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Review Article

Web-Based Sport Management System with Short Message Service Notification (WBSMS)

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ABSTRACT

The collection, management and dissemination of data manually in the sport unit of federal polytechnic Ile-Oluji has posed a serious challenge to the unit. This is especially true because of the absence of a central repository from which all information related to the sport unit can be stored and managed. In this paper, a sport management system was developed for the sport unit of the Federal Polytechnic Ile-Oluji, Ondo State, Nigeria. The Web-Based Sport Management System (WBSMS) was developed using macromedia dream weaver as the integrated development environments, Hypertext Mark-Up Language, Cascading Style Sheet and JavaScript were used for the frontend. PHP was used as the scripting language and MySQL served as the database server. The result of the developed system showed that all details of student involved in the sport unit can be able to register, login, tournament assignment, submit details, run queries on information that has been previously entered into the system such as tournament assignment, registering sport equipment and SMS notification sent to student when they have been assigned to a tournament. It is recommended for sport unit with accessible internet services for proper record keeping and prompt notification after student have been assigned to a tournament.

Keywords: Web-based; Sport; Management; SMS; Notification

INTRODUCTION

Sport is an activity involving physical exertion and skills in which an individual or team competes against one another for entertainment. The sport unit in any educational institution is responsible for managing, arranging and organizing both staff and student participation in different sport activities. The unit is also in charge of maintaining and supervising sport facilities. The unit requires proper management of data of each participant in different sport activities. The main objectives of the unit is to train student and encourage student who can also represent the school at local and national level and also drive in the importance of sports to both student and staff. Another objective of the unit is to analyse evolving opportunity for sport in daily life and to build background knowledge for student about sports. The paper focuses on the design and implementation of a web-based SMS notification sport management system for the federal polytechnic Ile-Oluji sport unit [1].

WBSMS is a system that is design to manage the activities in the sport unit such as student information and this is an application that was developed to keep the record of students' details and available equipment in the sport unit. The research was embarked to find out some of the problems experienced at the sport unit of the polytechnic and also provide necessary solutions that will further develop the unit. Some of the major problems in the unit include storing and retrieving student registration in the absent of a coach. As of now the unit is making use of paper and pen method of registration to eradicate this problem. A computerized sport management system will be developed for the unit to make their job easy and for documentation purpose [2].

Objectives

Considering the problems stated above, the work was aimed at designing and implementing a Web-Based Sport Management

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System (WBSMS) for federal polytechnic Ile-Oluji sport unit. The objective of the research work is to:

- Design a registration form to store details of student information in the database.
- Keep record of equipment in the sport unit.
- Assigning of tournament.
- Send SMS notification to student assigned to a tournament [3].

During the design and implementation of the work, three major approaches were used:

Data gathering: In order to obtain demographic information about the unit using a web based sport management system only few question were asked from the head coach of the polytechnic which was the primary source of data used for this project. The purpose was to get the unit view on the suggestion to develop a sport management system [4].

Software: Various application were used for the achievement of the project such as macromedia dream weaver 8, macromdia firework, MySQL and programming language such as PHP, HTML, JavaScript, CSS (Cascading Style Sheet).

Out sourcing: The secondary sources from which data was collected include textbooks from library and different websites on the internet. This was the secondary source of data which was considered most helpful [5].

LITERATURE REVIEW

It has provided a thesis that focused on providing a software solution for the San Diego State sports department to track budget and game-schedule information. The solution helped people in the department to manage, track and report information through a database system, thereby replacing pen and paper. The thesis also provided a comparative qualitative analysis on rich internet application frameworks like Adobe Flex, JavaFX and Microsoft Silverlight. The product was designed along the lines of a multi-tier architecture using open source technologies like Flex, Restlets, and MySQL. The work developed helped to serve the administrative personnel with better control of classified information in day to day activities [6].

