ZOO MANAGEMENT SYSTEM

P. Nandhini

PG Department of Computer Science, St. Mary's College (Autonomous), Thoothukudi

Affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India

ABSTRACT:

The information system for communication with zoo management system mainly focuses on keeping track of visitors, sponsors, and animals records with respect to categories. Also, the system displays all the available vacancies. In addition, the system allows ticket reservations for the visitors. This project contains a client-side with an admin panel, employee panel, sponsorship panel and visitor's panel. In an overview of this web application, visitors have to register in order to use the services. Here, registered visitors van view upcoming events, book the tickets and may able to send feedback. In terms of sponsorship accounts, he/she can sponsor animals. Before that, each sponsor has to provide detailed information including their annual revenue and others. An admin has full control over the system. He/she can manage animals, system users, employees, upcoming events, classifications and so on.

KEYWORDS:

Zoological Park, animal health records, interactive map, breeding programs, donation management, CRUD operations.

INTRODUCTION:

Zoo Management System mainly focuses on keeping track of visitors, animals, and more. The system helps to keep track of visitors, sponsors, and animal records with respect to categories. Also, the system displays all the available vacancies.

An administrator has full control over the system. He/she can manage animals, system users, employees, classifications, events, and so on. Here, each and every section has its own respective details such as name, image, and other important details. Here, an admin first has to set up classification, locations for maintaining further processes. Second the admin can manage animals with their respective details. Diving more into the animals section allows the administrator to archive/unarchive records, set animal of the week. This particular section plays an important role for the client-side in order to display animal records. Both the users' levels are to be managed by the admin from the account section. The user can register themself as zoo visitors. Here, the administrator can mark visitors as archives.

In vacancy section, the user can make vacancy announcements. For this, the user has to provide details such as job title, description, type, contract start, and ending date. All this vacancies are displayed on the client-side where any users can apply for them by uploading their CV. Also, the administrator can list out all the job applications and take action against it. Here, action refers to approving and declining the application of the job applicants. Also, the user can download the CV of each applicant in order to view it.

The visitors are the ones that make ticket reservations from the client-side. For this, the visitor has to provide minor information such as visiting date, the number of children, students and others. Here, ticket price varies according to age groups and students. After making reservations, the admin can list out all the ticket reservation information. This includes the name of the visitor their total ticket, total amount, and visiting date.

In terms of sponsorships, the administrator has the right to approve/reject sponsorship requests. Without approval from the admin, the sponsors won't get any access to the website's feature. Similarly, the same procedure goes towards animal sponsorship applications.

MATERIALS AND METHODS:

Software Description:

The project entitled "Zoo Management System" utilized the following software specifications:

- **HTML**

The Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With 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 documents.

- **CSS**

CSS is the language for describing the presentation of Web pages, including colour, layout, and font. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based mark-up language. The separation of HTML from CSS makes it easier to maintain sites, share style sheets across pages to different environments.

- **Java Script**

Java Script is a cross-platform, object-oriented scripting language used to make Web Pages interactive. There are also more advanced server-side versions of JavaScript such as Node. Js which allow you to add more functionality to a website than simply downloading files (such as real time collaboration between multiple computers. Inside a host environment, JavaScript can be connected to the objects of its environment to provide programmatic control over them. Client-side JavaScript extends the core language by supplying objects to control a browser and it's Document Object Model (DOM).

- **PHP**

PHP is a server side scripting language that is used to develop Static websites or Dynamic websites or Web applications. PHP stands for Hypertext Pre-processor, that earlier stood for personal Home Pages. PHP is supported by a wide range of commercial and open- source web servers, including Red-Hat Linux, and can also be installed as an Apache module. Its widespread availability and its relative simplicity mean that it is an excellent way to introduce dynamic features into your Web Pages. As it is an open, non-proprietary standard, PHP developers are not restricted by the limitations imposed by some commercial suppliers of server- side scripting software; neither do they have to purchase expensive licenses in order to use it.

