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Implementing Online No Due Certification System

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Abstract: *Due to the growth of online learning platforms, distant work settings, and the necessity for credentials that can be independently verified, the demand for digital Certifications has greatly expanded in recent years. In this project, we suggest creating an Online Certification Application(OCA), which provides a simple and safe method for creating and managing digital Certifications. By automating several steps, such as application, verification, and delivery, the Online Certification Application seeks to expedite the Certification issue procedure. The system makes use of web-based technology to make it simple for people and organisations to apply for certifications, submit supplementary materials, and monitor the status of their application online. This system's primary goal is to save both instructors and students time and effort. Authorities, students, and payment information are kept in separate records. In other words, the suggested system aims to do the following: A basic database is kept up. The operator needs less time to become accustomed to the system since user interfaces are appealing and easy to use*

Keywords: Digital Certification, automating, web-based technology, database, appealing, interfaces.

I. INTRODUCTION

A "No Dues Certification" has traditionally been obtained through a laborious and time-consuming process at traditional educational institutions and organizations. An institution or organization can certify that someone has paid all outstanding dues or obligations by issuing a No Dues Certification. These credentials are frequently necessary for a number of things, including job applications, admittance to further education, and financial transactions.

There is a need for an effective and convenient system to handle the issuance of No Dues Certifications due to the introduction of digital technologies and the rising need for streamlined administrative processes. The Online No Dues Certification Application(ONDCA) has evolved as a workable remedy to this.

The No Dues Certification Application(ONDCA) is an online tool that streamlines the application and issuance of No Dues Certifications. It eliminates the need for lengthy processing delays, in-person trips to administrative buildings, and paper-based record keeping. By leveraging web-based technology, the ONDCA offers a user-friendly interface that enables users to request and track the status of their applications for No Dues Certifications from any location at any time.

By automating the issuance and verification processes, administrative employees can make significant time and labour savings.

The ONDCA provides comfort and adaptability. They don't need to make in-person visits or wait around for a long time because they can submit their applications and monitor their progress online. Additionally, there is no requirement for physical copies of digital Certifications, which reduces administrative responsibilities and makes it simple to exchange them with prospective employers, educational institutions, or any other relevant parties through secure electronic channels.

II. LITERATURE REVIEW

As the demand for effective and streamlined administrative procedures in educational institutions and organizations grows, online solutions for issuing no dues Certifications have attracted a lot of interest. This review of the literature looks at recent studies and research on online no-dues Certification systems,

In a study by Firdaus et al. (2020), the researchers evaluated the performance of an ONDCS at a public institution in Malaysia. With an average processing time of two days as opposed to seven days in the conventional approach, the

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system was found to drastically minimize the time and effort necessary to issue no dues Certifications. The authors also mentioned how the ONDCA improved accuracy and transparency, which decreased errors and disagreements.

The importance of online technologies in improving the effectiveness and simplicity of the issuance procedure for no dues Certifications was highlighted by research by Gupta and Singh (2018). They discovered that digitizing the procedure avoided human errors and cut down on the amount of time needed for verification. With the Internet method, candidates could submit their paperwork from a distance, and Certifications could be processed and delivered more quickly.

The efficiency of an ONDCA in a Malaysian public university was examined in a study by Firdaus et al. (2020). It was discovered that the method greatly reduced the amount of time and effort needed to issue no dues Certifications, with an average processing time of two days compared to seven days in the conventional approach. Additionally, the authors noted that the ONDCA improved accuracy and transparency, reducing the occurrence of errors and disputes.

User satisfaction and system adoption are significantly influenced by the user experience and interface design of online services. User perceptions of an online no dues Certification Application were the subject of a study by Ahuja et al. in 2019. They emphasized the importance of a user-friendly design, simple navigation, and concise application instructions. In order to accommodate various devices and guarantee accessibility, the study also emphasized the need for responsive design.

For smooth operations, it is essential to integrate the online no dues Certificate Application with current employee or student databases. The integration issues that arose during the development of an online Certificate issuance system were looked into by Khare and Sahu (2020). To prevent data duplication, and synchronization problems, and to ensure data consistency across several platforms, they emphasized the importance of good system integration.

III. PROBLEM STATEMENT

To build a user-friendly authorized Online No Dues Certification Application (ONDCA) is to streamline and modernize the process of managing and issuing no dues Certifications in educational institutions or organizations.

IV. PROPOSED SYSTEM

The proposed system deals with the more affordable approach focused on the more practical and user-friendly Application that only permits authorized students for Requesting and Generating Online No Due Certification (ONDC).

