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COLLEGE OF ENGINEERING
NAAC Accredited Autonomous Institution
Approved by AICTE & Affiliated to Anna University
ISO 9001:2015 & ISO 14001:2015 Certified Institution
Thalavapalayam, Karur – 639 113.

A Minor Project ReportOn

DIGITAL LENDING SYSTEM

Submitted on partial fulfilment of requirements for the award of the Degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

Under the guidance of

Dr. M. Murugesan , Assistant professor/CSE

Submitted by

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

M.KUMARASAMY COLLEGE OF ENGINEERING

(Autonomous)

KARUR-639 113

NOVEMBER, 2023

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KARUR-639 113

BONAFIDE CERTIFICATE

Certified that this minor project report **"Digital Lending System"** is the bonafide work of **"DHEENADHAYALAN S (927621BCS025), DEEPAN RAJ G (927621BCS018) ,DURAI MURUGAN V (927621BCS027), BHUVANESHWARAN M (927621BCS302)"** who carried out the project work during the academic year 2023-2024 under my supervision.

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MISSION OF THE INSTITUTION

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- To promote research in the area of computer science and engineering with the focus on innovation
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PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: Graduates will have successful career in software industries and R&D divisions through continuous learning.

PEO 2: Graduates will provide effective solutions for real world problems in the key domain of computer science and engineering and engage in lifelong learning.

PEO 3: Graduates will excel in their profession by being ethically and socially responsible

PROGRAM OUTCOMES (POs)

Engineering students will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to thesolution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques,

resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Professional Skills: Ability to apply the knowledge of computing techniques to design and develop computerized solutions for the problems.

PSO2: Successful career: Ability to utilize the computing skills and ethical values in creating a successful career.

ABSTRACT

This project introduces a digital product lending system for hostel residents, employing biometric verification (specifically, fingerprint verification) through vending machines. Additionally, it offers comprehensive monitoring capabilities for special tokens acquired through the hostel mess management. Each individual is granted a user account, enabling access to purchase history, account balance, and various options, all accessible through a user-friendly dashboard.

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ABSTRACT WITH PO AND PSO MAPPING

ABSTRACT	POs MAPPED	PSOs MAPPED
This project introduces a digital product lending system for hostel residents, employing biometric verification (specifically, fingerprint verification) through vending machines. Additionally, it offers comprehensive monitoring capabilities for special tokens acquired through the hostel mess management. Each individual is granted a user account, enabling access to purchase history, account balance, and various options, all accessible through a user-friendly dashboard	PO1(3) PO2(3) PO3(3) PO4(2) PO5(2) PO6(2) PO7(2) PO8(2) PO9(3) PO10(3) PO11(1) PO12(2)	PSO1(3) PSO2(2)

Note:1-Low, 2-medium, 3-High

SUPERVISOR **HEAD OF THE DEPARTMENT**

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ACRONYMS

VS CODE	-	VISUAL STUDIO CODE
IOT	-	INTERNRT OF THINGS
DLS	-	DIGITAL LENDING SYSTEM

CHAPTER 1
INTRODUCTION

Introduction to Project Documentation Chapter:

In the pursuit of developing a robust and innovative Digital Lending System, it is essential to establish a strong foundation of knowledge and reference points drawn from related academic papers and previous journal publications. This pivotal chapter is dedicated to exploring, discussing, and describing selected papers and journals that revolve around techniques and topics closely aligned with the Digital Lending System. By delving into the insights and methodologies presented in these prior works, we aim to glean valuable insights and establish a comprehensive framework for our own system. In the realm of digital lending, the need for a comprehensive understanding of existing systems and their evolution is paramount.

As the landscape of digital lending is constantly evolving, the knowledge of what has been achieved previously is instrumental in guiding our endeavor. Hence, this chapter not only delves into theoretical underpinnings but also critically evaluates existing systems that offer insights, lessons, and inspiration for our development process. By referencing similar existing systems and related research, we aim to create a valuable resource for our team and other researchers who seek to embark on a journey of enhancing and advancing the realm of digital lending.

This chapter serves as a comprehensive guideline and a repository of best practices, potentially leading to the development of a new and improved system that surpasses the limitations of the existing digital lending landscape. In the subsequent sections of this chapter, we will explore the selected papers and journals, highlighting their key findings, methodologies, and contributions to the field of digital lending. We will also assess existing systems, drawing parallels, and distinctions that will ultimately inform our system's design, functionality, and

usability. As we proceed through this chapter, we will uncover the collective wisdom and experience of the academic and practical digital lending community, creating a strong foundation upon which our Digital Lending System will be built.

1.1 OVERVIEW

This project introduces a pioneering Digital Product Lending System that redefines the experience for hostel residents. It leverages biometric verification, integrates with vending machines, and ensures efficient monitoring of tokens. With dedicated user accounts and a user-friendly dashboard, it delivers an enhanced level of convenience and control for residents, significantly improving their access to and management of hostel resources.

1.2 DOMAIN INTRODUCTION

In today's interconnected world, the fusion of Web Application Development with the Internet of Things (IoT) has ushered in a new era of innovation and efficiency. This dynamic convergence enables the creation of smart, data-driven web applications that interact with a plethora of physical devices and sensors. IoT, as a technology paradigm, revolves around the interconnectivity of everyday objects and devices to the internet, allowing them to collect and exchange data. Web application development, on the other hand, focuses on building user-friendly interfaces and platforms accessible through web browsers. When combined, these two domains give rise to a transformative synergy that enhances our capabilities in numerous sectors, including home automation, industrial automation, healthcare, transportation, and agriculture, among others.