- **MySQL**

It handles large databases much faster than existing solutions. It consists of multi-threaded SQL server that supports different back ends, several different client programs and libraries, administrative tools, and application programming interfaces (APIs) its connectivity, speed, and security make MySQL server highly suited for accessing databases on the internet. MySQL database server offers several advantages:

- MySQL is easy to use, yet extremely powerful, fast, secure and scalable.
- MySQL runs on a wide range of operating system, including UNIX or Linux,Microsoft Windows, Apple Mac OS X, and others.
- MySQL is ideal database solution for both small and large application
- MySQL is developed, and distributed by Oracle Corporation.

Project Description:

The Zoo Management System is a comprehensive software solution designed to streamline the operations and administration of modern zoological parks. This system offers a centralized platform for managing various aspects of zoo activities including

animal records, visitor management, staff scheduling, financial transactions, and conservation efforts. Zoo administrators can easily maintain detailed profiles for each animal, including species information, medical records, diet plans, and behavioral observations. Through integrated RFID tracking, staff can monitor the movement and health status of animals in real-time, ensuring their well-being and safety. This feature not only improves animal care but also aids in research and conservation efforts by providing valuable data for scientific analysis.

It has the following modules:

ADMIN SIDE:

Login page: The page where system admin will submit their system to view and control thesystem design**.**

Animal's page: The website where the admin can add, edit, view and manage the details of theanimals and recommend them for a watchlist.

Location page: The website where the admin can add, edit, view the details of the locations.

Classification page: The website where the admin can add, view and update the animal's type.

Vacancies page: The page where the admin can add, view the job application. And based ontheir qualification, the admin has the authority to approve or reject the application.

Employee page: The page where the admin can add, view the employees of the zoo.

Vacancies page: The page where the admin can add, view the vacancies and view the application details and download CV.

Visitor page: The page where the admin can view the total number of visitor who visit the zoo.

Gallery page: The page where the admin user will manage the gallery images and data.

USER SIDE:

Home page: The default page where the user will be redirected when browsing the website andafter logging in.

Gallery page: The page where the images posted by the admin is being shown.

Animal page: The page where the different type of animal images and details of the animals areposted by the admin is being shown.

Book ticket page: The page where the user can book the ticket.

Vacancies page: The page where the user can apply for the job.

Event page: The page where the events posted by the admin is being shown.

Contact us page: The page where the user can contact and send message to the zoo.

Register page: The page where the user can login as visitor or login as sponsor.

RESULTS AND DISCUSSION:

Evaluate the satisfaction level of zoo visitors and staff members with the newly implemented system. Conduct surveys or interviews to gather feedback on the usability, functionality, and overall experience. Measure the efficiency gains achieved with the implementation of the zoo management system. Compare the time and resources required for various tasks before and after the system deployment. Analyze the cost-effectiveness of the system by comparing the expenses associated with manual processes versus those incurred with the automated system. Evaluate the security measures implemented within the system to protect sensitive information such as visitor records, financial transactions, and animal health data.

CONCLUSION:

The zoo management system developed in PHP offers a comprehensive solution for efficiently managing zoo operation. Through its intuitive interface and robust feature, it streamlines tasks such as animals tracking, staff management, and visitor engagement. Additionally, its customizable nature allows zoos to adapt to evolving needs and enhance overall efficiency. Overall, the implementation of this system signifies a significant step towards modernizing zoo management practices and ensuring a seamless experience for all stakeholders involved.

REFERENCES:

1. Paul A. Rees, 2013" Zoo management: A world class practice", First edition, Publisher:Wiley-Blackwell, Chichester, UK.
2. Michael Fouraker, James P.Gibbs, Larry J.Niles, 2015 "Wildlife Management and Conservation: Contemporary Principles and Practices", First edition, Publisher: Wiley-Blackwell, Chichester, UK.
3. Terry Maple, Susan G.Herman, 2018"Zoo Animals Welfare", Second edition, Publisher:Springer, Chem. Switzerland.
4. Ronald L.Tilson, Philip J.Nyhus, 2010"Tigers of the World: The Science, Politics and Conservation of Panthera tigirs", Second edition, Publisher: Academic Press, London.

5. David J. Gwynne, Terry L. Maple, 2020" Zoo Animal Learning and Training for EffectiveManagement and Conservation" Publisher: Academic Press, London.
6. Daryl J. Boness, Thomas L.Chapman,2006"Behavioral Approaches to Conservation inthe Wild", First edition, Publisher: Cambridge University Press, Cambridge, UK.