various fields can be used. Creative Learning - ICT-based learning and applying the information to create products of the real world to promote the information.

From the review of literature above, it has reviewed the relationship between ICT and education is very important in an organization hence the school boards or management of institutions should endeavor to empower and engage with more input and control over the employee's/staff work life. Through the management of leaves, one can quickly build the workflows and processes. The powerful flexibility features keep employees current and compliant even as rules and regulations change. For competent management of business process, computerization is a must in today's scenario.

CHAPTER THREE

3.0 METHODOLOGY

The step which was used in developing a system was to identify the need to change and improve an existing system. An investigation was carried out at Mary Queen of Peace Girls School. The design was guided by the physical leave form which will define the architecture of the database

The approach which was used in this research was by designing the system and the following languages were used to design the school leave management system;

- ❖ Hypertext Preprocessor (PHP) is programming language that allows web developers to create dynamic content that interacts with databases. PHP is basically used for developing web based software applications. PHP is a server side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking even build entire e-commerce sites. It is integrated with a number of popular databases including MySQL, PostgreSQL, Oracle, Sybase, Informix and Microsoft SQL Server

- ❖ MySQL is the most popular open source relational SQL database management. MySQL is one of the best RDBMS being used for developing wed based software applications. MySQL is a very powerful program in its own right. It handles a large subset of functionality of the most expensive and powerful database packages. MySQL is very user friendly to PHP, the most appreciated language for web development.

- ❖ Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language .Cascading means that styles can fall (or cascade) from one style sheet to another, enabling multiple style style sheets to be used on one HTML document. It brings a lot of long –awaited novelties, like rounded corners, shadows, gradients, transitions or animations, as well as new layouts like multiple-columns, flexible box or grid layouts.

- ❖ JavaScript is prototype-based with first class functions, making it a multi-paradgm language supporting object-oriented, imperative and functional programming styles. JavaScript is a programming language that is run by most modern browsers. It supports object – oriented programming and procedural programming. It can be used to control web pages on the client side of the browser, server side programs, and even mobile applications.

- ❖ jQuery is a JavaScript Library. jQuery greatly simplifies JavaScript programming. jQuery is a fast, small, and feature- rich JavaScript library. It makes things like HTML document transversal and manipulation, event handling, and animation.

3.1 Proposed system

The web application consists of four modules

- ❖ Admin
- ❖ Employee
- ❖ HOD
- ❖ Principle

APPLY LEAVE

In this module an employee can apply their leave application through online. User should login with username and password. A comparison is done for a user name and for a password if the correct user id and password are supplied then, main menu of online leave form will be displayed to the user.

ADMIN MODULE

- ❖ The initial step which is handled by the admin module is to create a unique user account for each employee in the institution.
- ❖ This module handles administrative functions of the system and is used by the head.
- ❖ The head of department will enter the leave eligibility for each employee, for each type of the leave at the beginning of the year.
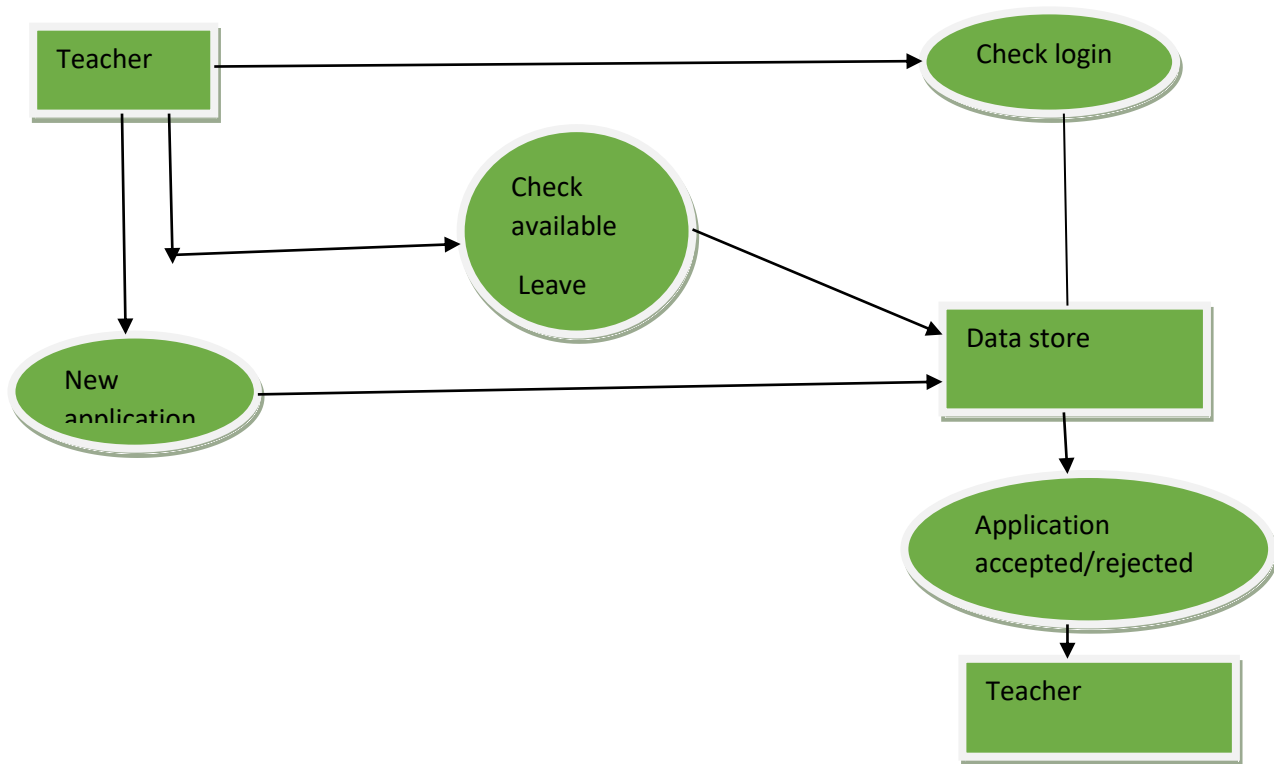
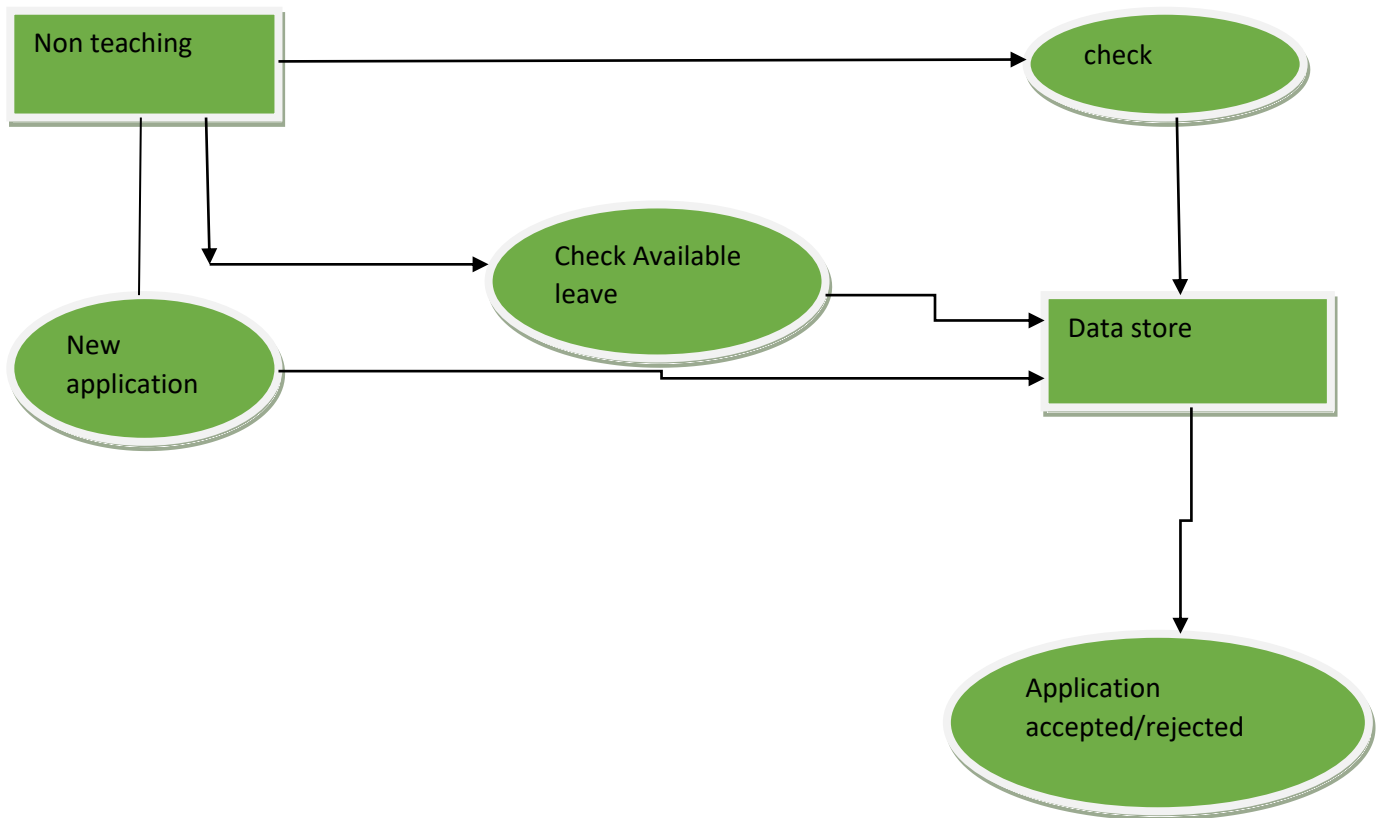Figure 3: Teaching Staff   Source: Pratik Mahorey 2012

