ST. TERESA'S COLLEGE (AUTONOMOUS), ERNAKULAM

AFFILIATED TO MAHATMA GANDHI UNIVERSITY

PROJECT REPORT ON

DRAIN CARE SYSTEM

In partial fulfilment of the requirements for the award of the degree of

B.Voc SOFTWARE DEVELOPMENT

Submitted By

APSARA B

III B.Voc Software Development

Register No: VB21SWD010

Under the Guidance of

Dr. Dhanya R

Department of Computer Applications

2021-24

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CERTIFICATE

This is to certify that the project report on "**Drain Care System**" is a bona fide record of the work done by **APSARA B (VB21SWD010)** during the year 2021-2024 and submitted in partial fulfillment of the requirement for the degree of **B.Voc Software Development** of Mahatma Gandhi University.

21/3/24

Head of the Department

ST. TERESA'S COLLEGE DEPT. OF COMPUTER SCIENCE ERNAKULAM

Internal Examiner

22/03/2024

External Examiner

Date: 02/03/2024

DECLARATION

I, **APSARA B (Register no: VB21SWD010), B.Voc Software Development** final year student of St. Teresa's College (Autonomous), Ernakulam, hereby declare that the project submitted named **DRAIN CARE SYSTEM** for the Bachelor 's of Vocation Degree in Software Development is my original work. I further declare that the said work has not previously been submitted to any other university or academic body.

APSARA B

Date: 22/03/2024

Place: Ernakulam

ACKNOWLEDGEMENT

First and foremost, I would like to thank god almighty for the successful comp letion of my project. I express my sincere thanks to Provincial Manager **Rev Dr. Sr Vinitha CSST**, Director **Rev. Sr Emeline CSST**, AND Principal **Dr. Alphonsa Vijaya Joseph** of St. Teresa's college (AUTONOMOUS) for giving me an opportunity to undertake this project. I also extend my sincere gratitude to **Ms. Dr. Dhanya R**, my project guide for her constant support which helped in the successful comp letion of my project. I'm grateful to all the faculties of Department of Computer Applications for their valuable help and guidance during each stage of my project. Last but not the least, I would like to thank my parents and friends for motivating me and providing me the right environment for making this project work a great success.

APSARA B

SYNOPSIS

"Drain Care System" is a community-driven platform designed to streamline the process of reporting and resolving drainage problems in our neighborhood. Recognizing the common inconveniences and potential health risks associated with poorly managed drainage, this project aims to emp ower community members to actively contribute to creating a cleaner, safer, and healthier environment.

The website provides a user-friendly interface, allowing residents to easily report drainage issues, from clogged drains to standing water, with just a few clicks. Beyond convenience, the platform addresses the broader implications of drainage problems on public health, emphasizing the importance of prompt resolution.

CONTENTS

1. INTRODUCTION

1.1 ABOUT THE PROJECT

The Drainage Issue Reporting System stands as a community-centric solution to the common challenges posed by drainage problems within our locality. This web - based platform provides residents with an easy-to-use interface for reporting various drainage issues, from clogged drains to standing water, facilitating a streamlined and efficient communication channel between the community and local authorities. Real-time updates on reported issues, community forums, and educational resources create an engaging environment, encouraging active participation and collaboration among community members. Beyond its intuitive reporting features, the system underscores the health implications associated with drainage issues, aiming not only to address inconveniences but also to proactively contribute to public health awareness and community well-being.

1.2 OBJECTIVE OF THE PROJECT

The main objective of the Drain Care System is to streamline the reporting and resolution process for drainage-related concerns in our community. By leveraging technology, the system aims to facilitate swift communication between residents and local authorities, ensuring that reported issues are addressed promptly. The system's key goals include providing a user-friendly reporting interface, fostering community engagement through real-time updates and educational resources, and ultimately contributing to the creation of a cleaner, safer, and healthier living environment for all community members.

2. SYSTEM ANALYSIS

2.1 INTRODUCTION

System Analysis is a detailed study of the various operations performed by the system and their relationship within the modules of the system. This phase involves the study of the parent system and identification of the system objectives. The main objective of this phase involves gathering of necessary information and using the structured tool for analysis. This includes designing the system. In this project, the requirements are studied in detail and information are collected and documented.

2.2 EXISTING SYSTEM

- Swachhata-MoHUA

✓ This app can be use for filing issues ranging from sweeping, garbage dumped, fresh water leakage in public area, etc.

DISADVANTAGES

✓ The app shows INTERNAL SERVER ERROR 500 frequently.
✓ Complaints are closed without resolution and clear information
✓ This app is for just marketing purpose only, no ground reality here.

2.3 PROPOSED SYSTEM

Objectives of the Drain Care System are:
✓ The aim is to overcome all the drawbacks faced in all the existing applications and generate fast & accurate results.

✓ Acknowledgment about their complaint has been intimated as successful submission of complaint.

✓ The website is user friendly one that anyone can access for free of cost.

2.4 SYSTEM SPECIFICATION

System specification specifies the hardware and software configuration of the new system. It helps to define the operational and performance guidelines for a system. Drain Care System is a website developed in HTML, CSS, JAVSCRIPT and PHP for registering complaint, tracking the complaint status and solving the drainage issue.

