TAKORADI TECHNICAL UNIVERSITY

FACULTY OF APPLIED SCIENCE

DEPARTMENT OF COMPUTER SCIENCE

SYNOPSYS ON AN ONLINE HOSTEL BOOKING SYSTEM

BY

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# ABSTRACT

Hostel facilities are widely used in most high universities in Ghana of which Takoradi Technical University is one of them. In view if this, hostels are being built to be efficient and highly robust thus offering a very high degree of reliability. But like any other booking platform, despite of how it is being acquired needs to be flexible and easy to acquire which if not provided for students, might lead to poor acquisition for accommodation of student and applicants in the long run.

ONLINE HOSTEL BOOKING SYSTEM is a software developed for managing various activities in the hostel. For the past few years, the number of educational institutions is increasing rapidly. Thereby the number of hostels also increasing for the accommodation of the students studying in this institution. And hence there is a lot of strain on the person who are running the hostels and software’s are not usually used in this context. This project deals with the problems on managing a hostel and avoids the problems which occur when carried manually. Identified of the drawbacks of the existing system leads to the designing of computerized system that will be compatible to be existing system with the system which is more user friendly and more GUI oriented. We can improve the efficiency of the system, thus overcome the drawbacks of the existing system.

TITLE

Design and implementation of online hostel booking system (The case study of Takoradi Technical University).

INTRODUCTION

In our current era of automated systems with it being either software or hardware, it’s not advisable to be using manual system. Hostels without a management system are usually done manually. Registration forms verifications to other data saving processes are done manually and most at times, they are written on paper. Thus, a lot of repetition can be avoided with an automated system. The drawbacks of existing system led to the design of a computerized system that will help reduce a lot of manual inputs. With this system in place, we can improve the efficiency of the system, thus overcome the drawbacks of the existing manual system.

This system is design in favor of the hostel management which helps them to save the records of the students about their rooms and other things. It helps them from the manual work from which it is very difficult to find the record of the students and the mess bills of the student, and the information about those who have left the hostel years before. This system gives idea about a student’s fee details, room allocation, mess expenditures are maintained in a better way, the hostel management system will also contain special features like how many students are in a room, student’s id and free rooms or space available. The administration has a unique identity for each member as well as student details.

BACKGROUND OF THE STUDY

Hostels are seen as a home for students when they are far from their homes. It has large well-ventilated dormitories and single rooms and is situated in the school premises. Providing clean and calm hostel accommodation is one of the key responsible of school management.

To manage the hostel facilities, a lot of data need to be maintained such as number of student hostel can accommodate, hostel rules and regulation, hostel fee, hostel in and out of student, guest and visitor record and so on. So, this needs the system which can capture all kind of data and information and analyze it properly for smooth functioning of the hostel.

Hostel management in schools often involves administering of all activities of students. All these remain difficult and require some job for the top management. Hostel management system is well designed specially to meet challenges of administrative set up of any school. Hostel booking management system can be used to assist in student’s allocation, setup hostel information, hostel application, and visitors’ management. In short, this system will assist the staff in managing some the hostel activities.

A hostel booking system is a web-based software to provide tertiary students accommodation to the university hostels more efficiently. This project is to keep details of the hostellers and applied students. The project is done to minimize human works and make hostel allocation an easier job for students and hostel managers by providing online platform for hostel, automatically select the student from the waiting list and mess calculation, complaint registration, notice board etc. Student will get approval notification in their mails. Hostellers can view notice board, hostel fee and mess menu by login into the online system.

STATEMENT OF THE PROBLEM

The growing number of students in higher institutions all over the world has posed a lot of accommodation problem on the part of student and school management. There are a lot of drawbacks in keeping and maintaining a hostel. Especially with manual system. Since most hostels are being run by only one hostel manager, the number of students in a room are sometimes not known by the hostel manager. He must go room by room to ensure that a room is occupied or not. Sometimes pupil maybe owing in the hostel, and they are recorded on papers or huge notebooks and receipts. If the books should go missing or stolen, the manager would never be able to know the records. Room allocation also becomes a problem as the hostel manager might not know which rooms are available or not. Some hostels have a lot of free room, and it would be very tedious to go through all stores in search of a free room for an applicant. Also, the manager might not know the number of students in a room or know if a room is full or not.

Hence, the need for an online booking system to handle these tasks simply and efficiently.

APPLICABILITY OF THE STUDY

The alternative solution to these problems is development of an online hostel booking system; the hostel booking system will eliminate the problems encountered in the manual system. If implemented, will play a great role such as:

1. **Increase efficiency**: the computerized system formulates accurate efficiency, faster and effective way of processing hostel activities, with the intervention of computer.
2. **Storage**: the new system provides a better means of information storage, all records related are stored on a centralized database and encrypted to avoid unauthorized access.
3. **Error free:** the new system with the computer intervention in processing, errors will be avoided or eliminated.
4. **Speed:** the new system offers the students affairs officer and the management an opportunity to retrieve and sort files int the shortest possible time compared to the manual method.
5. **Reliability:** delay is completely faced out on the retrieval of record about hostel using the computerized system.

RELEVANCE OF THE STUDY

The new system designed for computer driven student’s hostel booking and allocation will among other things:

1. Facilitate timely allocation of hostel rooms to students.
2. Check the hostel occupancy at any time for information management, sum up the total amount realized from hostel fee each session.
3. Enable management to plan on improving hostel living condition.
4. Have first-hand information on the statistics of student in the hostel, so also keeps the records of staffs employed to work in the hostel.

