**CHAPTER – 1**

**INTRODUCTION**

* 1. **WEB DEVELOPMENT**

Web development is the process of creating, designing, and maintaining websites and web applications. It plays a crucial role in today's digital era, where the internet serves as a primary platform for communication, commerce, and entertainment. Web developers use a combination of HTML, CSS, and JavaScript to build the foundation, style, and functionality of web pages.

In the rapidly evolving digital landscape, web development has become indispensable. Mobile devices, social media, and emerging technologies demand websites that are responsive, user-friendly, and visually appealing. As a result, web developers must continuously adapt to the latest trends and technologies to deliver seamless and engaging web experiences.

For businesses, web development is a cornerstone of establishing a strong online presence. A well-designed website can attract potential customers, drive sales, and foster brand loyalty. With e-commerce on the rise, businesses need web developers to create secure and efficient online shopping platforms.

Moreover, web development has democratized digital creation, empowering individuals to express their ideas and ventures online. Entrepreneurs and creatives can now build their websites and showcase their work or products, eliminating the need for costly middlemen.

Learning web development offers numerous opportunities for personal growth and career advancement. Aspiring developers can acquire valuable skills, fuelling their passion for technology and problem-solving. With the demand for web developers on the rise, mastering this field opens doors to diverse job prospects and the potential for freelance work.

In conclusion, web development is an essential and dynamic discipline that shapes the modern digital landscape. From powering businesses to enabling individual creativity, its impact on society is profound. Embracing web development empowers individuals and organizations to thrive in the digital age.

**1.1.1 Types of Web Development:**

Web development can be categorized into several types based on different criteria. Here are the main types of web development:

**1. Front-end Development:** Also known as client-side development, this type of web development focuses on creating the visual elements and user interface of a website. Front-end developers use HTML, CSS, and JavaScript to structure web content, define styles, and add interactivity. They ensure that the website is visually appealing, responsive, and user-friendly.

**2. Back-end Development:** Back-end development deals with the server side of the website. Back-end developers work on the server, databases, and server-side applications that handle data processing and business logic. They use server-side programming languages like PHP, Python, Ruby, Java, or Node.js, along with frameworks to build the core functionality of web applications. Back-end development ensures that data is stored, retrieved, and processed efficiently to deliver dynamic content to the front end.

**3. Full-stack Development:** Full-stack developers are proficient in both front-end and back-end development. They have a comprehensive understanding of the entire web development process, allowing them to work on all aspects of a web application, from designing the user interface to handling server-side logic and database management.

**4. Mobile Web Development:** Mobile web development focuses on creating websites and web applications that are optimized for mobile devices. It involves responsive design and consideration for various screen sizes and touch-based interactions.

**5. Web Design:** While not strictly a development type, web design is an essential part of the web development process. Web designers create the visual aesthetics and layout of websites, ensuring they are visually appealing and user-friendly.

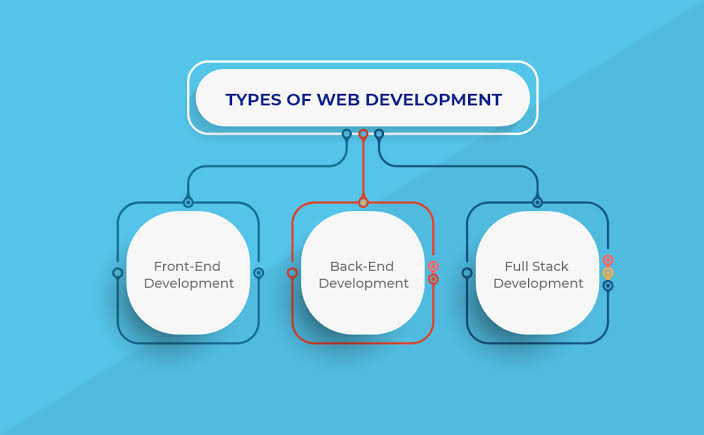
**6. E-commerce Development:** E-commerce development involves building online shopping platforms, including features like product catalogs, shopping carts, payment gateways, and order processing systems.

**7. Content Management System (CMS) Development:** CMS development revolves around creating or customizing content management systems like WordPress, Joomla, or Drupal, which simplify content creation and website management.

**8. Web Application Development:** Web application development focuses on creating interactive and dynamic web applications that provide users with a more engaging and personalized experience.

9**. Progressive Web App (PWA) Development:** PWAs are web applications that use modern web technologies to offer an app-like experience, including offline access, push notifications, and faster load times.

**10. API Development:** API (Application Programming Interface) development involves creating interfaces that allow different software applications to communicate and exchange data with each other.



**Fig 1.1.1 Types of Web Development**

* + 1. **Web Development Best Practices**

Web development best practices encompass a set of guidelines and principles aimed at creating high-quality, efficient, and user-friendly websites and web applications. One crucial aspect is mobile responsiveness, ensuring that websites adapt seamlessly to various devices and screen sizes. Performance optimization is equally vital, emphasizing code and asset optimization to reduce loading times and improve page speed. Cross-browser compatibility guarantees consistent functionality and appearance across different web browsers. Code validation ensures adherence to web standards and error-free code. Search Engine Optimization (SEO) techniques improve website visibility on search engines, attracting organic traffic. Accessibility is prioritized by adhering to WCAG standards, making websites inclusive for all users. Robust security measures protect against common threats like SQL injection and XSS. Utilizing version control enables efficient code management and collaboration. Thorough testing and quality assurance are essential to identify and resolve issues before deployment. Writing modular and DRY code promotes maintainability and avoids redundancy. Documentation helps developers understand the codebase and facilitates future updates. Continuous performance monitoring aids in identifying areas for improvement. Regular updates keep software components and libraries up to date, ensuring security and compatibility. By following these best practices, web developers can deliver reliable and exceptional web experiences, benefiting both businesses and end-users.

## Web Development Career Paths

## In the vast and dynamic world of web development, numerous exciting career paths await aspiring professionals. Front-end developers focus on creating visually engaging and interactive user experiences by employing HTML, CSS, and JavaScript. They ensure seamless navigation and optimize websites for various devices. Back-end developers, on the other hand, work behind the scenes, managing servers, databases, and application logic, ensuring data is processed accurately and securely. Full-stack developers combine both front-end and back-end skills, offering a holistic approach to web development. For those inclined towards design, becoming a UI/UX designer involves crafting intuitive and aesthetically pleasing interfaces, enhancing user satisfaction. DevOps engineers specialize in streamlining the development and deployment process, automating tasks, and maintaining continuous integration and delivery. Additionally, web development opens doors to specialized niches such as mobile app development, e-commerce solutions, and web accessibility, catering to diverse industry needs. As technology advances, web development careers continue to evolve, providing numerous opportunities for professionals to grow and make a meaningful impact on the digital landscape.

## Front-End Development

## Front-end development is a captivating and essential career path in web development. It involves creating and implementing the user interface and user experience of websites and web applications. Front-end developers primarily work with HTML, CSS, and JavaScript to build visually appealing and responsive interfaces that ensure seamless user interaction. They collaborate with designers and back-end developers to integrate functionality, ensuring the site functions optimally across various devices and browsers. With the ever-evolving web technologies and the increasing demand for interactive user experiences, front-end developers play a crucial role in shaping the digital landscape and enhancing user satisfaction in the online world.

## Back-End Development

## Back-end development is a fundamental aspect of web development, encompassing a range of specialized roles and responsibilities. Database administrators manage and optimize data storage, ensuring efficient retrieval and organization of information. Server-side developers create the logic that processes user requests, performing complex calculations or data manipulations. They work with programming languages like Python, Ruby, or PHP, depending on the project's requirements. DevOps engineers focus on system administration, automating deployment processes, and maintaining seamless integration of software updates. Security specialists concentrate on safeguarding data and implementing robust security measures to protect against potential threats and breaches. With the back end forming the backbone of web applications, these professionals collaborate closely to ensure smooth functionality, reliability, and performance of digital platforms.

## Full-Stack Development

## Full-stack development is an all-encompassing and versatile career path within web development. Full-stack developers possess expertise in both front-end and back-end technologies, allowing them to handle every aspect of building web applications. They can design captivating user interfaces using HTML, CSS, and JavaScript while also managing server-side logic, databases, and application architecture using languages like Python, JavaScript (Node.js), or PHP. Their comprehensive knowledge enables seamless communication between the client and server sides, creating cohesive and efficient digital solutions. Full-stack developers play a critical role in the entire development process, from concept to deployment, making them invaluable assets in today's fast-paced tech industry.

## STUDENT FEEDBACK REVIEW SYSTEM

## The Online Student Feedback System developed for college students is a highly beneficial tool for educational improvements within the college. This system enables students to rate and analyze the performance of college faculty, providing valuable insights for enhancing the quality of education. By digitizing the feedback process, it eliminates the laborious task of manually evaluating each student's feedback page, saving time and effort for both students and administrators. Moreover, the system's online nature reduces the need for physical record-keeping, alleviating the burden of maintaining vast paper-based records and ensuring data safety. With its secure and private platform, the system prevents any tampering or unauthorized access to feedback, safeguarding the integrity of the evaluation process. Additionally, the convenience of remote.

**1.2.1 CONTRIBUTION**

The implementation of the Online Student Feedback System represents a significant and multi-faceted contribution to the college's educational ecosystem. Firstly, the project plays a pivotal role in enhancing educational quality and faculty performance. By providing a streamlined and efficient platform for students to rate and analyze faculty members, the system offers valuable insights into the strengths and areas for improvement of instructors. This feedback, in turn, facilitates continuous faculty development, empowering educators to adapt their teaching methodologies, content delivery, and classroom engagement to better meet the student's needs.