2.5 OPERATING SYSTEM

Windows is a series of operating system developed by Microsoft. Each version of Windows includes a graphical user interface, with a desktop that allows users to view files and folders in windows. Microsoft introduced an operating environment named Windows on November 20,1985 as a graphical operating system shell for MS-DOS in response to the growing interest in graphical user interfaces (GUIs). For the past two decades, windows has been the most widely used operating system for personal computer PCs.

2.6 LANGUAGE OR SOFTWARE PACKAGE

The frontend of the Drain Care website is built using HTML, CSS, and JavaScript, collectively forming the essential trio for creating an engaging user interface. HTML (Hypertext Markup Language) structures the content and layout of the web pages, providing a standardized framework. CSS (Cascading Style Sheets) enhances the visual presentation, ensuring a cohesive and aesthetically pleasing design. JavaScript adds interactivity, enabling dynamic features such as real-time updates and user-friendly form interactions. This combination of frontend technologies results in a responsive, visually appealing, and user -centric interface, making the reporting process accessible and intuitive for community members.

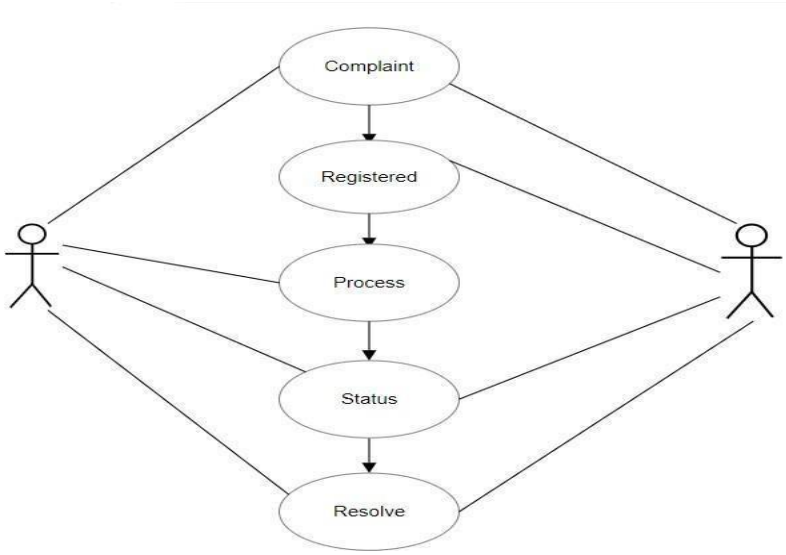
On the backend, PHP (Hypertext Preprocessor) serves as the scripting language responsible for server-side operations. PHP seamlessly integrates with the frontend, handling tasks such as form processing, data validation, and interaction with the backend database. The choice of PHP is driven by its versatility, scalability, and compatibility with various databases, making it a suitable backend language for this community-driven project.

2.7 HARDWARE & SOFTWARE SPECIFICATIONS

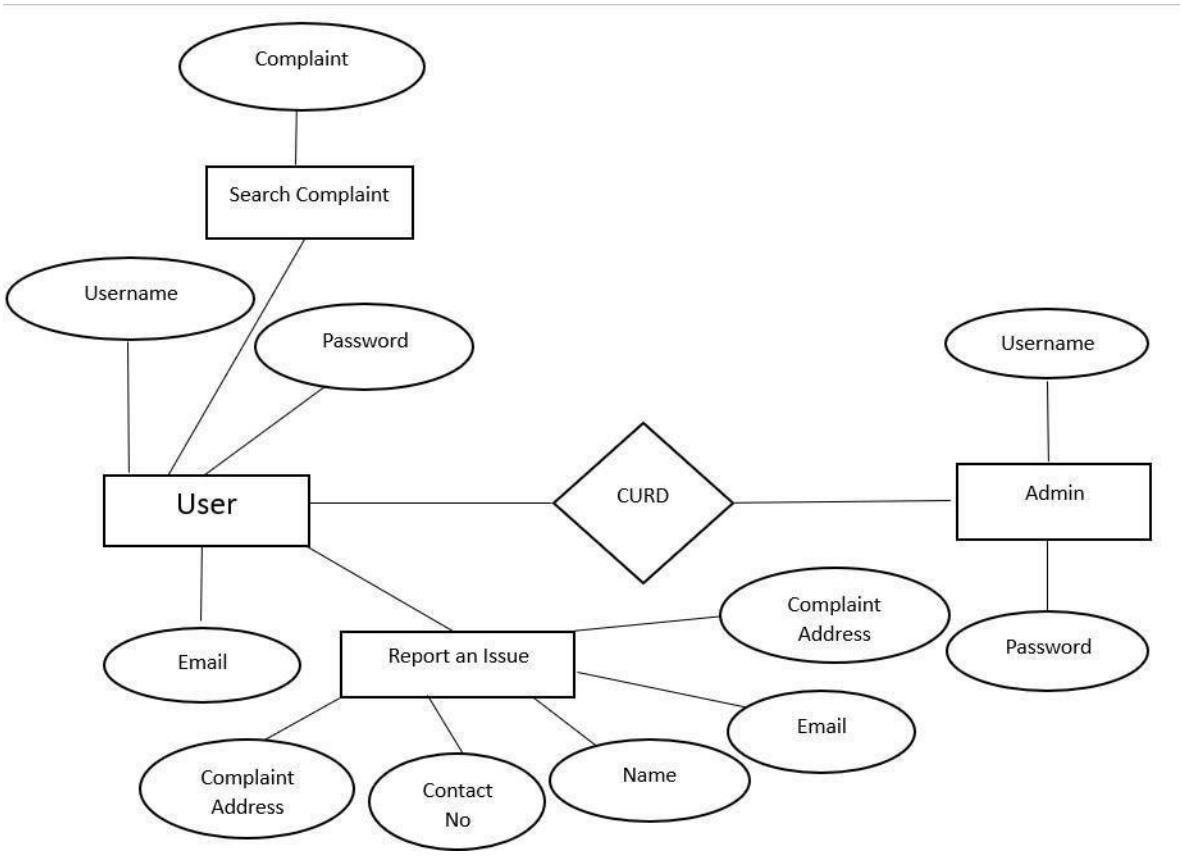
- Front End:
  - ✓ HTML5, CSS, JavaScript
- Back End:
  - ✓ PHPMySQL
- Operating System:
  - ✓ Browser: Google Chrome