It limitation was that the system was limited to the San Diego state sport department and couldn't be used in any other sport department. There was no provision for storing sport equipment. Team members had to regularly log in to the system for new information [7]. I has developed sport management system to help small sport clubs in their management task. Taking as example the management task of the football club from the outside perspective, the management task is reduced to fill a paper with amounts of personal data and deliver it to the club. Meanwhile, from the inside perspective, lots of sign up papers are being received with the data that will be needed afterwards to set the rosters of the teams and maybe more things. In the football club, this task was performed with no use of technology at all for a long time, until the lasts years when it was introduced a database to store players' and partners' data. This database was created using Microsoft access and kept on premise in the club's office computer [8]. The data had to be entered and maintained manually and locally from the computer, and also repeat the same every year for the new users and update the data of the ones that were already in. The work allows the users to interact with the club's database online through a friendly user interface, manage the users who access the intranet and manage the players subscribed to the club. It limitation was that the system was limited to the university of Barcelona Tech. football club and couldn't be used in any other sport department. The design system used Xampp as the local sever. Xampp is a local sever PHP (Hypertext Preprocessor) is a programming language very popular in the development of web pages that can be combined with HTML. MySQL was also used as the database that holds the information supply from the frontend. The client side part of the project was developed, as most websites, using HTML, CSS and JavaScript as the font end. The system used dream weaver 8 as the integrated development environment [9].

Findings

The sport unit is one of the core areas of the institution due to the sensitive role it plays in the management of local, state and national sport activity. In order to keep the unit moving and reliable, the implementation of sport management system will be very important to the unit. The work will enable the sport unit of the polytechnic to majorly achieve the following:

- Provide a centralized and secure database.
- Storing and retrieving of general student information.
- prompt SMS notification.

DISCUSSION

The system is designed into two modules, the admin and user modules. The admin module can view registered users, register equipment, assign tournament and send SMS notification to students who have been assigned to a particular sport. Figure 1 shows the system design for the system. Figure 2 shows the system architecture for the system (Figures 1 and 2) [10].

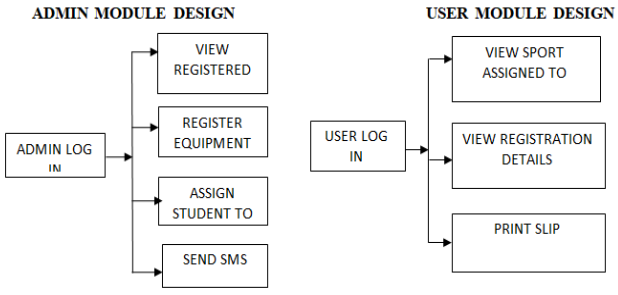

Figure 1: System design.

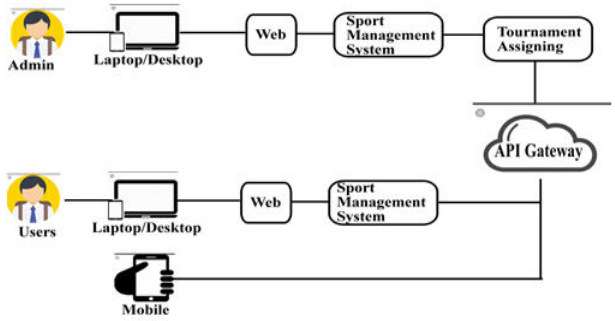

Figure 2: System architecture.

Modules of the WBSMS

There are 2 users' *i.e.* the admin and the Student. Admin can access the student data and assign games to student out of the list of games the student have selected. He/She also has the right to add or modify the student data or information supplied. The first procedure is the student registration. Here the student enters all their details including the sport they like to participate. All these information will be stored in the database. Next is the entry of the tournaments. Here depending on the sport, the tournament date and the venue is saved in the database for further confirmation. There are 5 different sports. A list of players will be displayed and also the upcoming tournaments will be shown according to the particular sport. The system also provides a special authority of adding photos to the system for a particular sport for sweet memories and for proof (Figure 3).

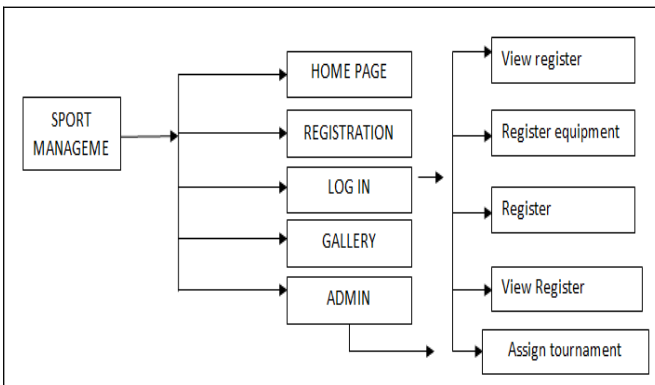

Figure 3: WBSMS module partition.

