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Student Ticketing using Laravel Framework

Ghandi B. Galila
Faculty, College of Engineering and Information Technology,
Surigao Del Norte State University, Surigao City, Philippines

Abstract: *Advanced Student Ticketing System developed on the Laravel framework, designed to cater to the needs of students reporting errors, bugs, or any other issues related to their academic platform. This specialized ticketing system aims to streamline the process of error reporting and issue resolution, providing students with a user-friendly and efficient platform to communicate with administrators and technical support teams. By harnessing the power of Laravel's robust features and adhering to modern development practices, the system seeks to foster a seamless and engaging experience for students, ensuring a more efficient resolution of technical challenges.*

Keywords: Advanced Student Ticketing System, Laravel framework, Issue resolution, User-friendly platform

I. INTRODUCTION

In the modern educational environment, student portals and academic platforms have become essential tools that enable students to access important information, manage their academic assignments, and participate in the learning process [1][2]. However, like any complex system, these platforms are subject to errors, bugs, or technical issues that can affect the overall user experience. To effectively address these challenges, a special student ticketing system was developed based on the Laravel framework to provide a special platform for students to report any problems they encounter while using academic tools.

The Student Ticketing System serves as a streamlined communication channel, allowing students to report any bugs or problems encountered while working with the academic platform[3][4]. By providing a user-friendly interface and clear instructions, students can easily submit their concerns and provide detailed explanations and supporting evidence if required. The system includes a tracking and escalation mechanism that allows administrators and technical support teams to efficiently prioritize and resolve reported issues and ensure timely resolution.

This ticketing system leverages the robust features of the Laravel framework and offers several advantages such as code maintainability, scalability and security [5][6]. The platform is built with modern development practices in mind, ensuring a seamless and reliable experience for students and administrators. The Student Ticketing System facilitates effective communication between students and technical teams, enables faster resolution of errors and bugs, and ultimately improves the academic platform experience.

II. REVIEW OF RELATED LITERATURE

Web application accessibility has become an important aspect of modern software development [7][8][9]. Research in this area highlights the importance of creating user-friendly interfaces and inclusive designs that cater to people of varying abilities. By incorporating accessibility principles, the Student Ticketing System aims to enable students with usage challenges to seamlessly access and operate the platform, promoting inclusion and ensuring that all students are on campus. to actively participate in the events of Studies on student portals highlight the importance of providing an integrated and efficient platform for students to manage their various academic pursuits [10][11]. The literature in this area emphasizes the importance of streamlining registration, payment, and accounting and checkout functions within the student portal. The Student Ticketing System aims to take inspiration from these insights to create a seamless ticketing platform that complements existing portal functionality and ultimately improves the overall student experience.

User feedback systems have proven to be very important in improving software applications and platforms. Research highlights the value of actively engaging users to gather feedback, address issues, and continuously improve the system

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based on user input [12][13]. The Student Ticketing System has a robust user feedback mechanism that allows students to report errors, bugs, and other issues related to the platform. By considering user feedback, the system can undergo iterative improvements, resulting in a smarter, more user-centric platform. Comprehensive event management literature highlights the benefits of using a ticketing system to streamline event organization and ensure a positive user experience. Research highlights the need to prioritize accessibility and inclusiveness when planning and conducting campus events. The Student Ticketing System integrates event management functionality that adheres to these principles, allowing all students to seamlessly participate and enjoy campus events regardless of usage issues.

III. SYSTEM DESIGN AND DEVELOPMENT

Rapid Application Development (RAD) is an agile software development approach that emphasizes iterative prototyping, user engagement, and rapid feedback to accelerate the design and development process. This section provides an overview of the system design and development using RAD methodology for a proposed student ticketing system for students with usage problems.

The first step in the RAD process is to collect and analyse the requirements of the student ticketing system. This includes working with stakeholders such as students, administrators, and technical support teams to understand their needs, preferences, and pain points. The focus is on identifying the key functionality required for bug reporting, bug tracking, and issue resolution within academic portals. This collaborative approach ensures that the system is user-centric and meets the goals of inclusiveness and accessibility.

