Faculty of Computer Science and Information Technology

UNIMAS SPORT FACILITIES AND INFORMATION SYSTEM

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Bachelor of Computer Science with Honours
(Software Engineering)
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UNIMAS SPORT FACILITIES RESERVATION AND INFORMATION SYSTEM

ARTHUR ALVIN AWAH

This project is submitted in partial fulfillment of the requirements for the degree of Bachelor of Computer Science with Honours (Software Engineering)

Faculty Computer Science and Information Technology
UNIVERSITY MALAYSIA SARAWAK
2015
DECLARATION

I certify that all work on this thesis was carried out between September 2014 and June 2015 and no portion of the work has been submitted for academic award at any other College, Institutes or Universities. The work presented was carried out under supervision of Madam Izzatul Nabila binti Sarbini. All other work in the thesis is my own except where acknowledgement in the dissertation.

Signed by,

................... June 2015

(Arthur Alvin Awah)
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ABSTRACT

The online reservation system is widely used nowadays. By using the system, we are able to gain our desire information and process our reservation through the internet at anytime and wherever we are at, it is a system that uses the first come-first served principle. There are a lot of online reservation systems that are actively operating on the internet. Through online, it is much easier to store and analyze system users' information about their activities in the database of the system. The administrator of the system is able to manage the information about the user and reservation, so that the reservation and management work can be done more efficiently. Online Sport Facilities Reservation and Information System is also a kind of online reservation system, the enhancement of the system will include features where users can choose or select the date and type of court, then the available timeslot will be displayed, user just need to select the desire available day and time slot for reservation. They can also do cancelation and edit the reservation as well. The admin of the system has the authorities to approve or cancel the reservation and inform the user through the system and user will receive notification that will update user about the information which related to the reservation. The system also can work as a social media which can let the users communicate with each other or with the admin to have discussion that related to the sport centre such as discussing about the reservation or proposing event that needs to use the provided sport facilities. Having all these features included in the system increases the usability and functionality of the system which this is the main objective of this project.
CHAPTER 1: INTRODUCTION

1.1 Introduction

Nowadays, there is a lot of online reservation system. Since the UNIMAS Sport Centre still does not have a system to manage the sport facility, this proposed project is designed as an effective way for making reservations using web-based application. The sport facilities reservation and information system is developed by using PHP and MySQL for the database. These software tools are selected to build the system because they are open source application and also more stable and efficient in developing the system. This project is developed to assist the UNIMAS Sport Centre staffs to manage the sport facilities reservation. It also helps the users to communicate with each other to stay updated with the sport facilities reservation information or status, and discuss related topics. There are three types of users that will be using the system, which are the UNIMAS staffs and students, and the staff that manages the sport facility from the Sport centre will be the administrator for this system, which he or she has the authority to make approval of the reservation, generate monthly reports, and manage users and reservations. When this project is done and functioning well, it will provide benefits for the sport centre staffs in managing the sport facilities reservation process.
1.2 Problems Statement

In UNIMAS, we have sport facilities such as the badminton courts, basketball courts, volleyball courts, takraw courts, netball courts, tennis courts, futsal courts and football fields. But UNIMAS still does not have a proper system to manage the provided facilities to be reserved by the staffs and students. They have to go to the sport centre office to make the reservation without even know when is the desire court will be available, and the quantities of courts are limited. So in order to use those facilities, it has to be done by using the first come first serve concept. This shows that it is very inconvenient for the staffs and students of UNIMAS to reserve the sport facilities and so with the person who is responsible to manages the whole reservation system that is currently in use.

1.3 Objective

These are the objectives of the propose project:

- To develop a reservation system that is user friendly and able to simplify the process for the sport facility reservation.
- To develop a system that can work as a social media where user can communicate with each other to discuss about activities and upcoming event that will be held by using the provided sport facility.
1.4 Scope

The scope of UNIMAS Sports Facilities Reservation & Information System is to replace the current system that is manually done by the staffs of the UNIMAS sport centre, which they manage all the sport facility reservation manually with lots of paperwork. The proposed system consists of the following functionalities:

a) Users are able to view the timeslot to select desire date and time that are available for reserving the provided sport facilities in UNIMAS.

b) Users are able to update their personal details easily.

c) Users are able to interact with each other and share information through the system.

d) Administrator is able to search registered users details by entering user’s name, user ID, or username in order to search the desire users.

e) Administrator is able to approve or reject the application from users for the sport facility reservation.

f) Administrator has the authorization to cancel the users’ approved reservations for the sport facility.

g) Administrator is able to keep track on the users who apply for sport facilities reservation.

h) Administrator is able to generate monthly report that displays the name, ID number, Faculty, year of study (for students), amount of people that are using the desire sport facility.
1.5 Research Significance

The UNIMAS Sports Facilities Reservation & Information System is to be introduced to the staffs of the sport centre in UNIMAS which it is able to provide help and ease the management process for the sport facility reservation. The system provides efficient ways to store all the users’ information in the system, it also eases the process of the user in making reservation for the sport facility in UNIMAS without calling or going to the office, then fill in the application form and check on the timeslot. After doing that, the applicant has to go back to the office from time to time to check their application for the reservation whether it has already been approved or not, which can be very tedious and inconvenient for the user. With the help of the proposed system, all those problems can be solved, and all the reservation made from the users can be managed easily through the system which it speeds up the management work and be more efficient.