## Secondly, the project fosters a culture of transparency and accountability. The system's anonymous feedback feature encourages students to express their opinions openly, as they can freely share their experiences without fear of retribution. This transparent feedback loop between students and faculty fosters mutual understanding, trust, and a shared commitment to academic growth.

## Thirdly, the project promotes a data-driven approach to decision-making. College administrators can utilize the data and analytics generated by the system to make informed choices on various educational aspects, such as faculty evaluation, curriculum enhancements, and resource allocation. This data-driven approach ensures that strategic decisions align with the college's mission and objectives.

## Fourthly, the Online Student Feedback System facilitates student engagement and empowerment. By involving students actively in the feedback process, the project encourages them to take ownership of their education and voice their concerns and suggestions. This active involvement cultivates a sense of responsibility and partnership between students and the college, fostering a positive and inclusive learning environment.

## Furthermore, the project contributes to operational efficiency. The digitization of the feedback process reduces the administrative burden of manual data collection, entry, and storage. This optimization of resources saves time and effort for both students and administrative staff, allowing them to focus on other essential aspects of college operations.

## Lastly, the project has the potential to positively impact the college's reputation and accreditation status. Positive feedback from students serves as a testament to the college's commitment to quality education and student satisfaction, which can strengthen its reputation and credibility in the academic community.

## In conclusion, the implementation of the Online Student Feedback System goes beyond just being a mere feedback collection tool. It fosters a dynamic, data-driven, and student-centric educational environment, empowering students and faculty alike while contributing to the college's overall effectiveness, accountability, and excellence.

**1.2.2 OVERVIEW OF THE REPORT**

The "Overview of the Online Student Feedback System Report" presents a comprehensive analysis of the system's impact on the college's educational environment. The report highlights the purpose and objectives of the project, emphasizing the need for an efficient feedback mechanism to improve faculty performance and foster continuous improvement. It provides a detailed explanation of the system's features, including real-time and anonymous feedback collection, data analysis, and reporting capabilities. The report underscores the positive outcomes of the system, such as enhanced educational quality, faculty development, and student engagement. It emphasizes the project's role in promoting transparency, accountability, and data-driven decision-making within the institution. Furthermore, the report showcases how the system contributes to operational efficiency, saving time and resources. Lastly, it discusses the potential impact on the college's reputation and accreditation status through positive student feedback. In conclusion, the report underscores the transformative impact of the Online Student Feedback System, making it an invaluable tool for educational improvements and fostering a conducive learning environment within the college.

**CHAPTER – 2**

**BACKGROUND WORK**

The development of the Online Student Feedback System encompassed various critical components. A comprehensive literature review delved into existing student feedback systems, shedding light on their implementations and impacts in educational settings. Concurrently, a needs analysis was conducted, employing surveys, interviews, and focus groups to ascertain specific feedback requirements from students, faculty, and administrators. A rigorous evaluation of various technologies and frameworks determined the most suitable technology stack for the project. Based on these findings, a prototype was developed and continuously improved through iterative feedback loops, ensuring a user-friendly and efficient system.

Privacy and security were paramount considerations, leading to the implementation of robust measures to protect user data and maintain anonymity. The project underwent institutional approval, ensuring alignment with college policies and garnering support from relevant stakeholders.

This meticulous background work established a strong foundation for the Online Student Feedback System, enabling its seamless implementation to address feedback needs effectively. With a data-driven and user-centric approach, the system fosters a culture of continuous improvement, promoting a dynamic and conducive learning environment within the college.

# **2.1 REVIEW OF STUDENT FEEDBACK REVIEW SYSTEM**

The Student Feedback Review System is a valuable and comprehensive platform that plays a pivotal role in promoting educational excellence and continuous improvement within educational institutions. With its user-friendly interface, the system empowers students to provide valuable feedback anonymously and in real time. This feature fosters a culture of open communication, as students can freely express their thoughts and suggestions without any fear of retribution. By offering customizable questionnaires, the system tailors the feedback process to each course and faculty member, ensuring that the feedback collected is relevant and targeted.

One of the system's most significant advantages is its data analysis and reporting capabilities. The system efficiently processes the feedback data, generating insightful reports that highlight trends, strengths, and areas for improvement. These reports provide administrators and faculty members with valuable information to make informed decisions, ensuring that educational strategies and teaching methodologies align with the student's needs and expectations.

The Student Feedback Review System places great emphasis on security and privacy, ensuring that student data remains confidential and protected. This aspect is crucial in building trust and encouraging participation among students, as they can rest assured that their feedback will remain anonymous and will not be subject to tampering or misuse.

Moreover, the system's integration with the Learning Management System (LMS) streamlines the feedback process, making it easily accessible to students within their familiar learning environment. This integration enhances user participation and engagement, increasing the likelihood of valuable feedback submissions.

In terms of administrative features, the system provides an efficient and user-friendly dashboard for managing and analyzing feedback data. This dashboard allows administrators to gain a comprehensive overview of the feedback trends and patterns, enabling them to identify recurring issues and implement appropriate solutions promptly.

Furthermore, the Student Feedback Review System acts as a catalyst for continuous improvement within the institution. Faculty members can use the feedback to reflect on their teaching methods, identify areas of strength, and seek opportunities for enhancement. This commitment to improvement contributes to a positive and nurturing learning environment, promoting student success and academic excellence.

The system's benefits extend beyond individual courses and faculty members. By collecting and analyzing feedback across the institution, administrators can gain valuable insights into the overall student experience and identify areas where institutional support and resources can be optimized.

In conclusion, the Student Feedback Review System is a powerful tool that facilitates open communication between students and faculty, empowers students to take an active role in their education, and promotes a culture of continuous improvement within the educational institution. Its user-friendly interface, anonymity, data analysis capabilities, and commitment.

**CHAPTER 3**

**PROBLEM DEFINITION**

The problem to be addressed by the Online Student Feedback System is the need for an efficient and effective mechanism to collect, analyze, and utilize student feedback in educational institutions. Traditional feedback methods, such as paper-based surveys or manual processes, are often time-consuming, resource-intensive, and may not guarantee anonymity, leading to biased or incomplete responses. This hinders the institution's ability to gather comprehensive and candid feedback from students, impeding efforts to improve teaching quality, curriculum, and overall educational experience.

The lack of a streamlined feedback system also poses challenges for faculty members who may struggle to identify their strengths and areas for improvement without timely and specific feedback from students. Additionally, the absence of data analysis and reporting features makes it challenging for administrators to gain actionable insights and make data-driven decisions to enhance the institution's educational strategies.

Furthermore, the absence of a secure and privacy-focused feedback system raises concerns about the confidentiality of feedback data and may deter students from providing honest feedback, limiting the system's effectiveness in driving continuous improvement and academic excellence.

In summary, the problem at hand is the need for a robust, user-friendly, and secure Online Student Feedback System that can collect timely, anonymous, and targeted feedback from students, empower faculty to make informed improvements, and enable administrators to gain actionable insights for enhancing educational quality and overall institutional effectiveness. Addressing this problem will contribute to a more transparent, engaging, and data-driven educational environment that fosters continuous improvement and student success.

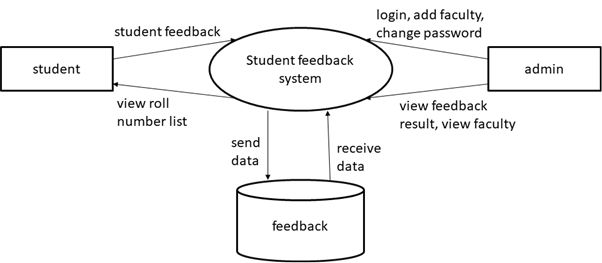
**CHAPTER 4**

**PROPOSED WORK**

**4.1 OVERVIEW**

In this project, I implemented a system that works on the concept of online feedback from students which is the replacement of the existing paper feedback system which is so complicated method for finding an average for particular subject feedback which is submitted by students. This project has four kinds of users Students, Staff, Hod, and the Principal. In this system, we have designed main three forms student login form, admin login form, and faculty login form. Students will log in to their login form with the proper id and password which is provided by the admin at the time of registration. The student can give feedback in the online system provided by college staff. First staff can prepare questions and add, and update these questions to the online system. After that, if a student wants any changes in his profile, then there is an option to edit such particular information of his own. Projects Skip to content Skip to content; Online Student Feedback System. Student Feedback. 3. Reports. After that the subject contains page is displayed, where the subject is located in it, and as per the selection from students continued to their feedback after this page, the feedback page is displayed. This system can be developed using After that it was viewed by the students and can give feedback about the lecturers. This page contains a form that includes such questions about the teachers where it contains some simple questions regarding particular subject faculty. After giving the feedback the page appeared which contains a message like you are feedback is submitted. Then after feedback is submitted there is a logout button after clicking on it students will successfully log out from their profile. In main page it contains some hyperlinks like contact us, frequently ask questions, and Submit Queries. And contains three particular modules like student login, admin login, staff login, etc. Admin will fill in the information of students as well as view their feedback, add and delete students and generate the average report of that feedback. After that logout button occurs and the admin simply logout from the system. Students will log in by using their user id and password and the login page will be open containing subjects, a suggestion box, submit suggestions, and submit feedback after them occurs a log-out button to log out successfully from the system.

**4.2 PROPOSED MODEL WORKFLOW**



**Fig 4.2 System Function Module Diagram**

A student feedback system ensures that students have a way to provide feedback on their courses and instructors and that the feedback is reviewed and acted upon by the administrator. The workflow begins with the student logging in to the system and providing feedback on their courses and instructors.