Figure 4: Non teaching staff   Source: Pratik Mahorey 2012

EMPLOYEE/OR TEACHER'S MODULE

- ❖ Employee/ teacher can log in or out their account their account for the leave application with the unique Id which is provided by the admin module
- ❖ Based on the availability of leave, employee can apply for leave online. Study leave, sick leave, maternity leave, and other types of leave.
- ❖ Employee/teacher is able to see his/her leave record in a particular month or year and its type also.
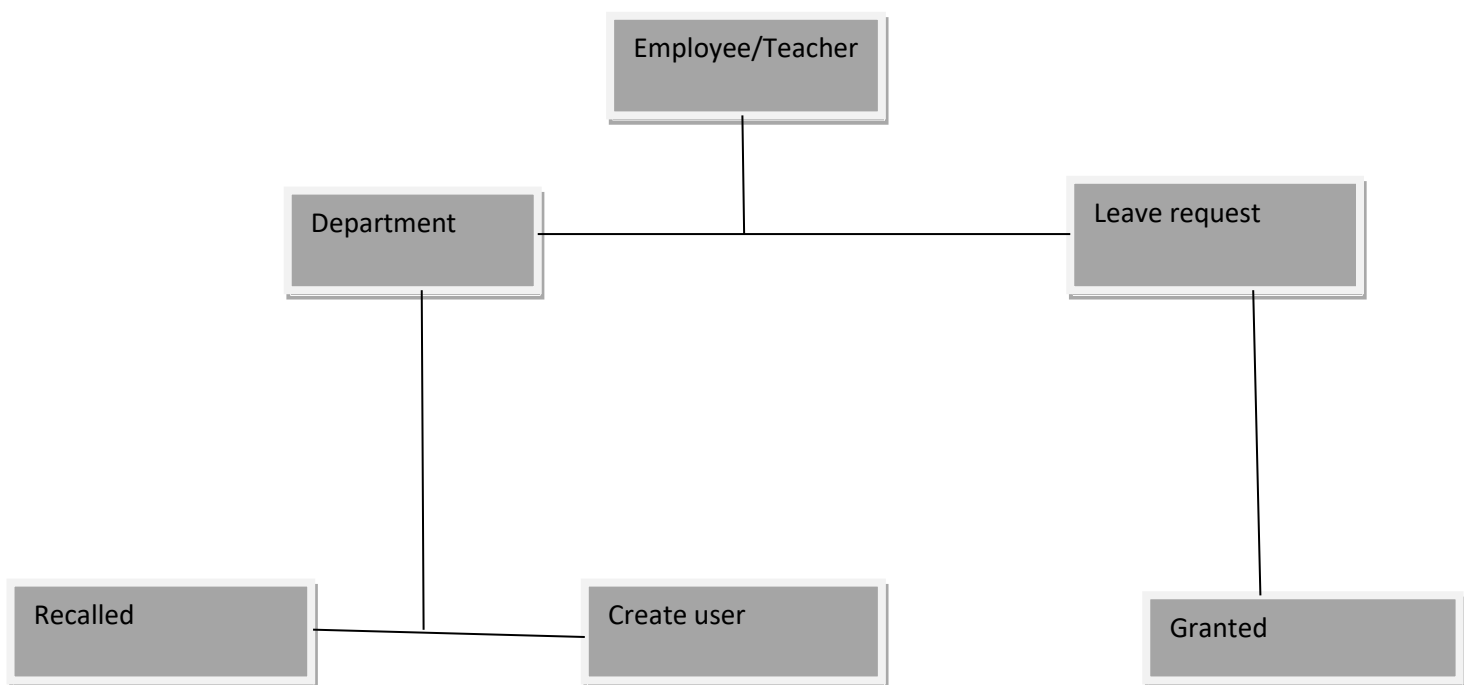

Figure 5: Employee/teachers   Source: Pratik Mohorey 2012

HOD MODULE

❖ This module is having the power of leave verification of the employees

❖ HOD is able to see the leave record of the employee.

❖ HOD's can verify the leave on the basis of the leave availability of the employee.

