
1.INTRODUCTION

Faculty Leave Management System (FLMS) is a system being used by Human Resource Department all over the world. The particular systems are Management System, Payroll System, employee Leave Management System. FLMS is used by the faculty when they want to apply for leave. Faculty will use the FLMS application by filling the desired date. Nowadays the usage of FLMS has grown in many sectors with various types of tools and features used to assist their company to keep tracks and record of the faculty's leave. Usually the faculty will manually apply their leave by filling up the leave application form. They must also need to provide relevant information about their leave such as the duration of the leave. Then they will have to submit the application form to the Head of Department to approve their application. When the Head of Department (HOD) has approved the leave application form, the form will then be submitted to upper management in order to verify that the faculty is not bonded to any of the activities on the day he applied for leave. After that the faculty will know whether the leave is approved or not. This process is inefficient especially when the faculty has to wait for approval.

This happens because they might be very busy with their work. Even sometimes there are cases such as the loss of leave form and the faculty would not know the status of their leave application. However, the web application we developed allows faculty to apply for leave. It will accept leave applications and send it to the HOD. HOD will approve the application for staff on leave.

In the existing leave management system, leaves are maintained using the attendance register for staff. The faculties need to submit their leaves manually to their respective authorities. This increases the paperwork & maintaining the records becomes tedious. Maintaining notices in the records also increases the paperwork.

The main objective of the proposed system is to decrease the paperwork and help in easier record maintenance by having a particular centralized Database System, where Leaves are maintained. The proposed system automates the existing system. It

decreases the paperwork and enables easier record maintenance. It also reduces chances of Data loss. This module intelligently adapts to HR policy of the management & allows faculty to manage leaves and replacements for better scheduling of workload.

1.1 Problem definition:

People are constantly in the fight to save their time. The leave management system is a single leave management system that keeps leave records of all the faculties. This system will provide a connection between the user and the database hence enabling quick retrieval of the information without any intervention from the head of the department. In these system employees can apply for leave online and he/she can see her/his balance leaves. The main objective of the system is which shows and helps you to collect most of the information about leave details of faculties.

1.2 Existing system:

In the current scenario Leave record management system, every college/department follows manual procedure in which faculty enters information in a record book. At the end of each month, administration department calculate leaves of every member which is a time taking process and there are chances of losing data or errors in the records. This module is a single leave management system intelligently adapts to HR policy of the management and allows employees and their line managers to manage leaves and replacements.

1.3 Proposed system:

In this project, Head of the department (HOD) will have permissions to look after data of every faculty member of their department. HOD can approve leave through this application and can view leave information of every individual. This project main idea is to develop an online centralized application connected to database which will maintain faculty leaves, notices information and their replacements (if needed).

2.FEASIBILITY STUDY

The purpose of the feasibility study which is an economic discussion on the selected alternative and how it meets the established objectives and the functional requirements are discussed further in detail. Discussion on technological capabilities of developing the selected alternative and the operational impact of the system on the current environment is addressed as well. This study further includes discussion, economic analysis of the life cycle cost and benefits of the project. In addition to it includes the cost and benefits of the current method of operation during the life cycle. Under the schedule feasibility the project schedule and the key milestones are defined.

2.1 Feasibility Parameters of the proposed system

2.1.1 Technical Feasibility:

The proposed system will be developed in web bases completely and it is required to use web technologies appropriately. Technology to build the overall system is available.

- Currently available web technologies-HTML, CSS, JAVASCRIPT, PHP.
- Web Server: Apache Server.
- Database Server: MySQL.
- The system is developed using PHP as the main development language due to client's hard ware specification, reliability and flexibility in between platforms. MySQL is chosen to be the DBMS of the system, due to flexibility.
- Availability of the chosen technologies: All the chosen technologies are widely used in the world and are available for free use. These technologies are all open source software (MySQL, Apache, and PHP) and does not require any registering or purchasing of any kind.
- Maturity of the technology Apache over 50% of the servers in the world are Apache therefore the technology is considered to be mature enough to be used.
- PHP: relatively new but gaining popularity fast.

Source Availability: These open source software sources are available widely and knowledge is freely available through the internet.

- Technical expertise: The software team currently does not possess the required expertise to complete the system, but it is possible to expertise the technologies in the given period of time.

2.1.2 Operational Feasibility

- It is the measure of how well a proposed system solves the problems and takes advantages of the opportunities identified during the scope definition and problem analysis phases. And how well it satisfies the system requirements identified in the requirement analysis phase.
- Potential users of the system are familiar with the website navigation and handling. Hence training up to necessary level would be easy.
- Existing internal network - The implementation of the system in the intranet can be easily managed, and the security issues needs to be addressed in network level or else in the application level.
- PHP5 supports object-oriented development approaches so that well defined design can maintain the smooth run and the flexibility of the proposed system.
- Security issues - User access levels will be set, and the system will only allow privileged users. Authentication, Authorization and Audit procedures will be facilitated to the system administrators.
- Data retrieval and the data presenting will be done by the system, so the report generation will be automated by the system.

2.1.3 Cultural Feasibility

In cultural feasibility the project's alternatives are evaluated for their impact on the local and general culture. For example, environmental factors need to be considered and these factors are to be well known. Further an organization's own culture can clash with the results of the project.

It is mainly deals with the way end users feel about the proposed system. Some of the cultural feasibilities involve with our proposed system are:

- Within the system we should give the client access privileges according to the organizational culture of the University of Colombo School of Computing. So

the four users should get the privileges to access the personal information and leave management details with the use of their username and password.

- Users should feel good about the system which has a user-friendly environment.
- The daily attendances of the employees which are gathered with the use of fingerprint machine should be highly secured.

2.1.4 Legal Feasibility

Legal feasibilities involve in verifying the legal viability of the proposed system.

- Government Constraints – Since the proposed system is implemented in a government institute, it may be subject to rules and regulations imposed and even funding constraints. However, in this particular scenario it may not have a big impact.
- Copyright Issues – Since the proposed system will be using open source software there will be minimal licensing and other related issues.

2.1.5 Economic Feasibility

Economic feasibility is the most frequently used method for evaluating the effectiveness of a new system. More commonly known as cost/benefit analysis, the procedure is to determine the benefits and savings that are expected from a candidate system and compare them with costs. If benefits outweigh costs, then the decision is made to design and implement the system.

2.1.6 Benefits

- Better efficiency and effectiveness in the maintenance of personal information details and calculations in the leave system thus reducing human errors.
- Saving on time and paper cost of manually entering data and generating reports thus improving communications
- Better employee motivation and flexibility due to improved efficiency in dealing with user friendly interfaces etc
- Reduction in labour cost as fewer employees would be needed in entering the data into the system and processing the information.

- Improved employee services- efficiency in applying leaves, obtain their leave information quickly and obtain other details relating to their no pay days, short leave and half days from the website
- Personal information and would be easily managed by the database thus saving the storage space on file cabinets and maintenance
- Data redundancy and security issues would be lessened due to improved backups and security features in the system.

2.1.7 Feasibility Analysis - Cost-Benefit Analysis

We can divide the cost in to the few categories.

- Development and Purchasing Costs
 - Hardware (Currently the got enough hardware facilities)
 - Software
 - Operating System (Already installed and no need to change)
 - Main software need to build the system (Open source software - Free)
 - Other software (Total cost*25%)
- Installation and Data entry Costs
 - Install the system
 - Training the staff
 - Enter previous data into system
- Operational Costs
 - Maintenance of the system
 - Upgrading the software
- Personnel Costs
 - Maintenance staff cost
 - Operational staff cost

3. LITERATURE REVIEW

3.1 Background Study:

In the existing practice related to leave management, leaves are maintained using the attendance register for employee. The employee needs to submit their leaves manually to the irrespective authorities. This increases the paper work maintaining the records becomes tedious. Maintaining notices in the separate files also increases the paperwork. The main objective of the proposed system is to decrease the paperwork and help in easier record maintenance by having a centralized Database System, where Leaves and Notices are maintained. The proposed system automates the existing system. It decreases the paperwork and enables easier record maintenance. It also reduces chances of Data loss. This module intelligently adapts to HR policy of the management allows employees and their line managers to manage leaves and replacements for better scheduling of workload.

- **HR e-Leave Tour Management System at RDCIS, SAIL (by S.**

Selvi): This paper describes about the Human Resource Management System at RDCIS, SAIL. The system proposed here completely reduces the paper work and the entire organization by using this single application for maintaining the data of all the employees like managing the leaves of the employees, salary details, working hours etc. automates the manual work easily. The proposed system comprises of database design, application design and development of software for storage and retrieval for the maintenance of HR data through user friendly interfaces. The developed software also has the mechanisms to avoid tampering of data. The software has been developed with 3-tier approach. The software tools used are Oracle Designer, Oracle Database and JSP. The software has been deployed with Tomcat Apache Server on Windows Operating System.