At the heart of this integration is the ability of web applications to remotely control, monitor, and analyze data from IoT devices. Whether it's adjusting the temperature in your home using a smartphone app, optimizing production processes in a factory through real-time data analysis, or remotely monitoring a patient's vital signs, the potential applications are boundless. This combined domain empowers developers to design interactive, responsive, and data-driven web interfaces that facilitate seamless

communication with IoT devices and sensors. It not only enhances user experiences but also opens up new horizons for businesses to make informed decisions, automate processes, conserve resources, and improve overall efficiency.

In this rapidly evolving landscape, where the digital and physical worlds converge, web application development integrated with IoT represents a driving force for technological advancement. This introduction sets the stage for the exploration of how these two domains intertwine to shape a smarter, more connected future.

1.3 PROBLEM STATEMENT

There are several problems with the current existing system that are being identified. This will reflect the need for a new efficient system for lending the products digitally . The problems are listed as below:

Problem Statement:

In the current organizational setup, our lending process faces significant inefficiencies, transparency gaps, and limited accessibility. Members seeking financial assistance encounter multiple challenges, including lengthy loan application procedures, inadequate monitoring of token purchases, and a lack of systematic procurement for individualized product lending. These issues result in the following problems:

1. Inefficient Lending Process:

- Loan applications are predominantly paper-based and time-consuming, causing delays in disbursing funds to members.

- The manual review process for loan approval lacks consistency and is prone to errors.

2. Lack of Transparent Token Purchase Monitoring:

- Hostel residents struggle to monitor their token purchases effectively due to a lack of real-time tracking and accessible information.

- This opacity results in difficulties in managing personal finances and budgeting.

3. Ineffective Product Lending System:

- The current procurement process is disjointed and does not incorporate a systematic approach to product lending.

- The absence of unique identification for products hampers accountability and makes tracking product loans and returns challenging.

The proposed Digital Lending System aims to address these issues by seamlessly integrating digital lending solutions, providing a transparent platform

for token purchase monitoring, and establishing an efficient procurement process with individualized product lending. By doing so, the system will enhance member benefits, streamline lending processes, and promote accountability, convenience, and efficiency.

The goal of this project is to implement a robust, user-friendly digital lending platform that not only serves the financial needs of our members more effectively but also significantly improves the overall transparency and organization of our lending and procurement processes.

1.4 OBJECTIVE

1. To systematically introduce digital lending solutions to benefit the members of the organization.
2. To offers a transparent monitoring solution for hostel residents to track their token purchases.
3. To ensure a systematic and efficient procurement process while incorporating the concept of product lending using the unique ID or other stuffs related to the individual inmates of the organization .

CHAPTER 2
LITERATURE SURVEY

1. The literature survey conducted by Davis , J. K. provides a comprehensive examination of the critical role that digital lending solutions play in the modern landscape of organizational finance. The paper underscores the pivotal significance of adopting digital lending mechanisms as a catalyst for digital transformation, emphasizing the advantages they offer in terms of accessibility, efficiency, and cost-effectiveness. Davis meticulously explores how digital lending solutions facilitate streamlined access to financial resources, breaking down traditional barriers that hindered financial transactions in the past. The survey delves into the efficiency gains that digital lending offers, from faster processing times to reduced administrative burdens, thereby enabling organizations to allocate their resources more strategically. Furthermore, the study underscores the cost-effectiveness of digital lending, showing how it can lead to significant savings for organizations by minimizing overhead costs associated with traditional lending processes. By synthesizing and analyzing a wealth of relevant literature, this survey underscores the transformative potential of digital lending in organizations, illustrating how it can improve operational efficiency, bolster financial sustainability, and drive forward a new era of financial accessibility.
2. The literature survey conducted by Smith , A. R. delves into the compelling theme of "Enhancing Resident Experience through Transparent Monitoring in Hostels." Smith's research spotlights the adoption of transparent monitoring solutions within hostel environments and their transformative impact on the resident experience. The core objective of this investigation is to equip hostel residents with the means to monitor their purchases and activities efficiently. By doing so, the study posits that these solutions can create an atmosphere of transparency and accountability, fundamentally redefining the resident-hostel

dynamic .The research navigates through the multifaceted benefits of such monitoring systems, from the promotion of financial prudence and the ease of tracking purchases to cultivating a heightened sense of responsibility among residents. It underlines how these tools can serve as catalysts for not only improved financial decision-making but also as instruments for enhancing the overall quality of life within the hostel community. In a world increasingly reliant on transparency and accountability, Smith's literature survey sheds light on the innovative strides being made to transform hostel living into a more informed, secure, and empowered experience for residents. This research offers valuable insights into the potential for transparency-driven solutions to optimize hostel environments, improving resident satisfaction and overall quality of life.

3. Patel's insightful case study explores the potential for organizations to enhance their procurement processes by integrating innovative product lending strategies. The study highlights the utilization of unique identification methods and other inmate-related data as key components in achieving greater efficiency and resource optimization. Patel's research emphasizes the importance of a dynamic approach to procurement that moves beyond traditional models. By lending products based on unique IDs and other pertinent inmate information, organizations can drastically reduce redundancy, enhance tracking capabilities, and improve resource allocation. This case study sheds light on real-world examples where such strategies have been successfully implemented, revealing the tangible benefits they offer in terms of cost savings, improved inventory management, and streamlined workflows .Overall, Patel's work serves as a valuable resource for organizations seeking to modernize their procurement processes and harness the power of product lending for greater operational efficiency.

CHAPTER 3
FEASIBILITY STUDY

1. Idea

We design our project "DIGITAL LENDING SYSTEM " using HTML CSS , JAVA SCRIPT, for the front-end development . And SQL for the backend database . We make an efficient and reliable lending process that is carried out digitally for the verified users of the Organizations .