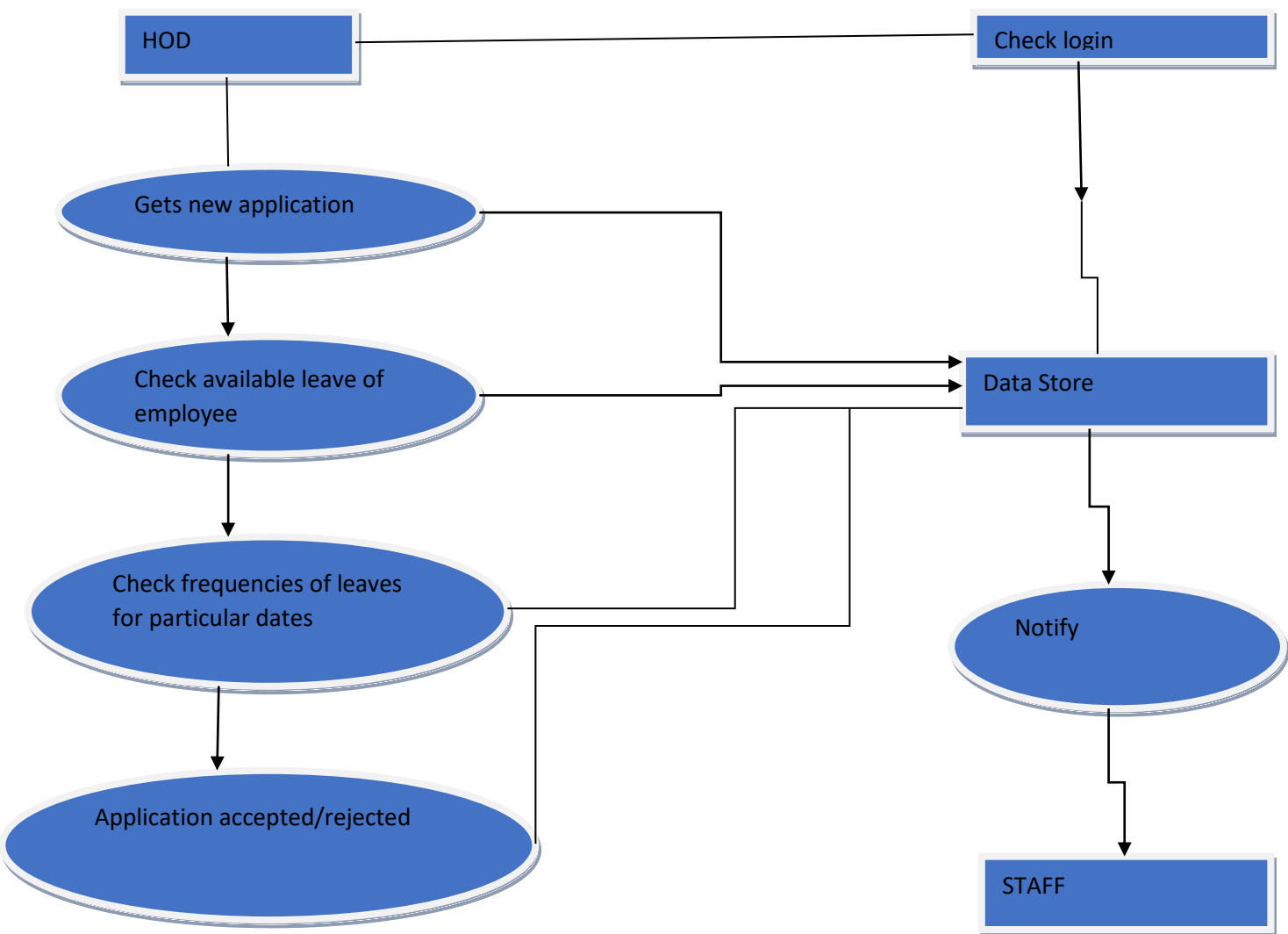❖ After leave verification leave is transferred to the principal for the approval.

Figure 6: HOD   Source: Pratik Mahorey 2012

PRINCIPAL/ HEADTEACHER'S MODULE

- ❖ This module is the higher authority for all.
- ❖ This module can see the whole view that leaves are verified by HOD and application of leave by employee
- ❖ Principal is having authority of approval or disapproval of leave and remark on that.

- **SOFTWARE REQUIREMENT SPECIFICATION**

The software requirements in this project include

- ➢ Front End: Notepad PHP
- ➢ Back End: sql server 2012
- ➢ XAMPP a platform used
- ➢ Web Browser: Internet Explorer, Mozilla Firefox, Google Chrome etc.

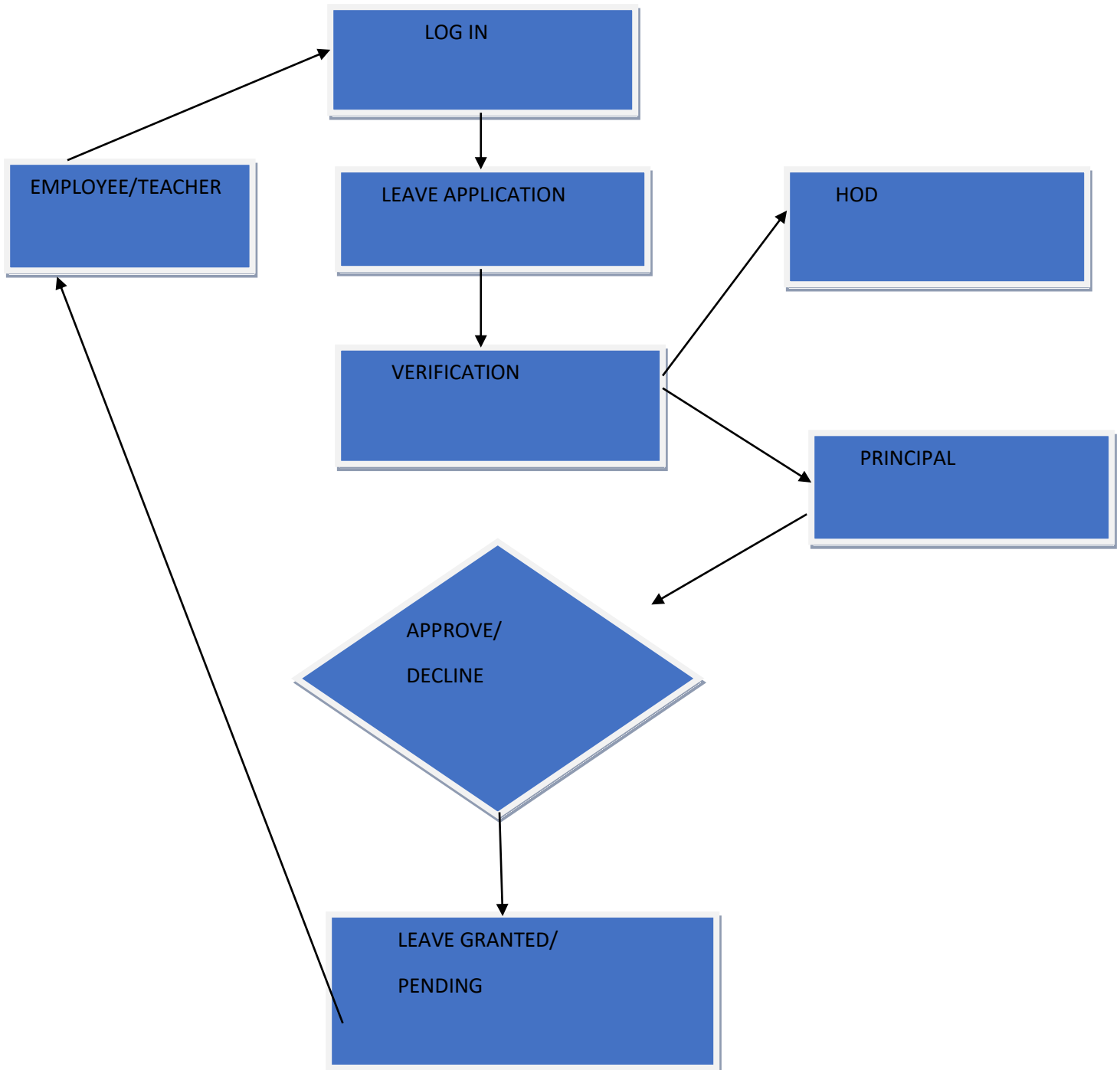The data processing diagram

Figure 7: data processing   Source: Pratik Mahorey, 2012

The above diagram shows how data is processed. The employee logs in the system then applies for leave then the leave application is verified by the HOD and the principal after verification, the principal approves/ declines the leave thereafter leave is granted or not granted or pending and the notification is received after the process through the email.

