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JUDUL: INTEGRATED OUTDOOR ACTIVITIES SYSTEM (IOAS)

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Integrated outdoor activities system / Hanun Fadzlin
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INTEGRATED OUTDOOR ACTIVITIES SYSTEM

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This report is submitted in partial fulfillment of the requirements for the
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**FAKULTI TEKNOLOGI MAKLUMAT DAN KOMUNIKASI
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA**

2005

DECLARATION

“I hereby certify that this project report entitled
INTEGRATED OUTDOOR ACTIVITIES SYSTEM
is entirely my work and that is no part has been plagiarized or copied without
appropriate citation.”

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DEDICATION

To my beloved parents who always supported my ups and downs, my lecturers and supervisor, and not forgetting my fellow friends.

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I would like to thank Allah S.W.T for giving me the permission to complete my Projek Sarjana Muda (PSM) report successfully and accomplish my system prototype for the PSM.

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ABSTRACT

This report is to propose an application system for Projek Sarjana Muda (PSM) named Integrated Outdoor Activities System (IOAS). IOAS is a system that will integrate the inventory and booking system to simplify the gears inventory and booking process of outdoor activities in REDTMA. The problems that bring to developing the IOAS are the existed computerized booking and inventory system is having these problem-is not integrated with each other and not systematic, inefficiency of functions, inaccurate manual calculation and information error because there is no exact amount for the available gears for booking and the booking status cannot be confirm immediately. The objectives of developing this IOAS is to reduce management cost, to provide a systematic system for managing the booking and inventory process for outdoor activities in REDTMA, to know the exact amount of the outdoor activities gears that are available for booking and to give a confirmation on booking of outdoor activities. The scope for IOAS is contained three moduie which are Equipment inventory, Event Booking and Staff and Customer Maintenance. The IOAS is using OOAD methodology in its development process. Meanwhile, in the development and implementation of the project, PHP and MySQL have been used.

ABSTRAK

Laporan ini adalah untuk mencadangkan satu sistem aplikasi untuk Projek Sarjana Muda (PSM) yang bernama Integrated Outdoor Activities System (IOAS). IOAS ialah satu sistem yang menggabungkan inventori dan tempahan sistem untuk memudahkan lagi kemasukan alatan dan proses penempahan untuk aktiviti luar di REDTMA. Masalah sistem semasa yang membawa kepada pembangunan IOAS ini adalah sistem semasa menggunakan dua sistem yang berasingan iaitu sistem kemasukan alatan dan sistem tempahan, mempunyai fungsi yang tidak efisien, kesalahan dalam pengiraan dan masalah maklumat kerana bilangan sebenar alatan yang boleh ditempah tidak diketahui. Objektif IOAS ialah untuk mengurangkan kos pengurusan, menyediakan satu sistem yang sistematik untuk tempahan dan inventori alatan di REDTMA, untuk mengetahui jumlah sebenar alatan yang boleh ditempah dan untuk memberikan keputusan tempahan dengan segera. IOAS mengandungi tiga modul iaitu Inventori Alatan, Tempahan Aktiviti dan Pengurusan Staf dan Pelanggan REDTMA. IOAS menggunakan metodologi OOAD dan mengimplimentasikan PHP dan MySQL dalam pembangunan sistem.

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CHAPTER I

INTRODUCTION

1.1 OVERVIEW

This report is to propose an application system named Integrated Outdoor Activities System (IOAS) that will be developed for a recreational organization called REDTMA (Outdoor Trainers) that provided outdoor activities such as wall climbing, flying fox and kayaking as their services in Malacca.

This IOAS will be developed to manage the activities booking and inventory of the activities gears process systematically. The proposed system will be developed to upgrade the existing system that the REDTMA is using nowadays and the main purpose of the system is to give the user of the system, which are the administration authority and the staff to experience the easiest and fastest way of managing the booking and inventory process.

This system will reduce the management cost, upgrade the data security for the record, to give the confirmation of the booking status, to make the exact stock analysis and also will provide a fast way to search data.