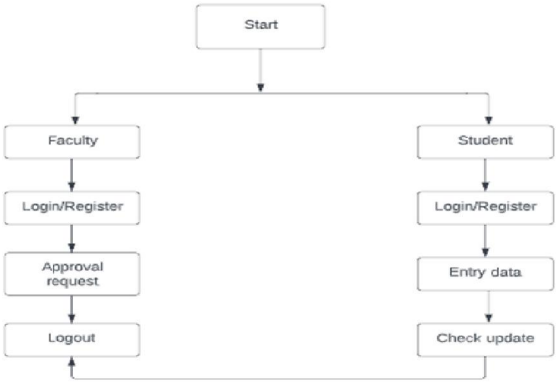

Fig. Proposed System

User registration and log-in: Users would register accounts and log in independently using their special credentials, such as the student's PRN number, name, mobile number, email ID, and password. This makes sure that only those with permission can access and use the system.

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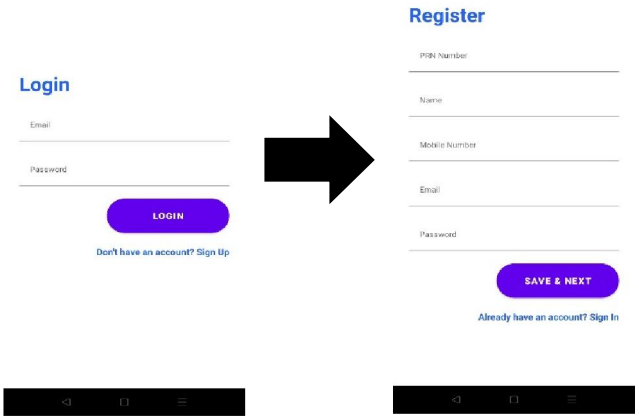
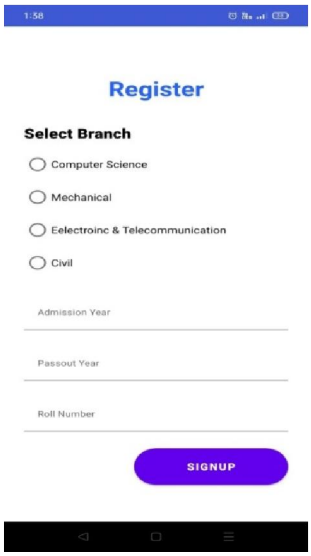


Select Branch: User/student has to register According to their mandatory, which simplifies administer/ staff members to split students.



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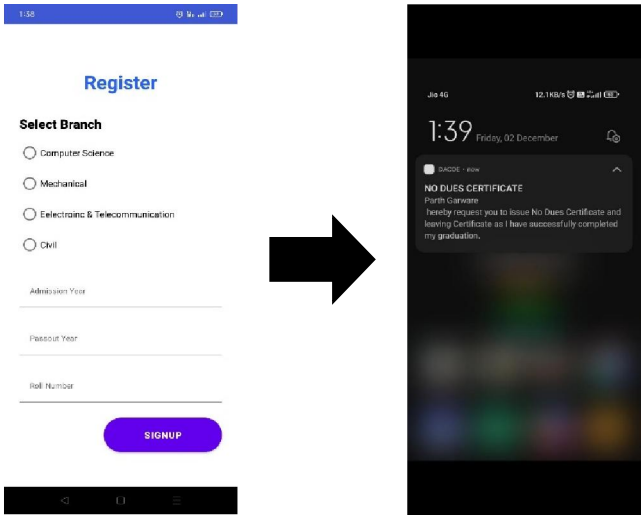
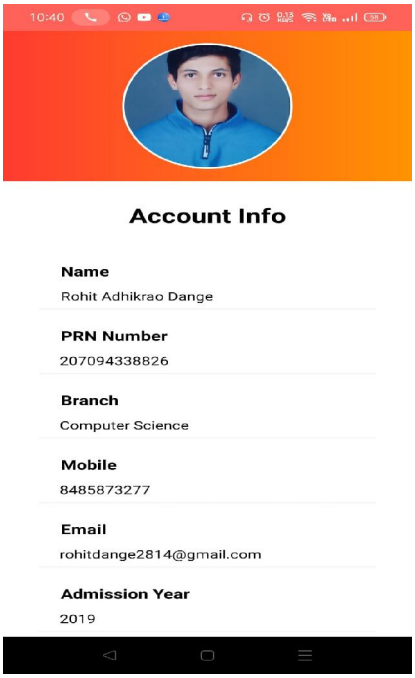
Communication and Notifications: Through message or notification tools, the system would make it easier for users to communicate with administrative employees. Users can request clarifications, get updates, or offer more details as needed.