3.2 Testing

System testing

A type of testing to confirm that all code modules work as specified and the system as a whole performs adequately on the platform on which it will be deployed

Components of Testing are given below

- ❖ Testing process
- ❖ Requirements traceability
- ❖ Tested items
- ❖ Testing schedule
- ❖ Test recording procedure
- ❖ Hardware and software requirements
- ❖ constraints

Testing process

Testing process as the name suggests is the systematic step by step approach to testing. They are listed in number below

1. Unit Testing
2. Module Testing
3. System Testing

There are others as well but they hardly matter given the scenario worked on.

Ongoing support

Review/Test

Requirements Analysis		Operational Testing

High level Design		Integration Testing

Detailed specifications		Unit Testing

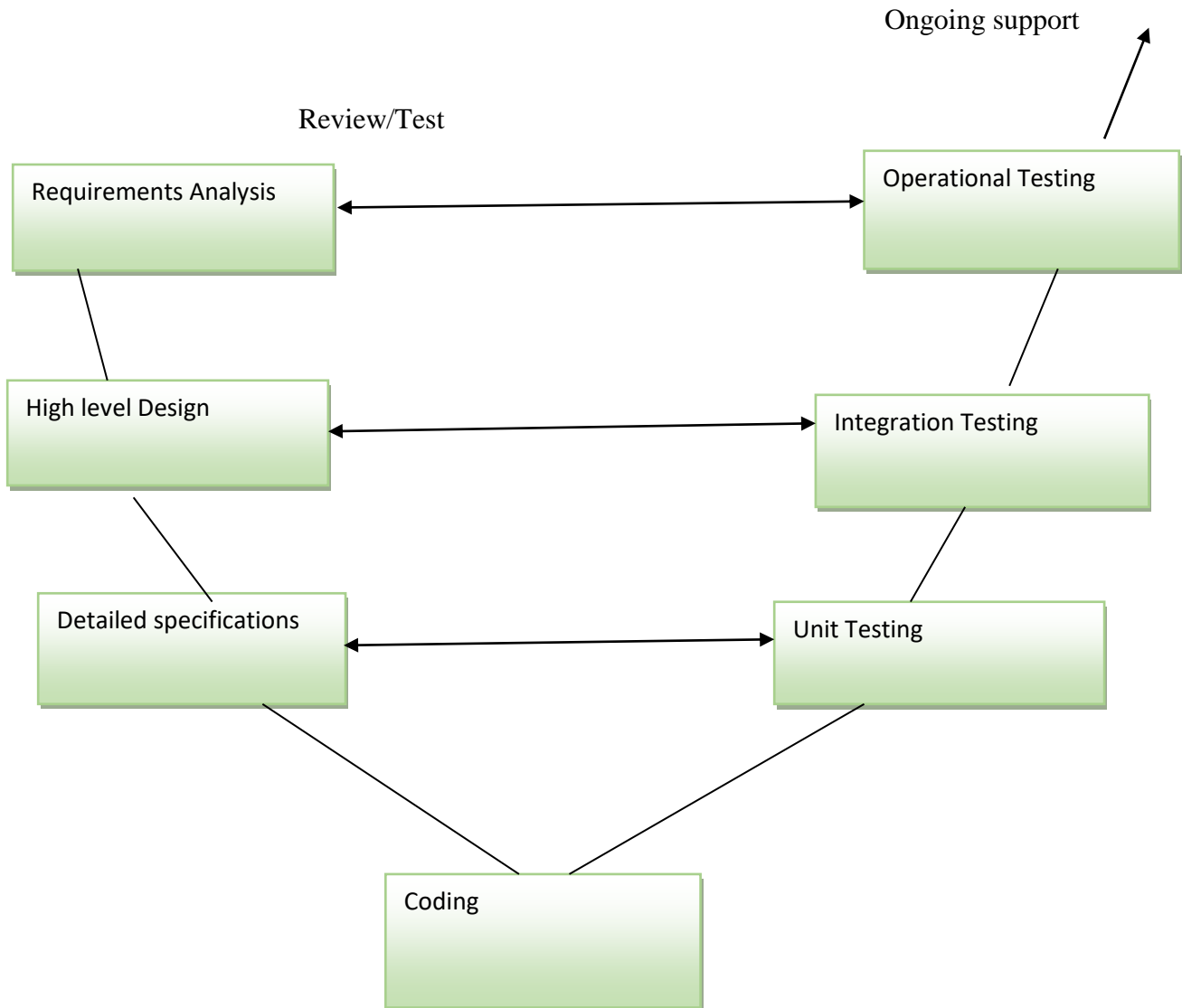| Coding |
|---|

Figure 8: system testing   Source: Pratik Mahorey, 2012

Table 1: Unit testing for Login page   Source: Linda Malomo 2018

Project Name	School Leave Management System
Test ID(user name)	TID (password)
Testing Module	Login
Testing Module	Unit testing
Date	25th July 2018
Name of tester	Linda Malomo
Description of module	This module allows to access login page

Table 2: Unit Testing for Admin page   Source: Linda Malomo 2018

Project name	School Leave Management System
Test ID (username)	(TID) Password
Testing Module	Admin module
Testing module	Unit testing
Date	25th July 2018
Name of tester	Linda Malomo
Description of Module	This module allows to access admin page

Table 3: Unit testing for HOD module   Source: Linda Malomo 2018

Project name	School Leave Management System
Test ID (username)	(TID) Password
Testing Module	HOD module
Testing module	Unit testing
Date	25th July 2018
Name of tester	Linda Malomo
Description of Module	This module allows to access HOD page

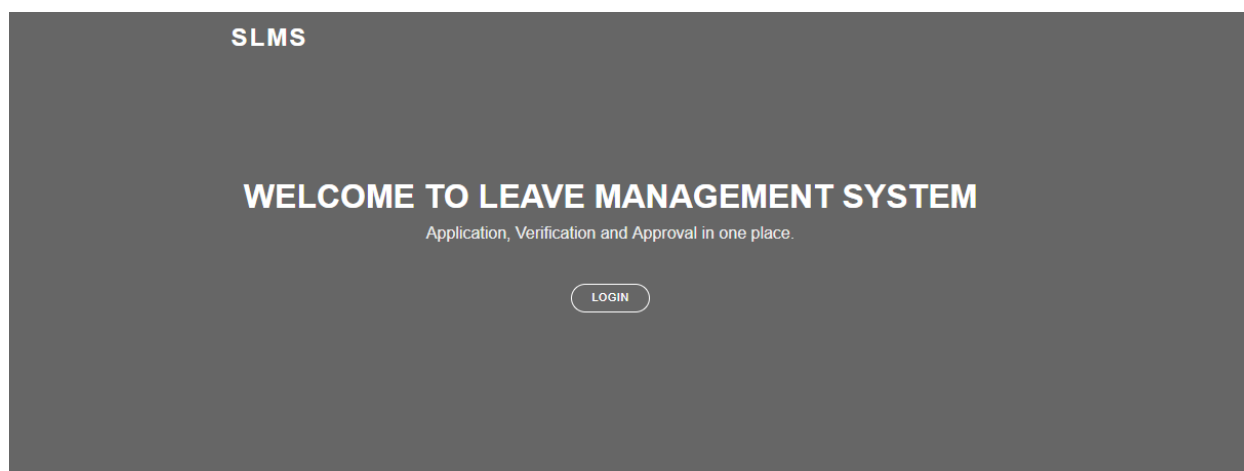Table 4: Unit testing Principal/Head teacher module   Source: Linda Malomo, 2018