At RAD, rapid prototyping plays a central role in the development process. Once the requirements were gathered, a prototype of the student ticketing system was quickly created. This prototype serves as a visual representation of the system's functionality and user interface. Stakeholders, including students with usage issues, participate in prototype feedback. Your input helps us refine the design of the system and ensure it meets your specific needs.

Based on feedback received during the prototyping stage, the development team iterates and refines the student ticketing system. RAD encourages incremental development, allowing new features to be added and existing features to be continuously improved. This approach enables a flexible and adaptive development process and ensures that the system continues to reliably adapt to changing user requirements.

As system components are iteratively developed, they are integrated into a coherent whole. RAD emphasizes continuous testing throughout the development process to identify and fix bugs early. Extensive testing is performed to ensure the system operates as designed and meets required performance and safety standards. In addition, user acceptance testing involves students with usage problems to see if the system effectively meets their needs.

Once the student ticketing system has been thoroughly tested and validated, it is ready for use by students and administrators. RAD focuses on rapid deployment to reduce time to market and gain valuable user feedback in real-world environments. After implementation, the system will be continuously maintained and updated to address emerging issues and incorporate user suggestions for further improvement.

RAD encourages a culture of continuous improvement. User feedback is collected regularly and improvements are made as needed and as requirements change. This iterative and collaborative approach ensures that the student ticketing system evolves with the needs of the institution and meets the challenges faced by difficult students.

IV. RESULTS

The implementation of the Student Ticketing System for Students with Usage Challenges using the Rapid Application Development (RAD) methodology yielded promising outcomes, significantly enhancing the efficiency and inclusivity of the academic portal. The following results show the key achievements of the Student Ticketing System.

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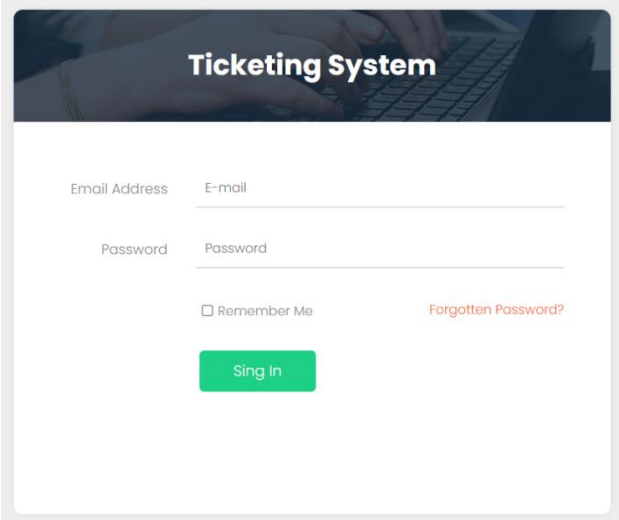