The feedback is then sent to the administrator, who reviews it and takes appropriate action. The student is then notified of the outcome of their feedback. This workflow can help to improve the quality of education for all students.

Here is a more detailed explanation of each step in the workflow:

Step 1: The student logs in to the system. This can be done using their student ID number and password.

Step 2: The student provides feedback on their courses and instructors. This feedback can be about the quality of instruction, the workload, the overall learning experience, etc.

Step 3: The feedback is sent to the administrator. The administrator is responsible for reviewing the feedback and taking appropriate action. This may include contacting the instructor, making changes to the course, or providing additional resources to students.

Step 4: The administrator reviews the feedback and takes appropriate action. The administrator will review the feedback and decide what action to take, if any. This may include contacting the instructor, making changes to the course, or providing additional resources to students.

Step 5: The student is notified of the outcome of their feedback. The student will be notified of the outcome of their feedback, either by email or through the system. This will help to ensure that students are aware of the impact of their feedback.

The student feedback system in web development is a valuable tool for educational institutions seeking to enhance their teaching and learning experience. By following a well-structured approach, developers can create a user-friendly web interface that allows students to submit their feedback easily. Behind the scenes, the back-end logic, integrated with a secure database, ensures that sensitive feedback data is stored safely. To maintain privacy and restrict access, a robust user authentication system is implemented, ensuring only authorized users can contribute their feedback. The feedback data is then presented in a clear and readable format for teachers and administrators to analyze. Utilizing data analysis tools, valuable insights can be extracted, identifying trends and areas for improvement. Regular maintenance and updates guarantee the system remains functional and relevant, making it an invaluable resource for institutions committed to providing quality education and fostering a collaborative learning environment.

The workflow of a student feedback system in web development involves a series of interconnected steps that facilitate the smooth collection, processing, and analysis of feedback data from students. Here's an overview of the typical workflow:

**1. Feedback Collection:**  The process starts with students providing their feedback through an online form or survey. The form should be user-friendly and accessible, allowing students to express their opinions easily.

**2. Data Input and Validation:** Once the feedback is submitted, the system validates the data to ensure it meets the required criteria and is free from errors or malicious input. Validated data is then stored securely in a database.

**3. Storage and Organization:** The feedback data is organized in a structured manner within the database. It can be categorized based on different parameters, such as courses, teachers, or semesters, for easier analysis.

**4. Data Analysis:** The system employs data analysis techniques to process the feedback data. This may involve generating charts, graphs, and statistical reports to identify trends, patterns, and key insights.

**5. Result Analysis:** The analyzed feedback data is then used for result analysis. Educators and administrators review the results to gain valuable insights into the overall student satisfaction, strengths, weaknesses, and areas for improvement.

**6. Actionable Decisions:** Based on the result analysis, actionable decisions are made to address the identified issues and improve the learning experience. This may involve curriculum modifications, teaching method adjustments, or providing additional support services.

**7. Communication and Response:** The system communicates the results and actions taken to students, acknowledging their feedback and demonstrating that their opinions are valued.

**8. Continuous Improvement:** The feedback system is continuously monitored and improved. Regular updates and enhancements are implemented to adapt to changing requirements and technological advancements.

**9. Scalability and Adaptability:** The system is designed to be scalable and adaptable, ensuring it can handle an increasing number of students and feedback submissions while accommodating future changes and advancements.

**10. Privacy and Security:** Throughout the workflow, special attention is given to privacy and security. Data encryption, user authentication, and access controls are implemented to safeguard sensitive feedback data.

**11. Feedback Loop:** The process completes a feedback loop, where the actions taken based on previous feedback inform future feedback collection, result analysis, and decision-making. This loop promotes continuous improvement and a student-centric approach.

In conclusion, a well-structured workflow in a student feedback system ensures efficient feedback collection, robust data processing, and effective result analysis. By fostering open communication, data-driven decision-making, and a commitment to continuous improvement, these systems play a pivotal role in enhancing the educational experience for students and supporting institutional growth.

**Design of the student feedback system**

**1. User-Centric Interface Design:** The success of the student feedback system heavily relies on creating an intuitive and user-centric interface. Developers must focus on responsive design to ensure that the system functions seamlessly across various devices and screen sizes. Employing clear and concise language with well-organized forms enhances the user experience, encouraging higher participation rates from students. Regular usability testing helps in identifying potential pain points, leading to continuous improvements and a more engaging feedback process.

**2. Real-Time Feedback Processing:** Implementing real-time feedback processing allows students to see the immediate impact of their submissions. This feature reinforces the notion that their feedback is valued and encourages honest and timely responses. By leveraging technologies like AJAX, developers can enable instant validation and submission of feedback without the need for page reloads, further enhancing the user experience.

**3. Integration with Learning Management Systems (LMS):** To streamline the feedback process, the system should integrate seamlessly with the institution's existing Learning Management System. This integration simplifies the feedback collection process, ensuring that students can easily access and submit feedback directly from their course pages. The LMS integration also allows teachers to view feedback alongside other course materials, providing a comprehensive view of their performance.

**4. Anonymous Feedback Option:** Providing an option for anonymous feedback enables students to express themselves openly without fear of repercussions. While maintaining anonymity, developers must ensure that appropriate measures are in place to prevent misuse of the feature. Balancing anonymity and accountability in the system ensures that honest and constructive feedback can be gathered, leading to more actionable insights for improvement.

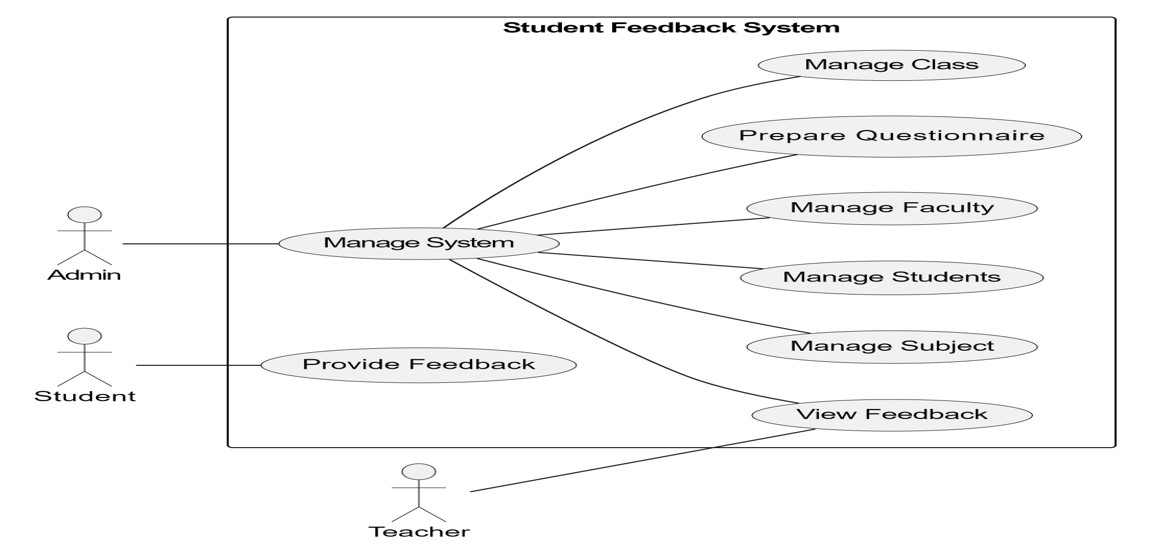
**5. Automated Feedback Reminders:** To increase the response rate, developers can implement automated feedback reminders. These reminders can be sent via email or notifications to students who have not yet submitted their feedback. Strategically timed reminders help keep the feedback process on track and ensure that valuable insights are collected from a broader range of students.

**6. Continuous System Enhancement:** The development of a student feedback system should be an iterative process. Actively seeking feedback from users, including both students and teachers, can unveil areas that need improvement. Regularly analyzing the system's performance, such as response rates and usability metrics, enables developers to make data-driven decisions and prioritize future enhancements. By continuously listening to user feedback and staying responsive to changing needs, the student feedback system can remain a valuable asset in the educational ecosystem.