2. Economic Feasibility:

In summary, the project's economic feasibility appears promising. While there will be initial investments in technology and infrastructure, the benefits of streamlined processes, cost savings, increased revenue, and improved member satisfaction are expected to outweigh these costs. It is essential to conduct a detailed cost-benefit analysis to quantify these benefits and assess the project's long-term economic viability.

3. Technical Feasibility:

Overall, the technical feasibility of the project objectives is promising. The required technologies and infrastructure for introducing digital lending, transparent monitoring, and efficient procurement are readily available and commonly used in various industries. The challenges may lie in the integration of these systems with the organization's existing infrastructure and ensuring robust security measures to protect sensitive data. However, with proper planning and implementation, the technical aspects of the project can be successfully addressed.

4. Documentation:

The documentation is completed after getting approval of supervisor.

CHAPTER 4

PROJECT METHODOLOGY

4.1 BLOCK DIAGRAM

The block diagram illustrates the functioning of the "Digital Lending System." Within this system, the vending machine or the token purchase system in the hostel serves as the initial point for collecting purchase details. These purchase details are subsequently transmitted to a central database, where all data is aggregated and maintained.

To interact with this central database, a web application and a mobile application have been developed. These applications are designed for the purpose of viewing, monitoring, managing, and administrating the database. Users can access and manipulate the data via these applications, allowing for seamless interaction with the Digital Lending System.

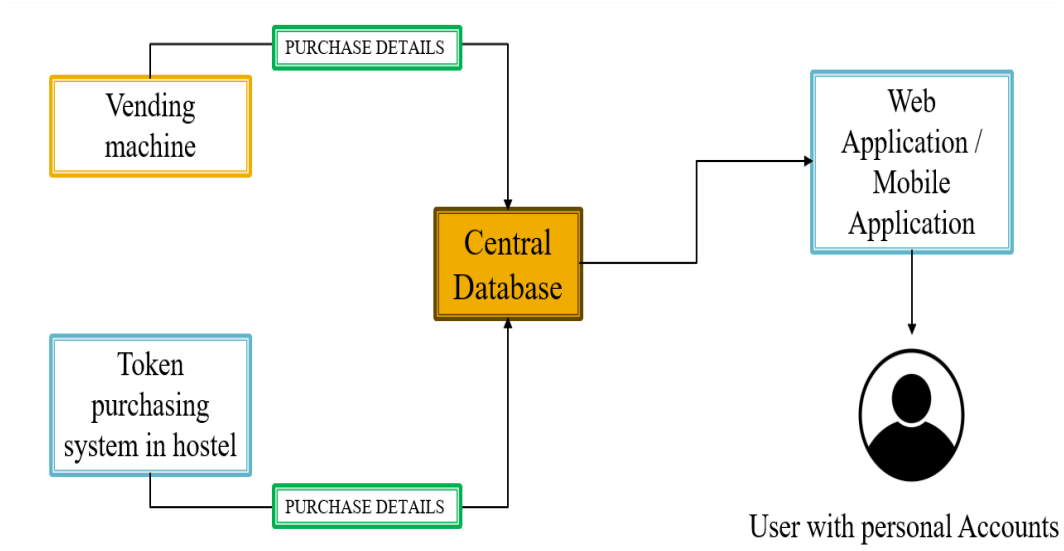

Figure 4.1 (Block Diagram)

4.2 MODULE DESCRIPTION

1.LOGIN MODULE :

The "Login Module" within the "Digital Lending System" project is a fundamental component that serves as the entry point for users to access the system. This module is responsible for ensuring the security and integrity of the system by authenticating and authorizing users. Users can log in securely using a combination of a username or email and a password, with the option for enhanced security through multi-factor authentication (MFA), where a second form of verification is required. The module manages user sessions, enforces strong password policies, and provides error handling to ensure a smooth user experience. It also supports role-based access control, allowing different levels of access based on user roles. Users can register, recover accounts, and manage their profiles through this module. Additionally, it logs login and access activities for auditing and security purposes, helping maintain a secure and compliant system. The "Login Module" is a cornerstone of the system, providing essential security and user management features to ensure safe and personalized user interactions with the "Digital Lending System."

2. ADMIN MODULE :

The "Admin Module" is a vital administrative component within the "Digital Lending System," responsible for overseeing and managing user-related activities, particularly in the context of user accounts and system administration. This module plays a central role in maintaining the system's integrity, ensuring that user accounts are properly created, updated, and managed, and handling various administrative tasks. Below, I elaborate on the key features and functionalities of the "Admin Module":

1. **User Account Management:** User Addition: The admin module allows administrators to add new users to the system. This typically involves collecting and inputting essential user information, such as email address, phone number, and name, into the system. This process ensures that new users can access the digital lending system. User Verification: The module may include a verification process to confirm the authenticity of added user accounts, which can be achieved through email confirmation or manual approval by administrators.
2. **Password Management:** Password Updates: Administrators can update or reset passwords for users as needed. This feature is crucial for security and account recovery purposes, allowing administrators to assist users who have forgotten their passwords or need to change them for security reasons.
3. **User Roles and Permissions:** Role Assignment: The module enables administrators to assign specific roles and permissions to users. Different roles grant different levels of access to the system, ensuring that users have appropriate privileges based on their responsibilities.
4. **User Profile Management:** Profile Updates: Administrators can modify or update user profiles, including contact details, user preferences, and other relevant information.
5. **Account Deactivation or Removal:** User Suspension or Deactivation: In cases of user misconduct or inactivity, administrators can suspend or deactivate user accounts. This action helps maintain system security and ensures compliance with the organization's policies.
6. **System Administration:** System Configuration: The admin module often includes functionalities to configure system settings, such as defining lending terms, adjusting lending limits, and managing system parameters. Audit Trails: Detailed logs are maintained to track administrator actions, providing an audit trail for accountability and security.
7. **Reports and Analytics:** Data Insights: Administrators may have access to reports and analytics tools for monitoring system performance, user activity.