Project name	School Leave Management System
Test ID (username)	TID (Password)
Testing Module	Principal/head teacher module
Testing module	Unit testing
Date	25th July 2018
Name of tester	Linda Malomo
Description of Module	This module allows to access Principal/Head teacher page

CHAPTER FOUR

Results/Outputs

The development of School Leave Management System has led to reduction of manual work and simplified the work. Previously the system was tedious hence maintenance of data was a great challenge. The School Leave Management System has made work easier by applying for leave anywhere and anytime. The applicant would just log in the system and apply for leave and within few minutes a notification is received. The figure below shows the login system of an applicant.

Figure 9: login page   Source: Linda Malomo, 2018

The Head of department duties has been simplified because previously there was collection of records then check manually which employee/teacher is on leave but with School Leave Management System the Head of Department will login to the system and check on the records without wasting time. The figure below shows the Head of Department dashboard.
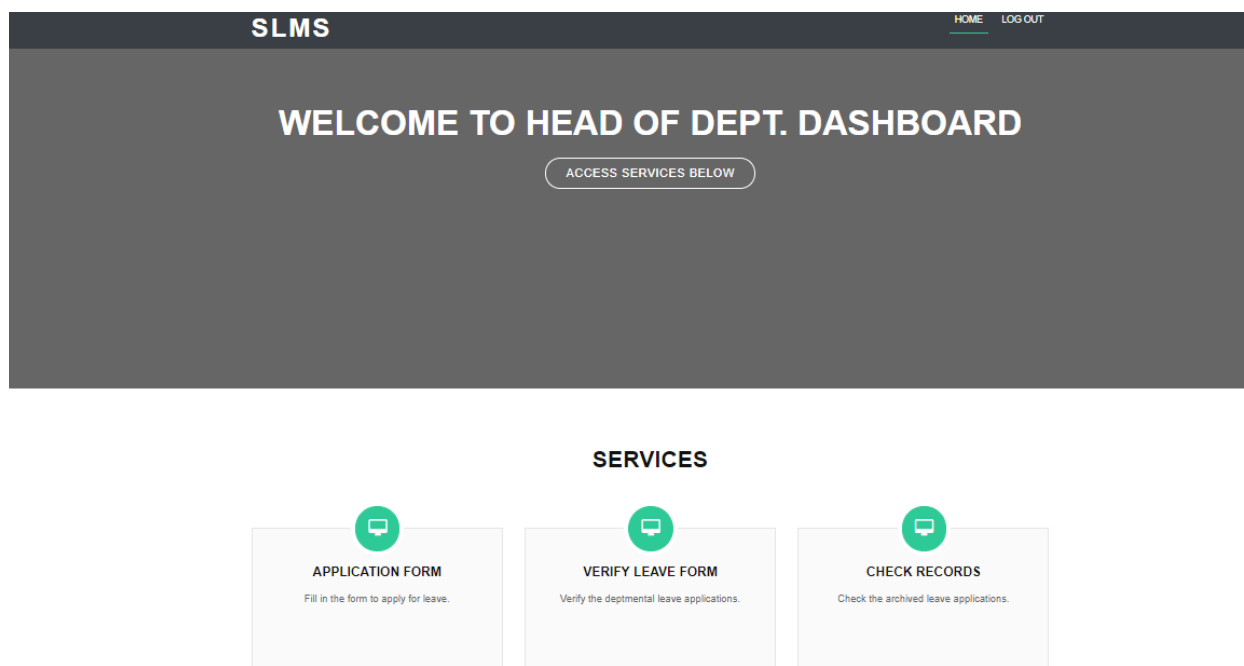

Figure 10: head of department   Source: Linda Malomo, 2018

The head of department is able to login into the system, apply for leave, verify leave, and check the records of leave.

The figure below shows the principal/ head teacher's dashboard to view the activities of the system
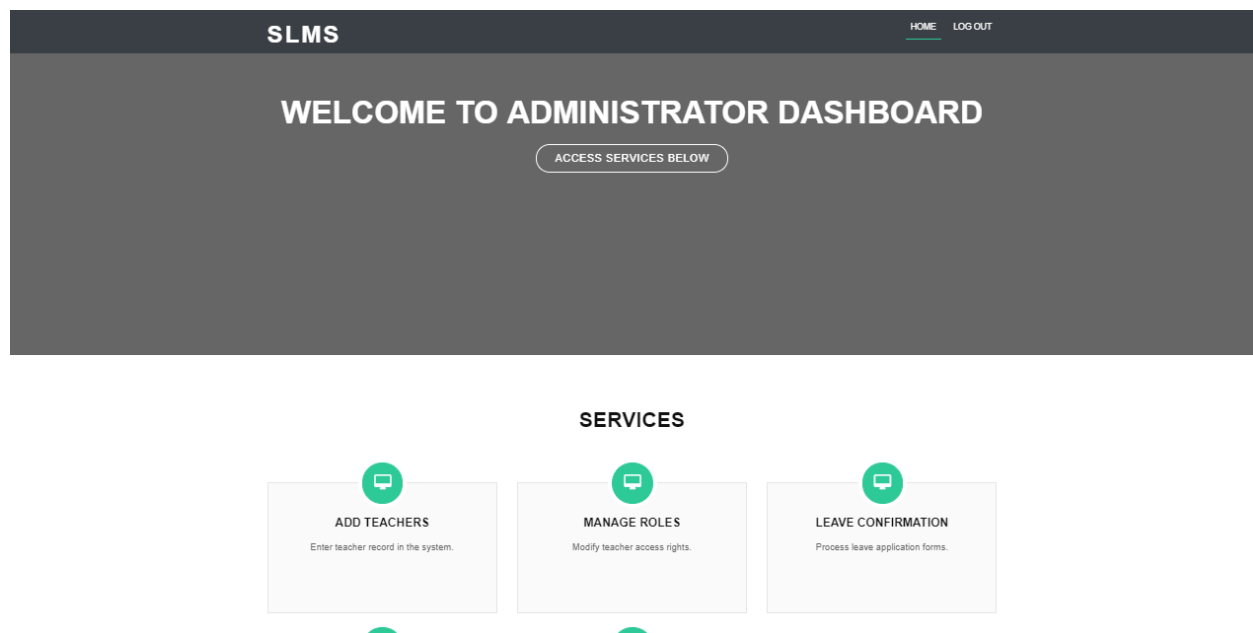

Figure 11: administrator page   Source: Linda Malomo, 2018

The administrator's page shows many services. The admin is able to login ,add the teachers, manage the roles confirm the leave, the records etc.