**CHAPTER - 5**

**OBJECT-ORIENTED ANALYSIS**

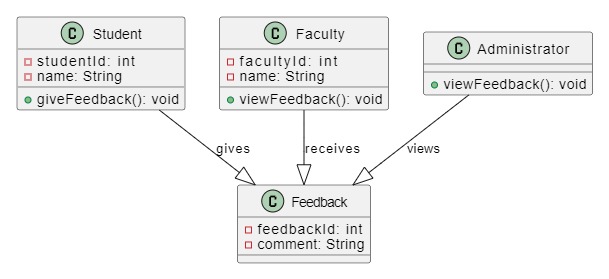
**5.1 USE CASE DIAGRAM**



**Fig 5.1 Use case diagram**

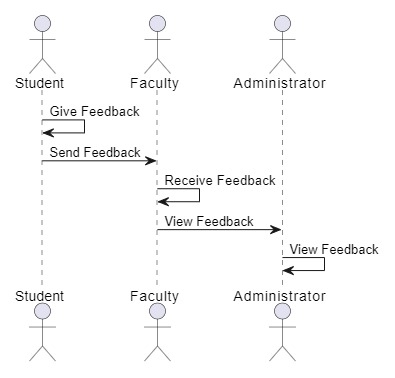
**5.2 CLASS DIAGRAM**

**MAIN ACTIVITY CLASS**

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**Fig 5.2 class diagram**

**5.3 SEQUENCE DIAGRAM**

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**Fig 5.3 Sequence diagram**

**CHAPTER 6**

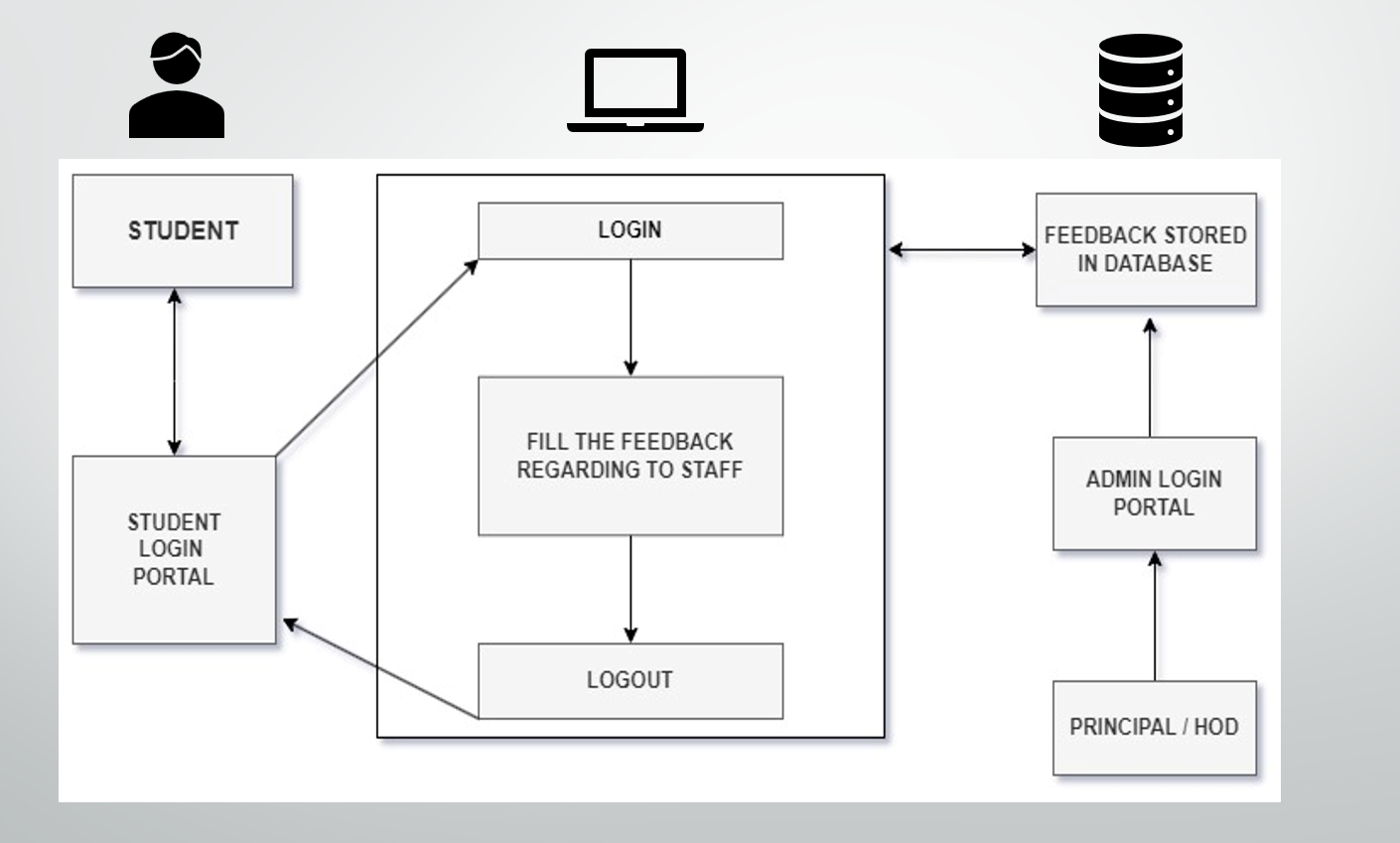
**SYSTEM DESIGN AND IMPLEMENTATION**

**6.1 SYSTEM DESIGN**

The System Design and Implementation of the Online Student Feedback System. In this chapter, the important aspects of the System Design phase are discussed. This includes outlining the system's architecture, defining the user interface, designing the database structure, implementing security measures, ensuring anonymity and privacy, considering integration with existing systems, and ensuring scalability and performance. The System Implementation phase is also highlighted, covering the development, testing, deployment, user training, and ongoing support of the system. Both phases play a crucial role in transforming the conceptual model into a functional and user-friendly platform that facilitates open communication, continuous improvement, and educational excellence within the college environment.

**6.2 SYSTEM IMPLEMENTATION**

The Student Feedback System, where the designed system is transformed into a functional reality. This phase involves a series of key activities to bring the conceptual model to life. Skilled developers write the code based on the system design specifications, creating the front-end user interface with a focus on user-friendliness and intuitive navigation. Simultaneously, the back-end servers and database are set up to handle data processing efficiently. Rigorous testing is conducted to identify and resolve any bugs or errors, including unit testing to validate individual components and integration testing to ensure seamless operation across different modules. Once the system successfully passes all testing stages, it is deployed to the college's infrastructure or cloud-based servers, making it accessible to students, faculty, and administrators. Comprehensive user training sessions are conducted to equip all stakeholders with the knowledge and skills to use the system effectively. Additionally, ongoing technical support is provided to address any queries or issues that may arise during system usage, ensuring a smooth user experience. System implementation is a crucial step in the overall development process, as it brings the Online Student Feedback System to life, empowering the college community with a powerful tool for open communication, continuous improvement, and fostering educational excellence.

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**6.2 ARCHITECTURE**

**6.3 MODULE DESCRIPTION**

**6.3.1 Admin:**

**•** View Feedback Submissions

• Manage Faculty

• Course Management

• Data Analysis and Reports

**6.3.1.1 View Feedback Submissions**

The Admin module grants administrators access to view all feedback submissions received from students. They can analyze the feedback data, extract valuable insights, and identify trends to support data-driven decision-making for educational improvements.

**6.3.1.2 Manage Faculty**

Admins have the authority to manage faculty profiles within the system. They can add new faculty members, assign them to specific courses, and update their information as needed.

**6.3.1.3 Course Management**

This module allows administrators to manage the courses offered in the college. They can add or remove courses, update course details, and ensure an accurate representation of the college's academic offerings.

**6.3.1.4 Data Analysis and Reports**

Admins have access to comprehensive data analysis tools that facilitate generating reports based on feedback submissions. These reports provide an overview of faculty performance and highlight areas for improvement.

**6.3.2 Students**

• Submit Feedback

• View Past Feedback

• Anonymity and Privacy

**6.3.2.1 Submit Feedback**

Students can access this module to submit feedback for their respective courses and faculty. They can provide ratings and comments anonymously, ensuring honest and candid responses.

**6.3.2.2 View Past Feedback**

Students can view their previous feedback submissions to keep track of their responses and monitor any changes in faculty performance or course experiences.

**6.3.2.3 Anonymity and Privacy**

To encourage open feedback, the system ensures the anonymity of students' submissions. This feature allows students to provide feedback without the fear of identification or reprisals.

The Student Feedback Review System is designed to empower both administrators and students in the feedback process. Administrators can efficiently manage faculty and courses, analyze feedback data, and generate valuable reports to drive educational improvements. On the other hand, students can freely submit feedback and view their past submissions with the assurance of anonymity. Through this comprehensive module description, the system aims to foster open communication, continuous improvement, and educational excellence within the college environment.

**6.4 SYSTEM REQUIREMENTS**

**6.4.1 HARDWARE**

• Processor: Intel Core i5 or equivalent

• Memory: Minimum 4 GB RAM

• Storage: At least 1TB of hard disk space

**6.4.2 SOFTWARE**

• Development Environment: Visual Studio Code

• Web Server: XAMPP or any compatible web server

• Operating System: Windows 10 or higher

• Coding Language: PHP 7. X or higher

The Student Feedback Review System requires hardware with sufficient processing power, memory, and storage capacity to handle the system's functionalities and data processing. An Intel Core i5 processor or its equivalent is recommended for optimal performance. Additionally, a minimum of 4 GB RAM is required to ensure smooth execution of the system.

On the software side, a suitable development environment like Visual Studio Code is necessary for coding and testing the system. XAMPP or any compatible web server is needed to set up the required server environment for hosting the system. The operating system should be Windows 10 or a higher version to ensure compatibility with the system components. Finally, PHP 7. X or a higher version is the coding language of choice for developing the Student Feedback Review System.

By meeting these hardware and software requirements, the system can operate efficiently, providing a seamless feedback submission and management experience for both administrators and students.

The software requirements for a student feedback system include robust user authentication and access control, enabling user registration and login for students, faculty, and administrators with role-based permissions and secure password policies. It should allow students to provide feedback on courses and instructors, supporting various feedback types and anonymous responses. The system should facilitate course and instructor selection for feedback and grant administrators the ability to create customizable surveys with different question types and rating scales. Real-time data visualization and reporting should present feedback results clearly, and automated notifications should remind students to submit feedback. Secure data storage and encryption, mobile compatibility, and integration with existing systems are crucial. The system should offer feedback analysis for actionable insights and comply with data protection regulations, support multi-language feedback, ensure regular backups, and maintain usability, scalability, and ethical standards.

**CHAPTER 7**

**TESTING**

**7.1 INTRODUCTION**

The purpose of testing is to discover errors. Testing is the process of trying to discover every

convincible fault or weakness in a work product. It provides a way to check the functionality

of components, sub-assemblies, assemblies, and/or finished products.