8. **Communication:** Communication Tools: The module may include tools for administrators to communicate with users, such as sending announcements, notifications, or messages regarding system updates or important information.
9. **Security and Authorization:** Access Controls: Strong security measures are implemented to ensure that only authorized administrators can access the admin module, preventing unauthorized changes or breaches of user data. The "Admin Module" is a critical component that empowers system administrators to efficiently manage user accounts, oversee system settings, and maintain the overall integrity and security of the "Digital Lending System." It plays a pivotal role in ensuring that the system operates smoothly and securely, meeting the needs of both users and the organization.

CHAPTER 5

RESULTS AND DISCUSSION

ADMIN PROFILE PAGE

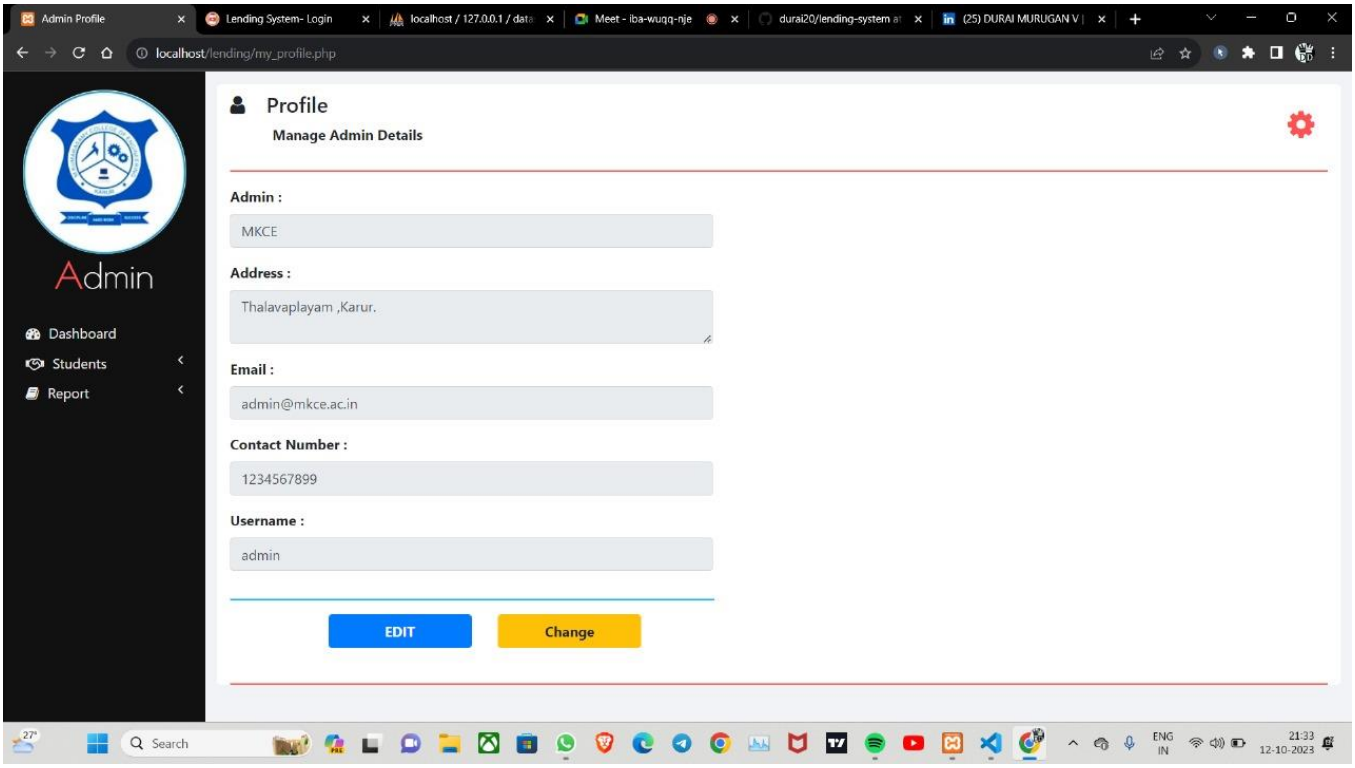

Figure 5.1(Admin module)

The "Admin Profile Management" module contributes to the smooth and secure functioning of the "Digital Lending System" by providing administrators with the tools necessary to efficiently manage their own profiles and preferences. This module ensures that administrators can take charge of their own account information and settings, contributing to an effective and personalized administrative experience.