The applicant previously would move from one place to another in order to apply for leave and in the process chances of manipulating data were very high and it was also time consuming but with School Leave Management System the applicant will apply online in his/her comfort zone without wasting much time. The figure below shows the applicant dashboard
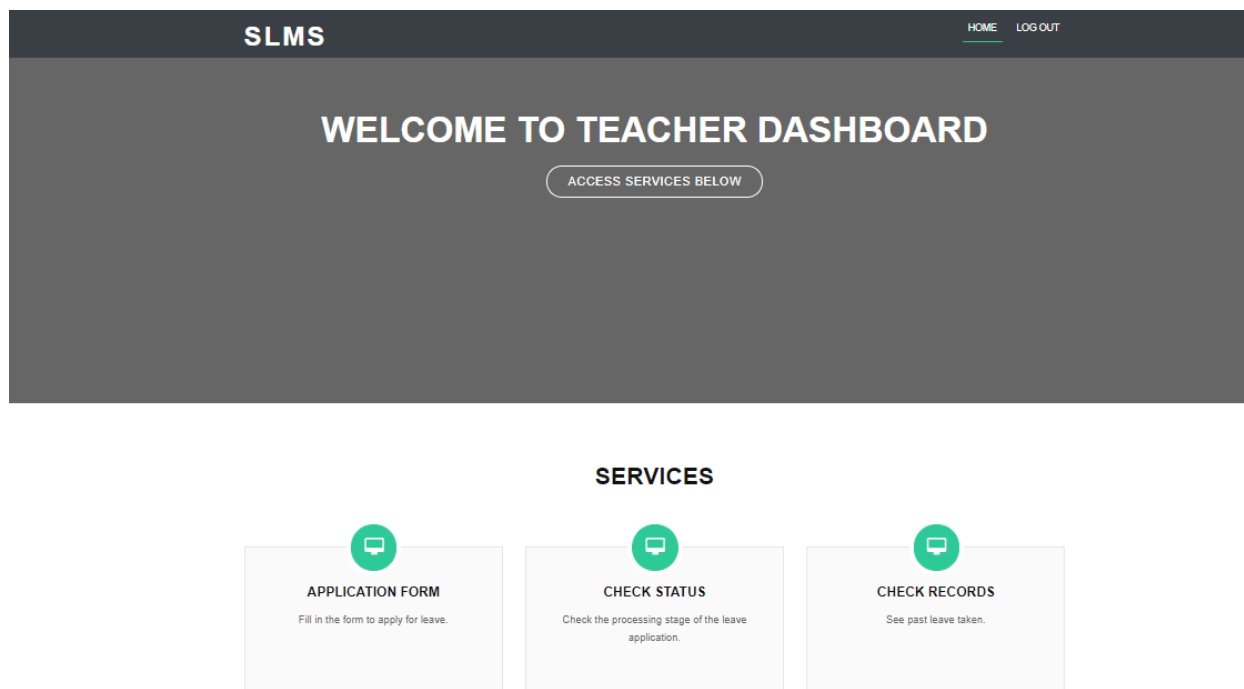

Figure 12: Teacher's page   Source: Linda Malomo, 2018

The above figure shows the services of the teacher. The teacher will log in and be able to apply for leave, check the status and check the records.

CHAPTER FIVE

5.1 Limitations

- ❖ The leave status cannot be cleared until and unless the principal/or head teacher approves/rejects the application and the staff/employee cannot cancel the leave application once made.
- ❖ The system will not function properly with the multiple computers in the network and the system will fail if the server fails, but the data will remain stored in the database
- ❖ The system will be accessed by those with smart phones and computers.
- ❖ Training for simple computer operations is necessary for the users working on the system

5.2 CONCLUSION

Leave management system will be very useful for the institution to maintain the leave records of employees.

This system will not only maintain the leave records of the staff, it will also maintain the leave application of the staff

The higher authority may accept or reject the applications requested by the staff. Thus this system maintains the excess amount of job done by the institution to maintain the leaves.

The system also approaches to reduce the formalities and delay by faculty members for the approval of leave.

5.3 Recommendations

A recommendation would be made on the system that there should be a provision for the pupils to be part of the system because of the re-entry police. Re-entry police is the process when a pupil gets pregnant and is given a maternity leave which shows that the pupils are also entitled get leave if a need arises.

The other recommendation is for managers to organize workshops for the staff in order for them to be computer literate.

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Appendix 1: Code for index page

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>SLMS - Home</title>
  <meta content="width=device-width, initial-scale=1.0" name="viewport">
  <meta content="" name="keywords">
  <meta content="" name="description">

  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,700,700i|Poppins:300,40
0,500,700" rel="stylesheet">

  <!-- Bootstrap CSS File -->
  <link href="lib/bootstrap/css/bootstrap.min.css" rel="stylesheet">

  <!-- Libraries CSS Files -->
  <link href="lib/font-awesome/css/font-awesome.min.css" rel="stylesheet">
  <link href="lib/animate/animate.min.css" rel="stylesheet">

  <!-- Main Stylesheet File -->
  <link href="css/style.css" rel="stylesheet">
</head>
<body>

  <!--==========================
  Header
  ============.==================-->
```

```html
<header id="header">
  <div class="container">


    <div id="logo" class="pull-left">
      <h1><a href="#hero">SLMS</a><h1>
    </div>


    <nav id="nav-menu-container">
      <p class="bold text-right">
          <?php
           echo date('Y-m-d');
         ?>
        </p>
    </nav><!-- #nav-menu-container -->
  </div>
</header><!-- #header -->


<!--=========================
  Hero Section
============================-->
<section id="hero">
  <div class="hero-container">
    <h1>Welcome to Leave Management System</h1>
    <h2>Application, Verification and Approval in one place.</h2>
    <a href="#about" class="btn-get-started">Login</a>
  </div>
</section><!-- #hero -->


<!-- <main id="main"> -->
```

```
<!--=========================
 Login Section
============================-->
<section id="about">
  <div class="container">
   <div class="row">
     <div class="col-md-2">
      </div>
      <div class="col-md-8">
     <form action="login/login_action.php" role="form" class="lead" method="post">
      <div class="row">
        <div class="col-xs-6 col-sm-6 col-md-6">
          <div class="form-group">
            <label>Username</label>
            <input type="text" name="username" id="username" class="form-control input-md">
          </div>
        </div>
        <div class="col-xs-6 col-sm-6 col-md-6">
          <div class="form-group">
            <label>Password</label>
            <input type="password" name="password" id="password" class="form-control input-md">
          </div>
        </div>
      </div>
      <input type="submit" value="Login" class="btn btn-skin btn-md">
      <p class="lead-footer">* Enter your username and password.</p>
     </form>
    </div>
    <div class="col-md-2">
```

```
        </div>

      </div>

    </div>

  </section>

 <!--===========================

  Footer

 ============================-->

 <footer id="footer">

  <div class="footer-top">

   <div class="container">

   </div>

  </div>

  <div class="container">

   <div class="copyright">

     &copy; Copyright <strong>School Leave Management System</strong>. All Rights Reserved.
<br>SIN:1406331321 , Name : Linda Malamo

