

ABSTRACT

With the expansion of colleges and universities, offices and campus increase and spread over, which add the difficulty for the management of college sports. So step up the pace of the university sports information construction, and eventually improve the level of sports teaching quality and teaching mainly lies in strengthening the construction of informatization.

Using this website it provides for all students the platform for attendance and recent sport activities. It provides secure communication between student and the faculties using the login page. Unauthorized access not possible. Students have access to view the recent activities of sports and co-curricular activities. It ensures the security of co-curricular activities. It is like our contineo website. Everyday students can visit this site to get know about what are the recent sport and co-curricular activities. This platform provide more insights to regarding co-curricular activities. All students can visit the site if the username and password is correct. It will go the attendance form if we login through the login page and the students who have participated in sports and co-curricular activities can fill this form and it will go to specified faculty through the email, whatsapp and the form. They will verify the document that is sent using the attendance form in this way there is a secure communication. It saves the time for both the students and the faculty.

ACKNOWLEDGEMENT

We are extremely thankful to **Dr. Rohini Nagapadma, Principal**, NIE, Mysuru, for providing us the academic ambiance and laboratory facilities to work, and everlasting motivation to carry out this work and shape our careers.

We express our sincere gratitude to **Dr. Girish, HoD**, Dept. of Information Science & Engineering, NIE, Mysuru, for his stimulating guidance, continuous encouragement, and motivation throughout the course of the present work.

We would like to thank to Minor project Coordinator **Ms. Shwetha S, Assistant Professor** from the Department of Information Science and Engineering at NIE Mysuru, for providing us the opportunity of creating this minor project.

We would like to express our sincere gratitude and appreciation to guide **Ms. Ashwini M, Assistant Professor** from the Department of Information Science at NIE Mysuru, for project title “Web Application for Co-Curricular NIE” for her unwavering support and guidance throughout the project.

Anantha Bharath	4NI20IS017
Mahesh S	4NI20IS058
Mohan Kumar Kalmani	4NI20IS064
Yashwanth K S	4NI20IS127

TABLE OF CONTENTS

Sl. no	Chapter	Page No
1.	Introduction	1
1.1	Objectives	2
1.2	Scope of project	2
2.	Literature survey	3
2.1	District level sports management system	3
2.2	Web based attendance management	3
2.3	Attendance Management System through Fingerprint	3
3.	System Analysis	4
3.1	Existing System	4
3.2	Disadvantages of Existing System	4
3.3	Proposed system	4
3.4	Advantages of proposed system	5
3.5	System requirements	5
3.5.1	Software requirements	5
3.5.2	Hardware requirements	5
4.	System design and architecture	6
4.1	System Design	6
4.2	Database Design	6
4.3	Database schema	7
4.4	UI Design	7
4.5	Data Flow	8
4.6	Sequence Diagram	10
4.7	Client Server Architecture	10
4.7.1	Client-Side	11
4.7.2	Server-Side	11
4.8	Pseudo code	11
4.8.1	Email validator	11
4.8.2	Password validator	12
4.8.3	Login	12
4.8.4	OTP Validator	12

5. System Implementation	14
5.1 Software Model Used	14
5.1.1 Agile Method	14
5.2 Technologies Used	15
5.2.1 React Js for Front-end	15
5.2.2 000Webhost	15
5.2.3 Visual Studio Code Editor	16
5.2.4 Bootstrap	17
5.2.5 HTML	18
5.2.6 CSS	18
5.2.7 MySql	19
5.2.8 PHP Language (Back end)	19
5.2.9 PHP Mailer	19
6. System Testing	20
6.1 Unit Testing	20
6.2 Integration Testing	20
6.3 Validation Testing	20
6.4 Acceptance Testing	20
7. Results of Web Page	21
8. Conclusion	26
9. Future Scope	26
10. References	27

LIST OF FIGURES

Fig No	Figure Description	Page numbers
4.1	System design	6
4.3.1	Sign in/Sign up table schema	7
4.3.2	Contact Fetcher table schema	7
4.4	User Case Diagram	8
4.5	Data flow diagram	9
4.6	Sequence Diagram	10
7.1	Home Page	21
7.2	Sports Activities	21
7.3	Placement and Training Activities	22
7.4	Cultural Activities	22
7.5	Sign Up Page	23
7.6	Contact Details	23
7.7	Contact Us	24
7.8	Attendance Form	24
7.9	Faculty Database Example	25
7.10	Student Database Example	25

CHAPTER 1

INTRODUCTION

Co-curricular activities play a vital role in the holistic development of students. These activities encompass a wide range of events, programs, and initiatives beyond the academic curriculum, including clubs, societies, competitions, workshops, and sports activities. Managing attendance for co-curricular activities is crucial for educational institutions to track student participation, ensure accountability, evaluate the effectiveness of programs, and foster a well-rounded learning experience.