- **Mobile HRM for Online Leave Management System (by**

A.MohanaPriya, G.Shyamala, and R.Dharshini): The existing system requires tedious file management and paper work. It decreases the paper work and easier record maintenance by having a database for leaves. The proposed system is an android application which provides an interface for the employee to apply leave. This calls for a new system which digitalizes the leave requests. It is very easy to implement and easy to use for the user. The features in the proposed system are applying leave, checking leave status, viewing reports, approving and cancelling leave.

- **A proposed leave management system for Dutch Bangla bank limited (by MD. NasiruzzamanChoudury):** The objective of this paper is to analyse the current system to find out its problems and thus design a new computerized system which will be more efficient, optimized and synchronized. The management will implement a system which makes their task simpler in case of leave related activities and the employees will be able to know the decision of the management at the click of a button.
- **Leave Management System (by Pratik Mahoney):** The main motivation behind this project is to reduce the manual work related to maintaining and monitoring the leave requests. This system is very convenient to understand and implement.

4. SYSTEM ANALYSIS

4.1 Software Architecture Overview

The architecture used in the development of the system is based on Three-tier architecture which allows any one of the three tiers to be upgraded or replaced independently. The user interface is implemented on a desktop PC and uses a standard graphical user interface with different modules running on the application server. The relational database management system on the database server contains the computer data storage logic.

The three tiers in three-tier architecture are:

1. Presentation Tier: Occupies the top level and displays information related to services available on a website. This tier communicates with other tiers by sending results to the browser and other tiers in the network.
 2. Application Tier: Also called the middle tier, logic tier, business logic or logic tier, this tier is pulled from the presentation tier. It controls application functionality by performing detailed processing.
 3. Data Tier: Houses database servers where information is stored and retrieved. Data in this tier is kept independent of application servers or business logic.
- Apache will be used as the web server.
 - My SQL will be used as the database server.
 - HTML, CSS, JAVASCRIPT are used in developing user interface.
 - PHP will be used as the back-end processing script.
 - PHP Report maker will be used as the report maker
 - HTTP will be used as the text transfer protocol over TCP/IP network.

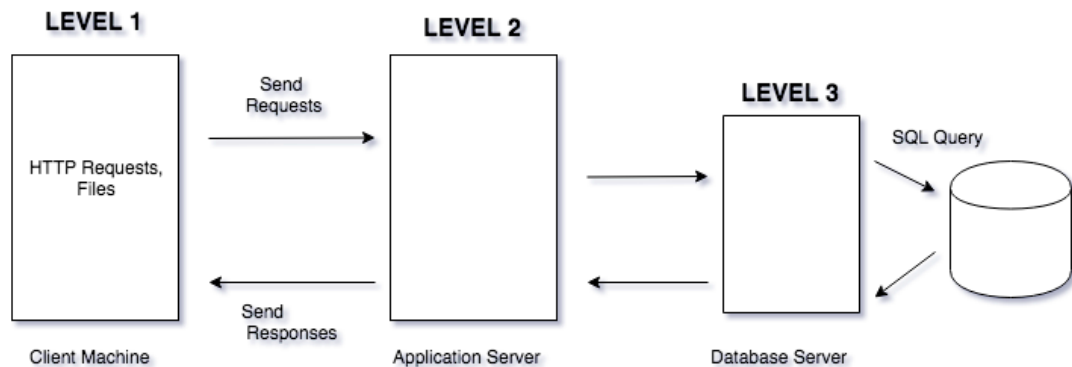


Figure 4.4.1 *Three tier Architecture*

4.2 Hardware Overview

The system will be running on the server computer and the usage is distributed over the network among computers in the administrative branch.

The main hardware to be used in the system:

- Server computer (existing)
- Client computers (existing)
- Network hardware (existing)

4.3 Functional Requirements

- The whole info regarding the leaves and the type of leaves applied by the faculties will be stored in the database for easy access.
- The system has the ability to add, delete or update the details of the leaves he/she applied for.
- With the use of leave management system, the users can calculate the number of leave and no pay days of each employee for a given period. And also, it can facilitate to display the remaining number of leave of the faculties.

The main functions of the modules used in our system are as follows:

- **Faculty functions:** The project leave management system includes faculty login, admin login. Faculty login can see their leave status. They can apply for

the leave and cancel their leaves whenever they want to. The faculty can adjust the periods instantly with the other faculty in the department.

- **Admin functions:** Admin will have a username and password. Admin will have two choices either approve the leave or reject it according to the purpose of leave, number of leaves taken by the faculty.
- **Other Faculty functions:** Other faculty members who are available in the specified period receive a request from the faculty who applied for leave requesting him/her to engage that period. If he/she accepts the request, notification is sent to the faculty.

4.4 Non-Functional Requirements

- **Performance requirements:** As it is going to be used by all the concerned faculties within the college, the system should have a good performance in terms of speed and accuracy. The proposed system should be accurate and fast enough to handle data. It should provide fast communication between server and clients.
- **Safety Requirements:** as the system is going to handle records for a long run eliminating the manual system, it is supposed to ensure the retaining of data avoiding or eliminating any probable cause for data loss.

1. Accurate and hence reliable
2. Secured
3. Fast speed
4. Compatibility
5. Portability

4.5 Modules

A typical leave management system would encompass the following modules.

1. Leave Policy Definition
2. Holidays and Restricted Holidays
3. Leave Planning/Balances

-
4. Leave Transactions
 5. Leave Workflows
 6. Leave Reports

Additionally, there are three types of users who interface with the leave management system. They are: (1) Faculty applying for leave (2) Admin (3) Faculty for replacement

5. SYSTEM DESIGN

5.1 Introduction

In this system design, OOAD (Object-oriented System Analysis and Design) is the best approach than traditional structured approach. This methodology is using UML (Unified Modelling Language). It is because base on John W.Satzinger, the object oriented approach has the potential to reduce errors, reduce costs, and increase flexibility because of its inherent features.

The development of the project consists of five SDLC (Software Development Life Cycle) phases. The phases are:

1. Planning Phase
2. Analysis Phase
3. Design Phase
4. Testing Phase
5. Implementation Phase

Planning Phase

In this phase, the first step is making a research in finding the best project to propose. After get information about the project, proposal is submitted. The proposal consists of the project background, problem area, objectives and project requirements. This is the most important thing to do in phase planning. Besides that, the faculty has accommodated a flow that need to be follow by the student. From the schedule, the student can plan the best way in managing time to develop the project ct. Gantt chart are develop base on schedule and time that given by the guide to submit those entire things needed.

Analysis Phase

First of all, the analysis has to done to know the view of whole system to develop. The content of the proposal is the result from the analysis.

In this phase, the important thing need is make more research to captured key functionality, system process and tolls needed. This finding and research can be done through internet, journal, books and article. The finding should be described and

elaborate in diagram, chart and table to make the system easier to understand in process of develop later.

Many analyses must be done to know the business process of the as-is system and to-be system. Analysis about requirement and functionality of the system is very important in process to develop the system.

Design Phase

Based on the analysis phase, the design will be done. The design phase is consisting of 3 activities. The activities are:

a. Logical design

This activity involves use case diagram and activity diagram

b. Interface design

The activity includes navigation design, output design and input design.