OBJECTIVES OF THE STUDY

The aim of this research work is to develop an online hostel booking system that will manage the hostel activities of the Takoradi Technical University. The main objectives of the research include the following:

1. Identify and model the requirements specification to develop the system.
2. Design and implement a central database system that would serve a hostel database, which will contain all the records related to the hostel.
3. To provide online student application for students to apply for hostel.
4. To upgrade from manual means of acquiring accommodation of student and hostel management.
5. To develop a user-friendly and efficient online hotel booking system that can be easily accessed by customers.
6. To provide hotels with a centralized system for managing bookings, reducing the possibility of errors and double bookings.
7. To allow customers to easily compare prices, room types, and availability at different hotels.
8. To provide customers with a secure payment system for making bookings.

HYPOTHESIS

An online hostel booking system is a website or platform where users can search and book hostel accommodations. The hypothesis of such a system is that it will provide a convenient and efficient way for students and users to find and book hostels, making the process faster, simpler and more secure and accessible. It is expected to offer features such as real-time availability, user friendly interface, secure payment options, and reviews from previous guests. The hypothesis is that this system will save student and users time and money, increase hostel bookings, and provide valuable data for hostel owners to improve their business.

THE MATERIAL AND METHODS OF THIS ONLINE HOSTEL BOOKING SYSTEM

* Development of a user-friendly website or platform with a search and booking interface, payment gateway, and customer support system.
* Integration with a database of hostels and their respective details, including images, descriptions, and availability information.
* Development of algorithms to search and display relevant hostel options based on user criteria, such as location, price and rating.
* Implementation of security measures such as encryption and secure payment options to protect user information and transactions.
* Partnership with hostel providers to obtain and regularly update hostel information, pricing, and availability.
* Collection and analysis of customer data to improve the systems search algorithms and suggest personalized recommendations to users.
* Integration with review systems to allow guests to provide feedback on their experiences and provide valuable information to future students and users.
* Monitoring and maintenance of the system to ensure optimal performance, security, and compliance with industry standards.

STUDY DESIGN

Study Design for Evaluating the Effectiveness of this Online Hostel Booking System:  
Objectives:

* To determine the level of user satisfaction with the online hostel booking system.
* To identify any challenges and issues encountered while using the online hostel booking system.
* To assess the effectiveness of the online hostel booking system in terms of ease of use, user-friendliness, and efficiency.
* To determine the level of adoption of the online hostel booking system by users.

Methodology

* Sampling: A convenience sample of 100 users of the online hostel booking system will be selected.
* Data Collection: Data will be collected using an online survey questionnaire, consisting of multiple-choice and open-ended questions.
* Data Analysis: The collected data will be analyzed using descriptive statistics and inferential statistics.

Data collection and analysis techniques:

* Descriptive Statistics: To describe the demographic characteristics of the participants and the level of satisfaction with the online hostel booking system.
* Inferential Statistics: To determine the relationship between the level of satisfaction with the online hostel booking system and demographic variables such as age, gender, and education level.
* Qualitative Analysis: To identify common challenges and issues encountered while using the online hostel booking system.
* Statistical Analysis:
* Pearson's Correlation Coefficient will be used to determine the relationship between the level of satisfaction with the online hostel booking system and demographic variables.
* Independent Sample T-test will be used to compare the level of satisfaction between different demographic groups.
* Expected Outcomes:
* To gain a better understanding of the level of user satisfaction with the online hostel booking system.
* To identify any challenges and issues encountered while using the online hostel booking system.
* To make recommendations for improving the online hostel booking system based on the findings of the study.

SETTINGS

The settings for this an online hostel booking system are:

* Web-based Platform: The online hostel booking system is typically accessed through websites that are designed for the purpose of searching for and booking hostel accommodations.
* Digital Environment: The system operates in the digital environment and requires an internet connection for users to access it.
* Infrastructure and Technology: The online hostel booking system is supported by various infrastructure and technology components, such as servers, databases, payment gateways, and security systems.
* Hostels: The system is designed to connect users with various hostels, allowing them to compare prices, room types, and availability.
* Customers: The online hostel booking system is designed to serve customers who are searching for hostel accommodations and want a convenient, efficient, and user-friendly way to book them.
* Geographic Location: The online hostel booking system operates globally, allowing users to search for and book hostel accommodations in any location around the world.
* The setting of an online hostel booking system is designed to provide users with a convenient, efficient, and user-friendly way to book hostel accommodations, regardless of their location or time of day.

The duration of a study for this online hostel booking system can vary depending on various factors, such as the scope of the study, the methods used, and the resources available. However, as a general estimate, the duration of a study for an online hostel booking system could be as follows:

* Planning and Preparation: 2-4 weeks
* Data Collection: 4-6 weeks
* Data Analysis: 4-6 weeks
* Results and Findings: 2-4 weeks
* Final Report Preparation: 2-4 weeks
* This is a rough estimate, and the actual duration may be longer or shorter depending on the specific requirements of the study. The study could involve qualitative or quantitative research methods, such as surveys, interviews, or case studies, which would impact the duration of the study. Additionally, the resources available, such as funding, staff, and equipment, could also impact the duration of the study.

REFERENCES

Katz, R.N(2002) About Web Portals: A home page does not make a portal. Jossey-Bass, A Wiley Company.