3. SYSTEM DESIGN

3.1 USE CASE DIAGRAM



3.2 ENTITY RELATIONSHIP DIAGRAM



3.3 DATABASE DESIGN

User

Field Name	Type	Size	Description
Id	Integer	(11)	Primary key
Username	Varchar	(50)	
Email	Varchar	(50)	
Password	Varchar	(50)	
Create_datetime	Datetime		

Admin

Field Name	Type	Size	Description
Id	Integer	(11)	Primary key
Username	Varchar	(15)	
Password	Varchar	(15)	
Position	Varchar	(20)	

Complaints

Field Name	Type	Size	Description
Id	Integer	(11)	Primary key
Name	Varchar	(15)	
Contact	Varchar	(12)	
Email	Varchar	(30)	
Title	Varchar	(100)	
Description	Varchar	(255)	
Uniqueid	Varchar	(10)	
Status	Integer	(11)	
Remarks	Varchar	(255)	

4. SYSTEM DEVELOPMENT

4.1 INTRODUCTION

System development is the process of defining, designing, testing and implementing a new software application or program. It could include the internal development of customized systems, the creation of database systems, the creation of database systems, or the acquisition of third party developed software

4.2 PROCESS DESCRIPTION

- In the project, there are two types of users:

✓ Administrator (Admin)
✓ User (Any user from public)

Role:

I. Admin

✓ Create, modify, and delete user accounts
✓ Manage user roles and permissions
✓ Update the status of reported issues
✓ Communicate with users about the resolution progress
✓ Send notifications to users about issue resolution updates

II User (Public)

✓ Submit reports on drainage issues, providing detailed information andlocation.
✓ Receive real-time updates on the status of reported issues.
✓ Track and view the history of submitted drainage reports.

4.3 CODING

HOME PAGE

```
<!DOCTYPE html>
<html lang="en">
<head>
<link rel="icon" type="image/x-icon" href="../assets/favicon.ico">
<link rel="stylesheet" href="../style/landing.css">
```

```
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width">
<title>CMS Beta</title>
</head>
<script type="module" src="../scripts/landingScripts.js">
</script>
<style>

.solveBtn {
text-align:
center;width:
140px; height:
45px;
font-family: 'Roboto', sans-
serif;font-size: 11px;
text-transform:
uppercase;letter-
spacing: 2.5px;
font-weight: 500;
color: #000;
background-color:
#fff;border: none;
border-radius: 45px;
box-shadow: 0px 8px 15px rgba(0, 0, 0, 0.1);
transition: all 0.3s ease 0s;
cursor:point
er
outline:none;
 }
.solveBtn:hover {
 background-color:
 #5000ca;
 box-shadow: 0px 15px 20px rgba(46, 229, 157,
 0.4);color: #fff;
 transform: translateY(-3px);
 }

.credits {
 color:
 white;

 margin-top:
 200px;font-
 weight: 500;
```

```
letter-spacing:
3px;
text-transform:
uppercase;color: black;
filter: invert(70%);
}
</style>
<body>

<div class="container">
  <div  class="blob-container">
 <div class="blob"></div>
 <div class="blob  one"></div>
 <div class="blob  two"></div>
 <div class="blob  three"></div>
 <div class="blob  four"></div>
 <div class="blob  five"></div>
 <div class="blob  six"></div>
 <div class="blob  seven"></div>
 <div class="blob  eight"></div>
 <div class="blob  nine"></div>
 <div class="blob  ten"></div>
 <div class="blob"></div>
 <div class="blob  one"></div>
 <div class="blob  two"></div>
 <div class="blob  three"></div>
 <div class="blob  four"></div>
 <div class="blob  five"></div>
 <div class="blob  six"></div>
 <div class="blob  seven"></div>
 <div class="blob  eight"></div>
 <div class="blob  nine"></div>
 <div class="blob  ten"></div>
 <div class="blob"></div>
 <div class="blob  one"></div>
 <div class="blob  two"></div>
 <div class="blob  three"></div>
 <div class="blob  four"></div>
 <div class="blob  five"></div>
 <div class="blob  six"></div>
 <div class="blob  seven"></div>
 <div class="blob  eight"></div>
 <div class="blob  nine"></div>
 <div class="blob  ten"></div>
</div>

<div id="hero">
```

```
<img
class="primary_im
g"
 src="../assets/landing_main.svg"
 alt="vector graphics">
 <h1>Drain Care <span> System</span></h1>
 <p>
 Empower our Community,One Report at a time..
 </p>
 </div>
 <div id="footer">
 <div class="line">
    <div class="button-container">
    <button class="solveBtn" onClick="hello('user login.php')">Report an
    Issue</button>
       <button class="solveBtn"
onClick="hello('search Comp laint.php')">Comp laintStatus</button>
       <button class="solveBtn" onClick="hello('login.php')">Admin Login</button>
       </div>
       </div>
       </div>

<p class="credits">Drain Care System</p>
</body>

<script src="../scripts/landingScripts.js">
// <script type="module" src="../scripts/res.js">

</script>
 </html>
```