It is the process of exercising software with the intent of ensuring that the software system

meets its requirements and user expectations and does not fail in an unacceptable manner.

**7.2 LEVELS OF TESTING**

There are generally four recognized levels of testing: unit/component testing, integration

testing, system testing, and acceptance testing. Tests are frequently grouped by where they

are added in the software development process, or by the level of specificity of the test.

**7.2.1 UNIT TESTING**

Unity testing is a method by which individual units of source code, sets of one or more

computer program modules together with associated control data, usage procedures and

Operating procedures.

For unit testing first, we adopted the code testing strategy, which examined the logic of

the program. During the development process itself, all the syntax errors get rooted out. This developed test case results in executing every instruction in the program.

**7.2.2 USER ACCEPTANCE TESTING**

User acceptance testing of the system is the key factor for the success of the system. A system

under consideration is tested for user acceptance by constantly keeping in touch with the

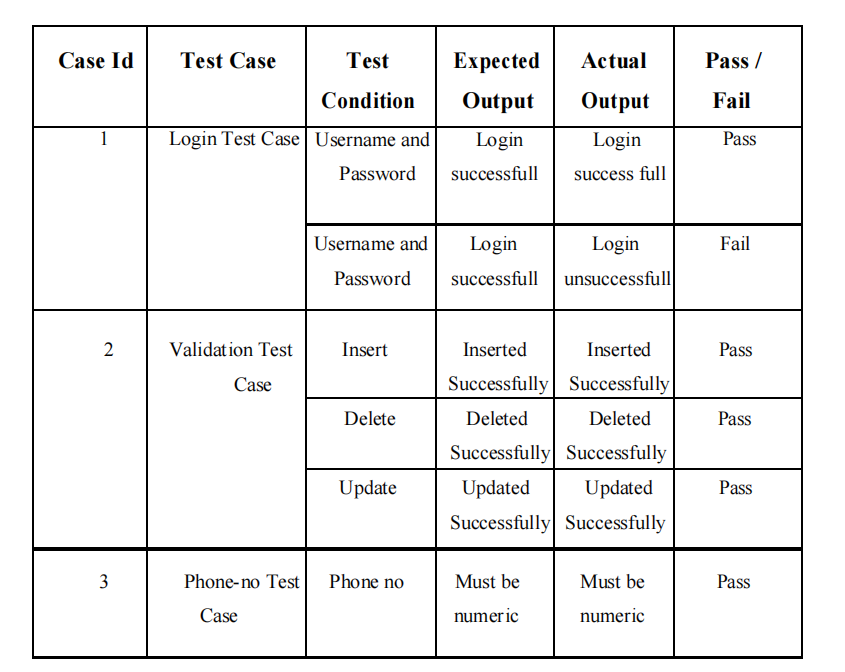
prospective system at the time of development and making changes whenever required. This is done with regard to the input screen design and output screen design.

**7.2.3 GUI TESTING**

GUI testing is used to ensure visual clarity of the system, flexibility of the system, and user-friendliness of the system. The various component which is to be Tested are:

i. Relative layout

ii. Various Link and Buttons



**Table 7.2 Test Cases**

**GUI Testing**

**Guidelines**

• Check Screen Validation

• Verify All Navigations

• Check usability Conditions

• Verify Data Integrity

• Verify the object states

• Verify the date Field and Numeric Field Formats

• Verify the object states

• Verify the date Field and Numeric Field Formats

**7.2.4 VALIDATION TESTING**

The process of evaluating software during the development process or at the end of

the development process to determine whether it satisfies specified business requirements.

At the culmination of black box testing, the software is completely assembled as a package.

Interfacing errors have been uncovered and the correct and final states of tests i.e., validation are defined with a simple definition that validation succeeds when the software function in a

manner that can be reasonably accepted by the customer. Validation Testing ensures that

the product actually meets the client's needs. It can also be defined as demonstrating that

the product fulfils its intended use when deployed in an appropriate environment.

**7.2.5 OUTPUT TESTING**

After performing validation testing, the next step is output testing of the proposed

system. Since the system cannot be useful if it does not procedure the required output. Asking

the user about this required format in which the system is required tests the

output displayed or generated by the system.

**CHAPTER 8**

**EXPERIMENTAL SETUP AND RESULTS ANALYSIS**

**8.1 EXPERIMENTAL SETUP**

**8.1.1 Visual Studio Code (VS Code):**

Visual Studio Code (VS Code) was chosen as the code editor for developing the Student Feedback Review System. It is a free, lightweight, and versatile code editor developed by Microsoft, suitable for Windows, macOS, and Linux. VS Code offers various features such as syntax highlighting, code completion, debugging, and support for a wide range of programming languages. It also boasts a rich ecosystem of extensions, enabling developers to enhance their productivity and integrate with different frameworks and tools. VS Code proved to be an ideal choice for the project, providing a seamless development environment and efficient code editing capabilities.

**8.1.2 XAMPP Server:**

XAMPP, a free and open-source cross-platform web server solution stack, was utilized for testing and deploying the Student Feedback Review System. The XAMPP package includes components like the Apache HTTP Server, MySQL database, and PHP scripting language. This web server solution stack enabled the creation of a local development environment on various operating systems, allowing for easy testing and debugging of the system before deploying it to a live server. XAMPP's simplicity and support for multiple platforms made it a suitable choice for web development and testing purposes.

**8.2 RESULT ANALYSIS**

The Student Feedback Review System proved to be a well-designed and effective platform for handling the feedback process within the college environment. The analysis of the system's results showcased the following key outcomes. In a student feedback system, result analysis is the process of systematically examining and interpreting the feedback data provided by students to gain valuable insights and identify areas for improvement. Through data collection and organization, the system aggregates feedback on various aspects of the learning experience. Data visualization techniques are then employed to present the information in a visually clear and concise manner. By identifying key themes, strengths, and weaknesses, educators and administrators can evaluate the effectiveness of teaching methods, courses, and support services. Result analysis provides actionable insights for continuous improvement.

**8.2.1 Enhanced Efficiency and Time Savings:**

The system significantly reduced the manual effort required for feedback management, saving time and resources for administrators. With streamlined data handling and automated processes, the system efficiently managed the entire feedback submission process.

**8.2.2 Improved Data Security and Privacy:**

By incorporating encryption and stringent security measures, the system ensured the confidentiality and privacy of feedback submissions, maintaining the anonymity of students' responses. This instilled trust and encouraged students to provide honest and candid feedback**.**

**8.2.3 Data Analysis and Decision-Making:**

The system's data analysis and reporting tools empowered administrators to derive valuable insights from the feedback data. These insights aided data-driven decision-making, enabling educational improvements based on the feedback received.

**8.2.4 User-Friendly Experience:**

The system's user-friendly interface facilitated easy feedback submission for students and simplified the feedback review process for administrators. Its intuitive design and accessibility contributed to a positive user experience.

**8.2.5 Streamlined Communication and Continuous Improvement:**

The Student Feedback Review System fostered open communication between students and faculty, facilitating ongoing improvements in the college's educational offerings. The system's ability to manage faculty profiles and courses efficiently streamlined the feedback loop**.** A student feedback system facilitates streamlined communication and continuous improvement in the educational setting by establishing an effective feedback loop between students and educators. This loop enables ongoing dialogue and promotes a culture of openness and collaboration.

**8.2.6 Scalability and Adaptability:**

The system demonstrated scalability, allowing for potential expansion to accommodate more users and handle increased feedback submissions in the future. Additionally, its customizable nature enabled adaptation to the college's specific requirements.

The experimental analysis revealed that the Student Feedback Review System effectively fulfilled its objectives, promoting open communication, continuous improvement, and educational excellence within the college environment. The system's seamless integration of technology, user-friendly interface, and efficient data handling underscored its significance as a valuable tool for the institution's growth and development.

Scalability refers to the system's ability to handle a growing number of users, data, and transactions without compromising performance or user experience. In the context of a student feedback system, scalability means that as the number of students and courses increases, the system can handle the increased data flow and user interactions without becoming slow or unresponsive. Achieving scalability involves employing various strategies, such as load balancing, caching, horizontal scaling (adding more servers), and optimizing database queries to distribute the workload efficiently.

In conclusion, a student feedback system in web development is a powerful tool that enables educational institutions to gather valuable insights from students and improve the overall learning experience. By providing a user-friendly interface, efficient data collection, and robust back-end processing, the system empowers students to voice their opinions, fostering transparency and open communication. Through result analysis, educators can identify strengths, weaknesses, and areas for enhancement, leading to data-driven decision-making and targeted improvements. The system's scalability and adaptability ensure that it can accommodate growth and changing requirements, remaining relevant and effective in the ever-evolving educational landscape. Looking ahead, the future scope of these systems holds great promise, with advancements in data analytics, artificial intelligence, and personalization poised to revolutionize feedback processes. Ultimately, student feedback systems play a crucial role in shaping a student-centric educational environment, nurturing continuous improvement.

**CHAPTER 9**

**CONCLUSION AND FUTURE ENHANCEMENT**

**CONCLUSION**

The development and implementation of the Student Feedback Review System have been successfully accomplished, offering a comprehensive and efficient platform for collecting and analyzing feedback from students. Through this system, students can provide valuable insights into faculty performance and course experiences, while administrators can access meaningful data to drive educational improvements.