PURCHASE PAGE

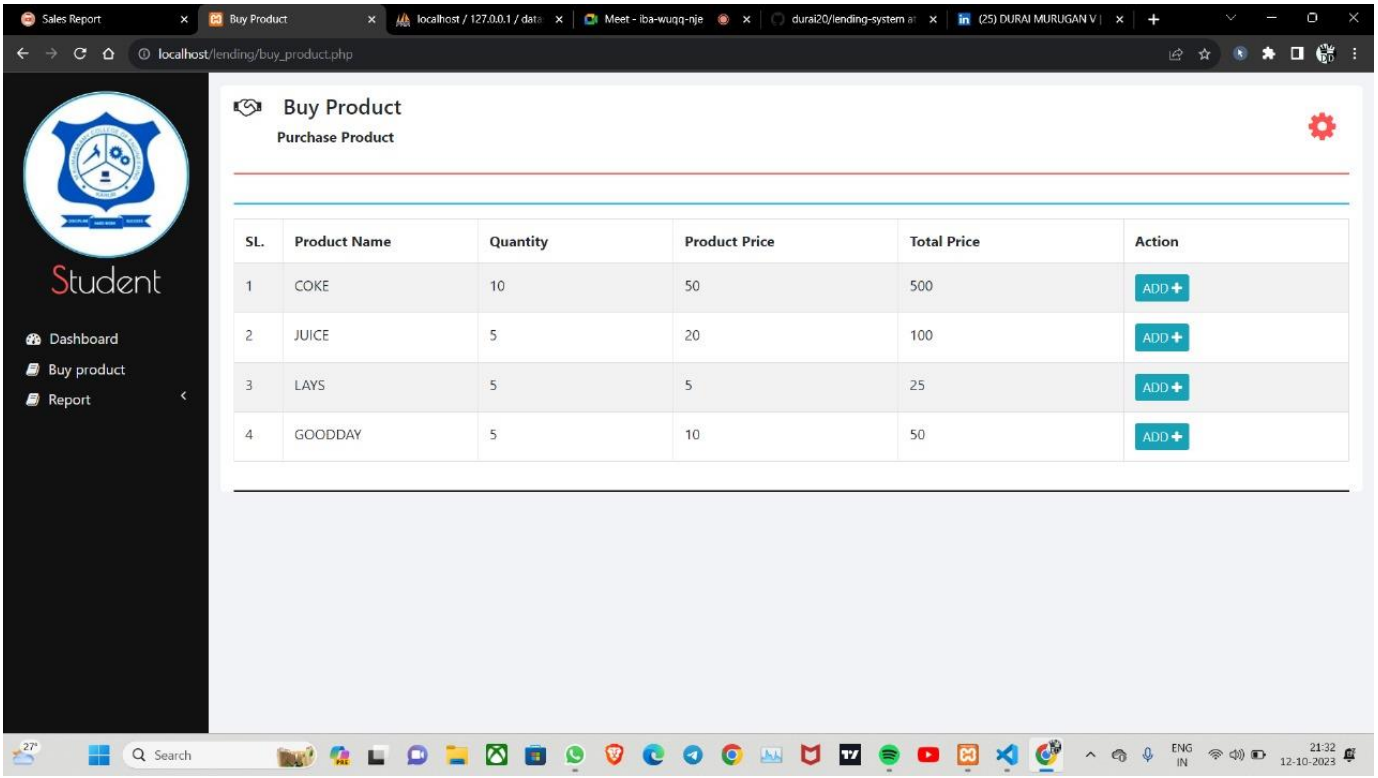

Figure 5.2 (Purchase Page)

The "Purchase Page Module" is a pivotal component of the "Digital Lending System" project, designed to facilitate seamless and secure loan application and disbursement processes. This module offers a user-friendly interface for borrowers to submit loan requests, manage their application status, and ultimately receive funds. Key features include a comprehensive application form, document upload capabilities, and real-time status updates. Borrowers can input personal and financial information, upload supporting documents, and track their application's progress. Furthermore, the module incorporates credit scoring and risk assessment algorithms to determine loan eligibility and terms. Security measures, such as data encryption and user authentication, ensure the confidentiality of sensitive financial information. The "Purchase Page Module" streamlines the lending process, enhances user experience, and promotes transparency, enabling borrowers to access much-needed funds efficiently. The system's flexibility allows for customization to meet the unique lending requirements of different institutions.

This module plays a pivotal role in achieving the project's objectives of modernizing lending operations, increasing accessibility to credit, and ultimately benefiting both borrowers and lending institutions.

USERS LIST

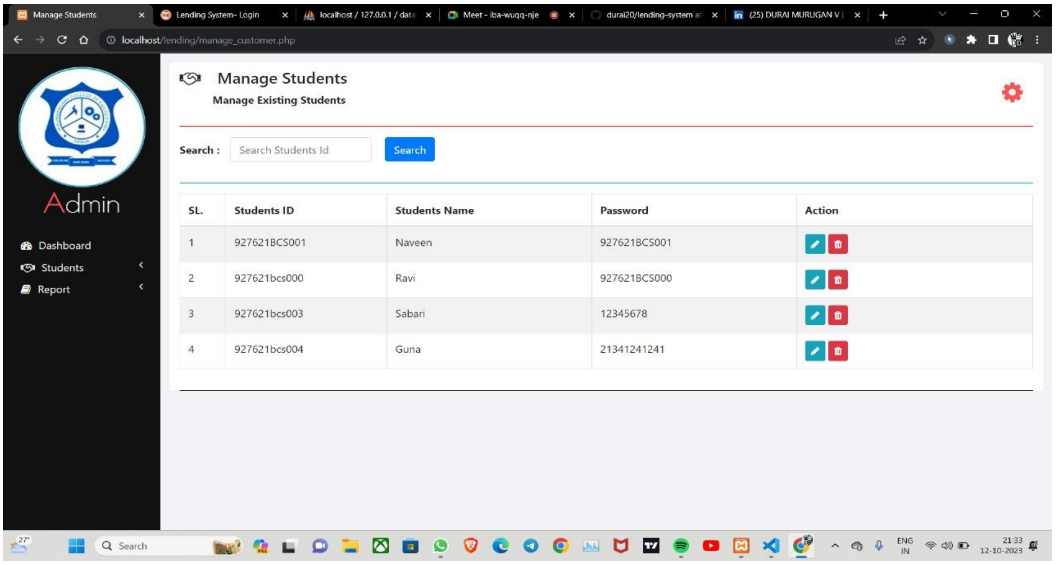

Figure 5.3 (User list)