Figure 1. Login Page

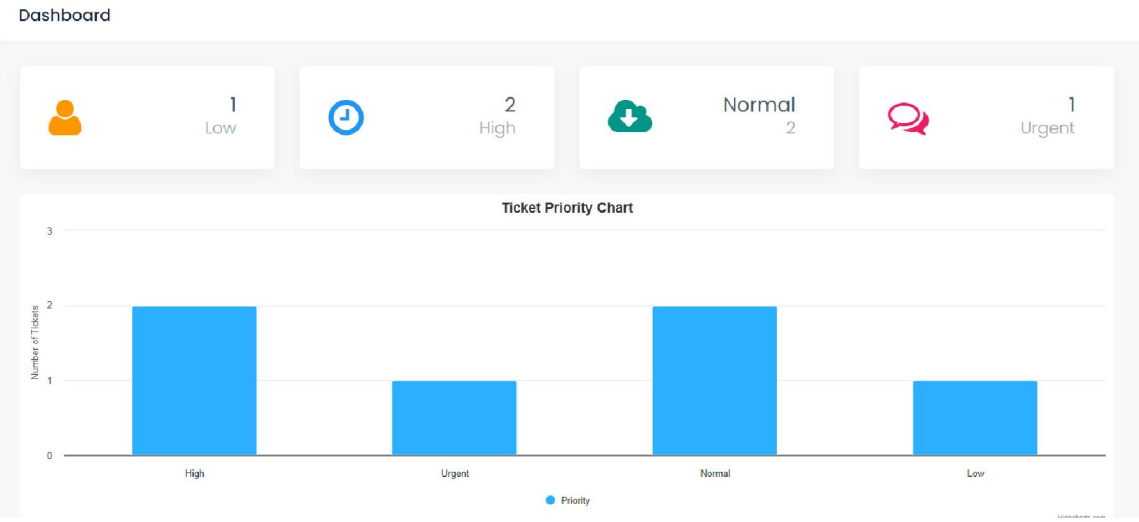

Figure 2. Dashboard

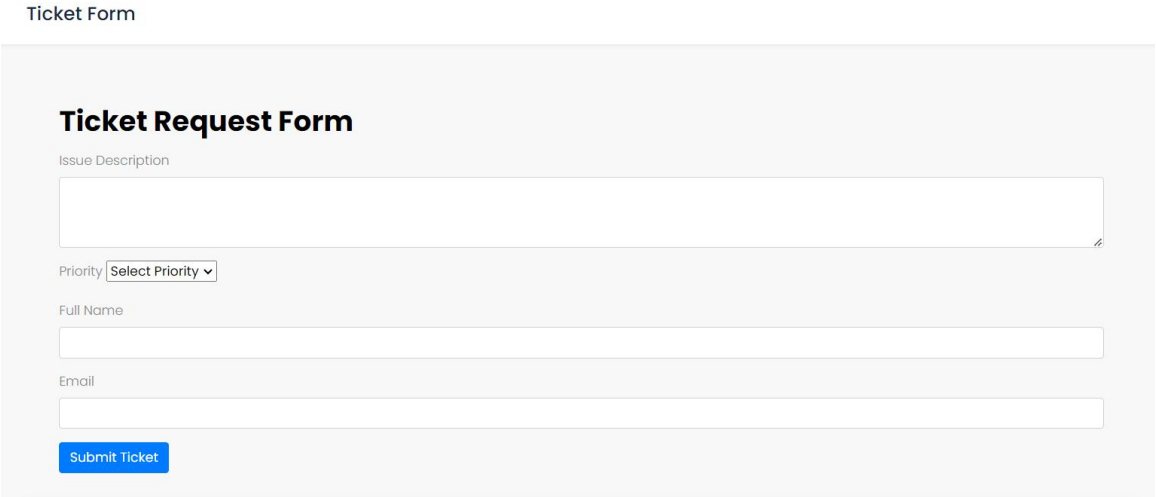

Figure 3. Ticket Form

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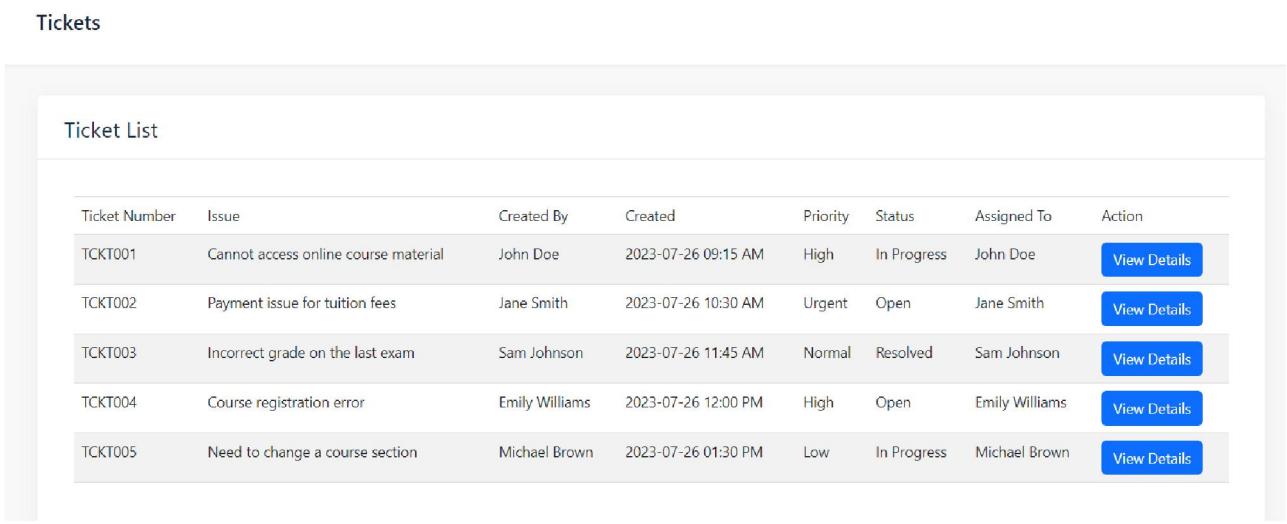