The Student Feedback Review System has demonstrated several key advantages. It streamlines the feedback submission process, saving time and resources for both students and administrators. The system ensures the anonymity and privacy of feedback submissions, fostering honest and candid responses from students. By providing data analysis and reporting tools, administrators can make data-driven decisions, leading to continuous improvement in the college's educational offerings. The user-friendly interface and scalability of the system contribute to a positive user experience and allow for potential expansion in the future.

**FUTURE SCOPE**

The Student Feedback Review System holds promising potential for further enhancements and additional features. Some potential future scope includes:

**1. Enhanced Data Analytics:** Introduce advanced data analytics techniques, such as sentiment analysis, to gain deeper insights from feedback submissions and identify specific areas for improvement.

**2. Integration with Learning Management Systems:** Integrate the Student Feedback Review System with the college's Learning Management System (LMS) to streamline feedback processes and facilitate seamless data exchange.

**3. Mobile Application:** Develop a mobile application for the system, enabling students to provide feedback on the go and access their past submissions conveniently.

**4. Gamification:** Introduce gamification elements to incentivize students to participate in the feedback process actively, promoting higher response rates.

**5. Predictive Analytics:** Implement predictive analytics to anticipate potential issues and challenges in courses, enabling proactive measures to enhance the learning experience.

**6. Multi-Campus Support:** Extend the system's capabilities to support multiple campuses or departments within the institution, accommodating diverse feedback requirements.

**7. Integration with Faculty Performance Review:** Integrate the feedback data into faculty performance evaluations to facilitate a comprehensive assessment of teaching effectiveness.

**8. Artificial Intelligence (AI) Chatbot:** Implement an AI-powered chatbot to assist students in providing feedback and address their queries related to the feedback process.

By incorporating these future enhancements, the Student Feedback Review System can further elevate its impact and serve as a robust tool for continuous improvement and excellence in the college's educational ecosystem. As technology and educational needs evolve, the system will continue to adapt and enhance its capabilities, fostering a culture of open communication, learning, and growth within the institution.

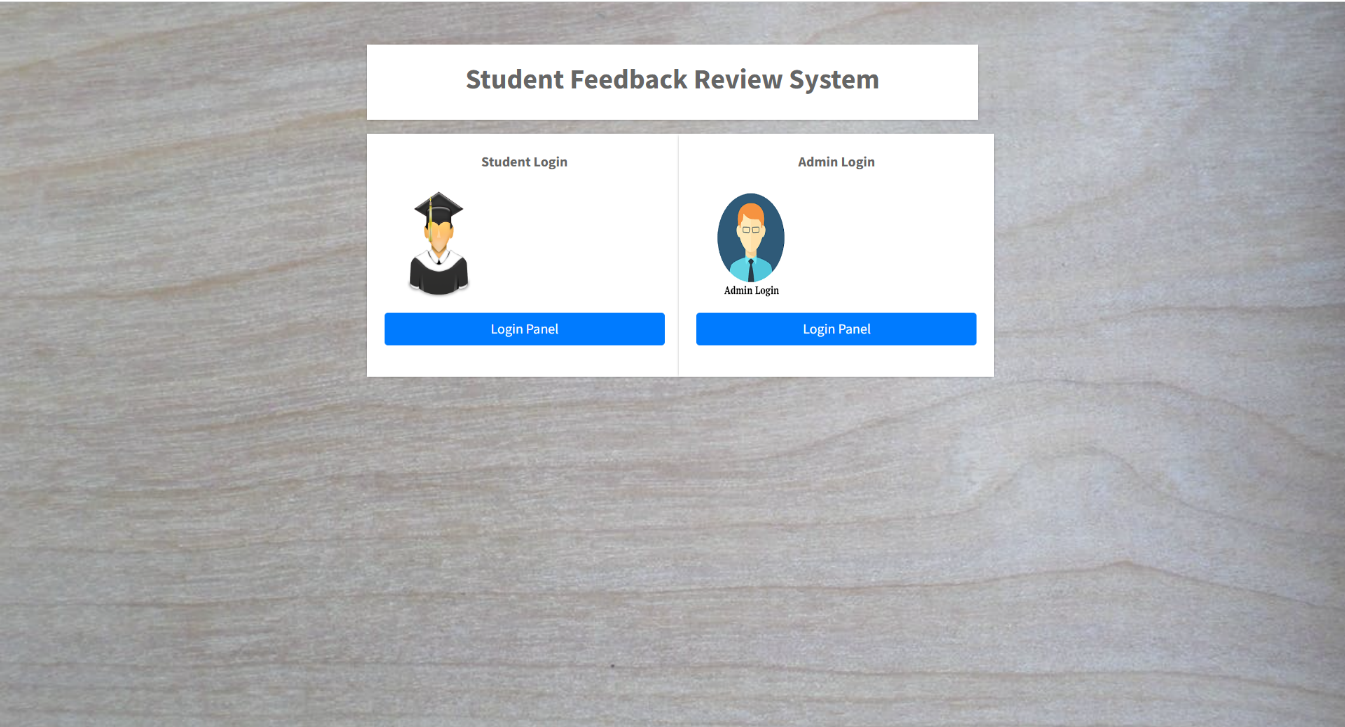
The future scope of a student feedback system in web development is promising, with technology poised to revolutionize education. Advancements in data analytics, artificial intelligence, and machine learning will empower these systems to extract deeper insights from feedback data, enabling institutions to make more informed decisions. Personalization and real-time feedback mechanisms will enhance the student experience, offering tailored recommendations and timely interventions to support struggling students. Multimodal feedback collection, incorporating text, audio, and video responses, will capture more nuanced student feedback. Integration with learning analytics and social platforms will provide a comprehensive view of students' progress and foster greater engagement. Emotional feedback analysis will contribute to the overall well-being of students. Moreover, global collaboration and benchmarking will drive educational excellence, and integrating feedback with course evaluation and accreditation will ensure continuous improvement and accreditation compliance.