This project report aims to present a comprehensive solution for co-curricular attendance management, leveraging technology to streamline the process and enhance its efficiency. The proposed solution will address the challenges faced by educational institutions in managing and tracking attendance for diverse co-curricular activities.

The report will discuss the significance of co-curricular attendance management and its impact on student engagement, personal growth, and skill development. It will emphasize the need for an automated and centralized system that can facilitate the seamless recording, tracking, and reporting of student attendance for various co-curricular events and programs.

Furthermore, the report will delve into the limitations and drawbacks of traditional manual methods of attendance management, including paper-based registers or spreadsheets, and the potential risks associated with human errors, data inconsistency, and time-consuming administrative tasks.

The proposed solution will explore the utilization of technological tools and platforms to automate the attendance management process. These may include mobile applications, RFID or barcode scanning, web-based interfaces, and data analytics systems. The report will outline the benefits of implementing such a system, including accurate attendance tracking, real-time reporting, data-driven insights, improved communication, and streamlined administrative tasks.

Additionally, the project report will discuss the project scope, objectives, and methodology to be followed for the implementation of the co-curricular attendance management system. It will highlight the expected outcomes and potential future enhancements or expansions of the system, considering factors such as scalability, integration with existing systems, and user experience.

By the end of this report, readers will gain a comprehensive understanding of the importance of co-curricular attendance management, the challenges involved, and a proposed solution that leverages technology to enhance the overall process. The report aims to provide educational institutions with valuable insights and recommendations for implementing an effective and efficient co-curricular attendance management system.

1.1 Objectives

The objective is to provide an web application which manages the activity of many co curricular activities at a time. It also manages the selection activity of students . The users will consume less amount of time when compared to manual paper work through the automated system. The system will take care of all the servicing activity in a quick manner. Data storing is easier. It will be able to check any report at any time.

In this web application where students , faculty, parents and aspirants can look about the co curricular activities held in Nie. This web application also provides the related members of the users to gain information related to their activites and also helps to maintain attendance of the participating students. We aim to bring more transparency in these cultural and co curricular acts between both the users of our web application.

User-friendly interface: The project strives to create a user-friendly interface that allows users to easily input statements and receive prompt feedback on their truthfulness. The interface will be designed to be intuitive, accessible, and accommodating to users with varying levels of technical expertise.

Users can navigate through the website to gain info about these events like sports, placement activities etc. It provides login page to students in which participating students can fill the attendance form to maintain their academic attendance. Here they can fill out forms for participation for events , manage their attendance for the events they are participating and view all their previous participation.

1.2 Scope of project

- The Students can upload their certificates through online for different co-curricular activities such as sports, placements and cultural events and teachers can view the certificates.
- The system enables real-time attendance tracking for co-curricular activities.
- As students and lecturers are increasingly using mobile devices, the system has a mobile-friendly interface. This enables easy access to attendance records, event details.
- The system has prioritize data security and privacy, ensuring that student attendance records are stored securely and accessible only to authorized personnel.

Chapter 2

LITERATURE SURVEY

2.1 District level sports management system - Authors : Aniket Zode1 , Tanushree Tarankar , Bhagyashree Lute , Sonal Chakole.

The complete system is design and developed using webtechnology. Interface is designed by Bootstrap and JavaScript. The back-end is developed by Laravel and PHP. On webpage there are various options such as home, contact, sports schedule and many more. The main purpose of webpage is to give a brief idea about the Sports to users and the facilities provided by it. After login, User can add new participant's and teacher's information, payment process in which participant can get challan online instantly and its copy are distributed to bank, school and branch. Sports list shows the various sports available with it's age limit. Admin can modify the system's view and can edit the sport's schedule, sports protocols and latest news regarding sport which is displayed on home page. Admin also provide certificates to the particular school who enroll themselves for competition. System provide the more security, reduce the time as well as fraud happened during the sports.

2.2 Web based attendance management - Authors : Arvind Lal, Chumphlla Bhutia, Bidhan Pradhan, Monisha Limboo.

The system is a Web-based application developed for daily student attendance in departments within the university. It facilitates access to the attendance of a particular student in a particular class. This system will also help in generating reports and evaluating the attendance eligibility of a student. The system is not only improving the work efficiency, students' study and development, but also can save human and material resources.