ISSUE REPORTING PAGE

```
 <!DOCTYPE html>
 <html lang="en">
 <head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <link rel="icon" type="image/x-icon" href="../assets/favicon.ico">

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

 <title>Log Complaint - CMS</title>
 </head>
 <body>
```

```
<div class="container">
<div  class="blob-container">
<div class="blob"></div>
<div class="blob  one"></div>
<div class="blob  two"></div>
<div class="blob  three"></div>
<div class="blob  four"></div>
<div class="blob  five"></div>
<div class="blob  six"></div>
<div class="blob  seven"></div>
<div class="blob  eight"></div>
<div class="blob  nine"></div>

      <div class="blob  ten"></div>
</div>

<section>
<div class="card">
<div class="title">
<img src = "../assets/graphics_log.svg"  class='logGraphics' style='height: 250px'/>
<h1  style='font-size: 40px'><span>Report  Complaint<br></span>  </p>
</div>
<div class="description">
<div  class="login-form">
<h2>Complaint  Details</h2>
<form action = "../handlers/recordComplaint.php"  method="POST">
<label for="name">Name:</label>
     <input  placeholder="Enter  your  name" type="text"  id="name"
name="name"required><br>
<label for="contact">Contact  number:</label>
     <input placeholder="Enter  your  Contact  number"  pattern="[789][0-9]{9}"
type="text"id="contact"  name="contact"  required><br>
<label for="email">Email:</label>
     <input placeholder="Enter  your  email address"  type="email"
id="email"name="email" required><br>
<label for="title">Complaint  type</label>
     <input  placeholder="Eg:Clogged  drains,Leaking
pipes,Sinkholes,Standing water"type="text"  id="title"  name="title"
required><br>
<label  for="complaint">Complaint:</label><br>
     <textarea placeholder="Explain your complaint briefly"
id="complaint"name="complaint" rows="4" cols="50"
required></textarea><br>
<label for="complaint">Complaint  Address:</label><br>
<textarea  placeholder="Road
```

```
    Name/Area/Colony&#10Pincode&#10City&#10State"id="complaint"
    name="address"  rows="4"  cols="50"  required></textarea><br>
    <button  type="submit">Submit</button>
    </form>
  <?php
    if($_GET) {
    if ($_GET['id']) {
    $ref = $_GET['id'];
    echo "<h3 style='font-weight: 600; color: green'>Reference id: $ref</h3>";
    }
    }
    ?>
    </div>
    </div>
    </div>
    <form  action="../handlers/go Home.php"    method="POST">
    <button  class="homeBtn"

  href="http://localhost/project/pages/landing.php">Home</button>
   </form>
  </section>
</div>
<?php
   $message = "Not recorded";

   if ($_GET) {
     if ($_GET["success"]) {
   $val =  $_GET["success"];

   if ($val == '1')
     {echo
     '<script>
     alert("Updated  Successfully")
     </script>';
   } else {
     echo '<script>
     alert("Error
     Occurred")
     </script>';
   }
  }
  }
?>


</body>
</html>
```