c. Database design

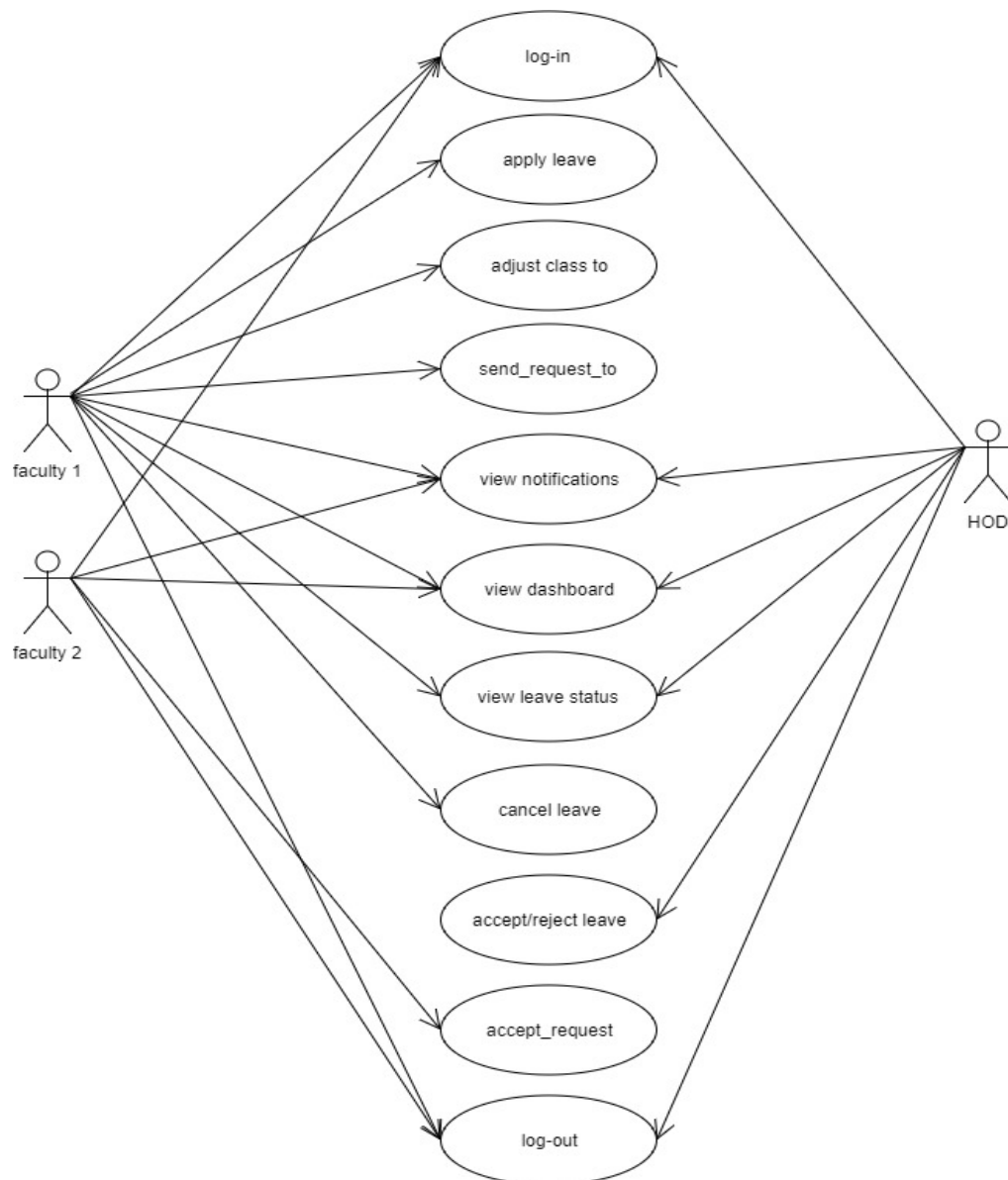
This activity defines logical data model, detail explanation for each entity, description of the association, cardinality and relationship.

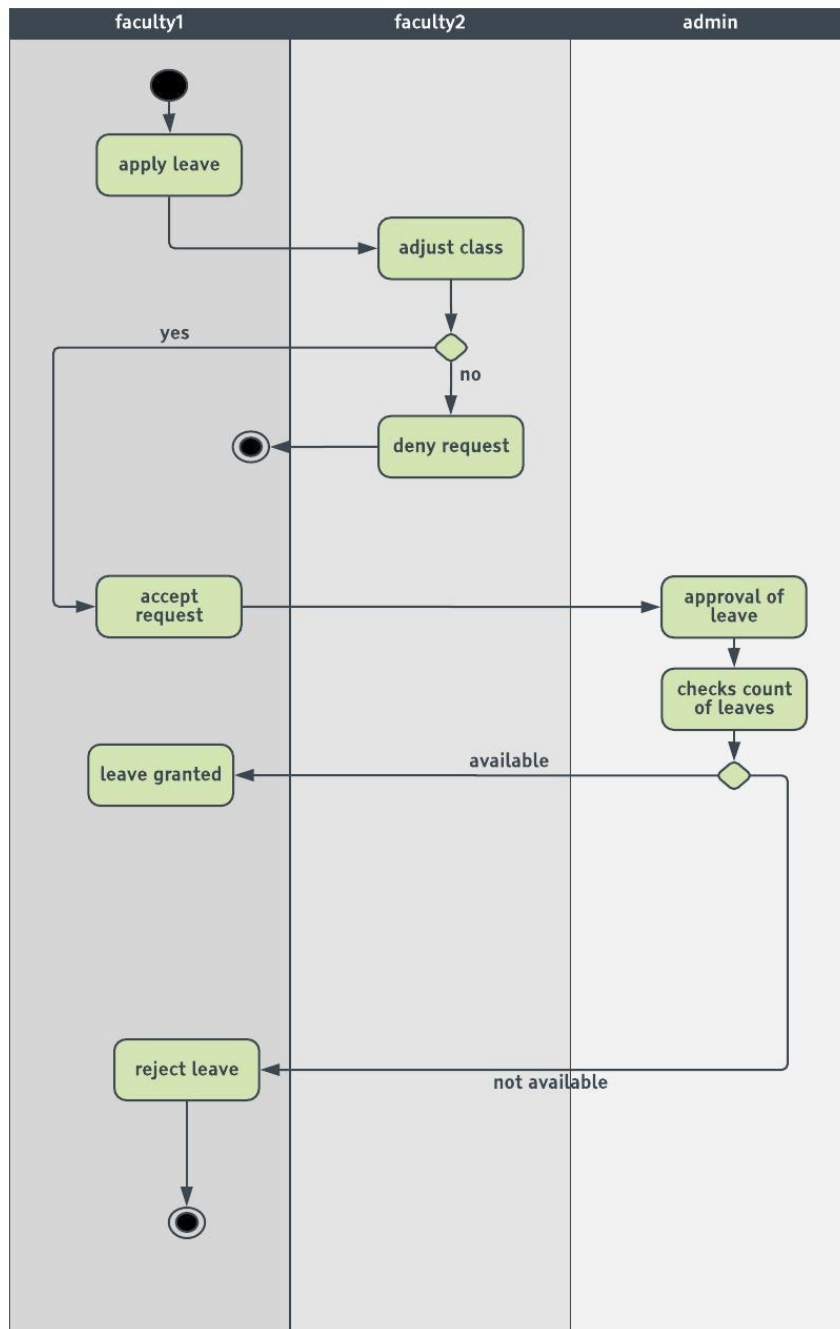
Testing Phase

In this phase, the all functionality system are testing and confirm that there are no error and record the entire not function requirement and correct it.

Implementation Phase

After all phase have been perfectly done, the system will be implemented to the server and the system can be used.