2.3 Attendance Management System through Fingerprint - Authors : Nilesh Rathod, Seema Shah, Kavita Shirsat.

This paper proposed an idea of recording attendance using biometrics (fingerprint) for tracking attendance and storing the data using LAN. This paper provides a brief description about the usage, accessibility, accuracy, affordability and acceptance of biometric (fingerprint verification) system. In this system the data is fetched from the individual in the form of fingerprint and then it is verified with the data that was stored in prior and marks the attendance of an individual. Finally the database is also obtained. This method provides high accuracy results and consumes less time but it is not cost-effective.

Chapter 3

SYSTEM ANALYSIS

3.1 Existing System

Presently we do not have any separate section for the purpose of the cocurricular activities in Nie . All the notifications regarding these events are either sent through whatsapp by several members that do not always reach everybody sometimes these notifications are sent via email thar are often ignored.

Students who did participate in the events struggle to maintain their academic attendance and are bid to run around the required faculty for their attendance. Currently the notifications that are sent to are not being reached by majority of the students . The selective few are the ones who are participating and the else are less aware of the events being held. The existing system is more of a manual work, where the students have to walk up to the sports department.

3.2 Disadvantages of existing system

- Involves a lot of paperwork
- Students have to walk a lot for the registration and other sports-related activities
- Data getting corrupted is high
- Human error is common during intra-college and university tournaments.
- The students need to visit the venue to get all the information about the tournament and would have to wait for a long time.
- Manually recording all information with regard to all data and manually creating the contest schedules, coordinating facility usage, and hand-registering athletes and teams. The dissemination of information would require that documents be typed, photocopied, and put up on the notice board or common place where students can view them.

3.3 Proposed system

Using this website it provides for all students the platform for attendance and recent sport activities. It provides secure communication between student and the faculties using the login page. Unauthorized access not possible.Students have access to view the recent activities of sports and co-curricular activities. It ensures the security of co-curricular activities.It is like our contineo website. Everyday students can visit this site to get know about what are the recent sport and co-curricular activities.

This platfrom provide more insights to regarding co-curricular activities.All students can visit the site if the username and password is correct. It will go the attendance form if we login through the login page and the students who have participated in sports and co-curricular activites can fill this form and it will go to specified faculty through the email, whatsapp and the form. They will verify the document that is sent using the attendance form in this way there is a secure communication. It saves the time for both the students and the faculty.

3.4 Advantages of proposed system

- Students can communicate easily with faculty Members.
- Paperwork is not needed because it is through digitalization.
- This Web Application will become an asset for the campus and can be used for various productive purposes.
- The students can upload their certificates by using this application.

3.5 SYSTEM REQUIREMENTS

3.5.1 Software requirements

1. VS Code.
2. Bootstrap.
3. Mysql .
4. React JS and Node JS .
5. Mongoose, Express, Nodemon, Postman.
6. Any appropriate web browser ex- chrome, brave etc.

3.5.2 Hardware requirements

1. Intel Core i3 or any equivalent Processor.
2. 2GB RAM or more.
3. 1GB ROM or more.

the activity that it can be placement, Sports and cultural activities and the email is sent to the respective faculty and then we can logout the webpage.

The above explained user interface can be better explained by using a use case diagram. Use-case diagrams describe the high-level functions and scope of a system. These diagrams also identify the interactions between the system and its actors. The use cases and actors in use-case diagrams describe what the system does and how the actors use it, but not how the system operates internally.



Fig 4.4 Use Case Diagram.

4.5 Data Flow

The flow of the user's journey begins at the home website, which includes various pages such as sports, placement, cultural activities, and a contact page for additional project information. The user then proceeds to the required page to send an email to a specific faculty member regarding their absence from class, corresponding to their respective course. Initially, the user must create an account by providing their details and using their college email address. An OTP (One-Time Password) is sent to the user's email for verification. Once the OTP is entered, the user's identity is confirmed, and they are directed to the sign-up page where they can enter their email and password. To ensure password security, the system stores passwords in a hashed format, making it impossible to decrypt. After completing all the necessary verifications, the user proceeds to the attendance page.

On the attendance page, the user enters the course ID to retrieve comprehensive information about the course, including the faculty's email address. The user copies the email and proceeds to the next page. At this stage, the user enters the copied email along with other required details and sends the email to the faculty using their college email ID. After sending the email, the user can choose to log out or return to the home page, thus completing the entire cycle.