More details about the proposed system, the problems that bring to the developing of the proposed system, the objectives of the system, the system scope, and the benefits of the system and the expected output of the IOAS will be explained in this chapter.

1.2 PROJECT BACKGROUND

REDTMA (Outdoor Trainers) is a recreational club or organization in Malacca that is fully active in co-curricular activities whether in motivation part, outdoor activities or sports. This organization was established based on the requirements to create a well knowledge individual, not just in academic but also in co-curricular.

REDTMA is provided many outdoor activities such as wall climbing, flying fox and kayaking to the competitors. These activities are organized by the accredited trainers from the Kementerian Belia dan Sukan Malaysia and the management authority of REDTMA is determined to give the best services and fulfill the competitor's requirements.

In the determination to give the best services to the competitors, REDTMA management authority wants to upgrade the existing computerized system to the more systematic and integrated computerized system for the on the spot activities booking because they are already have the online booking form in their website at www.redtma.cjb.net. They also want to upgrade the computerized inventory system for the activities gears record to a system that can generate the stock analysis and inventory report. The upgrading from the common computerized system to more advanced and integrated is to acquaint the REDTMA staff with the advanced ICT technology that every organization are using nowadays and to organize the booking and inventory process for the outdoor activities to be more systematic.

Thus, to fulfill the REDTMA requirements, an integrated computerized system that will be named as Integrated Outdoor Activities System (IOAS) will be developed to upgrade the existing system. With the IOAS, a lot of benefit to the recreational park staff and visitors can be gain. The main purpose of this IOAS is for the staff and visitors to experience the easiest and the fastest way of booking and to manage the inventory of the activities gears process systematically.

1.3 PROBLEM STATEMENT

The problems that bring to the developing of the IOAS are as stated below:

- **Not Systematic** – The existed computerized booking and inventory system is not integrated with each other and totally separated. The exact amount for the available gears for booking cannot be sure because have to check in the inventory system first.
- **Inefficiency of Functions** – Each system only provided a database to save the record for booking or inventory and does not have extra function such as generate report or stock analysis.
- **Inaccurate Manual Calculation** – The manual calculation for stock analysis will cause the inaccurate calculations and mistakes.
- **Information Error** – There is no exact amount for the available gears for booking and the booking status cannot be confirm immediately.
- **Higher Management Cost** - Management authority has to spend more on salary to pay the extra work done by the staff to double check the stock analysis calculation to avoid mistakes.

1.4 PROJECT OBJECTIVES

The objectives of the proposed system that will be achieved are as stated below:

1.4.1 General Objectives:

1.4.1.1 To reduce management cost.

1.4.1.2 To save the countless manpower and times.

1.4.2 Specific Objectives:

1.4.1 To provide a systematic system for managing the booking and inventory process for outdoor activities in REDTMA.

1.4.2 To know the exact amount of the outdoor activities gears that are available for booking

1.4.3 To enable the recreational park staff and the administration authority make the exact inventory analysis.

1.4.4 To give a confirmation on booking of outdoor activities.

1.5 PROJECT SCOPE

The Integrated Outdoor Activities System (IOAS) will be delivered and used in REDTMA (Outdoor Trainers) in Malacca. The user of this system will be the administrator authority and the staff of the REDTMA.

This system is a computerized system only and it is a standalone system which means that the system can be access through the pc that has been installed with the

with the system only or the pc in Local Area Network (LAN) in REDTMA. The IOAS will contain these modules:

1.5.1 Equipment Inventory

This inventory system is to record the activities equipment or also known as gears inventories that the outdoor activities in REDTMA are using in a database so that all the details about the equipment can be search easily. This Equipment Inventory is also related to the Event Booking module to simplify the booking process.

System database will be assigning a unique key to each data that has been record to avoid the same data being recorded twice. Only authorized user with the correct username and password can add, delete or modified the data on demand.

Stock analysis can be done by the IOAS based on the record in database. IOAS will provide a quick search for the data by data name or ID and the system will access and display the data in a few seconds.

This Equipment Inventory module will provide lists for the total amount of each gear in inventory, the damage or in repair gears and some other lists that will be used by the Event Booking module.