5.2 Detailed Design/UML DIAGRAMS:**Figure 5.2.1** *Use case diagram*

**Figure 5.2.2.** Activity Diagram

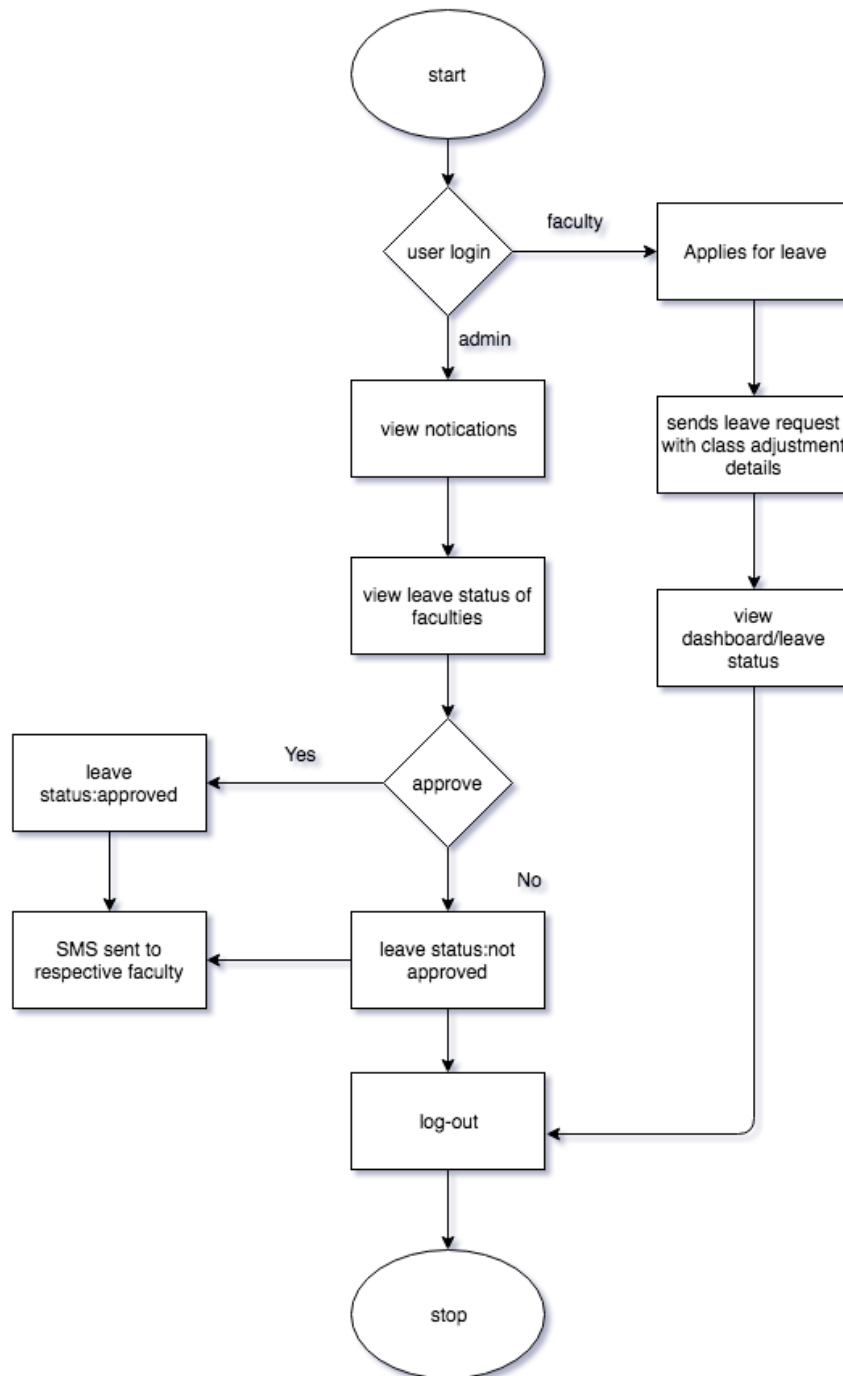


Figure 5.2.3. Flow diagram for complete system

6.Implementation

6.1 Source Code

For establishing database connectivity (Config.php)

```
<?php
$db_name="fullstac_leave_management";

$mysqli_username="fullstac_phani";

$mysqli_password="phani@1998";

$server_name="localhost";

$conn=mysqli_connect($server_name,$mysqli_username,$mysqli
_password,$db_name);

?>
```

Login page (index.php)

```
<?php
session_start();//session starts here

?>

<form action="" method="post">

    <div class="group">

        <input class="inputMaterial" type="text"
name="userid" required>

        <span class="highlight"></span>

        <span class="bar"></span>

        <label>USERID</label>

    </div>

    <div class="group">

        <input class="inputMaterial" name="password"
type="password" required>
```

```
<span class="highlight"></span>

<span class="bar"></span>

<label>PASSWORD</label>

</div>

<input type="submit" name="submit" value="LOGIN"
class="waves-effect waves-light btn"
id="buttonlogintoregister">

<!--<button name="submit" id="buttonlogintoregister"
type="submit">Log In</button>-->

</form>

<?php
include("conn.php");
if(isset($_POST['submit']))
{ $userid=$_POST['userid'];
    $password=$_POST['password'];
    $sql="select * from faculty WHERE perid='$userid'AND
password='$password'";
    //var_dump($check_user);
    $run=mysqli_query($conn,$sql);
    //var_dump($run);
    //var_dump(mysqli_num_rows($run));
    if(mysqli_num_rows($run))
    {echo
"<script>window.open('faculty_dashboard.php','_self')</scr
ipt>";
        $_SESSION['userid']=$userid;
        //$_SESSION['student']=$student_name;
```

```
        //here session is used and value of $jno store
in $_SESSION.

    }

    else

    {

        echo "<script>alert('userid or password is
incorrect!')</script>";

    }

}

?>
```

Faculty Home page(faculty_dashboard.php):

```
<?php

include 'conn.php';

session_start();

$userid=$_SESSION['userid'];

?>

<?php

include'conn.php';

    $sql=mysqli_query($conn,"SELECT * FROM leave_apply WHERE
    perid='$userid' and status='Approved'");

    $count=mysqli_num_rows($sql);

    $remain=20-$count;

    $dataPoints = array(

        array("label"=>"Leaves Taken", "y"=>"$count"),

        array("label"=>"Leaves Remaining", "y"=>"$remain")

    )
```

```
?>

<?php

    include 'conn.php';

    $sql="select * from faculty WHERE perid='$userid'";

    $run=mysqli_query($conn,$sql);

    while($row=mysqli_fetch_array($run))

        {

            $userid=$row[1];

            $fullname=$row[2];

        }

?>

<main role="main">

    <div class="row1">

        <div class="column left" style="background-color:#ffffff;">

            <div class="left-col">

                <h3><?php echo"$userid"; ?></h3>

                <h3><?php echo"$fullname"; ?></h3>

            </div>

            <div>

                <ul>

                    <li class="item"><a class="wave-effect"
href="faculty_dashboard.php"><i class="material-
icons">home</i>Home</a></li>


```

```
<li class="item"><a class="wave-effect"
href="faculty_profile.php"><i class="material-
icons">account_box</i>My Profile</a></li>

<li class="item"><a class="wave-effect"
href="faculty_apply_leave.php"><i class="material-
icons">note_add</i>Apply Leave</a></li>

<li class="item"><a class="wave-effect"
href="show_faculty_dashboard.php"><i class="material-
icons">dashboard</i>Dashboard</a></li>

<!--<li class="item"><a class="wave-effect"
href="faculty_notify.php"><i class="material-
icons">notifications</i>Notifications<sup style="font-
size:20px;"></sup></a></li>-->

<li class="item"><a class="wave-effect"
href="faculty_logout.php"><i class="material-
icons">exit_to_app</i>Logout</a></li>

</ul>

</div>

<!--<h2>Column 1</h2>

<p>Some text..</p>-->

</div>

<div class="column right">

<h2 style="text-align:center;color:#4db6ac">Welcome
<?php echo"$fullname"; ?></h2>

<!--<p>Some text..</p>

<p>Welcome <?php echo"$userid"; ?></p>-->

<div style="width:50%;background-color:white;border-
radius:5px; box-shadow:5px 5px 5px;">

<!--<form action="" method="post">

<div class="group">
```

```
<input      class="inputMaterial"      type="password"
name="currentpass" required>

<span class="highlight"></span>

<span class="bar"></span>

<label>CURRENT PASSWORD</label>

</div>

<div class="group">

    <input      class="inputMaterial"      name="newpassword"
type="password" required>

    <span class="highlight"></span>

    <span class="bar"></span>

    <label>NEW PASSWORD</label>

</div>

<div class="group">

    <input      class="inputMaterial"      name="confirmpassword"
type="password" required>

    <span class="highlight"></span>

    <span class="bar"></span>

    <label>CONFIRM PASSWORD</label>

</div>

<input      type="submit"      name="submit"      value="CHANGE
PASSWORD" id="buttonlogintoregister">

    <button      name="submit"      id="buttonlogintoregister"
type="submit">Log In</button>

</form>-->

<div id="chartContainer" style="height: 370px; width:
100%;"></div>
```

```
<script
src="https://canvasjs.com/assets/script/canvasjs.min.js"><
/script>

</div>

    </div>

</div>

</main>
```

Faculty Leaves Dashboard (show_faculty_dashboard.php):

```
<?php

include 'conn.php';

session_start();

$userid=$_SESSION['userid'];

if(!$_SESSION['userid'])

{   header("Location: index.php");//redirect to login page
    to secure the welcome page without login access.

}

?>

<?php

    include 'conn.php';

    $sql="select * from faculty WHERE perid='$userid'";

    $run=mysqli_query($conn,$sql);

    while($row=mysqli_fetch_array($run))

    {

        $userid=$row[1];

        $fullname=$row[2];

    }
```


?>

<?php

```
include 'conn.php';

$sql="SELECT      *      FROM      leave_apply      WHERE
perid='$userid'";

$run=mysqli_query($conn,$sql);

$count=mysqli_num_rows($run);

$total=20;

$remain=$total-$count;
```

?>

<?php

```
include 'conn.php';

$sql="SELECT      *      FROM      leave_apply      WHERE
perid='$userid'";

$run=mysqli_query($conn,$sql);

// $count=mysqli_num_rows($run);

$count=1;

while($row=mysqli_fetch_array($run))
{

    $leavetype=$row[3];

    $purpose=$row[4];

    $dates=$row[5];

    $timestamp=$row[6];

    $status=$row[7];

    $slno=$count++;

    echo"<tr>";

    echo"<td>$slno</td>";
```

```
        echo"<td>$leavetype</td>";

        echo"<td>$purpose</td>";

        echo"<td>$dates</td>";

        echo"<td>$timestamp</td>";

        echo"<td>$status</td>";

        echo"</tr>";

    }

?>
```