Figure 4. Ticket List

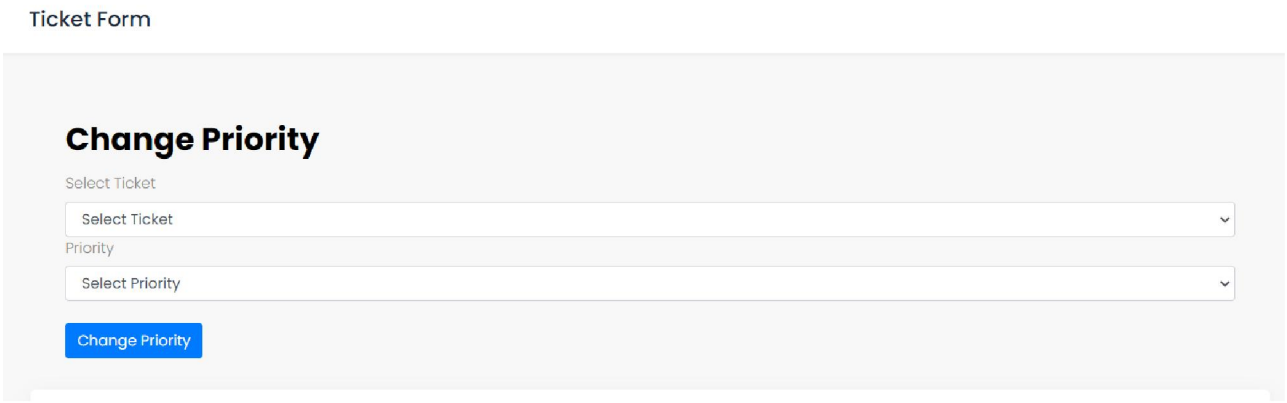

Figure 5. Update Priority

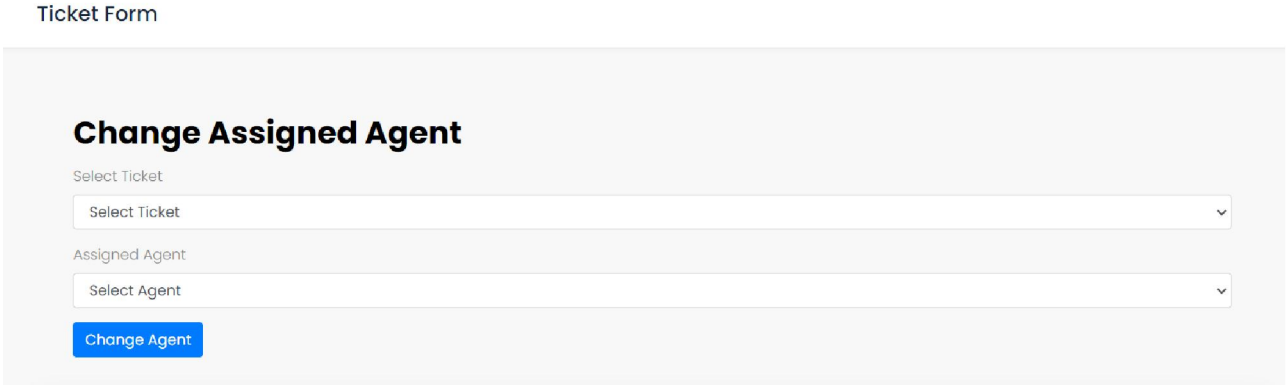

Figure 6. Update Assigned Agent

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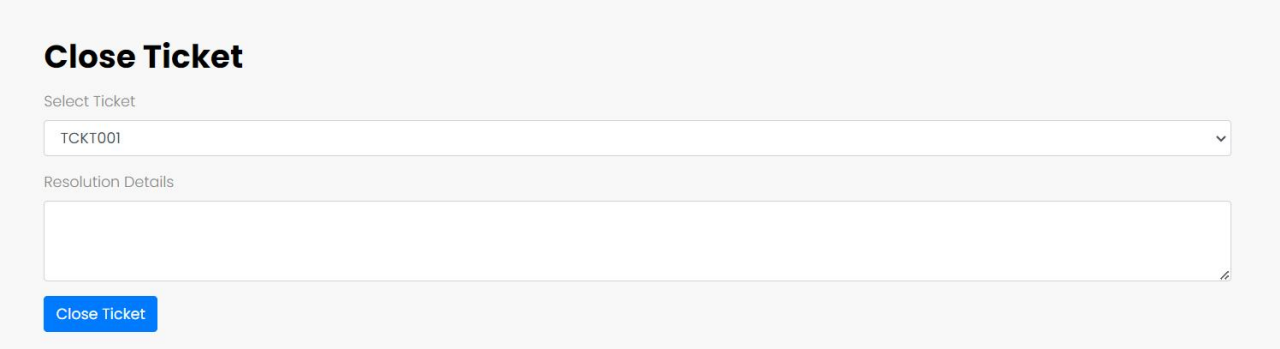

Figure 7. Closing Ticket

Figure 8. Ticket Feedback

The user-centered design approach chosen during the development process has contributed to an accessible and user-friendly platform for students. By integrating personalized support mechanisms, such as step-by-step instructions and compatibility with assistive technology, the system successfully addressed the needs of students facing usage challenges. This has improved the accessibility of academic portals and increased user engagement and participation in various events and activities on campus.

The Student Ticketing System has streamlined the error reporting and problem resolution process for students. RAD's rapid prototyping and iterative development approach allowed the system to evolve rapidly in response to user feedback and changing needs. This iterative development process enabled rapid response to student-reported issues and ensured seamless and efficient resolution of technical challenges within the academic portal.

For administrators and technical support teams, the RAD methodology has proven effective in accelerating the development process and promoting continuous improvement. The system's user-centric design has reduced support requests related to ticketing systems and freed up valuable administrative resources. In addition, system integration of real-time data and reports gives administrators valuable insight into user preferences and trends, enabling more strategic decision making in event planning and resource allocation.

After implementation, the student ticketing system has received positive feedback from both students and administrators. Students praised the system's intuitive user interface for efficiently reporting problems and tracking solutions. Administrators appreciated the seamless integration of the system with academic portals, simplifying event management and financial transactions. Overall, the system's positive user experience contributed to increased student satisfaction and a greater sense of community on campus.

The emphasis on iterative development and continuous improvement in the RAD methodology allowed the student ticketing system to adapt to changing user needs and new challenges. As user needs evolved, the system continued to meet the demands of a dynamic educational environment, ensuring long-term sustainability and relevance.

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