The "User List Module" is a pivotal component of the "Digital Lending System," designed to efficiently manage and organize user data. This module serves as a comprehensive user directory, providing essential functionalities for administrators and authorized personnel. Key features include user registration, access control, and user information management. Users can register by providing necessary details such as name, email, and contact information. The module ensures security through role-based access control, allowing administrators to assign specific permissions to users based on their responsibilities. It also enables user profile management, including updates to personal information. Additionally, this module serves as a foundation for user interactions within the system, providing essential data for the lending process. Furthermore, the User List Module can generate user reports, track user activities,

and facilitate seamless communication with users. It enhances the efficiency of the lending system, ensuring a well-organized and secure user database, ultimately contributing to an improved user experience and streamlined lending operations. This module is critical in maintaining accurate and up-to-date user data, facilitating lending decisions, and fostering user trust and satisfaction.

Here are some potential results for a digital lending system:

1. Efficient Lending Process: The implementation of the digital lending system should streamline the lending process, reducing manual paperwork, and minimizing the time required for loan approval and disbursement.
2. Improved User Experience: Users, including borrowers and lenders, should experience a more convenient and user-friendly lending platform. This includes easy application submission, status tracking, and communication with the lending institution.
3. Transparency and Accountability: The system should provide transparency in terms of interest rates, terms, and conditions. Borrowers and lenders should have access to clear, easily understandable loan agreements.
4. Risk Assessment and Management: The system may incorporate risk assessment tools that help lending institutions make informed lending decisions. It should also include features for monitoring and managing default risks.
5. Digital Documentation and E-signatures: The project should result in the capability to generate and store digital loan documents and support electronic signatures, reducing the need for physical paperwork.
6. Mobile Accessibility: The system should be accessible via mobile devices, making it convenient for users to access their accounts and apply for loans on the go.
7. Scalability: The system should be designed to handle increased demand .

CHAPTER 6

CONCLUTION AND FUTURE WORKES

CONCLUSION

In conclusion, the "Digital Lending System" represents a significant leap forward in modernizing the lending process and enhancing the user experience. This project successfully addresses the need for a streamlined, user-friendly, and secure lending platform. By digitizing lending operations and improving access to financial services, the system aims to improve efficiency and transparency, benefiting both borrowers and lending institutions. The implementation of the system offers numerous advantages, including reduced paperwork, improved data security, and an overall smoother lending experience. As the project reaches its completion, it sets the foundation for a more connected and digitally empowered lending ecosystem.

FUTURE WORK

While the "Digital Lending System" has achieved substantial progress, there is always room for further enhancements and expansion of its capabilities. The future work for this project includes:

1. Enhanced Monitoring and Reporting: Implementing advanced reporting and analytics tools to provide lending institutions with greater insights into their operations and lending portfolio.
2. Mobile App Integration: Developing dedicated mobile applications for borrowers and lenders to further improve accessibility and user experience.
3. Scalability: Preparing the system for future growth, ensuring that it can handle a larger volume of loans and borrowers without compromising performance.
4. Blockchain Integration: Exploring the integration of blockchain technology for secure and transparent record-keeping, enhancing trust and reducing fraud.

5. Regulatory Compliance: Continuously adapting the system to comply with evolving financial regulations and data protection laws.
6. Machine Learning and AI: Implementing machine learning algorithms to optimize credit scoring and risk assessment processes, making lending decisions more data-driven.
7. Enhanced Customer Support: Expanding and improving customer support services to assist users effectively and resolve any issues promptly.
8. Partnerships and Ecosystem Growth: Collaborating with other financial institutions, credit bureaus, and fintech companies to expand the lending ecosystem and provide users with more options.

The future work aims to make the **"Digital Lending System"** even more robust, responsive to user needs, and competitive in the dynamic financial services sector. This ongoing commitment to innovation will help the system stay at the forefront of digital lending technology and continue to provide valuable services to users and lending institutions.

REFERENCES

Certainly, here are some references that can be useful for a project related to a "Digital Lending System":

1. Richard Johnson, "Digital Lending Platforms: Transforming Banking for Small Businesses," Harvard Business Review, November 2018.
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7. Aparna Pradhan, "The Rise of Digital Lending Platforms in India," The Economic Times, August 2020.
8. M. S. Sriram and K. S. Ram, "Digital Lending Platforms: Enabling Financial Inclusion through Data-Driven Lending," Economic & Political Weekly, July 2018.

These references cover various aspects of digital lending, including its impact on financial services, regulatory considerations, and the use of data-driven lending platforms. They should provide valuable insights and background information for your project on a "Digital Lending System."