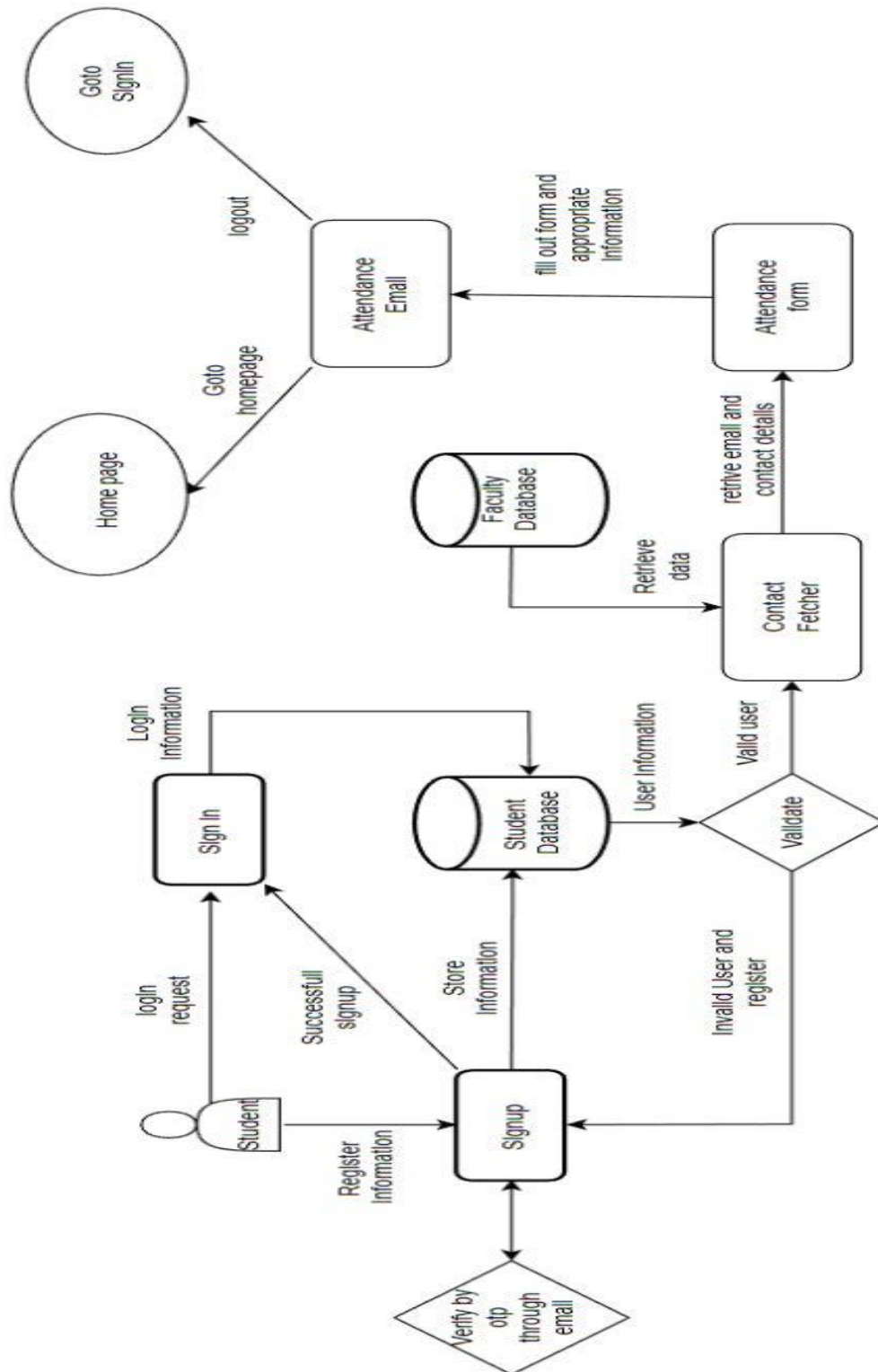


Fig 4.5 Data flow diagram

4.7.1 Client-Side

- User Interface: The client-side includes the web browser or mobile app interface through which users interact with the social network. It encompasses the UI design, layout, and user interactions.
- Front-End Technologies: HTML, CSS, and JavaScript are used to create the user interface and handle client-side interactions.

