

Revolutionizing Education: A Student Dropout Prevention System

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Abstract: *The Student Dropout Prevention System aims to address the growing challenge of student dropouts by providing a platform that ensures students' concerns are effectively communicated and addressed by the institution. Students can log into the system, access their profile page, and submit concerns or issues they are facing, which will trigger an immediate notification to the Head of the institution. The system ensures timely intervention by allowing heads to respond directly to students, promoting a constructive dialogue and supporting student retention efforts. Additionally, the system includes resources that raise awareness about critical issues such as stress management, academic focus, and tools for enhancing productivity. The platform also offers counseling support, allowing students to request assistance when needed. Once a student selects counseling, the system automatically forwards their request to the appropriate counseling team, ensuring prompt attention. Furthermore, the system allows students to choose a mental health specialist for personalized support, ensuring that students in need of mental health care are quickly identified and helped. By providing a structured system for communication, support, and awareness, the Student Dropout Prevention System aims to create a safer, more supportive environment that helps reduce dropout rates and fosters student success.*

1. INTRODUCTION:

Student retention is a critical challenge faced by educational institutions worldwide. Factors such as academic pressure, personal issues, and mental health concerns often contribute to students considering dropping out. To address this issue, it is essential to create a supportive environment where students can express their challenges and receive timely assistance. The Student Dropout Prevention System is designed to provide a platform that enables students to communicate their concerns while offering a robust mechanism for institution heads and support staff to intervene effectively.

The system aims to bridge the gap between students and institutional authorities by facilitating real-time communication. Through a user-friendly interface, students can easily log in, submit their concerns, and access valuable resources related to academic and mental well-being. Heads of the institution are notified immediately when a student expresses an issue, allowing them to provide prompt and structured responses. Additionally, the platform offers tools for stress management, academic focus, and guidance on productivity, helping students stay engaged in their educational journey. By also incorporating counseling services and mental health support, the system ensures that students in need of psychological assistance are identified and supported quickly. In essence, this system is designed to create a proactive approach to preventing student dropouts, fostering a culture of care and engagement within the educational institution. The goal is to help students overcome challenges, stay motivated, and succeed in their academic pursuits, ultimately reducing the risk of dropout and promoting overall student success.

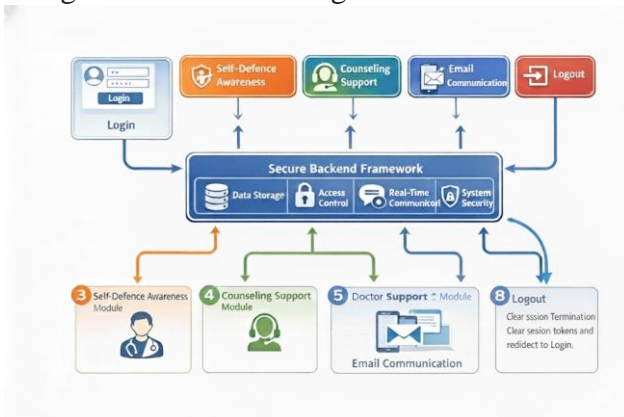
2. STUDENT SUPPORT AND WELL-BEING ENHANCEMENT SYSTEM:

Our paper, "**Revolution Education: A Student Dropout Prevention System**", This system aims to enhance student communication by providing a safe and accessible platform for students to express their concerns, ensuring timely attention from institutional heads. It enables real-time alerts for early intervention, helping prevent dropouts by addressing issues promptly. The platform also promotes student well-being through awareness resources on stress management, productivity, while facilitating quick access to counselling and mental health support. Overall, it fosters student retention and academic success by creating a structured, supportive environment that encourages engagement, well-being, and continuous guidance.

2. ARCHITECTURE:

The architecture includes dedicated modules for self-defence awareness, counseling support, email communication, and supportive digital tools that help students manage personal challenges. It also provides resources for student well-being, academic guidance, and productivity enhancement through an integrated system. A secure backend framework manages data storage, access control, and seamless communication, ensuring continuous support, student engagement, and overall academic success.