Leave Application Page (faculty_leave_apply.php):

```
<?php
include 'conn.php';

session_start();

$userid=$_SESSION['userid'];

if(!$_SESSION['userid'])

{

    header("Location: index.php");//redirect to login page
    to secure the welcome page without login access.

}

?>

<?php

include 'conn.php';

$sql="select * from faculty WHERE perid='$userid'";

$run=mysqli_query($conn,$sql);

while($row=mysqli_fetch_array($run))

{

    $userid=$row[1];
```

```
$fullname=$row[2];

$email=$row[3];

$gender=$row[5];

$department=$row[6];

$mno=$row[7];

}

?>

<?php

if(isset($_POST['selcdate']))

{

    $dates=$_POST['subdates'];

    echo"<div class='mui-row'>

<div class='mui-col-md-4'>

    <div class='mui-panel'>

        you are requesting to take leave on

        <div class='mui-textfield mui-textfield--float-label'>

            <input type='text' value='$dates'

name='dates_leave'></div> date(s)

        </div>

    </div>

</div>"

    echo"<div class='mui-row'>

<div class='mui-col-md-4'>

        <input id='app' type='submit' name='apply'

value='APPLY' style='background-color: #03A9F4;outline:

none;border: none;color:#FFF; font-
```

```
size:25px;cursor:pointer;border-radius:5px;box-shadow: 0 0
2px rgba(0,0,0,.12), 0 2px 2px rgba(0,0,0,.2);'>

</div>

</div>";

$list_dates=explode(",",$dates);

    //echo"$list_dates";

    print_r($list_dates);

    //print_r(explode(",",$dates));

    //<button type="submit" class="mui-btn mui-btn--
raised" style="background-color:#4db6ac">ADJUST
CLASSES</button>

echo"</div>

<div class='column2 abc'>

    <div class='mui-row'>

        <div class='mui-col-md-12'>

            <input id='ad' type='button' name='adjust'
value='ADJUSTMENT OF CLASSES'

                style='background-color: #03A9F4;outline:
none;border: none;color:#FFF; font-size:20px;'>";

            //include 'conn.php';

            for($day=0;$day<count($list_dates);$day++)
            {

                //$dates =$ _POST['fromdate'];

                $dayOfWeek = date("l",
strtotime($list_dates[$day]));

                //echo"<div id='ans' style='display:none;'>";

                //echo $date . ' You are going to take leave on' .
$dayOfWeek .'.';
```

```
//echo"</div>";

$count=0;
if ($dayOfWeek=='Monday' || $dayOfWeek=='Tuesday' || $dayOfWeek
=='Wednesday' || $dayOfWeek=='Thursday' || $dayOfWeek=='Friday
' || $dayOfWeek=='Saturday')

{

    $sql="SELECT      *      FROM      timetable      WHERE
perid='$userid'";

    $run=mysqli_query($conn,$sql);

    while($row=mysqli_fetch_array($run))
    {

        $p1=$row[2];

        $p2=$row[3];

        $p3=$row[4];

        $p4=$row[5];

        $p5=$row[6];

        $p6=$row[7];

        $p7=$row[8];

        $p8=$row[9];

        if ($p1==1)

        {    $count++

        }

        if ($p2==1)

        {    $count++;

        }

        if ($p3==1)

        {    $count++;
```

```
        }

        if ($p4==1)

        {
            $count++;
        }

        if ($p5==1)

        {
            $count++;
        }

        if ($p6==1)

        {

            $count++;

        }

        if ($p7==1)

        { $count++;

        }

        if ($p8==1)

        {
            $count++;

        }

    }

    //echo "you have total $count periods on that
day";

}

/*if ($dayOfWeek=='Tuesday')

{

        $sql="SELECT      *      FROM      timetable      WHERE
perid='$userid'";

        $run=mysqli_query($conn,$sql);

        while($row=mysqli_fetch_array($run))
```

```
{  
  
    $p1=$row[2];  
  
    $p2=$row[3];  
  
    $p3=$row[4];  
  
    $p4=$row[5];  
  
    $p5=$row[6];  
  
    $p6=$row[7];  
  
    $p7=$row[8];  
  
    $p8=$row[9];  
  
    if ($p1==1)  
    {  
        $count++;  
    }  
  
    if ($p2==1)  
    {  
        $count++;  
    }  
  
    if ($p3==1)  
    {  
        $count++;  
    }  
  
    if ($p4==1)  
    {  
        $count++;  
    }  
  
    if ($p5==1)  
    {  
        $count++;  
    }  
  
    if ($p6==1)  
    {  
        $count++;  
    }  
}
```

```
        }

        if ($p7==1)
        {
            $count++;
        }
        if ($p8==1)
        {
            $count++;
        }
    }

    // echo "you have total $count periods on that
day";

    }*/

    echo"</div>

</div>

<div class='mui-row' id='cls_adj' >

<div class='mui-col-md-12'>";

    //<div class='mui-row'>

        //include'conn.php';

        $j=0;

        $arr[$j]=0;

if ($dayOfWeek=='Monday')

{

    if ($p1==1)

    {

        $i++;

        $sql="SELECT * FROM timetable where

p1='0'";

        $run=mysqli_query($conn,$sql);
```



```
$sql1="SELECT * FROM timetable where
perid='$userid'";

$run1=mysqli_query($conn,$sql1);

while($row1=mysqli_fetch_array($run1))
{
    $hour=explode(",",$row1[2]);
}

echo "<div class='mui-col-md-4'>

<div class='mui-select'>

    <select name='periodadj1'>

    <option>--SELECT--</option>";

while($row=mysqli_fetch_array($run))

    //$hour=explode(",",$row[2]);

    echo"<option
value='$row[1],$list_dates[$day]at$hour[2],$hour[1]'>$row[
1],$list_dates[$day]at$hour[2],$hour[1]</option>";

    echo"</select>

    <label>$list_dates[$day]--
$hour[2]--$hour[1]</label>

    </div>

</div>";

}

if($p2==1)
{
    $i++;
}
```

```
$sql="SELECT * FROM timetable where
p2='0'";

$run=mysqli_query($conn,$sql);

$sql1="SELECT * FROM timetable where
perid='$userid'";

$run1=mysqli_query($conn,$sql1);
while($row1=mysqli_fetch_array($run1))
{
    $hour=explode(",",$row1[3]);
}

echo "<div class='mui-col-md-4'>
<div class='mui-select'>

    <select name='periodadj2'>

    <option>--SELECT--</option>";

while($row=mysqli_fetch_array($run))
    echo"<option
value='$row[1],$list_dates[$day]at$hour[2],$hour[1]'>$row[
1],$list_dates[$day]at$hour[2],$hour[1]</option>";

    echo"</select>

    <label>$list_dates[$day]--
$hour[2]--$hour[1]</label>

    </div>

</div>";

}

if($p3==1)
{
```

```
$i++;

$sql="SELECT * FROM timetable where
p3='0'";

$run=mysqli_query($conn,$sql);

$sql1="SELECT * FROM timetable where
perid='$userid'";

$run1=mysqli_query($conn,$sql1);

while($row1=mysqli_fetch_array($run1))
{
    $hour=explode(",",$row1[4]);
}

echo "<div class='mui-col-md-4'>

<div class='mui-select'>

    <select name='periodadj3'>

    <option>--SELECT--</option>";

while($row=mysqli_fetch_array($run))

    echo"<option
value='$row[1],$list_dates[$day]at$hour[2],$hour[1]'>$row[
1],$list_dates[$day]at$hour[2],$hour[1]</option>";

    echo"</select>

    <label>$list_dates[$day]--
$hour[2]--$hour[1]</label>

    </div>

</div>";

}

if($p4==1)
{
```

```
$i++;

        $sql="SELECT * FROM timetable where
p4='0'";

        $run=mysqli_query($conn,$sql);

        $sql1="SELECT * FROM timetable where
perid='$userid'";

        $run1=mysqli_query($conn,$sql1);

        while($row1=mysqli_fetch_array($run1))
        {

            $hour=explode(",",$row1[5]);

        }

echo "<div class='mui-col-md-4'>

<div class='mui-select'>

        <select name='periodadj4'>

        <option>--SELECT--</option>";

while($row=mysqli_fetch_array($run))

        echo"<option
value='$row[1],$list_dates[$day]at$hour[2],$hour[1]'>$row[
1],$list_dates[$day]at$hour[2],$hour[1]</option>";

        echo"</select>

        <label>$list_dates[$day]--
$hour[2]--$hour[1]</label>

        </div>

        </div>";

    }

    if($p5==1)

    {
```

```
$i++;

$sql="SELECT * FROM timetable where
p5='0'";

$run=mysqli_query($conn,$sql);

$sql1="SELECT * FROM timetable where
perid='$userid'";

$run1=mysqli_query($conn,$sql1);

while($row1=mysqli_fetch_array($run1))
{
    $hour=explode(",",$row1[6]);
}

echo "<div class='mui-col-md-4'>

<div class='mui-select'>

    <select name='periodadj5'>

    <option>--SELECT--</option>";

while($row=mysqli_fetch_array($run))

    echo"<option
value='$row[1],$list_dates[$day]at$hour[2],$hour[1]'">$row[
1],$list_dates[$day]at$hour[2],$hour[1]</option>";

    echo"</select>

    <label>$list_dates[$day]--
$hour[2]--$hour[1]</label>

    </div>

</div>";

}

if($p6==1)
{
```

```
$i++;

$sql="SELECT * FROM timetable where
p6='0'";

$run=mysqli_query($conn,$sql);

$sql1="SELECT * FROM timetable where
perid='$userid'";

$run1=mysqli_query($conn,$sql1);

while($row1=mysqli_fetch_array($run1))
{
    $hour=explode(",",$row1[7]);
}

echo "<div class='mui-col-md-4'>

<div class='mui-select'>

    <select name='periodadj6'>

    <option>--SELECT--</option>";

while($row=mysqli_fetch_array($run))

    echo"<option
value='$row[1],$list_dates[$day]at$hour[2],$hour[1]'>$row[
1],$list_dates[$day]at$hour[2],$hour[1]</option>";

    echo"</select>

    <label>$list_dates[$day]--
$hour[2]--$hour[1]</label>

    </div>

</div>";

}

if($p7==1)
{
```

```
$i++;

$sql="SELECT * FROM timetable where
p7='0'";

$run=mysqli_query($conn,$sql);

$sql1="SELECT * FROM timetable where
perid='$userid'";

$run1=mysqli_query($conn,$sql1);

while($row1=mysqli_fetch_array($run1))
{
    $hour=explode(",",$row1[8]);
}

echo "<div class='mui-col-md-4'>

<div class='mui-select'>

    <select name='periodadj7'>

    <option>--SELECT--</option>";

while($row=mysqli_fetch_array($run))

    echo"<option
value='$row[1],$list_dates[$day]at$hour[2],$hour[1]'>$row[
1],$list_dates[$day]at$hour[2],$hour[1]</option>";

    echo"</select>

    <label>$list_dates[$day]--
$hour[2]--$hour[1]</label>

    </div>

</div>";

}

if($p8==1)
{
```

```
        $i++;

        $sql="SELECT * FROM timetable where
p8='0'";

        $run=mysqli_query($conn,$sql);

        $sql1="SELECT * FROM timetable where
perid='$userid'";

        $run1=mysqli_query($conn,$sql1);

        while($row1=mysqli_fetch_array($run1))
        {

            $hour=explode(",",$row1[9]);

        }

echo "<div class='mui-col-md-4'>

<div class='mui-select'>

        <select name='periodadj8'>

        <option>--SELECT--</option>";

while($row=mysqli_fetch_array($run))

        echo"<option
value='$row[1],$list_dates[$day]at$hour[2],$hour[1]'>$row[
1],$list_dates[$day]at$hour[2],$hour[1]</option>";

        echo"</select>

        <label>$list_dates[$day]--
$hour[2]--$hour[1]</label>

        </div>

        </div>";

    }

}
```