4.7.2 Server-Side

- Web Server: The web server receives client requests and responds with the appropriate data. It serves as the intermediary between the client-side and the back-end components.
- Application Logic: The application logic handles the processing of user requests, manages user sessions, and interacts with the database. It performs tasks such as user authentication, data validation, and business logic implementation.
- Server-Side Technologies: Server-side technologies like PHP are used to implement the application logic.
- Database: The database stores and manages the social network's data, including user profiles, posts, messages, and other relevant information. Common database technology MySQL is used here.

4.8 Pseudo code

4.8.1 Email validator

```
function sendAttendanceForm():
    if request_method == 'POST':
        // Retrieve form data
        studentName = $_POST['studentName']
        branch = $_POST['branch']
        usn = $_POST['usn']
        courseName = $_POST['courseName']
        activityDetails = $_POST['activityDetails']
        documentProof = $_POST['documentProof']
        studentEmail = $_POST['studentEmail']
        facultyEmail = $_POST['facultyEmail']

        // Create email content
        emailContent = "Attendance Form - Missed Class\n" +
            "Student Name: " + studentName + "\n" +
            "Branch: " + branch + "\n" +
            "Branch: " + usn + "\n" +
```

```
"Course Name: " + courseName + "\n" +  
"Activity Details: " + activityDetails + "\n" +  
"Document Proof Link: " + documentProof  
  
// Send email using PHPMailer  
if sendEmail(studentEmail, studentName, facultyEmail, emailContent):  
    redirect_to('welcome.php')  
else:  
    display_error_message("Failed to send. Please try again.")  
else:  
    display_error_message("Invalid request method. Please submit the form.")
```

4.8.2 Password validator

```
function validPassword(password)  
{  
    //checkLength  
    if(password.length<8)  
        return invalid  
    //check Special Character  
    if(!password.contains["$","#","!","^","*"])  
        return invalid  
    if(!containsNumber(password)||!containsUpperCase(password)||!containsLower(password))  
        return invalid  
    //All conditions met  
    return valid  
}
```

4.8.3 Login

```
GET LoginID  
GET Password  
IF(LoginID == EnteredUsername && Password == EnterPassword) THEN  
    Login Successful  
ELSE  
    Login Failed  
ENDIF
```

4.8.4 OTP Validator

```
function generateOTP():  
    otp <- generateRandomNumber(100000, 999999)  
    sendOTPViaSMS(otp)
```

```
    displayOTPSuccessMessage("OTP generated and sent successfully.")
    return otp
function generateRandomNumber(min, max):
    randomNumber <- random(min, max)
    return randomNumber
function sendOTPViaSMS(otp):    // Implement code to send the OTP via SMS
function displayOTPSuccessMessage(message):
generatedOTP <- generateOTP()
```

Chapter 5

SYSTEM IMPLEMENTATION

5.1 Software Model Used

5.1.1 Agile Method

Scrum is an iterative and incremental framework that focuses on delivering value in short development cycles called sprints. The development process in Scrum involves breaking the project into small, manageable tasks and prioritizing them in a backlog. During each sprint, a cross-functional team collaborates to complete the selected tasks. Scrum enables flexibility, adaptability, and frequent feedback, which is beneficial for a blogging website as it allows for continuous improvement and faster time-to-market.

Product backlog: The product owner identifies and prioritizes features and improvements for the blogging website, creating a product backlog. This backlog may include items such as user registration, article publishing, commenting system, search functionality, responsive design, and SEO optimization.

Sprint planning: The development team, along with the product owner, selects a set of high-priority items from the product backlog to work on during a sprint, which is a fixed time period, typically 1-4 weeks. During sprint planning, the team breaks down the selected items into smaller tasks and estimates their effort.

Daily scrum: The development team holds daily stand-up meetings, called the daily scrum, to synchronize their work. Each team member briefly discusses what they worked on the previous day, what they plan to work on that day, and any potential obstacles or dependencies they have encountered. This fosters transparency, coordination, and the identification of potential bottlenecks.

Sprint execution: The development team works on the selected backlog items throughout the sprint. They collaborate closely, continuously integrating their work, and performing regular code reviews to ensure high-quality code and adherence to best practices. The Scrum Master facilitates the process and helps resolve any impediments that arise.

Sprint review: At the end of each sprint, the team conducts a sprint review meeting to showcase the completed work to stakeholders, including the product owner and other relevant parties. This allows for feedback, discussion, and validation of the delivered functionality.

Sprint retrospective: Following the sprint review, the team holds a retrospective meeting to reflect on the sprint's outcomes, processes, and collaboration. They identify what went well, areas for improvement, and actionable steps to enhance their efficiency and effectiveness in the next sprint.