User Dashboard: After logging in, each user would have a customized dashboard that would that gives them a quick glance at their clearance status, unpaid dues, filed requests, and notification.



Approvals and Automated Workflow: The system would incorporate an automated workflow that routes the clearance request to relevant departments or personnel for approval. Each department or authority can review and approve the clearance request digitally, with notifications sent to the next approver uponcompletion.

Status Tracking**:** Users can check the status of their clearance requests in real-time and find out which departments have approved and which are still pending their requests. Users may keep informed and make informed plans because to this transparency.

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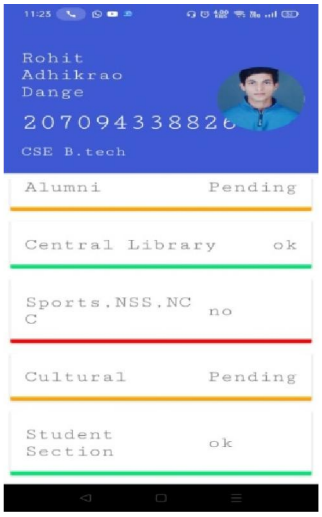
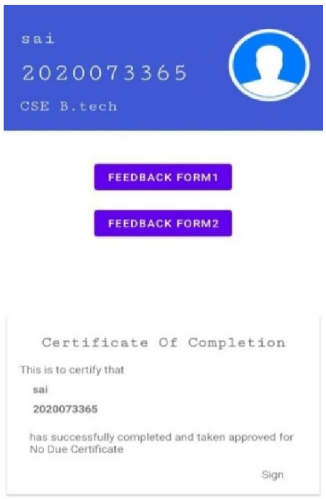


Approval and Generation: The system would automatically generate the no dues Certification following successful verification and approval from all pertinent departments. HOD and Staff member can digitally signed No Dues certificate and Store it.



Electronic Signature Integration: Integrate electronic signature functionality into the ONDCS to enable digital signing of clearance Certifications. This would enhance the authenticity and security of the Certifications and eliminate the need for physical signatures

The user can save and Download the certificate.

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V. EXPERIMENTAL SETUP

Software Requirements:

- Programming Language: Java
- Operating System: Windows 7 onwards
- Database: Firebase
- Android studio ver. 2021.1.20

Hardware requirements:

- Laptop/PC with 4GB RAM
- Processor – i3 or higher version

VI. METHODOLOGY

- Identify the specific requirements of the ONDCA based on the needs of the educational institution or organization.
- Make a system architecture that describes the ONDCA's elements, modules, and relationships.
- Create the user interface (UI) with the goal of providing a responsive, user-friendly experience on a variety of devices.
- Define the database architecture and data models for the records of Certifications, dues, and applicant information.
- Choose frameworks and technologies that are in line with the ONDCA's requirements and goals.
- Determine the best programming languages, frameworks, databases, and hosting platforms based on the development team's particular requirements and skill level.
- Application submission, verification, approval procedure, channels for communication, and Certification creation are all part of ONDCA.
- To maintain data consistency and efficient operations, integrate the ONDCA with current student or staff databases and administrative systems.

Test the system thoroughly to find any bugs, failures, or performance problems and fix them.

Advantage

- Time Efficiency: The solution speeds up the entire process by automating the workflow for verification and approval, doing away with the need for manual paperwork, in-person meetings, and drawn-out administrative procedures. Requests can be made online, and the technology streamlines the verification procedure to ensure faster Certification issuing.
- Reduced Administrative Burden: ONDCA automates a variety of administrative duties, which lightens the workload for administrative workers. Dues are automatically verified by the system, which interfaces with existing student or staff databases, negating the need for human cross-checking. Because of the administrative time that is saved, personnel can concentrate on other important responsibilities.
- User-friendly: System gives users an intuitive and appealing user interface so they can control the application more easily.
- Enhanced Transparency: By giving real-time information on the application's state, the ONDCA enhances transparency. Applicants can check any activities that are still pending, keep track of the status of their requests, and get reminders when their Certifications are prepared to be issued.
- Integration of Electronic Signatures: To enable the digital signing of clearance Certifications, integrate electronic signature capability into the ONDCA. Physical signatures would no longer be required, and the authenticity and security of the Certifications would be improved.
- Cost-effective: By automating the clearance procedure, an ONDCA lowers the expense and labour involved in manual processing, allowing institutions to more effectively allocate resources.