Home page: This module contains necessary information about the unit. Below is the screenshot. Figure 4 shows a screenshot of the system homepage.

Student registration: The first procedure is the student registration. This module allows student to register all their details including the sport they like to participate. All these information will be stored in the database. Below is the screenshot of the student registration page. Figure 5 shows a screenshot of the registration page.

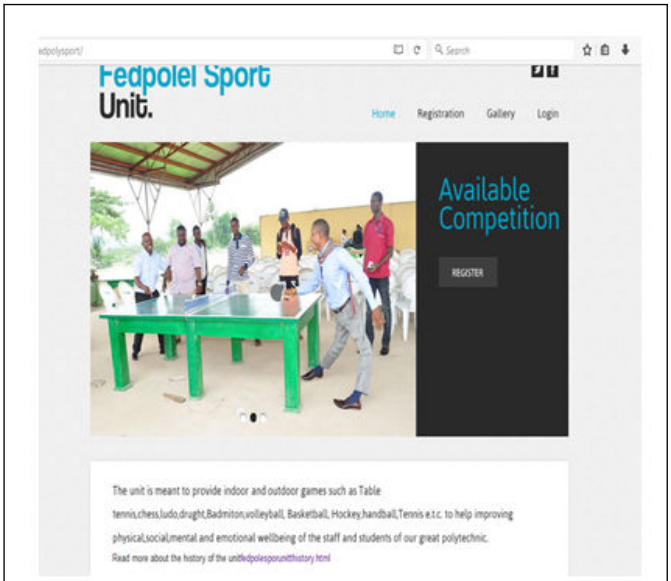

Figure 4: Homepage.

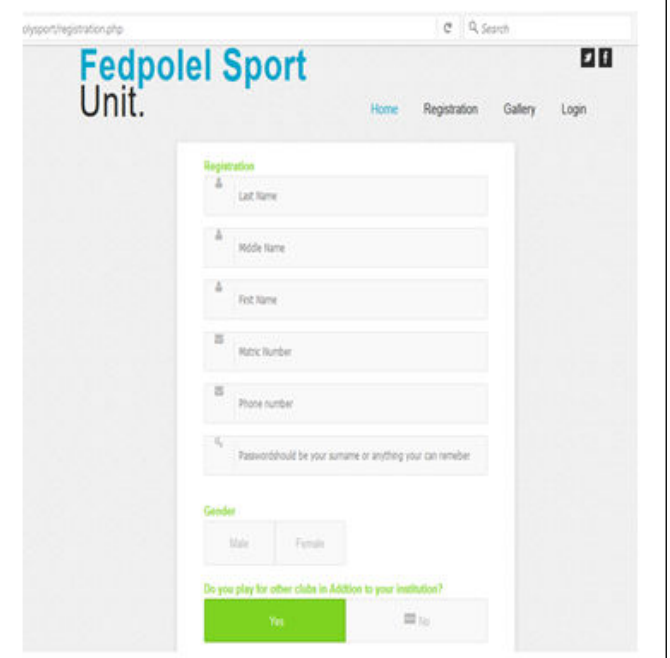

Figure 5: Registration page.

Login page: Student login with their matric number as their username and surname as their password which must be correspond with the one supplied at the point of registration. He also has the right to add or modify the information supply by an employee. Using this username and password, a student can login to the system to print his/her details.

Admin task page: The admin will have to login before he can perform any tasks. Admin can view register student and assign sport to each student, register student for tournament, register equipment and send SMS notifications to students who have been assigned a tournament. Figure 6 shows a screenshot of the registration page (Figure 6).