5.2 Technologies Used:

5.2.1 React JS for Front-end

React.js is a popular JavaScript library framework for building user interfaces (UIs) and front-end. It was developed by Facebook and is widely used in web development for creating interactive and dynamic UI components. React allows developers to build reusable UI components that update efficiently and seamlessly based on changes in data, resulting in faster and more responsive web applications.

Some of the key aspects of React Js are:

- **Component-Based Architecture:** React follows a component-based architecture, where the UI is divided into small, reusable components. Each component encapsulates its own logic, state, and rendering, making it easier to manage and maintain complex UI structures.
- **Virtual DOM:** React uses a virtual representation of the actual Document Object Model (DOM) called the Virtual DOM. It maintains a lightweight copy of the DOM in memory and efficiently updates only the necessary parts when the application state changes. This approach improves performance by minimizing the number of actual DOM manipulations.
- **JSX:** React uses JSX (JavaScript XML) as its syntax extension, which allows developers to write HTML-like code directly within JavaScript. JSX enables a more declarative and intuitive way of defining UI components and their interactions.
- **React Hooks:** Introduced in React version 16.8, hooks are functions that allow developers to use state and other React features in functional components without needing to write a class. Hooks provide a simpler and more concise way to manage component state, side effects, and lifecycle events.
- **React Router:** React Router is a popular routing library for React applications. It provides a declarative way to handle client-side routing, enabling the creation of single-page applications with multiple views and navigation between them.

5.2.2 000Webhost

000webhost is a web hosting service provider that offers free hosting plans to individuals and small businesses. While I don't have access to specific internal information or their current policies as of my knowledge cutoff in September 2021, I can provide some general information and theories based on common knowledge.

Website link : <https://nieactivities.000webhostapp.com/index.html#heroCarousel>

- **Revenue Model:** One theory is that 000webhost operates on a freemium model. They offer free hosting services to attract users and build a customer base. They may generate revenue through premium plans, upselling additional features, advertisements, or partnerships with other service providers.
- **Resource Limitations:** Free hosting services often come with limitations to control costs and prevent abuse. There might be restrictions on disk space, bandwidth, number of websites, or other features compared to paid hosting plans.
- **Community and Support:** As a popular free hosting provider, 000webhost likely has an active community of users who share knowledge and help each other through forums, blogs, or support channels. This can be a valuable resource for troubleshooting, learning, and getting assistance with any issues that arise.
- **Data Security:** Given that 000webhost hosts websites and potentially handles sensitive user data, it is crucial for them to prioritize data security. This may include implementing measures such as encryption, regular backups, firewall protection, and other security practices.
- **Performance and Reliability:** Free hosting services may not always provide the same level of performance and reliability as paid hosting plans. Due to resource limitations and a potentially high number of users, there could be occasional slowdowns or downtime.

5.2.3 Visual Studio Code Editor

Visual Studio Code is a free and open-source code editor developed by Microsoft. It has lightweight nature, extensive feature set, and strong ecosystem of extensions.

Some of the key aspects and features of VS Code are:

- **Cross-Platform Support:** VS Code is available for Windows, macOS, and Linux, ensuring compatibility across different operating systems. This allows developers to work with their preferred platform and seamlessly collaborate with others.
- **Lightweight and Fast:** VS Code is designed to be lightweight and optimized for performance. It has a minimalistic user interface and consumes fewer system resources compared to other full-fledged IDEs, resulting in a fast and responsive coding experience.
- **Rich Language Support:** VS Code provides robust language support for a wide range of programming languages, including popular ones like JavaScript, Python, Java, C++, and many more. It offers syntax highlighting, IntelliSense (code completion), code formatting, and other language-specific features to enhance productivity.
- **Extensibility with Extensions:** VS Code has a vast and active extension marketplace that allows developers to enhance and customize their coding environment. Extensions provide additional functionalities such as support for specific frameworks, linters, debuggers, themes, and more. Developers can choose from thousands of extensions to personalize their coding experience.

- **Integrated Terminal:** VS Code includes an integrated terminal that allows developers to run commands, scripts, and interact with the command-line interface without leaving the editor. It supports multiple terminal instances, customizations, and the ability to choose the default shell.
- **Version Control Integration:** VS Code offers seamless integration with popular version control systems such as Git. It provides built-in features for viewing and managing changes, committing code, resolving conflicts, and working with remote repositories. This simplifies collaboration and version control workflows.
- **Productivity Features:** VS Code offers several productivity-enhancing features, such as integrated task runners, code snippets, intelligent code navigation, refactoring tools, and built-in Git source control. These features help streamline development workflows and improve coding efficiency.