   </div>

  </div>

 </footer><!-- #footer -->

 <a href="#" class="back-to-top"><i class="fa fa-chevron-up"></i></a>

 <!-- JavaScript Libraries -->

 <script src="lib/jquery/jquery.min.js"></script>

 <script src="lib/jquery/jquery-migrate.min.js"></script>

 <script src="lib/bootstrap/js/bootstrap.bundle.min.js"></script>

 <script src="lib/easing/easing.min.js"></script>

 <script src="lib/wow/wow.min.js"></script>

 <script src="https://maps.googleapis.com/maps/api/js?key=AIzaSyD8HeI8o-c1NppZA-

92oYlXakhDPYR7XMY"></script>

 <script src="lib/waypoints/waypoints.min.js"></script>

 <script src="lib/counterup/counterup.min.js"></script>
```

```html
<script src="lib/superfish/hoverIntent.js"></script>
<script src="lib/superfish/superfish.min.js"></script>
<!-- Contact Form JavaScript File -->
<script src="contactform/contactform.js"></script>
<!-- Template Main Javascript File -->
<script src="js/main.js"></script>
</body>
</html>
```

Appendix 2: Code for Administrator page

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>SLMS - Admin</title>
  <meta content="width=device-width, initial-scale=1.0" name="viewport">
  <meta content="" name="keywords">
  <meta content="" name="description">
  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,700,700i|Poppins:300,40
0,500,700" rel="stylesheet">
  <!-- Bootstrap CSS File -->
  <link href="../lib/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <!-- Libraries CSS Files -->
  <link href="../lib/font-awesome/css/font-awesome.min.css" rel="stylesheet">
  <link href="../lib/animate/animate.min.css" rel="stylesheet">
  <!-- Main Stylesheet File -->
  <link href="../css/style.css" rel="stylesheet">
```

```
</head>
<body>
 <!--==========================
 Header
 ============================-->
 <header id="header">
  <div class="container">
   <div id="logo" class="pull-left">
    <h1><a href="#hero">SLMS</a><h1>
   </div>
   <nav id="nav-menu-container">
    <ul class="nav-menu">
     <li class="menu-active"><a href="../index.php">Home</a></li>
     <li><a href="../login/logout.php">Log out</a></li>
    </ul>
   </nav><!-- #nav-menu-container -->
  </div>
 </header><!-- #header -->
 <!--==========================
  Hero Section
 ============================-->
 <section id="hero">
  <div class="hero-container">
   <h1>Welcome to Administrator Dashboard</h1>
   <a href="#services" class="btn-get-started">Access services below</a>
  </div>
 </section><!-- #hero -->

 <main id="main">
```

```html
<!--===========================
  Services Section
=============================-->
<section id="services">
  <div class="container wow fadeIn">
    <div class="section-header">
      <h3 class="section-title">Services</h3>
      <p class="section-description"></p>
    </div>
    <div class="row">
      <div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.2s">
        <div class="box">
          <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
          <h4 class="title"><a href="">Add Teachers</a></h4>
          <p class="description">Enter teacher record in the system.</p>
        </div>
      </div>
      <div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.4s">
        <div class="box">
          <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
          <h4 class="title"><a href="">Manage roles</a></h4>
          <p class="description">Modify teacher access rights.</p>
        </div>
      </div>
      <div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.6s">
        <div class="box">
          <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
          <h4 class="title"><a href="">Leave confirmation</a></h4>
          <p class="description">Process leave application forms.</p>
        </div>
```

```
        </div>
        <div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.2s">
          <div class="box">
            <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
            <h4 class="title"><a href="">Check Records</a></h4>
            <p class="description">Check the archived leave applications.</p>
          </div>
        </div>
        <div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.4s">
          <div class="box">
            <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
            <h4 class="title"><a href="">View Teachers</a></h4>
            <p class="description">View all teachers in the system.</p>
          </div>
        </div>
      </div>
    </div>
  </section><!-- #services -->
</main>
<!--=========================
  Footer
==============================-->
<footer id="footer">
  <div class="footer-top">
   <div class="container">
   </div>
  </div>
  <div class="container">
    <div class="copyright">
```

© Copyright SLMS. All Rights Reserved.
SIN: , Name : Linda Malamo

```
    </div>
   </div>
 </footer><!-- #footer -->
 <a href="#" class="back-to-top"><i class="fa fa-chevron-up"></i></a>
 <!-- JavaScript Libraries -->
 <script src="../lib/jquery/jquery.min.js"></script>
 <script src="../lib/jquery/jquery-migrate.min.js"></script>
 <script src="../lib/bootstrap/js/bootstrap.bundle.min.js"></script>
 <script src="../lib/easing/easing.min.js"></script>
 <script src="../lib/wow/wow.min.js"></script>
 <script src="https://maps.googleapis.com/maps/api/js?key=AIzaSyD8HeI8o-c1NppZA-92oYlXakhDPYR7XMY"></script>
 <script src="../lib/waypoints/waypoints.min.js"></script>
 <script src="../lib/counterup/counterup.min.js"></script>
 <script src="../lib/superfish/hoverIntent.js"></script>
 <script src="../lib/superfish/superfish.min.js"></script>
 <!-- Contact Form JavaScript File -->
 <script src="../contactform/contactform.js"></script>
 <!-- Template Main Javascript File -->
 <script src="../js/main.js"></script>
</body>
</html>
```

Appendix 3: Code for Head of Department page

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="utf-8">
 <title>SLMS - HOD</title>
```

```
<meta content="width=device-width, initial-scale=1.0" name="viewport">

<meta content="" name="keywords">

<meta content="" name="description">

<!-- Google Fonts -->

<link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,700,700i|Poppins:300,40
0,500,700" rel="stylesheet">

 <!-- Bootstrap CSS File -->

 <link href="../lib/bootstrap/css/bootstrap.min.css" rel="stylesheet">

 <!-- Libraries CSS Files -->

 <link href="../lib/font-awesome/css/font-awesome.min.css" rel="stylesheet">

 <link href="../lib/animate/animate.min.css" rel="stylesheet">

 <!-- Main Stylesheet File -->

 <link href="../css/style.css" rel="stylesheet">

</head>

<body>

 <!--========================

 Header

 ============================-->

 <header id="header">

  <div class="container">

   <div id="logo" class="pull-left">

    <h1><a href="#hero">SLMS</a><h1>

   </div>

   <nav id="nav-menu-container">

    <ul class="nav-menu">

     <li class="menu-active"><a href="../index.php">Home</a></li>

     <li><a href="../login/logout.php">Log out</a></li>

    </ul>

   </nav><!-- #nav-menu-container -->
```

```
    </div>
  </header><!-- #header -->
  <!--=========================
    Hero Section
  ==============================-->
  <section id="hero">
    <div class="hero-container">
      <h1>Welcome to Head of Dept. Dashboard</h1>
      <a href="#services" class="btn-get-started">Access services below</a>
    </div>
  </section><!-- #hero -->

  <main id="main">
    <!--=======================
      Services Section
    ============================-->
    <section id="services">
      <div class="container wow fadeIn">
        <div class="section-header">
          <h3 class="section-title">Services</h3>
          <p class="section-description"></p>
        </div>
        <div class="row">
          <div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.2s">
            <div class="box">
              <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
              <h4 class="title"><a href="">Application form</a></h4>
              <p class="description">Fill in the form to apply for leave.</p>
            </div>
          </div>
```