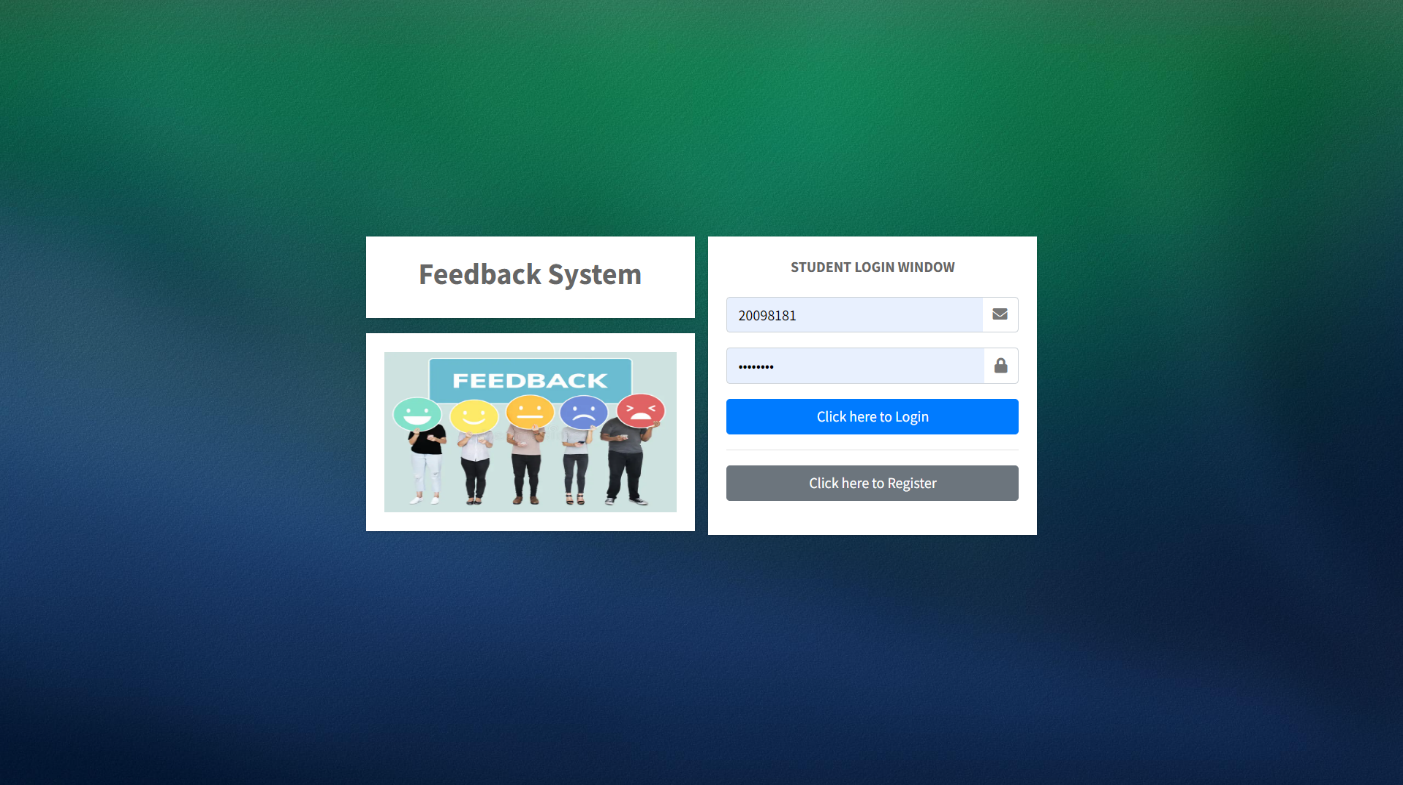
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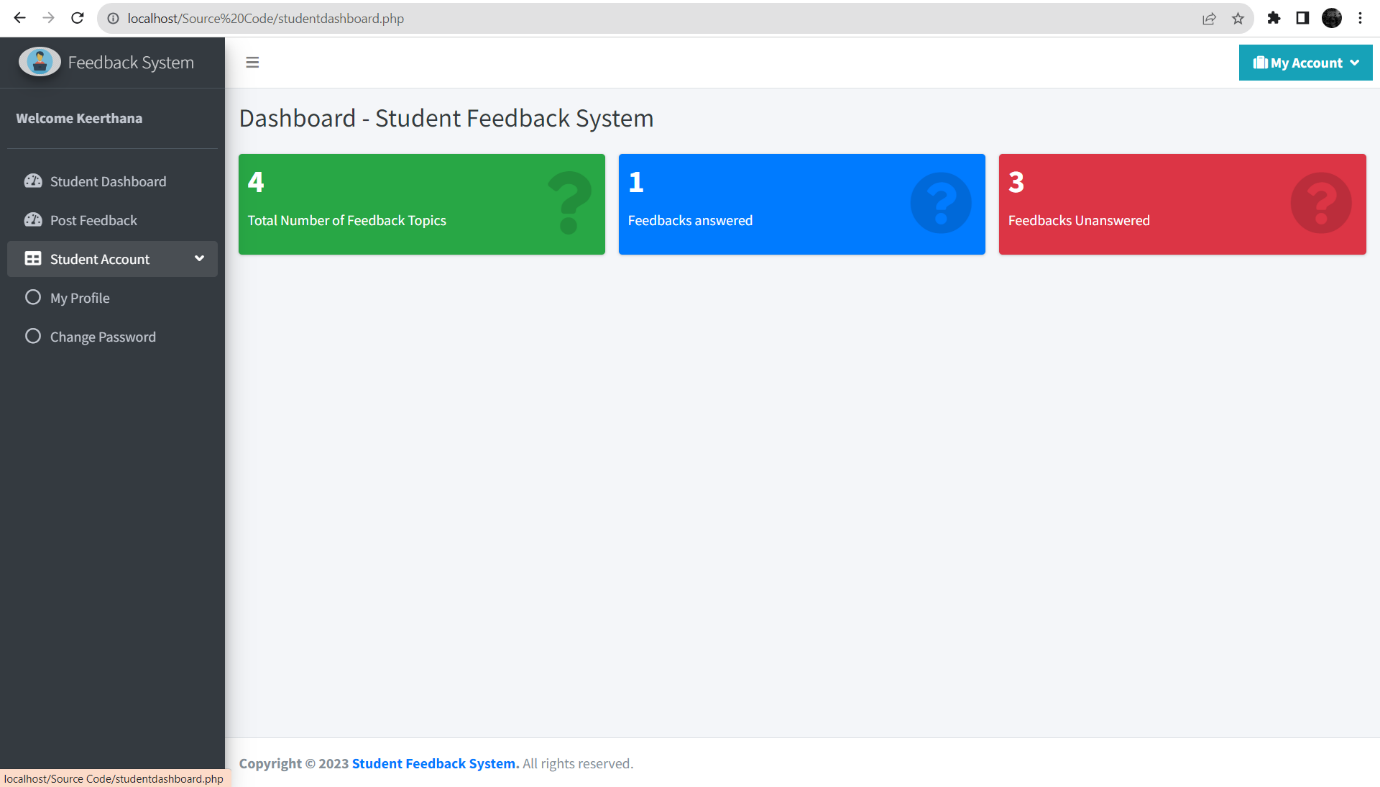
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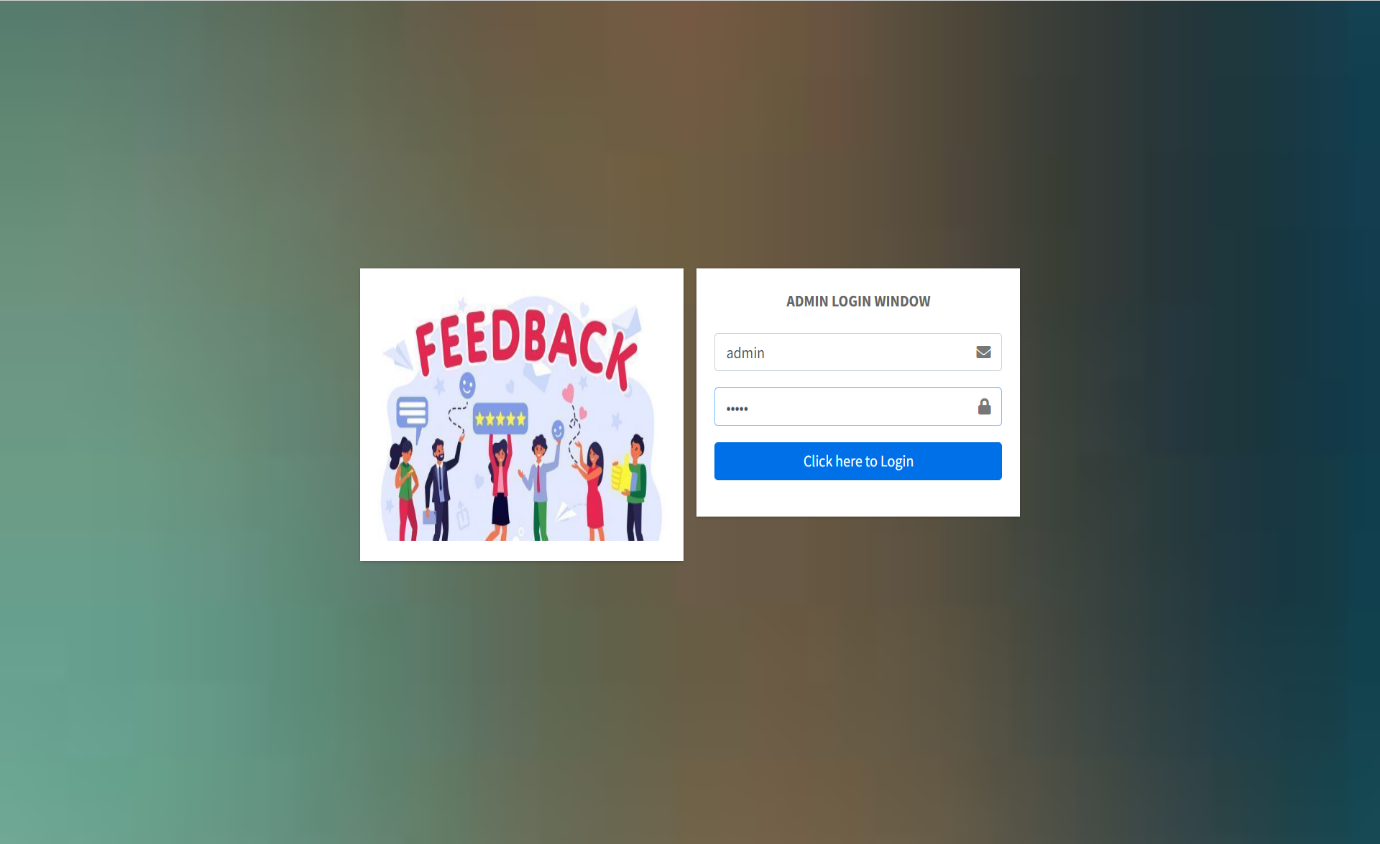
**APPENDIX**