Logout(login.php):

```
<?php

session_start();//session is a way to store information
(in variables) to be used across multiple pages.

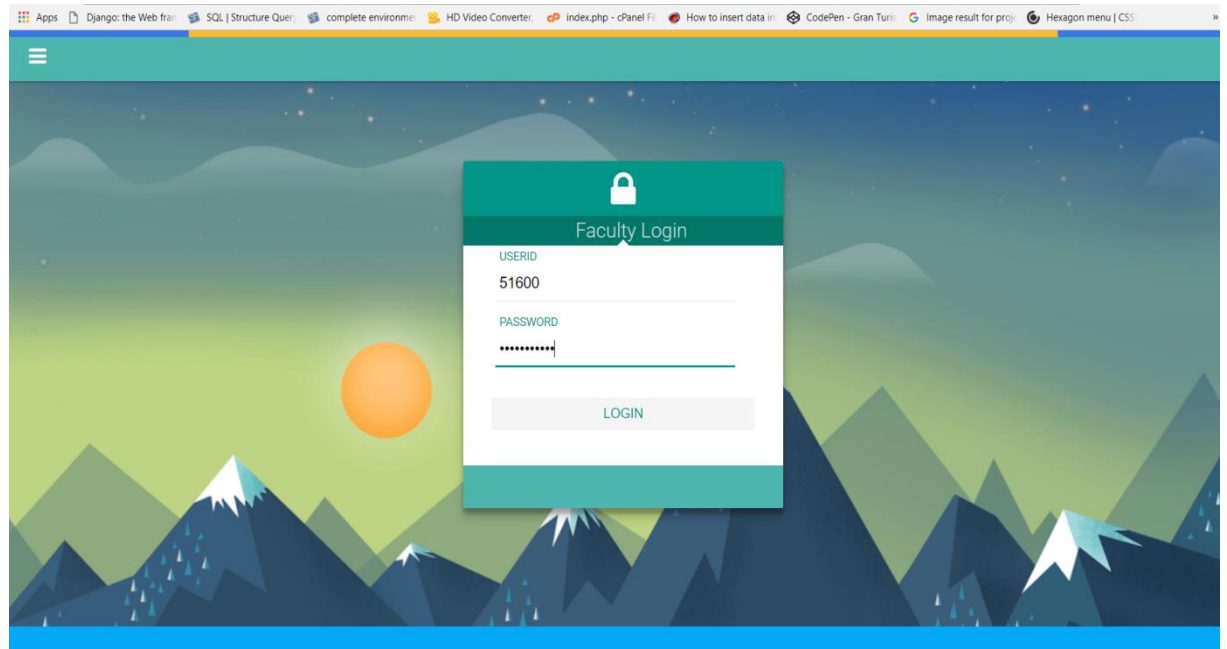
session_destroy();

header("Location: index.php");//use for the redirection to
some page

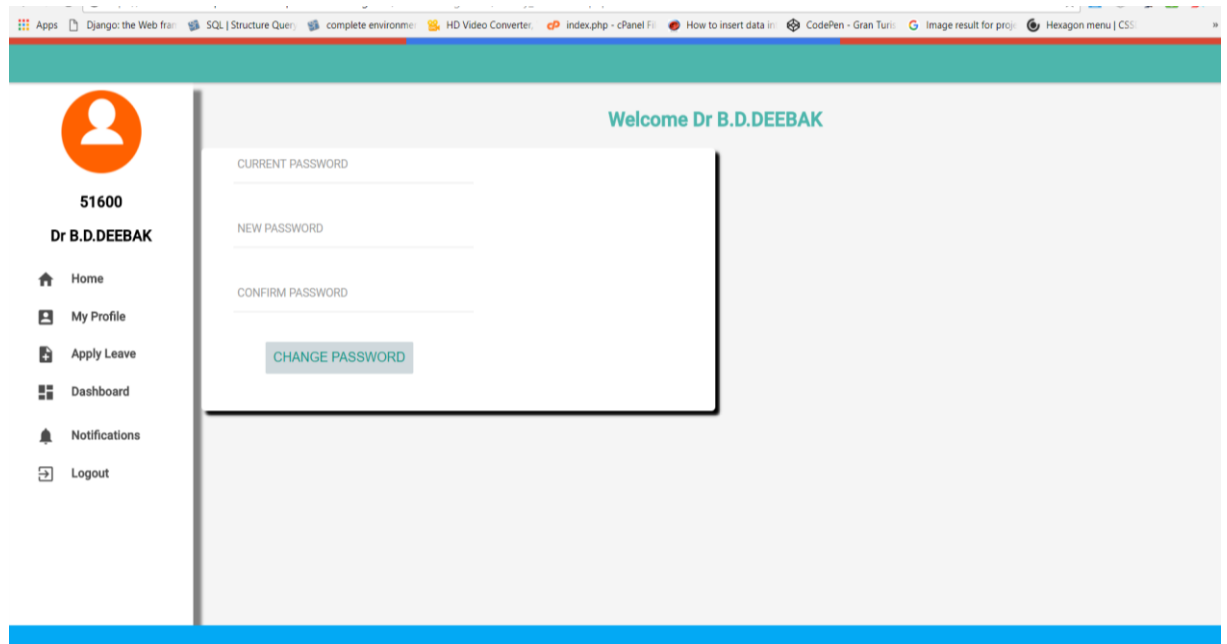
?>
```