ADMIN PAGE

```
<?php
session
_start()
;
if ($_SESSION) {
if ($_SESSION['logged']
== '1') {echo "user is
logged in";
header("Location:  http://localhost/project/pages/comp  laints.php");
}
}
?>

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<link rel="icon" type="image/x-icon" href="../assets/favicon.ico">
<link rel="stylesheet" href="../style/login.css">
<title>Admin Login - CMS</title>
</head>
<body>
<div class="container">
<div class="blob-container">
<div class="blob"></div>
<div class="blob one"></div>
<div class="blob two"></div>
<div class="blob three"></div>
<div class="blob four"></div>
<div class="blob five"></div>
<div class="blob six"></div>
<div class="blob seven"></div>
<div class="blob eight"></div>
<div class="blob nine"></div>
<div class="blob ten"></div>
<div class="blob"></div>
<div class="blob one"></div>
<div class="blob two"></div>
<div class="blob three"></div>
<div class="blob four"></div>
<div class="blob five"></div>
<div class="blob six"></div>
```

```
<div class="blob seven"></div>
<div class="blob eight"></div>
<div class="blob nine"></div>
<div class="blob ten"></div>
<div class="blob"></div>
<div class="blob one"></div>
<div class="blob two"></div>
<div class="blob three"></div>
<div class="blob four"></div>
<div class="blob five"></div>
<div class="blob six"></div>
<div class="blob seven"></div>
<div class="blob eight"></div>
<div class="blob nine"></div>
<div class="blob ten"></div>
</div>

<section>
<div class="card">
<div class="title">
<img src = "../assets/login_graphics.svg" class='logGraphics' style='height: 250px'/>
<h1 style='font-size: 30px' class="parentTitle">Admin Login</p>
</div>
<div class="description">
<div class="login-form">
<h2>Admin Login</h2>
      <form action="../handlers/auth.php" method="POST">
<label for="username" >Username:</label>
       <input value='Apsara' type="text" id="username" name="username"
placeholder="Enteryour username" required>
<label for="password">Password:</label>
       <input value="admin" type="password" id="password"
name="password"placeholder="Enter your password" required>
<button type="submit" value="submit">Login</button>
</form>
<?php
if ($_GET) {
$rec =
$_GET["status"];if
($rec == '0') {
echo "<p style='color: red; font-weight: 600'>Wrong credentials, Try again !</p>";
}
}
?>

</div>
</div>
```

```
</div>
<form action="../handlers/go Home.php" method="POST">
<button class="homeBtn">Home</button>
</form>
</section>
</div>

</body>
</html>
```

5.SYSTEM TESTING AND IMPLEMENTATION

5.1 INTRODUCTION

System testing is defined as testing of a complete and fully integrated software product. This testing falls in black box testing wherein knowledge of the inner design of the code is not a pre-requisite and is done by the testing team. System testing tests the design and behavior of the system and the expectations of the customer.

5.2 DEBUGGING

Debugging is the process of finding and fixing errors or bugs in the source code of any software. When software does not work as expected, comp uter programmers study the code to determine why any errors occurred.

5.2.1 UNIT TESTING

Unit Testing is a level of software testing where individual units/ components of software are tested. The purpose is to validate that each unit of the software performsas designed. A unit is the smallest testable part of any software. It usually has one or a few inputs and usually a single output. Here each unit is tested.

5.2.2 VALIDATION TESTING

Validation Testing ensures that the product meets the client's needs. The sections such as username and password were checked by giving invalid values and made sure that in such cases it shows message corresponding to the error, so that the usermay able to understand the mistake and change accordingly.

Here the phone no field and the password field are also validated.

5.2.3 INTEGRATION TESTING

Integration is a testing in which one or two modules which are unit tested are integrated to test and verification is done to verify if the integrated modules work as expected or not.

5.3 SYSTEM SECURITY

System security is the control of access to a computer system's resources, especially its data and operating system. It includes restricting access to the application by unwanted users. In this application, the access to it is controlled by providing a login. Only the registered users can access the data. This facility is considered as a system security.

5.4 SCOPE FOR FUTURE ENHANCEMENT

The Drainage Issue Reporting Website exhibits significant potential for future enhancements and expansions to further improve community engagement, problem resolution, and overall user experience. One avenue for enhancement involves the integration of smart city technologies and Internet of Things (IoT) devices. By incorporating sensors and real-time monitoring systems into the drainage infrastructure, the platform could automatically detect issues such as blockages or flooding, providing more proactive and timely responses. Additionally, the inclusion of predictive analytics could help anticipate potential drainage problems based on weather forecasts and historical data, enabling preemptive measures. Another area for improvement is the implementation of augmented reality (AR) features, allowing users to visualize reported issues in real-world locations through their smartphones, enhancing the accuracy of problem identification. Furthermore, the website could evolve into a comprehensive community resilience platform, addressing not only drainage but

also broader environmental concerns, disaster preparedness, and collaborative

initiatives for sustainable urban development. The scope for future enhancements is vast, ranging from technological integrations to community-driven features, ensuring the Drainage Issue Reporting Website remains at the forefront of fostering a healthier and more resilient community.