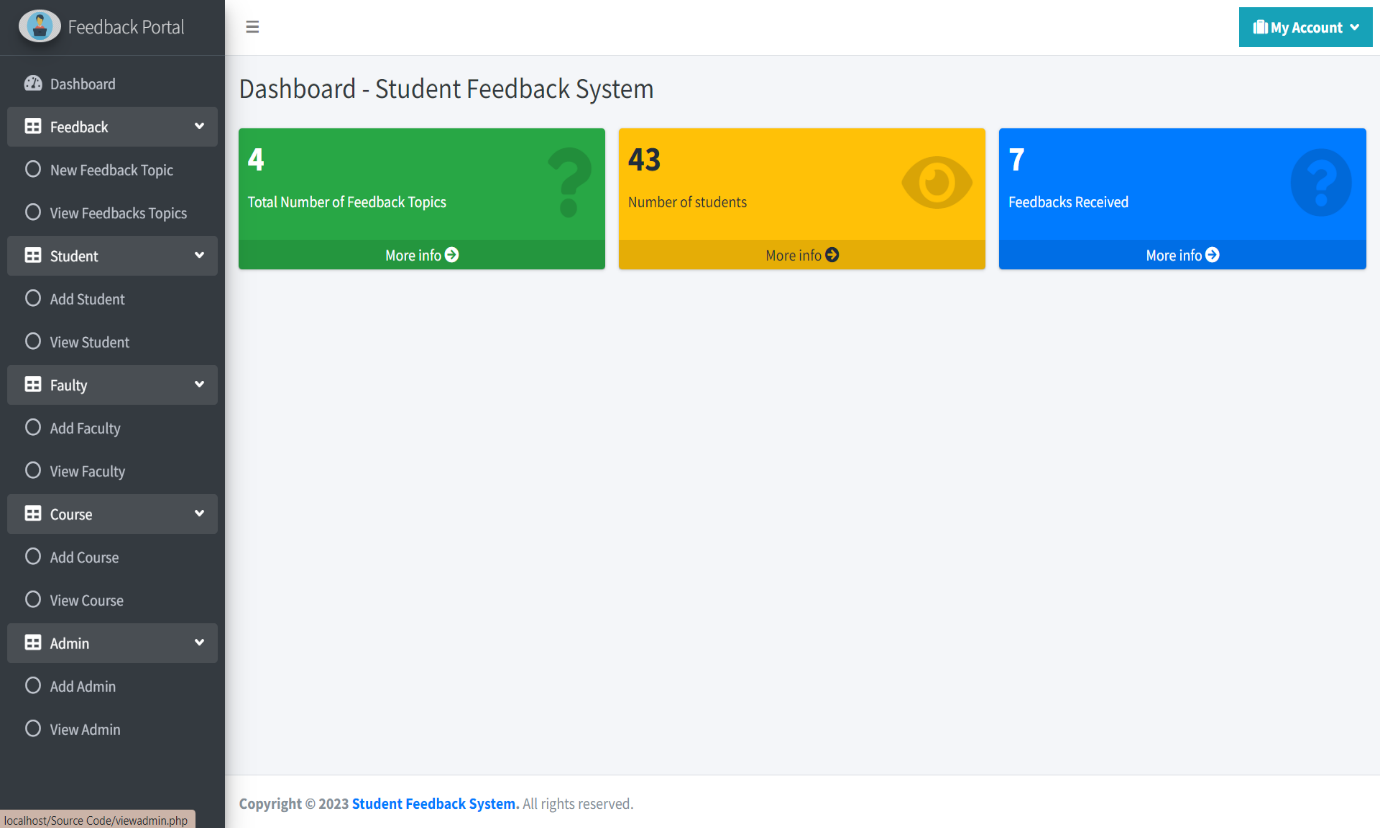
1. **SCREENSHOTS**

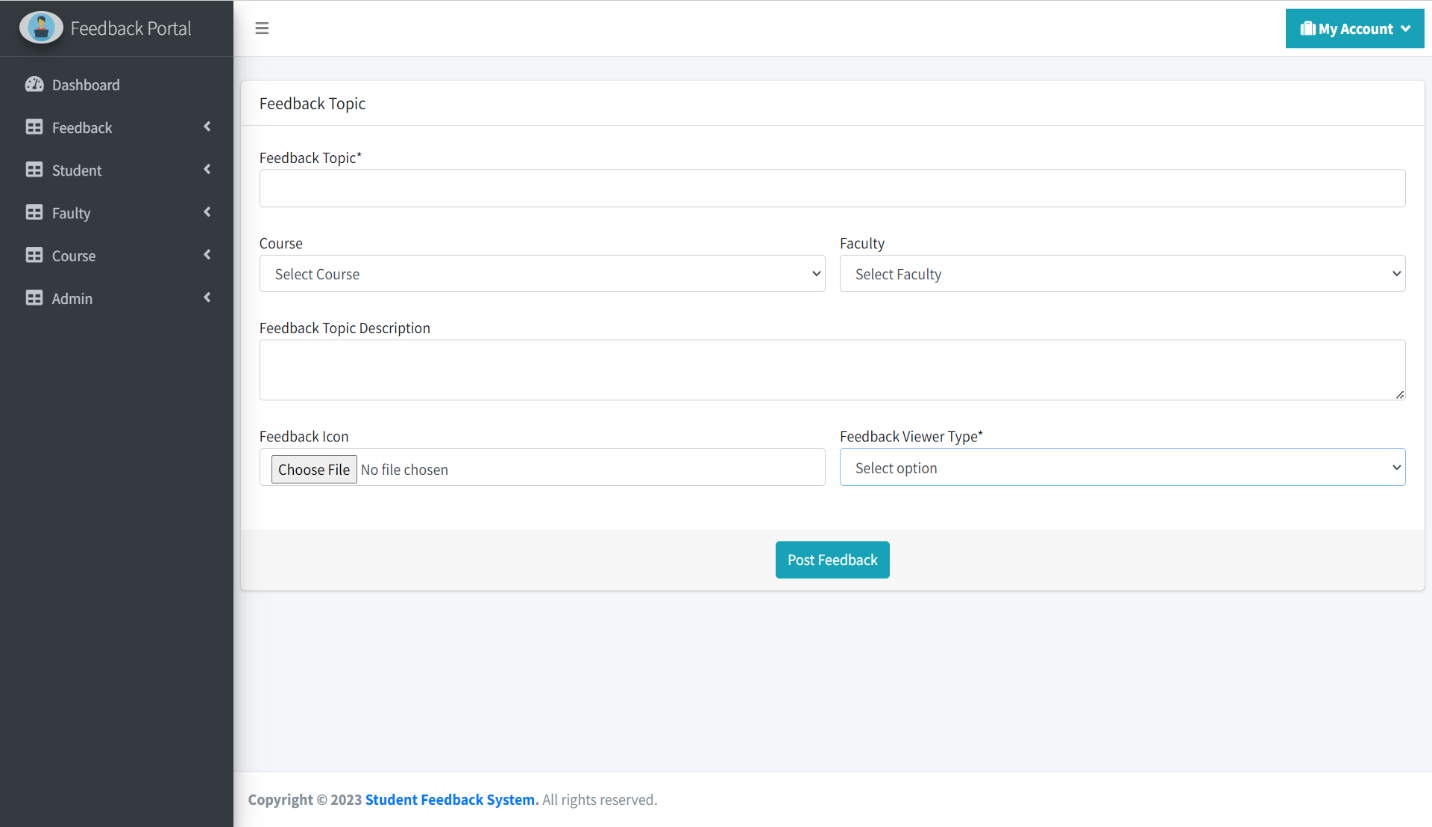












1. **SOURCE CODE**

**Database Connection: (configASL.php)**

<?php

error\_reporting(0);

$asl=mysqli\_connect("localhost","root","","feedback");

if (mysqli\_connect\_errno($asl))

{

echo "Failed to connect to MySQL: " . mysqli\_connect\_error();

}

?>

**Admin Login Page: (index.php)**

<?php

include("configASL.php");

session\_start();

if(isset($\_SESSION['aid']))

{

header("location:home.php");

}

if(!empty($\_POST))

{

$aid=mysqli\_real\_escape\_string($asl,$\_POST['aid']);

$pass=mysqli\_real\_escape\_string($asl,md5($\_POST['pass']));

$sql=mysqli\_query($asl,"select \* from admin where aid='$aid' and password='$pass'");

if(mysqli\_num\_rows($sql)==1)

{

$\_SESSION['aid']=$\_POST['aid'];

echo "<script>window.location='home.php';</script>";

}

else

{

?>

<script type="text/javascript">

alert("Incorrect Admin ID or Password");

</script>

<?php

} }

?>

<!doctype html>

<html>

<head>

<meta charset="utf-8">

<title>Student Feedback System</title>

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

</head>

<body>

<div id="topHeader">

<span class="tag">STUDENT FEEDBACK SYSTEM</span>

</div>

<div id="content" align="center">

<span class="SubHead">Admin Login</span>

<form method="post" action="" >

<div id="table">

<div class="tr">

<div class="td"> <label>Admin ID : </label>

</div>

<div class="td">

<input type="text" name="aid" size="25" required />

</div>

</div>

<div class="tr">

<div class="td">

<label>Password : </label>

</div>

<div class="td">

<input type="password" name="pass" size="25" required />

</div>

</div>

</div>

<div class="tdd">

<input type="submit" value="Login" />

</div>

<br>

</div>

</form>

<br>

<center>

<span class="SubHead" style="font-weight:100;">Student Feedback <a

href="feedback.php" class="link">Click Here</a></span>

</center>

</body>

</html>

</html>

**Change Admin Password: (changePass.php)**

<?php

include("configASL.php");

session\_start();

if(!isset($\_SESSION['aid']))

{

header("location:index.php");

}

$aid=$\_SESSION['aid'];

$x=mysqli\_query($asl,"select \* from admin where aid='$aid'");

$y=mysqli\_fetch\_array($x);

$name=$y['name'];

$old=$y['password'];

Student Feedback Management System

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if(!empty($\_POST))

{

$p1=md5($\_POST['p1']);

$p2=md5($\_POST['p2']);

if($old==$p1)

{

$u=mysqli\_query($asl,"update admin set password='$p2' where aid='$aid'");

}

if($u==true)

{

?>

<script type="application/javascript">

alert('Successfully changed password');

</script>

<?php } else { ?> <script type="application/javascript">

alert('Incorrect old password');

</script><?php }

}

?>

<!doctype html>

<html>

<head>

<meta charset="utf-8">

<title>Student Feedback System</title>

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

</head>

<body>

<div id="topHeader">

<span class="tag">STUDENT FEEDBACK SYSTEM</span>

</div>

<br>

<br>

<br>

<br>

<div id="content" align="center">

<br>

<br>

<span class="SubHead">Change Password</span>

<br>

<br>

<form method="post" action="" >

<div id="table">

<div class="tr">

<div class="td">

<label>Old Password : </label>

</div>

<div class="td">

<input type="password" name="p1" size="25" required

placeholder="Enter Old Password" />

</div>

</div>

<div class="tr">

<div class="td">

<label>New Password : </label>

</div>

<div class="td">

<input type="password" name="p2" size="25" required

placeholder="Enter New Password" />

</div>

</div>

</div>

<div class="tdd">

<input type="submit" value="CHANGE PASSWORD" />

</div>

<input type="button" onClick="window.location='home.php'" value="BACK">

</div>

</form>

</div>

</body>

</html>

**IEEE PUBLICATION**

|  |  |
| --- | --- |
| TITLE | Survey on student feedback review system for Faculty Teaching Performance Evaluation |
| AUTHORS | Mr. KAMAL BADAR, SHER MUHAMMAD DAUDPOTA, JUNAID BABER |
| JOURNAL | International Journal for Research in Applied Science and Engineering Technologies |
| STATUS | Accepted for Publication |