7. RESULTS

1. Faculty login page



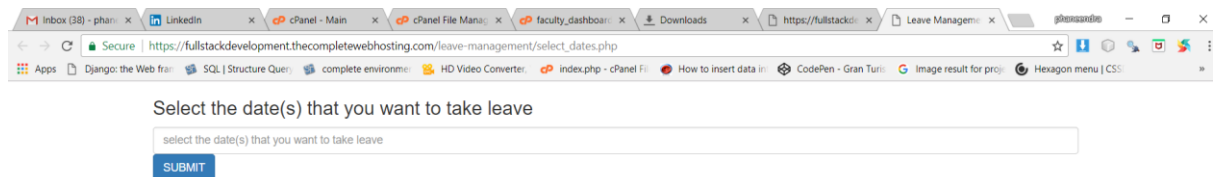
2. Faculty profile page



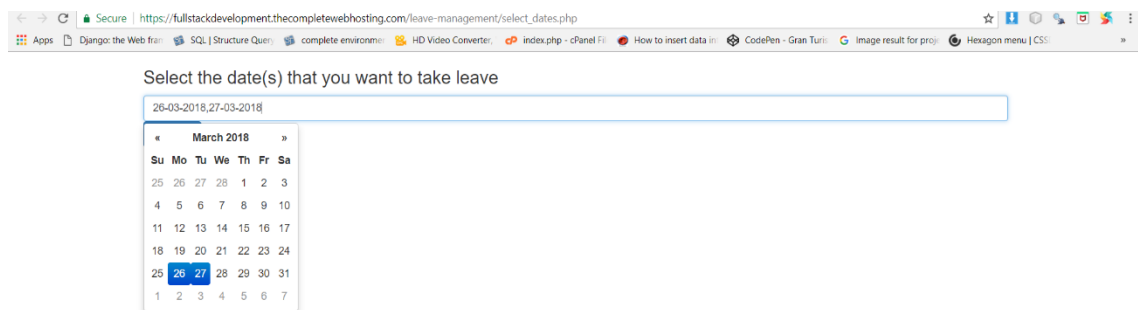
3. Leave application

4. Adjust classes

5. Selection of dates

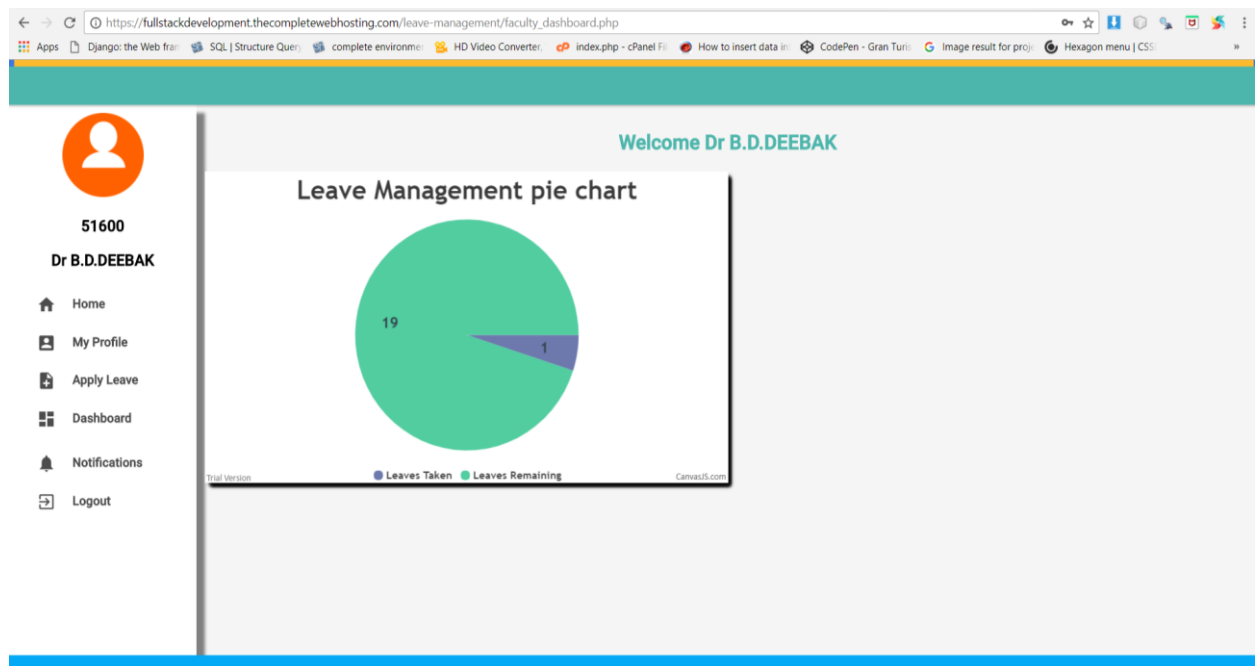


The screenshot shows a web browser window with multiple tabs. The active tab is titled 'Leave Management' and displays a form with the heading 'Select the date(s) that you want to take leave'. Below the heading is a text input field with the placeholder text 'select the date(s) that you want to take leave'. A blue 'SUBMIT' button is located below the input field. The browser's address bar shows the URL 'https://fullstackdevelopment.thecompletewebhosting.com/leave-management/select_dates.php'.



The screenshot shows the same web browser window as above, but with the date picker calendar open. The calendar is for March 2018 and displays the days of the week (Su, Mo, Tu, We, Th, Fr, Sa) and the dates (1 through 31). The date '26' is highlighted in blue. The browser's address bar shows the URL 'https://fullstackdevelopment.thecompletewebhosting.com/leave-management/select_dates.php'.

6. Count of leaves

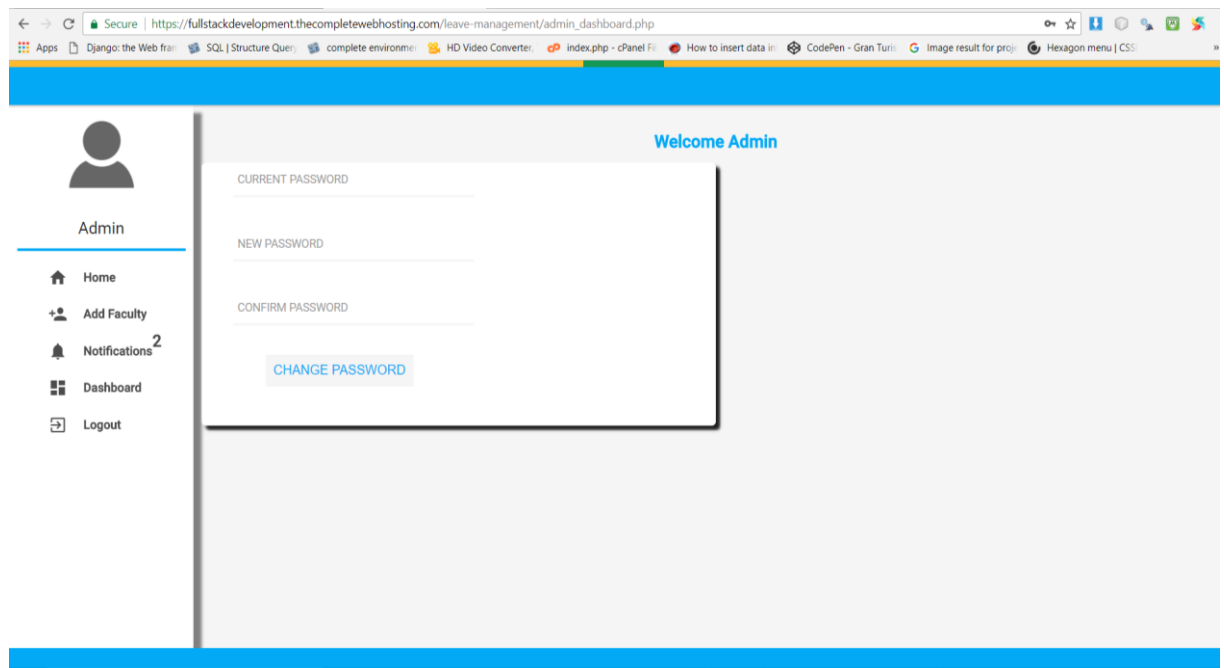


7. Admin login page

The screenshot shows the Admin Login page. The background features a stylized mountain landscape with a large orange sun. A login form is centered on the page, titled 'Admin Login' with a lock icon. The form contains the following fields and elements:

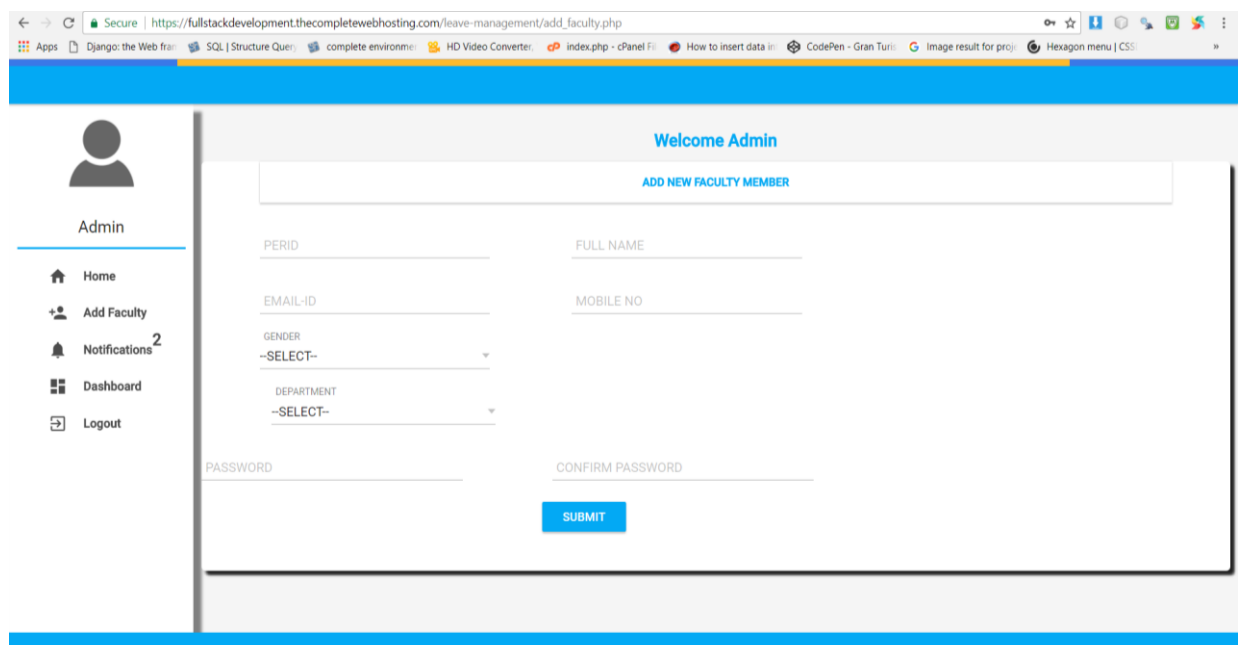
- Username:** A text input field containing the value 'admin'.
- Password:** A password input field with masked characters '*****'.
- LOGIN:** A button to submit the login information.

8. Admin profile page



The screenshot shows the Admin profile page of the Faculty Leave Management System. The page has a blue header and a sidebar on the left. The sidebar contains a user profile icon, the name 'Admin', and a list of navigation links: Home, Add Faculty, Notifications (with a badge showing '2'), Dashboard, and Logout. The main content area is titled 'Welcome Admin' and contains a form for changing the password. The form has three input fields: 'CURRENT PASSWORD', 'NEW PASSWORD', and 'CONFIRM PASSWORD'. Below these fields is a blue button labeled 'CHANGE PASSWORD'.

9. Adding new faculty



The screenshot shows the 'Add new faculty' page of the Faculty Leave Management System. The page has a blue header and a sidebar on the left. The sidebar contains a user profile icon, the name 'Admin', and a list of navigation links: Home, Add Faculty, Notifications (with a badge showing '2'), Dashboard, and Logout. The main content area is titled 'Welcome Admin' and contains a form for adding a new faculty member. The form has a title 'ADD NEW FACULTY MEMBER' and several input fields: 'PERID', 'FULL NAME', 'EMAIL-ID', 'MOBILE NO', 'GENDER' (a dropdown menu with '-SELECT-' selected), 'DEPARTMENT' (a dropdown menu with '-SELECT-' selected), 'PASSWORD', and 'CONFIRM PASSWORD'. A blue button labeled 'SUBMIT' is located at the bottom right of the form.

10. Notification page

The screenshot shows a web browser displaying the 'Notification page' for an Admin user. The page has a blue header and a sidebar on the left. The sidebar contains a user profile icon, the name 'Admin', and a list of navigation links: Home, Add Faculty, Notifications (with a badge showing '2'), Dashboard, and Logout. The main content area has a 'Welcome Admin' message and a table listing leave requests.

| Sl.No | Perid | Faculty Name | Leave Type | From Date | To Date | Purpose | Timestamp | Take Action | Status |
|-------|-------|---------------|---------------|------------|------------|----------------------|---------------------|--|--------|
| 1 | 51600 | Dr B.D.DEEDAK | Casual leave | 2018-02-12 | 2018-02-13 | personal | 2018-02-11 11:12:33 | APPROVE
NOT APPROVE | |
| 2 | 51600 | Dr B.D.DEEDAK | Medical leave | 2018-02-13 | 2018-02-15 | health related issue | 2018-02-11 11:13:50 | APPROVE
NOT APPROVE | |

8. TESTING

8.1 Test Cases

Figure 8.1.1 Test case #1-1(login panel of Faculty):

| S.no | Description | Result | Iteration-1 | Iteration-2 | Iteration-3 |
|------|---|----------------------------|-------------|-------------|-------------|
| 1. | The user enters the LMS URL into the address bar and clicks go button | Login page Prompted | Correct | Correct | Correct |
| 2. | The user enters the Username | No response | user1 | user2 | user3 |
| 3. | The user enters the Password | No response | Admin(HOD) | Admin(HOD) | Admin(HOD) |
| 4. | The user enters the valid credentials | Redirected to profile page | Correct | Correct | Correct |
| 5. | Clicks login button | User profiles Open | Correct | Correct | Correct |

Figure 8.1.2 Test case #1-2(login panel of Admin):

| S.no | Description | Result | Iteration-1 | Iteration-2 | Iteration-3 |
|------|---|----------------------------|-------------|-------------|-------------|
| 1. | The user enters the LMS URL into the address bar and clicks go button | Login page Prompted | Correct | Correct | Correct |
| 2. | The user enters the Username | No response | Admin1 | Admin2 | Admin3 |
| 3. | The user enters the Password | No response | Admin(HOD) | Admin(HOD) | Admin(HOD) |
| 4. | The user enters the valid credentials | Redirected to profile page | Correct | Correct | Correct |
| 5. | Clicks login button | User profiles Open | Correct | Correct | Correct |

Figure 8.1.3 Test case #2-1(user's leave management):

| S.no | Description | Result | Iteration-1 | Iteration-2 | Iteration-3 | Iteration-4 |
|------|---|---|--|--|---|---|
| 1. | The user clicks on apply for leave button. | A window is opened where user can apply for leave. | Correct | Correct | Correct | Correct |
| 2. | The user selects leave type from the leave type combo box. | No response by the system. | Sick leave | Medical leave | Casual leave | Casual leave |
| 3. | The user selects start date. | A calendar is opened. | 04/16/2018 | 04/16/2018 | 04/18/2018 | 04/18/2018 |
| 4. | The user selects end date. | A calendar is opened. | 04/17/2018 | 04/30/2018 | 04/18/2018 | 04/22/2018 |
| 5. | The user enters the reason for the leave in the reason text area. | The system does not allow the user to enter the reason of more than 160 characters. | I am Suffering from fever. Doctor has advised me to rest. Please grant me leave for one day. | I am Suffering from fever. Doctor has advised me to rest. Please grant me leave for one day. | My brother is coming from UK tomorrow. So I have to pick him from the airport. Please grant me 1 day leave. | My brother is coming from UK tomorrow. So I have to pick him from the airport. Please grant me 1 day leave. |
| 6. | The user clicks submit button. | "Leave submitted successfully Please wait for the approval" | Correct. | Correct. | Correct. | Correct. |

Figure 8.1.4 Test case #3-1(leave Approval/rejection):

| S.no | Description | Result | Iteration1 |
|------|---|--|------------|
| 1. | Approver clicks on leave list menu | A page prompted contain info related to leaves | correct |
| 2. | Approve choose approve/not approve button | An email and SMS to both admin and faculty | Accept |
| 3. | Faculty clicks on dashboard | Page containing leave transaction history is displayed | correct |

9.CONCLUSION

Faculty leave management system is very useful for college to maintain all the records of the employee. This system not only maintains the leave details of the employee, it also maintains leave applications of the employee as well. It reduces the paper work and easier record maintenance by having a website for leaves maintenance. This approach basically deals with the record of leaves taken by the faculty members in the organization and the higher authorities may accept or reject the leave applications requested by the employee. This system also approaches to reduce the formalities and time delay facing by faculty members for the approval of leave. Further up gradation of the faculty leave management system for various type of organization with multiple hierarchies can help in reducing paperwork and helps to achieve error free tabulation of leaves and in this system every faculty's individual leave record can be tabulated in a pie chart format so that the faculty can easily understand about the leaves.

Future Enhancement

- The modules in the proposed system can be further enhanced by adding a principal module which enables the HODs to apply for leave and also monitor the attendance status of the faculties of the respective departments.
- The summarized data generated by this system can be further provided to different departments. For example, Finance, Accounts for direct calculation of salaries.
- If personal data is fed into the system while creating employee profiles , a single interface to as certain information such as no .of years worked, birthdays, notice period, promotions, can be availed at a single point by the HOD.

10.REFERENCES

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