6. CONCLUSION

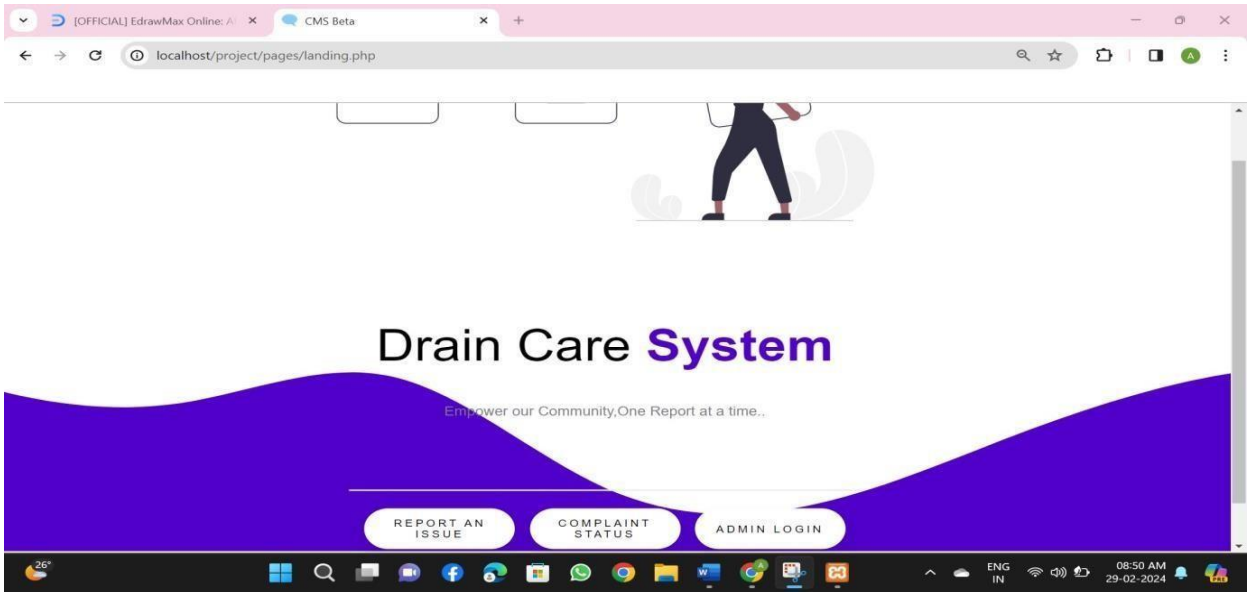
In conclusion, the Drain Care System stands as a vital tool for our community, providing an accessible and user-friendly platform to report and address drainage problems effectively. With its intuitive frontend built using HTML, CSS, and JavaScript, coupled with a robust PHP backend, the system ensures a seamless experience for users of all technical backgrounds. Moving forward, the potential for enhancements, such as advanced analytics and multilingual support, promises to further elevate the system's impact, fostering a cleaner, safer, and healthier community through collaborative efforts and proactive environmental care.

In essence, the Drain Care System represents not just a technological solution but a shared commitment among community members to collectively contribute to a better living environment. By embracing the principles of transparency, community engagement, and continuous imp rovement, this system paves the way for a future where our community actively participates in the preservation of its well-being.