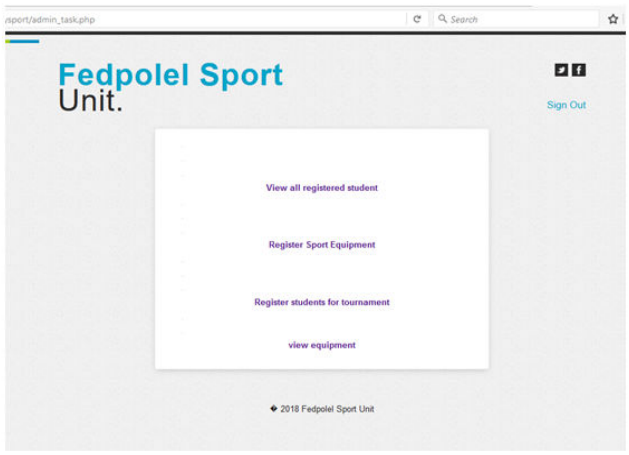

Figure 6: Admin task page.

Data: This module the admin can view all the register student online without need to go and access the data based. Below is the screenshot of the student who have been register during the testing of the design system. Figure 7 shows the screenshot of the admin portal.

SMS portal: This module is responsible sending SMS notification to students who has been assigned to a particular sport. Figure 8 shows the screenshot of the SMS portal (Figures 8 and 9).

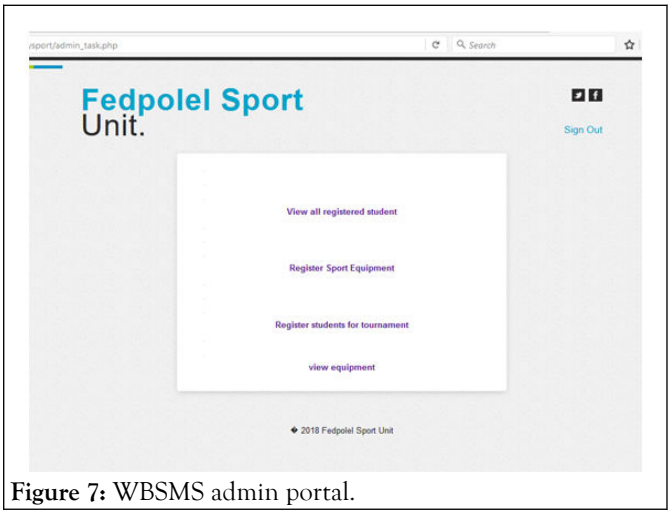

Figure 7: WBSMS admin portal.

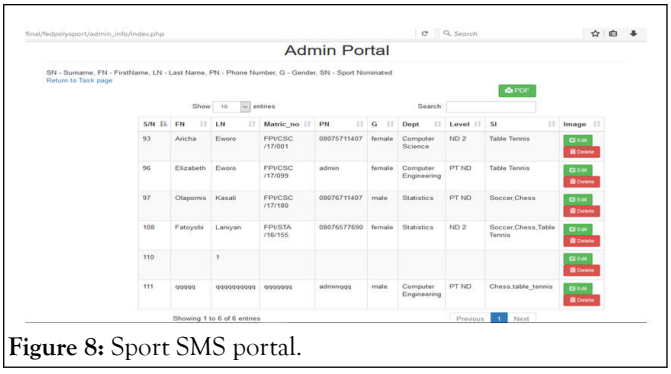

Figure 8: Sport SMS portal.

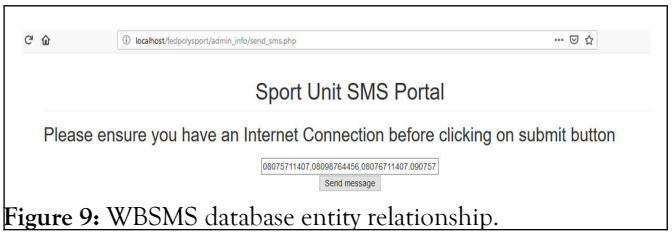

Figure 9: WBSMS database entity relationship.

CONCLUSION

Adopting a modern technology to the unit is very significant as we are in the age of computing where everything is done online therefore, the unit should ensure that the designs system should be implemented. As the implementation of web-based sport management system will help to carry out some of the management function of the unit which will make the management function of the unit easy and faster.

RECOMMENDATIONS

Based on the findings, it is recommended the design of the WBSMS for the sport unit of the federal polytechnic Ile-Oluji be implemented and this will effectively enable the student to register for sport and take sport activities seriously.

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