Fig. 1. Architecture diagram for certificate automation



3. FLOWCHART:

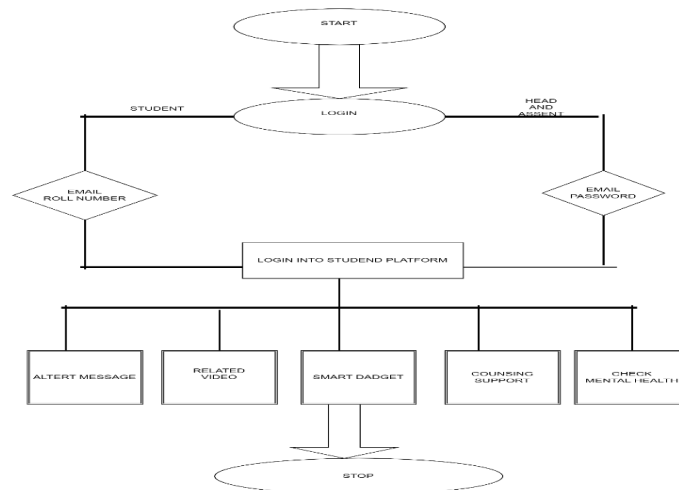


Fig. 2. Flowchart diagram for certificate automation

- 1) First, The process starts when the application is launched.
- 2) The user reaches the login page.
- 3) The user enters their email ID or roll number.
- 4) The user enters the registered password.
- 5) The system verifies the login details and allows access to the student platform.
- 6) The system displays alert messages and important notifications.
- 7) Related educational or awareness videos are provided to the user.
- 8) Smart gadgets or digital tools are made available for support and assistance.
- 9) Counseling support is provided for emotional or academic guidance.
- 10) Mental health status can be checked using the available resources.
- 11) The process ends when the user finishes the activities or exits the system.

PICTORIAL REPRESENTATION:

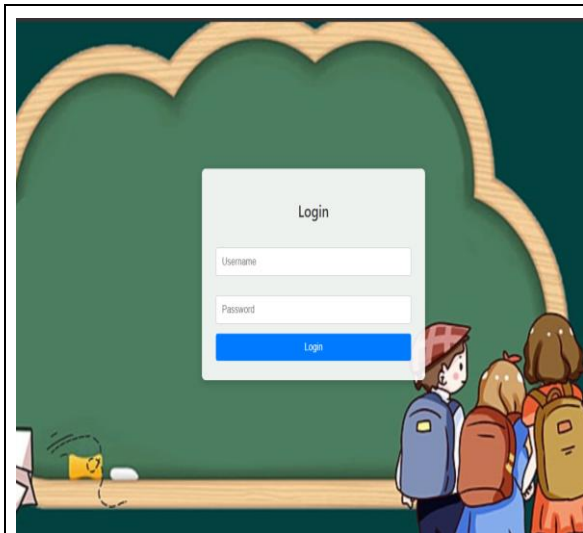


Fig. 3. Student Login page

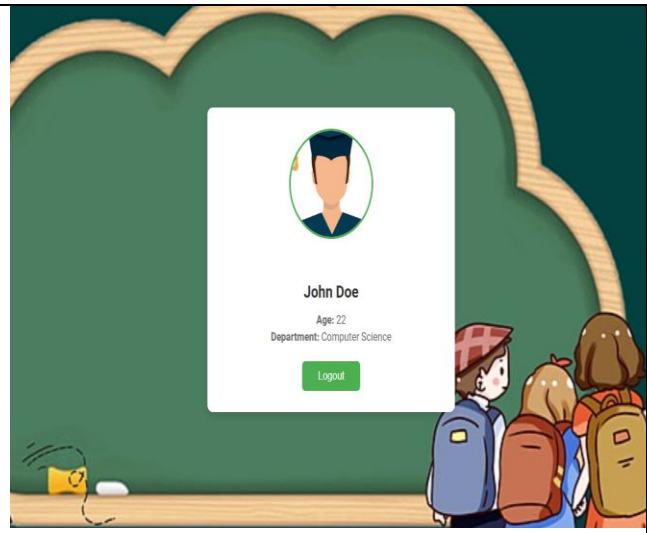


Fig. 4. Student Profile page

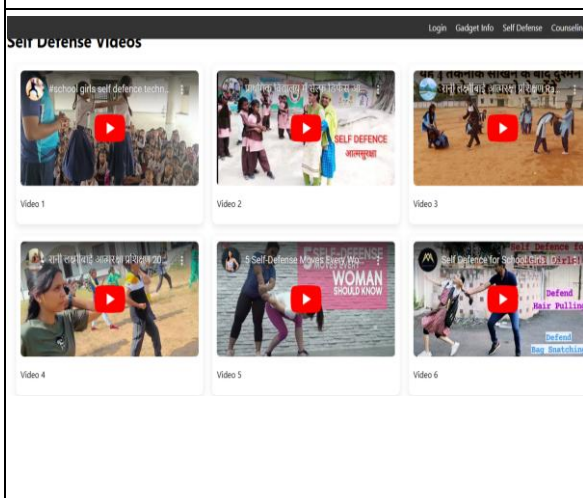


Fig. 6. Self-Defense Video page

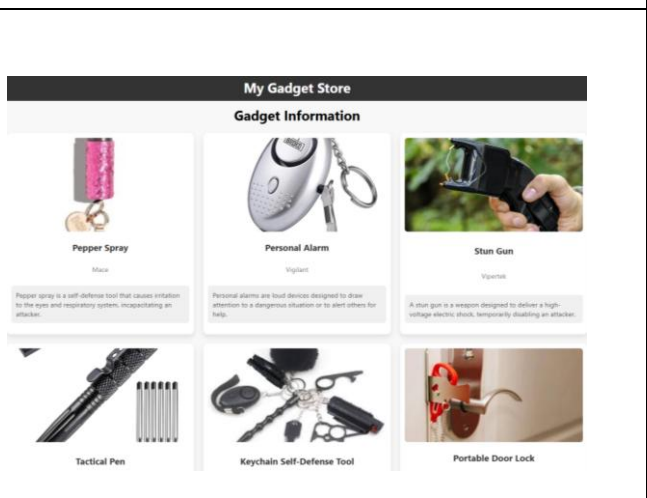
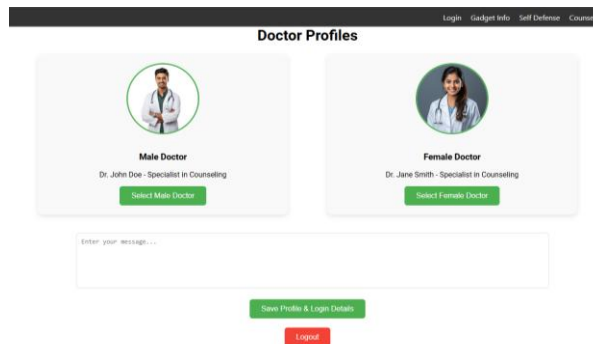


Fig.5. Gadget page

Fig.7.Doctor Profile Page



4.APPLICATIONS OF STUDENT DROPOUT PREVENTION SYSTEM

4.1 Real-Time Crisis Intervention

The system acts as a direct bridge between students and institution heads, ensuring that urgent concerns such as abuse or extreme mental stress are addressed immediately. By providing real-time communication channels, the platform allows students to voice their concerns directly, facilitating quick intervention before the student decides to leave the institution.

4.2 Automated Mental Health Support

Students often face overwhelming stress that leads to dropouts, and this system automates the delivery of stress management tools and productivity resources. The user-friendly interface provides 24/7 access to academic and mental health resources, reducing the need for manual scheduling of support sessions.

4.3 Personalized Counseling Connection

The platform manages specialized "Doctor Profiles," allowing students to select specific professionals, such as male or female counseling specialists, for their needs. Students can save their login and profile details for seamless, private consultations, ensuring a consistent and personalized mental health support experience.

4.4 Self-Defense and Safety Education

To combat dropouts caused by external factors like abuse or lack of security, the system provides a curated library of self-defense videos. This empowers students—particularly school-age girls—with the physical and mental skills needed to feel safe and confident in their educational environment.

4.5 Digital Safety Gadget Repository

The "My Gadget Store" feature serves as an informational hub for safety tools such as pepper spray, personal alarms, and stun guns. By educating students on available protective technology and how these "smart gadgets" work, the system alleviates the fear and anxiety associated with traveling to or attending school.

4.6 Academic Success Analytics

By integrating data from resources and student engagement, the system helps institutional heads track "at-risk" students who may be struggling with academic focus. This data-driven approach allows for early detection of dropout risks—such as those caused by transfer orders or personal abuse—allowing for timely assistance and academic success.

4.7 Gamified Engagement and Motivation

To prevent student disengagement, the system incorporates gamified elements such as rewards and challenges. This application increases the frequency of student interaction with the platform's resources, ensuring that academic focus and productivity tools remain a consistent part of their daily routine, much like how automated reports keep business employees on track.

4. SAMPLE OUTPUT:

to me ▼

Student Name: pooja

Age: 22

Department: Computer Science

Doctor Selected: Dr. Jane Smith - Female Specialist in Counseling

Messages:

Student: i am need counsling s

Login Information:

Username: pooja

Password: R

Fig.8.Sample email

5. CONCLUSION:

In conclusion, the Student Dropout Prevention System (SDPS) is a comprehensive solution that helps reduce student dropouts through early identification, timely interventions, and continuous support. By integrating features such as personalized dashboards, counseling services, real-time communication, data-driven analytics, and LMS platforms like Moodle and Blackboard, SDPS enables teachers and parents to respond proactively to student needs. This holistic approach improves student engagement, academic performance, mental well-being, and retention rates, ultimately creating a more supportive and successful educational environment.

6.References:

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