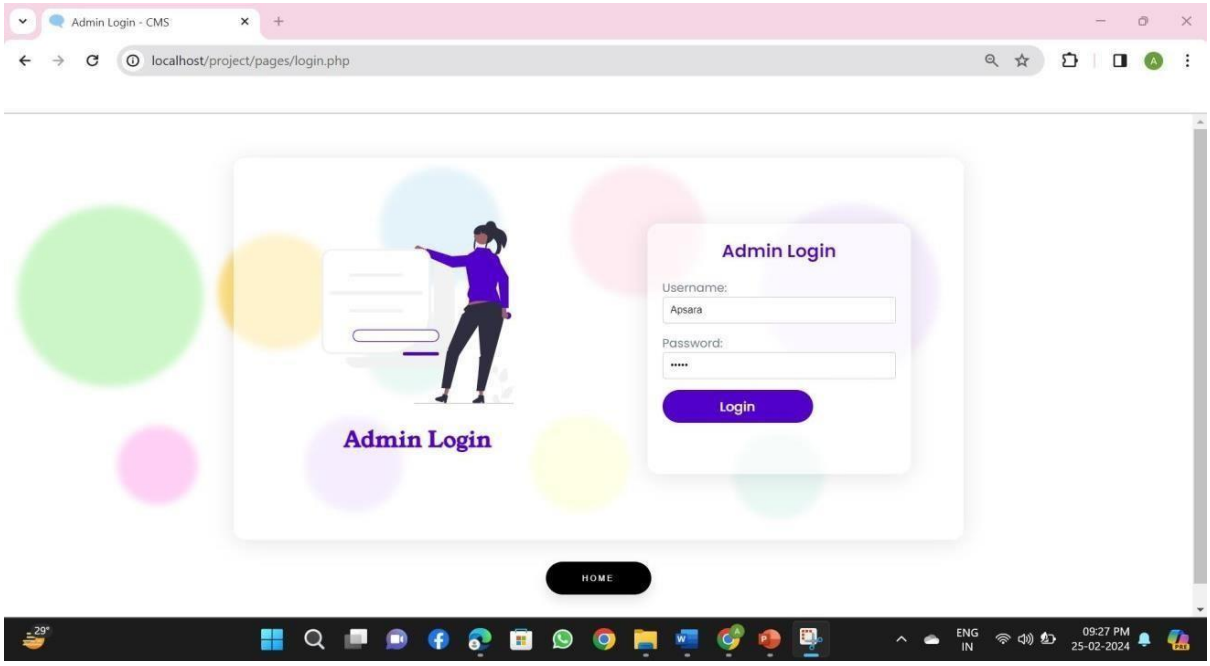
7. APPENDIX

7.1 INPUT & OUTPUT SCREEN

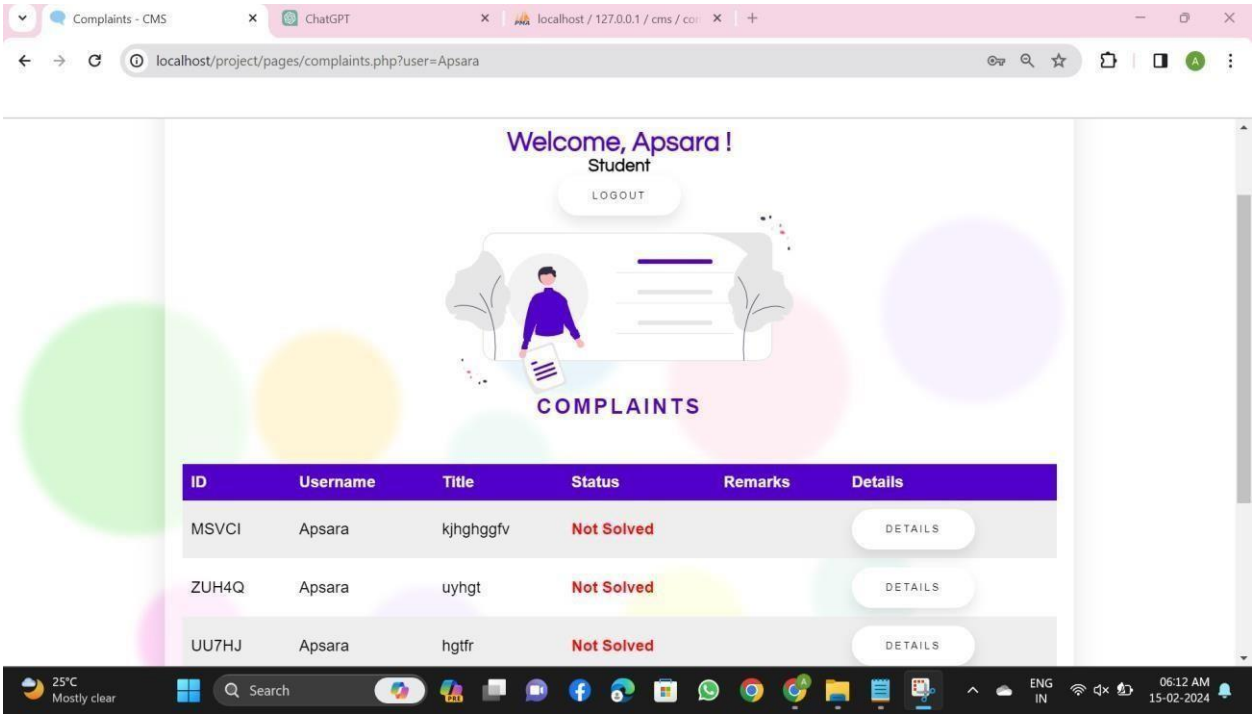
Home Page



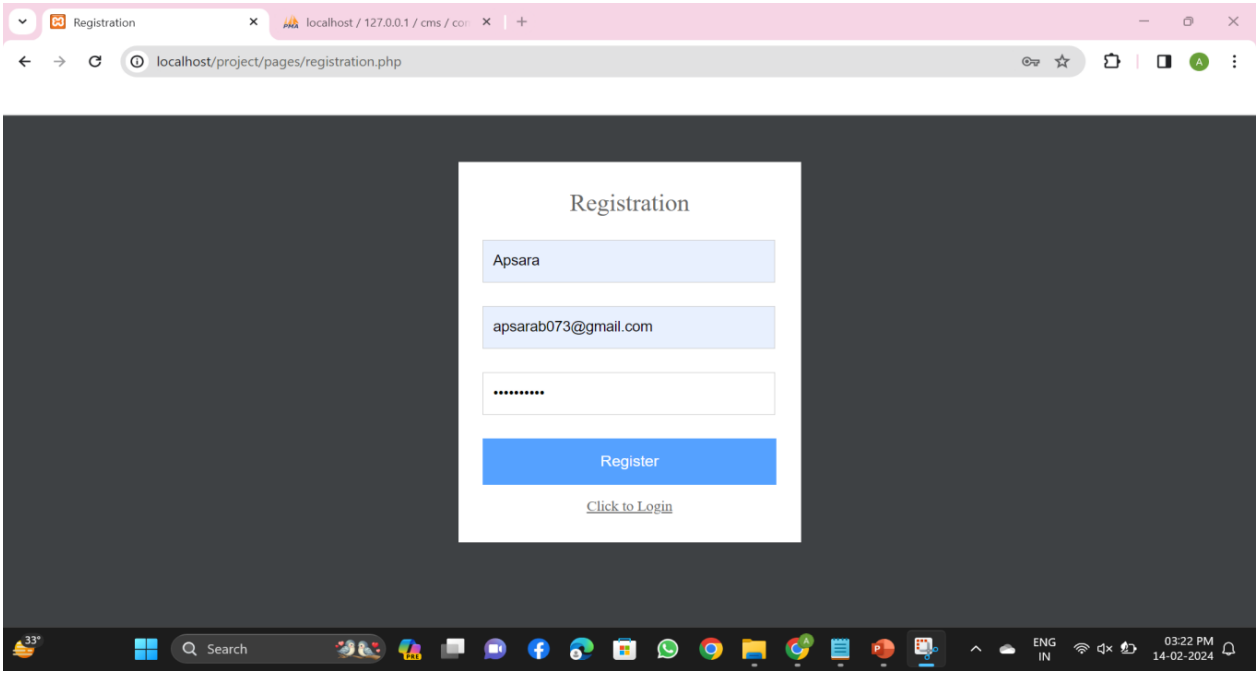
Admin Login



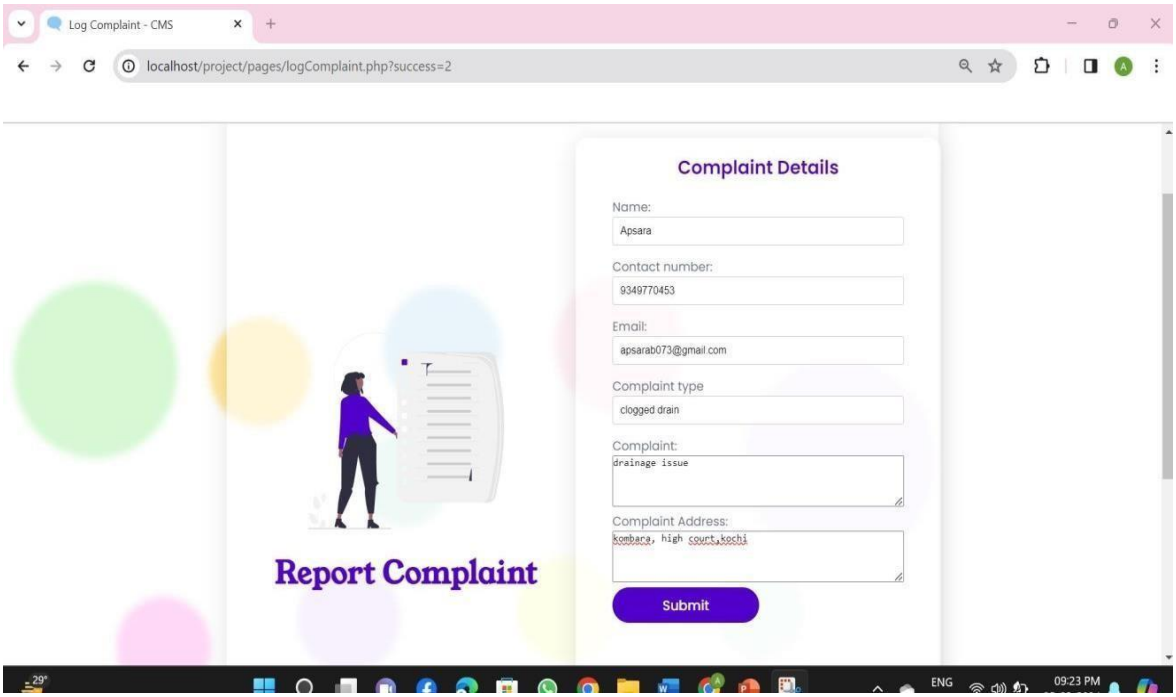
Complaints



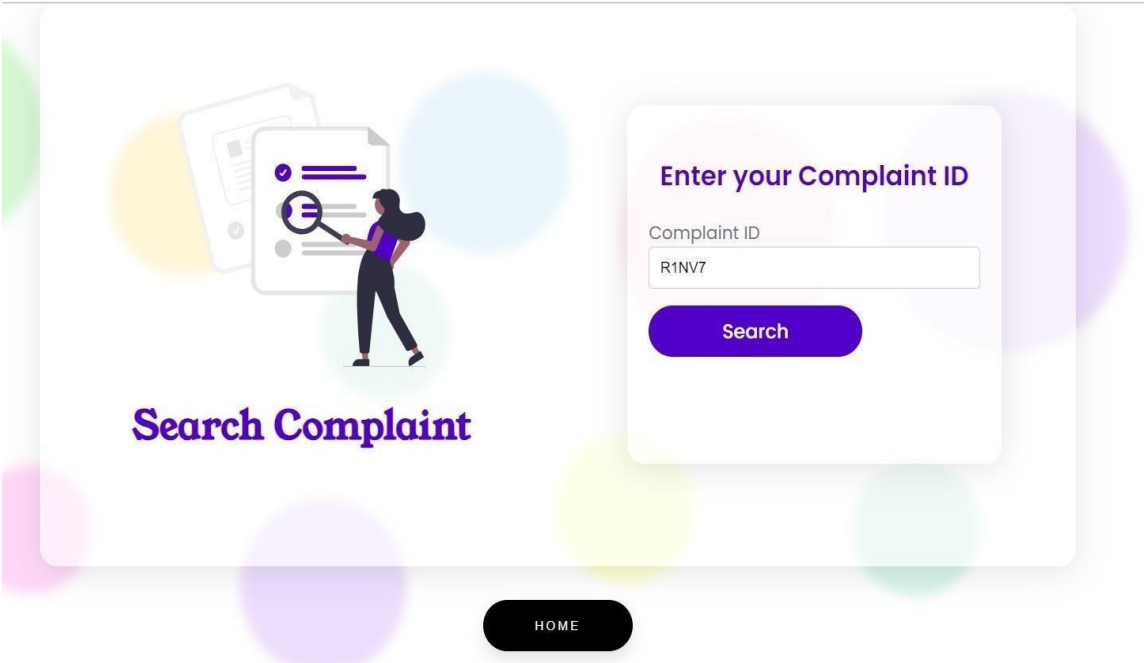
User Registration



Complaint Reporting



Complaint Status



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- https://htmlcss3tutorials.com/registration-and-login-form-in-php-mysql/
- https://htmlcss3tutorials.com/registration-and-login-form-in-php-mysq