On the reservation part, the student and staff can choose or select the date and type of reservation, then the time schedule will display the list of available timeslot, they just need to click on the timeslot slot in order to make reservation. They can also do cancelation and edit the reservation as well. The admin of the system has the authority to approve or cancel the reservation and inform the user through the system and user will receive notification that will update user about the information which related to reservation. The system also can work as a social media which can let the users communicate with each other or with the admin to have discussion that related to the sport centre such as discussing about the reservation or proposing event that needs to use the provided sport facilities. Besides that, the system has the function that allows the admin to generate monthly report of the sport facilities reservation for the staffs’ reference in the future.
1.6 Expected Outcome

To provide a system that eases sport facilities reservation process with viewable timeslot to the user member in UNIMAS. In addition, the system can also work as a social media which can let the user and the sport centre staffs to communicate with each other to discuss topics or matters that are related to the sport facilities reservation. Furthermore, the staff administrator can easily deal with the management of the sport facility reservation work.

1.7 Project Outline

Table 1.1: Project Outline

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<th>Chapter</th>
<th>Description</th>
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<tbody>
<tr>
<td>Chapter 1</td>
<td>It is an Introduction which describes the overview of the proposed project. It includes the introduction, problem statements, scope of the project, significant of project, and expected outcome.</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>It consists of the background Study by focusing on the literature review of the existing sport facilities reservation and information system. In this chapter, it starts with the introduction of literature review, then the review of existing systems and its features. The comparison between the existing system and proposed system will be identified.</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>It describes the analysis of requirements that are needed in the proposed system. Which it will explain the features of the proposed system, the design of architecture, database, user interface and the user’s features. The System specification is the collection of all design.</td>
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<tr>
<td>Chapter 4</td>
<td>It is focusing more on the physical implementation of the system which will be the design phase, and implementation phase.</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>It describes the testing phase of the proposed system. Each feature or function of the system will be tested to ensure that all of them work properly and the system is functioning well.</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>It describes conclusion and future enhancements of the proposed system. The constraints that will be faced during the development of the system and the error collected during implementation phase and testing phase will be listed, so with the achievement of the project. And lastly, the summary of the overall system also will be included.</td>
</tr>
</tbody>
</table>
1.8 Summary

In this chapter, it provides the information and overview of the whole project which consists of the project objectives, problem statement, scope, research significance, expected outcome and the project outline. As mentioned above, the idea of the project is to provide a system that eases sport facilities reservation process for the staff and student in UNIMAS. And it also works as a social media which the users can communicate with each other to have discussion related to the sport reservation facility. The staff admin can manage the sport facility and the reservation work such as approving users' application for sport facility reservation, checks the updates, generate monthly report and etc. Since UNIMAS still does not have the following system the existing system, the system will include features where users can easily check the timeslot of available courts, book the courts, check the status of the application, and interact with other users. By having all these features included in the system, it increases the usability and functionality of the system as it will be capable to ease the whole management of the sport facility that is provided by UNIMAS which is the main objective of this proposed project.
CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

In this chapter, there are several literatures that are related to the proposed project. It describes the software tools that can be used to develop the prototype of the proposed system. Other than that, this chapter will be comparing and describing the other existing systems that are similar to the proposed system. Relevant information is gained from the journals, articles or websites which have the related methodologies and approaches.

2.1.1 Background of Online Reservation System

By using online reservation system, users are able to find information and make their reservation through the internet anytime and anywhere, it is usually a first come-first served system. There are a lot of online reservation systems that do exist on the internet. A lot of companies started to use the system in order to do business, the online reservation systems have cooperate or work with the banks in order to process their payment or making transaction. Through online, it is much easier to capture and analyze system users’ information about their activities with the stored information in the database of the system, so that the administrator of the system is able to retrieve more relevant information about the user and reservation. It is not easy to change a totally manual system into a computerized system, must ensure that all the functions from the manual system are digitalized and functioning well in the computerized system. So that the reservation and management work can be done as desire and more efficiently [1].
2.2 Existing System

The existing system is an example of created system which has the similar features and specific functions which are related to the proposed system.

2.2.1 Universiti Teknikal Malaysia Melaka (UTeM) Sport Center On-Line Booking of Facilities and Equipments

This system eases the users in making the reservation for sport facilities and equipments online. User can make the reservation for desire facilities or equipments at anytime and anywhere by using internet browser. User able to view the facilities and equipments that are available at the moment before the booking process begin. It also assists the staff to manage the sport facilities and equipments with the provided features such as adding, modifying, and deleting in order to manage the information in the system. The staff of the sport centre is also responsible to verify the correct user that ask for the reservation of facilities or equipment, and manage the process for returning the facilities and equipment’s [2].
Table 2.1: Advantage and disadvantage of the UTeM Sport Center On-Line Booking of Facilities and Equipments

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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<tr>
<td>i. User can view the facilities availability</td>
<td>i. No viewable timeslot for user to check the</td>
</tr>
<tr>
<td>through searching the facility by facility name.</td>
<td>availability of the desire sport facility.</td>
</tr>
<tr>
<td>ii. All data are managed and maintained in the</td>
<td>ii. Difficulty in communicating between the</td>
</tr>
<tr>
<td>database, making it easy to retrieve record.</td>
<td>user and the staff of the sport centre online.</td>
</tr>
<tr>
<td>And the data will be considered as a secure and</td>
<td></td>
</tr>
<tr>
<td>will not go astray or damage or changed by</td>
<td></td>
</tr>
<tr>
<td>illegal person.</td>
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<tr>
<td>iii. System able to generate report.</td>
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<tr>
<td>iv. System able to let user view the booking</td>
<td></td>
</tr>
<tr>
<td>status</td>
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2.2.2 Recreational and Sports Centre Management System

This system helps the staff from Unit Sukan dan Rekreasi (USR), kolej Universiti Teknikal Kebangsaan Malaysia in order to improve their performance to manage the sports events and the inventory by using this system. User can insert all the important information regarding to the sports events or inventory into the system. Then the inserted data will be stored in a database, so that the