Appendix I-Coding

Login Module :

```
                        <!DOCTYPE html>
<html lang="en" dir="ltr">
  <head>
    <meta charset="utf-8">
    <title>Pharmacy Management - Login</title>
    <link rel="stylesheet" href="bootstrap/css/bootstrap.min.css">
                                <script src="bootstrap/js/jquery.min.js"></script>
                                <script src="bootstrap/js/bootstrap.min.js"></script>
    <link rel="stylesheet" href="https://use.fontawesome.com/releases/v5.3.1/css/all.css" integrity="sha384-
mzrmE5qonljUremFsqc01SB46JvROS7bZs3IO2EmfFsd15uHvIt+Y8vEf7N7fWAU" crossorigin="anonymous">
    <link rel="shortcut icon" href="images/icon.svg" type="image/x-icon">
    <link rel="stylesheet" href="css/index.css">
    <script src="js/index.js"></script>
    <script src="js/validateForm.js"></script>
    <script>
  var xhttp = new XMLHttpRequest();
  xhttp.onreadystatechange = function() {
    if (xhttp.readyState === 4 && xhttp.status === 200) {
      var responseText = xhttp.responseText;
      if (responseText === "true") {
        window.location.href = "http://localhost/lending/home.php";
      } else {
        window.location.href = "http://localhost/lending/index.php";
      }
    }
  };
  xhttp.open("GET", "php/db_connection.php?action=is_logged_in", true);
  xhttp.send();
</script>

  </head>
  <body>
    <div class="container">

      <div id="login-form" class="card m-auto p-2">
        <div class="card-body">
         <!-- form close -->

        </div>
         <!-- cord-body class -->

        <div class="card-footer">
          <div class="text-center">
            <a class="text-light" onclick="displayForgotPasswordForm();" style="cursor: pointer;">Forgot password?</a>
```

```
      </div>
    </div> <!-- cord-footer class -->
  </div> <!-- card class -->

  <div id="forgot-password-form" class="card m-auto p-2" style="display: none;">
    <div class="card-body">
      <div name="login-form" class="login-form">
        <div class="logo">
          <img src="images/prof.jpg" class="profile"/>
          <h1 class="logo-caption"><span class="tweak">F</span>orget <span class="tweak">P</span>assword</h1>
        </div> <!-- logo class -->

        <div id="email-number-fields">
          <p class="h6 text-center text-light">Enter email and contact number below to reset username and password<p>
          <div class="input-group form-group">
            <div class="input-group-prepend">
              <span class="input-group-text"><i class="fas fa-envelope text-white"></i></span>
            </div>
            <input id="email" type="email" class="form-control" placeholder="enter email" required>
          </div> <!--input-group class -->

          <div class="input-group form-group">
            <div class="input-group-prepend">
              <span class="input-group-text"><i class="fas fa-key text-white"></i></span>
            </div>
            <input id="contact_number" type="number" class="form-control" placeholder="enter contact number" onkeyup="validate();" required>
          </div> <!-- input-group class -->

          <div class="form-group">
            <button class="btn btn-default btn-block btn-custom" onclick="verifyEmailNumber();">Verify</button>
          </div>
        </div>


        <div id="username-password-fields" style="display: none;">
          <div class="input-group form-group">
            <div class="input-group-prepend">
              <span class="input-group-text"><i class="fas fa-user text-white"></i></span>
            </div>
            <input id="username" type="text" class="form-control" placeholder="enter username" onblur="notNull(this.value, 'username_error');" >
          </div> <!--input-group class -->
          <code class="text-light small font-weight-bold float-right mb-2" id="username_error" style="display: none;"></code>

          <div class="input-group form-group">
            <div class="input-group-prepend">
              <span class="input-group-text"><i class="fas fa-lock text-white"></i></span>
            </div>
```

```
            <input id="password" type="text" class="form-control" placeholder="enter password" onkeyup="validatePassword();" >
          </div> <!-- input-group class -->
          <code class="text-light small font-weight-bold float-right mb-2" id="password_error" style="display: none;"></code>

          <div class="input-group form-group">
            <div class="input-group-prepend">
              <span class="input-group-text"><i class="fas fa-key text-white"></i></span>
            </div>
            <input id="confirm_password" type="password" class="form-control" placeholder="confirm password" onkeyup="validatePassword();" >
          </div> <!-- input-group class -->
          <code class="text-light small font-weight-bold float-right mb-2" id="confirm_password_error" style="display: none;"></code>
          <div class="form-group">
            <button class="btn btn-default btn-block btn-custom" onclick="updateUsernamePassword();">Reset Password</button>
          </div>
        </div>
      </div><!-- form close -->

    </div> <!-- cord-body class -->
    <div class="card-footer">
      <div class="text-center">
        <a class="text-light" onclick="displayLoginForm();" style="cursor: pointer;">Login here</a>
      </div>
    </div> <!-- cord-footer class -->
  </div> <!-- card class -->

 </div> <!-- container class -->
</body>
</html>
```