```
<div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.4s">
  <div class="box">
    <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
    <h4 class="title"><a href="">Verify Leave form</a></h4>
    <p class="description">Verify the deptmental leave applications.</p>
  </div>
</div>
<div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.2s">
  <div class="box">
    <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
    <h4 class="title"><a href="">Check Records</a></h4>
    <p class="description">Check the archived leave applications.</p>
  </div>
</div>
<div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.4s">
  <div class="box">
    <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
    <h4 class="title"><a href="">View Teachers</a></h4>
    <p class="description">View deptment teachers in the system.</p>
  </div>
</div>
      </div>
    </div>
  </section><!-- #services -->
</main>
<!--=========================
  Footer
=============================-->
<footer id="footer">
  <div class="footer-top">
```

```
  <div class="container">

  </div>

 </div>

 <div class="container">

  <div class="copyright">

   &copy; Copyright <strong>SLMS</strong>. All Rights Reserved. <br>SIN:1406331321 , Name :
Linda Malamo

  </div>

 </div>

</footer><!-- #footer -->

<a href="#" class="back-to-top"><i class="fa fa-chevron-up"></i></a>

<!-- JavaScript Libraries -->

<script src="../lib/jquery/jquery.min.js"></script>

<script src="../lib/jquery/jquery-migrate.min.js"></script>

<script src="../lib/bootstrap/js/bootstrap.bundle.min.js"></script>

<script src="../lib/easing/easing.min.js"></script>

<script src="../lib/wow/wow.min.js"></script>

<script src="https://maps.googleapis.com/maps/api/js?key=AIzaSyD8HeI8o-c1NppZA-
92oYlXakhDPYR7XMY"></script>

<script src="../lib/waypoints/waypoints.min.js"></script>

<script src="../lib/counterup/counterup.min.js"></script>

<script src="../lib/superfish/hoverIntent.js"></script>

<script src="../lib/superfish/superfish.min.js"></script>

<!-- Contact Form JavaScript File -->

<script src="../contactform/contactform.js"></script>

<!-- Template Main Javascript File -->

<script src="../js/main.js"></script>

</body>

</html>
```

Appendix 4: Code for Teacher page

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="utf-8">

  <title>SLMS - Teacher</title>

  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <meta content="" name="keywords">

  <meta content="" name="description">

  <!-- Google Fonts -->

  <link

href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,700,700i|Poppins:300,40
0,500,700" rel="stylesheet">

  <!-- Bootstrap CSS File -->

  <link href="../lib/bootstrap/css/bootstrap.min.css" rel="stylesheet">

  <!-- Libraries CSS Files -->

  <link href="../lib/font-awesome/css/font-awesome.min.css" rel="stylesheet">

  <link href="../lib/animate/animate.min.css" rel="stylesheet">

  <!-- Main Stylesheet File -->

  <link href="../css/style.css" rel="stylesheet">

</head>

<body>

  <!--=========================

  Header

  ==============================-->

  <header id="header">

    <div class="container">

      <div id="logo" class="pull-left">

        <h1><a href="#hero">SLMS</a><h1>

      </div>

      <nav id="nav-menu-container">
```

```
    <ul class="nav-menu">
      <li class="menu-active"><a href="../index.php">Home</a></li>
      <li><a href="../login/logout.php">Log out</a></li>
    </ul>
    </nav><!-- #nav-menu-container -->
  </div>
</header><!-- #header -->
<!--==========================
  Hero Section
============================-->
<section id="hero">
  <div class="hero-container">
    <h1>Welcome to Teacher Dashboard</h1>
    <a href="#services" class="btn-get-started">Access services below</a>
  </div>
</section><!-- #hero -->
<main id="main">
  <!--==========================
  Services Section
============================-->
  <section id="services">
    <div class="container wow fadeIn">
      <div class="section-header">
        <h3 class="section-title">Services</h3>
        <p class="section-description"></p>
      </div>
      <div class="row">
        <div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.2s">
          <div class="box">
            <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
```

```
          <h4 class="title"><a href="">Application form</a></h4>
          <p class="description">Fill in the form to apply for leave.</p>
        </div>
      </div>
      <div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.4s">
        <div class="box">
          <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
          <h4 class="title"><a href="">Check Status</a></h4>
          <p class="description">Check the processing stage of the leave application.</p>
        </div>
      </div>
      <div class="col-lg-4 col-md-6 wow fadeInUp" data-wow-delay="0.2s">
        <div class="box">
          <div class="icon"><a href=""><i class="fa fa-desktop"></i></a></div>
          <h4 class="title"><a href="">Check Records</a></h4>
          <p class="description">See past leave taken.</p>
        </div>
      </div>
    </div>
  </section><!-- #services -->
</main>
<!--==========================
  Footer
============================-->
<footer id="footer">
  <div class="footer-top">
    <div class="container">
    </div>
  </div>
  <div class="container">
```

```
<div class="copyright">
    &copy; Copyright <strong>SLMS</strong>. All Rights Reserved. <br>SIN:1406331321 , Name :
Linda Malamo
    </div>
  </div>
 </footer><!-- #footer -->
 <a href="#" class="back-to-top"><i class="fa fa-chevron-up"></i></a>
 <!-- JavaScript Libraries -->
 <script src="../lib/jquery/jquery.min.js"></script>
 <script src="../lib/jquery/jquery-migrate.min.js"></script>
 <script src="../lib/bootstrap/js/bootstrap.bundle.min.js"></script>
 <script src="../lib/easing/easing.min.js"></script>
 <script src="../lib/wow/wow.min.js"></script>
 <script src="https://maps.googleapis.com/maps/api/js?key=AIzaSyD8HeI8o-c1NppZA-
92oYlXakhDPYR7XMY"></script>
 <script src="../lib/waypoints/waypoints.min.js"></script>
 <script src="../lib/counterup/counterup.min.js"></script>
 <script src="../lib/superfish/hoverIntent.js"></script>
 <script src="../lib/superfish/superfish.min.js"></script>
 <!-- Contact Form JavaScript File -->
 <script src="../contactform/contactform.js"></script>
 <!-- Template Main Javascript File -->
 <script src="../js/main.js"></script>
</body>
</html>
```

Appendix 5: Code for login page

```
<?php
include("connect.php");
$tbl_name="user_levels"; // Table name

$username= $_POST['username']; // username sent from form
$password= $_POST['password']; // password sent from form
```

```php
// To protect MySQL injection
$username = stripslashes($username);
$password = stripslashes($password);
$username = mysqli_real_escape_string($link, $username);
$password = mysqli_real_escape_string($link, $password);

//Query
$sql="SELECT * FROM $tbl_name WHERE username='$username' and password='$password'";
$result=mysqli_query($link, $sql);
// Mysql_num_row is counting table row
$rows = mysqli_fetch_assoc($result);




//Direct pages with different user levels
if ($rows['userlevel'] == '1') {
        header('location: ../admin/admin_dashboard.php'); //User1
        session_register("username");
        session_register("password");

}
else
if ($rows['userlevel'] == '2') {
        header('location: ../super/supervisor.php'); //User2
        session_register("username");
        session_register("password");
}
else
if ($rows['userlevel'] == '3') {
        header('location: ../user/teacher.php'); //user 3
        session_register("username");
        session_register("password");

}
else
{
        // Error login
echo "<script>alert('Access Denied!');
window.location='index.php';
</script>";
}
?>
```