5.2.4 Bootstrap

Bootstrap is a popular open-source framework used for developing responsive and mobile-first web applications. It was originally created by Twitter and has gained widespread adoption due to its ease of use, flexibility, and robust set of pre-built components and styles.

Some of the key points about Bootstrap are:

- **Responsive Design:** Bootstrap is known for its responsive design capabilities, which allow websites and applications to adapt and display optimally across different devices and screen sizes. It achieves this through a grid system that enables developers to create flexible and responsive layouts.
- **Pre-built Components:** Bootstrap offers a wide range of pre-built components, such as navigation bars, buttons, forms, modals, and carousels, among others. These components are designed to be easily customizable and can save developers a significant amount of time and effort when building user interfaces.
- **CSS Styling:** Bootstrap includes a comprehensive set of CSS styles that provide a consistent and visually appealing appearance to web applications. These styles are based on modern design trends and best practices, ensuring a professional and polished look for your project.
- **JavaScript Plugins:** Bootstrap comes bundled with a collection of JavaScript plugins that enhance the functionality of web pages. These plugins offer features like dropdown menus, tooltips, modals, sliders, and much more. They are well-documented and can be easily integrated into your project.
- **Cross-browser Compatibility:** Bootstrap is designed to be compatible with all modern web browsers, ensuring a consistent experience for users across different platforms. It takes care of

handling browser inconsistencies and provides a reliable foundation for building web applications.

- **Community and Support:** Bootstrap has a large and active community of developers, which means that you can find plenty of resources, tutorials, and examples online. The official Bootstrap documentation is comprehensive and provides clear guidelines on how to use its features effectively.
- **Customization:** While Bootstrap provides a set of ready-to-use components and styles, it is highly customizable. Developers can easily modify the framework to suit their specific design requirements by overriding CSS styles, adding custom JavaScript, or even choosing a subset of components to include in their project.
- **Integration with Other Tools:** Bootstrap can be seamlessly integrated with other popular tools and frameworks, such as jQuery, Angular, React, and Vue.js. This allows developers to leverage the power of Bootstrap while working with their preferred technologies.

5.2.5 HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web. Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document. HTML elements are the building blocks of HTML pages. With HTML constructs, images, and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes, and other site.

5.2.6 CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate.

5.2.7 MySQL

MySQL is an open-source Relational Database Management System (RDBMS). MySQL is free and open-source software under the terms of the GNU General Public License and is also available under a variety of proprietary licenses. MySQL was owned and sponsored by the Swedish company MySQL AB, which was bought by Sun Microsystems (now Oracle Corporation). The MySQL server provides

a database management system with querying and connectivity capabilities, as well as the ability to have excellent data structure and integration with many different platforms. It can handle large databases reliably and quickly in high-demanding production environments. MySQL Workbench is a visual database design tool that integrates SQL development, administration, database design, creation and maintenance into a single integrated development environment for the MySQL database system. It is the successor to DB Designer 4 from fabFORCE.net, and replaces the previous package of software, MySQL GUI Tools Bundle.

5.2.8 PHP Language (Back End)

PHP code may be embedded into HTML code, or it can be used in combination with various web template systems, web content management systems, and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface(CGI) executable. The web server combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface(CLI) and can be used to implement standalone graphical applications. The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP License. PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge. The PHP language evolved without a written formal specification or standard until 2014, leaving the canonical PHP interpreter as a de facto standard. Since 2014 work has gone on to create a formal PHP specification. PHP is an html-embedded scripting language. Much of its syntax is borrowed from c, java and Perl with a couple of unique PHP-specific features thrown in. the goal of the language is to allow web developers to write dynamically generated pages quickly. This is generally a good definition of PHP. However, it does contain a lot of terms you may not be used to. Another way to think of PHP is a powerful, behind the scenes scripting language that your visitors won't see! When someone visits your PHP webpage, your web server processes the PHP code. It then sees which parts it needs to show to visitors (content and pictures) and hides the other stuff (file operations, math calculations, etc.) then translates your PHP into html. After the translation into html, it sends the webpage to your visitor's web browser.