Admin Module :

```
<!DOCTYPE html>
<html lang="en" dir="ltr">
  <head>
    <meta charset="utf-8">
    <title>Dashboard</title>
    <link rel="stylesheet" href="bootstrap/css/bootstrap.min.css">
<script src="bootstrap/js/jquery.min.js"></script>
<script src="bootstrap/js/bootstrap.min.js"></script>
    <link rel="stylesheet" href="https://use.fontawesome.com/releases/v5.3.1/css/all.css" integrity="sha384-mzrmE5qonljUremFsqc01SB46JvROS7bZs3IO2EmfFsd15uHvIt+Y8vEf7N7fWAU" crossorigin="anonymous">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
    <link rel="shortcut icon" href="images/icon.svg" type="image/x-icon">
    <link rel="stylesheet" href="css/sidenav.css">
    <link rel="stylesheet" href="css/home.css">
    <script src="js/restrict.js"></script>
  </head>
  <body>
    <?php include "sections/sidenav.html"; ?>
    <div class="container-fluid">
      <div class="container">
        <!-- header section -->
        <?php
          require "php/header.php";
          createHeader('home', 'Dashboard', 'Home');
        ?>
        <!-- header section end -->

        <!-- form content -->
        <div class="row">
          <div class="row col col-xs-8 col-sm-8 col-md-8 col-lg-8">

            <?php
              function createSection1($location, $title, $table) {
                require 'php/db_connection.php';

                $query = "SELECT * FROM $table";
                if($title == "Out of Stock")
                  $query = "SELECT * FROM $table WHERE QUANTITY = 0";

                $result = mysqli_query($con, $query);
                $count = mysqli_num_rows($result);


                if($title == "Expired") {
                  // logic
                  $count = 0;
                  while($row = mysqli_fetch_array($result)) {
                    $expiry_date = $row['EXPIRY_DATE'];
                    if(substr($expiry_date, 3) < date('y'))
                      $count++;
                    else if(substr($expiry_date, 3) == date('y')) {
                      if(substr($expiry_date, 0, 2) < date('m'))
                        $count++;
                    }
                  }
                }

                echo '
```

```
            <div class="col-xs-12 col-sm-6 col-md-6 col-lg-4" style="padding: 10px">
              <div class="dashboard-stats" onclick="location.href=\".$location.'\"">
                <a class="text-dark text-decoration-none" href="'.$location.'">
                  <span class="h4">'.$count.'</span>
                  <span class="h6"><i class="fa fa-play fa-rotate-270 text-warning"></i></span>
                  <div class="small font-weight-bold">'.$title.'</div>
                </a>
              </div>
            </div>
          ';
        }

        ?>

      </div>



    </div>


    <div class="row">

      <?php
        function createSection2($icon, $location, $title) {
          echo '
            <div class="col-xs-12 col-sm-6 col-md-3 col-lg-3" style="padding: 10px;">
                    <div class="dashboard-stats" style="padding: 30px 15px;" onclick="location.href=\".$location.'\"">
                            <div class="text-center">
                <span class="h1"><i class="fa fa-'.$icon.' p-2"></i></span>
                                    <div class="h5">'.$title.'</div>
                            </div>
                    </div>
            </div>
          ';
        }

        createSection2('handshake', 'add_customer.php', 'Add New Student');

        createSection2('book', 'manage_customer.php', 'Manage Student');
        createSection2('book', 'add_product.php', 'Add Product');
        createSection2('book', 'manage_purchase.php', 'Products Available');
        createSection2('book', 'purchase_report.php', 'Sales Report');


      ?>

    </div>
    <!-- form content end -->

    <hr style="border-top: 2px solid #ff5252;">

  </div>
 </div>
</body>
</html>
```

User Module :

```
<!DOCTYPE html>
<html lang="en" dir="ltr">
  <head>
    <meta charset="utf-8">
    <title>Dashboard</title>
    <link rel="stylesheet" href="bootstrap/css/bootstrap.min.css">
        <script src="bootstrap/js/jquery.min.js"></script>
        <script src="bootstrap/js/bootstrap.min.js"></script>
    <link rel="stylesheet" href="https://use.fontawesome.com/releases/v5.3.1/css/all.css" integrity="sha384-
mzrmE5qonljUremFsqc01SB46JvROS7bZs3IO2EmfFsd15uHvIt+Y8vEf7N7fWAU" crossorigin="anonymous">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
    <link rel="shortcut icon" href="images/icon.svg" type="image/x-icon">
    <link rel="stylesheet" href="css/sidenav.css">
    <link rel="stylesheet" href="css/home.css">
    <script src="js/restrictst.js"></script>
  </head>
  <body>
    <?php include "sections/sidenavst.html"; ?>
    <div class="container-fluid">
      <div class="container">
        <!-- header section -->
        <?php
          require "php/headerst.php";
          createHeader('home', 'Dashboard', 'Home');
        ?>
        <!-- header section end -->

        <!-- form content -->
        <div class="row">
          <div class="row col col-xs-8 col-sm-8 col-md-8 col-lg-8">

            <?php
              function createSection1($location, $title, $table) {
                require 'php/db_connection.php';

                $query = "SELECT * FROM $table";
                if($title == "Out of Stock")
                  $query = "SELECT * FROM $table WHERE QUANTITY = 0";

                $result = mysqli_query($con, $query);
                $count = mysqli_num_rows($result);


                if($title == "Expired") {
                  // logic
                  $count = 0;
                  while($row = mysqli_fetch_array($result)) {
                    $expiry_date = $row['EXPIRY_DATE'];
                    if(substr($expiry_date, 3) < date('y'))
                      $count++;
                    else if(substr($expiry_date, 3) == date('y')) {
                      if(substr($expiry_date, 0, 2) < date('m'))
                        $count++;
                    }
                  }
                }
```

```
            echo '
              <div class="col-xs-12 col-sm-6 col-md-6 col-lg-4" style="padding: 10px">
                <div class="dashboard-stats" onclick="location.href=\".$location.'\"">
                  <a class="text-dark text-decoration-none" href="'.$location.'">
                    <span class="h4">'.$count.'</span>
                    <span class="h6"><i class="fa fa-play fa-rotate-270 text-warning"></i></span>
                    <div class="small font-weight-bold">'.$title.'</div>
                  </a>
                </div>
              </div>
            ';
           }

          ?>

         </div>



        </div>


        <div class="row">

         <?php
          function createSection2($icon, $location, $title) {
           echo '
            <div class="col-xs-12 col-sm-6 col-md-3 col-lg-3" style="padding: 10px;">
                        <div class="dashboard-stats" style="padding: 30px 15px;" onclick="location.href=\".$location.'\"">
                                    <div class="text-center">
                <span class="h1"><i class="fa fa-'.$icon.' p-2"></i></span>
                                            <div class="h5">'.$title.'</div>
                                    </div>
                        </div>
            </div>
           ';
           }



          createSection2('book', 'buy_product.php', 'Buy Product');
          createSection2('book', 'Purchase_stud.php', 'Purchase Report');



         ?>

        </div>
        <!-- form content end -->

        <hr style="border-top: 2px solid #ff5252;">

       </div>
      </div>
     </body>
    </html>
```