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Disadvantage

- Dependence on Technology: A lot of technology is needed for an ONDCA to operate efficiently. Any system malfunctions, network outages, or other technical issues could cause service interruptions and delays in processing no dues certifications.
- Issues with Access and Connectivity: In isolated locations or poor communities, not all users may have easy access to computers, smartphones, or reliable internet connections. This may put applicants at a disadvantage if they need physical access to administrative offices or have trouble connecting online.
- Technical Difficulties: Technical know-how and resources are needed to create and maintain an ONDCA. Infrastructure, software development, and system maintenance may all require investments from businesses, which can be expensive and time-consuming.
- Initial Implementation Effort: Converting an ONDCA from a manual process to a digital system requires some initial implementation effort. This necessitates educating stakeholders and personnel about the new system, which may at first result in a learning curve and resistance to change.
- Technical difficulties may arise when integrating the ONDCA with pre-existing databases for students, employees, or administrative systems. To prevent hiccups and inconsistent data, data synchronisation, system compatibility, and workflow integration must be properly handled.

VII. CONCLUSION

An Online No Dues Certification Application(ONDCA) provides educational institutions and organisations with a number of advantages, including efficacy, accountability, transparency, user experience, data management, security, compliance, and cost-effectiveness. The ONDCA decreases manual processing time and errors, provides real-time updates on the status of clearance requests, and maintains a trusted and secure repository of information by automating the clearance process and offering a centralised platform for all stakeholders involved in the clearance process.

VIII. FUTURE ENHANCEMENT

Analytics and Reporting: To gain insights on clearance trends, processing times, and bottlenecks, integrate analytics and reporting capabilities into the ONDCA. This information can be utilised to pinpoint problem areas, allocate resources more effectively, and improve decision-making.

Implement automated alerts and reminders: in the ONDCA to inform users of pending clearance requests, impending deadlines, or unpaid balances. This will ensure prompt completion of the clearance process while streamlining it.

Support for Multiple Languages: The ONDCA should be improved to support a variety of languages in order to meet the various linguistic needs of users. This would enhance usability and accessibility, particularly for organisations that host international students or users from various linguistic origins.

REFERENCES

[1]. S. K. Pani and A. N. Reddy (2017). For educational institutions, a clever online clearance system. 4(7), 161–166, International Journal of Innovative Research in Computer Science and Engineering.

[2]. S. Raut, R. Yadav, et al. (2018). Automating the process for creating No Fee Certifications for educational institutions. Engineering and Techniques International, 4(5), 250–254.

[3]. Bhargava, P., and Patil, A. (2017). Design and implementation of an online system allowing colleges to issue no-dues Certifications. 159(11), 16–21 in International Journal of Computer Applications.

[4]. Singh, R., Mishra, A. (2016). System for Educational Institutions to Clear Online Without Paying Any Fees. 139(6), 26–30, International Journal of Computer Applications.

[5]. In 2019, Singh, H., and Sandhu, R. An online system for creating no-fee Certifications for educational institutions has been designed and implemented. 7(1), 20–24 of the International Journal of Computer Science Trends and Technology.

[6]. S. Gupta and S. Gupta (2020). Design and creation of an online system enabling educational institutions to clear payments without paying any fees. 9(6), 261-270 International Journal of Computer Science and Mobile Computing.

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[7]. S. Choudhary, S. Kulkarni, and others (2019). The creation of an online system for creating free Certifications for educational institutions. 10(3), 123–129, International Journal of Advanced Research in Computer Science.

[8]. Verma, R., Sharma, P., and (2018). A Systematic Approach for the Online No Dues Certification Generation. 180(1), 13–19, International Journal of Computer Applications.

[9]. Bioinspired computationally intensive techniques to visual pattern recognition, Petkov N. Future Generation Computer Systems, 1995 August 1, 11(4-5), 451–65.

[10]. Diana R. Cundell, Les M. Sztandera, Randy S. Silibovsky, and Robyn Sanders. "Generation of an intelligent medical system to diagnose bacterial infection in hospitalised patients using a real database." International Journal of Medical Informatics, Volume 63, Number 1, 2001, Pages 31–40.

[11]. Adlassnig, K.P., Koller, W., and Chizzali-Bonfadin, C. 1995. An intelligent database and monitoring system for nosocomial infections is called MONI. MEDINFO, 8, pp. 1684–1684