5.2.9 PHP Mailer

Many PHP developers need to send email from their code. The only PHP function that supports this directly is mail(). However, it does not provide any assistance for making use of popular features such as encryption, authentication, HTML messages, and attachments. Formatting email correctly is surprisingly difficult. There are myriad overlapping (and conflicting) standards, requiring tight adherence to horribly complicated formatting and encoding rules – the vast majority of code that you'll find online that uses the mail() function directly is just plain wrong, if not unsafe!

The PHP mail() function usually sends via a local mail server, typically fronted by a sendmail binary on Linux, BSD, and macOS platforms, however, Windows usually doesn't include a local mail server; PHPMailer's integrated SMTP client allows email sending on all platforms without needing a local mail server. Be aware though, that the mail() function should be avoided when possible; it's both faster and safer to use SMTP to localhost.

Chapter 6

SYSTEM TESTING

The purpose of this report is to provide a comprehensive overview of the system testing activities conducted for “Web application Co-curricular NIE”. System testing is a critical phase in the software development lifecycle that verifies the system's functionality, performance, and reliability. This report outlines the testing objectives, strategies, test cases, and results to ensure the quality and robustness of the system. The primary objectives of the system testing phase were as follows:

- Validate that the system meets the specified functional requirements.
- Verify the system's performance, scalability, and response time under different loads.
- Identify and rectify any defects or bugs to ensure a stable and reliable system.
- Ensure that the system integrates seamlessly with external dependencies and services.
- Validate that the system is user-friendly and intuitive.

The various types of testing done on system were:

6.1 Unit testing

Unit Testing is a procedure used to validate that a particular module of source code is working properly. The procedure is to write test cases for all functions and methods so that whenever a change causes a regression, it can be quickly identified and fixed. Ideally, each test case is separate from the others. This type of testing is mostly done by the developers and not by end-users. The goal of unit testing is to isolate each part of the program and show that the individual parts are correct. Unit testing provides a strict, written contract that the piece of code must satisfy.

6.2 Integration Testing

Integration testing is the phase of software testing in which individual software modules are combined and tested as a group. It follows unit testing and precedes system testing. Integration testing takes as its input modules that have been checked out by unit testing, groups them in larger aggregates, applies tests defined in an integration test plan to those aggregates and delivers as its output the integrated system ready for system testing.

6.3 Validation Testing

At the culmination of integration testing, software is completely assembled as a package, interfacing errors have been uncovered and corrected, and a final series of software tests, validation testing was carried out. Validation testing can be defined in many ways, but a simple definition is that validation succeeds when the software functions in a manner that can be reasonably expected by the customer/user.

6.4 Acceptance Testing

When that user fined no major problems with its accuracy, the system passers through a final acceptance test. This test confirms that the system needs the original goals, objectives and requirements established during analysis without actual execution which elimination wastage of time and money acceptance tests on the shoulders of users and management, it is finally acceptable and ready for the operation.

CONCLUSION

In conclusion, our web project has been a method to solve the problems faced by the students and other people, our project has been a success in this way by the implementation of this procedure, there might have been many other methods of proceeding to solve this situation but this project implements one of the best ones of the ways, there may be further rectifications and improvements in the implementation of the project. Throughout this project, we have successfully achieved our objectives and created a platform that fosters self-expression, community engagement, knowledge sharing, and inspiration.

FUTURE SCOPE

Enhance the user interface and navigation of the website to make it more intuitive, user-friendly, and visually appealing. Implement responsive design to ensure a seamless experience across different devices. Develop a robust content management system (CMS) that allows visitors to easily understand and read the site. Include features such as scheduling, and documents uploading for efficient content organization and lessening the manual work and making it more available digitally. Provide customization options for users to personalize their profile and reading experience.

REFERENCES

- Wangwei, lingqiang “Design and Implementation of small and medium Sports Event Management Platform for College”, pp: 379-382, IEEE 2015
- Ekta Chhatar, Heeral Chauhan, Shubham Gokhale, Sompurna Mukherjee, Prof. Nikhil Jha, “Survey on Student Attendance Management System”, S.B. Jain Institute of Technology, Management and Research, Nagpur, 2016
- Mahesh G, Jayahari KR, Kamal Bijlani, “A Smart Phone Integrated Smart Classroom”, Amrita e-Learning Research Lab (AERL) Amrita School of Engineering, Amritapuri, Amrita Vishwa Vidyapeetham, Amrita University, India, 2016
- Website 1 - <https://www.w3schools.com/>
- Website 2 - <https://legacy.reactjs.org/docs/getting-started.html>
- Website 3 - <https://getbootstrap.com/>