1.5.2 Event Booking

System will display the list of the amount of the activities equipment provided, list of responsible equipment, which means the already booked or already in use equipment and the available equipment for booking from the Equipment Inventory module. Through the lists, user can know the exact amount of the activities equipment that is available for booking.

System will give a confirmation on booking when the activities and equipment in available list have been selected and a simple booking form in this module has been filled up. The Event Booking module will automatically ensure that the booking cannot be double-booked and keep track of cancelled booking.

A quick search such as in the Equipment Inventory module is also being provided in this module to search for the event booking.

1.5.3 Staff and Customer Maintenance

The important details about the REDTMA staffs including the management authority such as the name, staff id, address and especially the username and password for each staff will be save in the system database. The username and password for each staff will be used when the staff wants to login to the IOAS system.

This module can be monitor by the REDTMA administrator authority only. The record can be maintains by updating, deleting or create new record upon demands. The search for staff also can be done in this module by typing the keyword of the staff name. The same steps can be applied for the customer records.

1.6 PROJECT SIGNIFICANCE

The significances of the IOAS will give many advantages to the management authority and the staff of REDTMA. IOAS saved all the record about the REDTMA staffs, inventory and booking process in a specific and secure database. IOAS can generate stock analysis, reports on inventory and booking confirmation for the activities booking and inventory process for the outdoor activities in REDTMA from the database.

IOAS will save the manpower of the REDTMA staff by reducing the work burden and less time is required when searching for data. A unique key will be given to each data that have been entered in the system database to avoid data redundancy.

Last but not least, the significance of the IOAS will reduce the REDTMA management cost. By reducing the manpower, times required and mistakes in calculating the stock, the management authority does not have to spend more on salary for each extra work done by the staff anymore and the management process will be more systematic and well organized.

1.7 EXPECTED OUTPUT

An integrated computerized system with a good and attracting features and user friendly will be delivered to user. The functions and steps are simple and easy to use and it is not so complicated.

The main expected output is both of the booking system and the inventory system will be integrated in an IOAS. The other expected outputs for the IOAS will be stated by each module.

1.7.1 Equipment Inventory Module

1.7.1.1 Data Security

The data of booking and inventory process will be collected and saved in system database. Only authorized user with the user name and associated with a password can access to the system and the data. When the system is being abandoned for a few minutes, the user session will expire and user has to re-login to use the system to avoid any data to be threatened.

1.7.1.2 Data Availability

The data in the system database can be accessible and usable upon demand anytime by an authorized user especially when to search for a wanted data and the data can be access in a less time.

1.7.1.3 Reduce Manual Calculation Problems

Manual calculation problems such as inaccurate stock analysis and the amount of equipment and activities those are still available for booking can be reduce because the calculation will be done by the IOAS and the amount for the calculation will be gathered from the database.

1.7.2 Event Booking Module

1.7.2.1 Exact Equipment Amount for Booking

The lists of equipment amount that have been provided by the Equipment Inventory module make the user configure the exact amount of the equipment that can be book by visitors.

1.7.2.2 Eliminate Double-Booked

The Event Booking module will automatically ensure that the booking cannot be double-booked and keep track of cancelled booking.

1.7.2.3 Booking Confirmation

System will give a confirmation on booking when the activities and equipment in available list have been selected and a simple booking form in this module has been filled up.

1.7.3 Staff and Customer Maintenance Module

This module will maintain the staff's aliases the user's records occasionally upon demand and will manage the user security for the system authentication especially the username and password of each staff to login.

1.8 CONCLUSION

In this Introduction chapter, the early stage of study and research on the current system in the studied organization has been done. The study covered the problems caused by the current system and the major requirements of the organization have been indicated for developing the new system.

Hopefully, the expected output of this system will avoid all the problems that the user faced before with upgraded the management system for the activities booking and inventory process, reduced the management cost, more secure and integrated data in the database and reduce the manual calculation problems for the stock analysis.

After completing this Introduction chapter, the next chapter that will be provided is Literature Review and Project Methodology.