Significance of Information Technology in Hotel Management

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Abstract: *Since country's tourism and economic development is increasing rapidly, the competition in the hotel industry market is increasing rapidly. People can only get healthy and adequate development by developing the methods and means of their management and constantly improving their level of service. Hence, the computer management of hotel operation has become the most essential task in hotel industries. The enhancement in computer technology leads to create potential opportunity to bring the change in hotel management practices. This papers provide a brief introduction to the architecture of the hotel management framework in conjunction with software engineering means for the study of viability, design and specifications. The complete system is separately divided into modules and introduces the function, while providing the database management a logical structure and a set of criteria and the. These guidelines and analyses basically fulfil the requirements of design of the information technology-based hotel management system, in order to improve the hotel management's service efficiency and quality.*

Keywords: *Analysis, Design, Database, Feasibility, Logical Structure, Quality.*

I. INTRODUCTION

Although global economic convergence is bringing the hotel industry larger, it is also making the hotel industry rapidly faced with intense competition and growing customer expectations, pushing the insider to continuously broaden their markets, improve service efficiency, lower administrative costs and boost customer satisfaction with innovative ways to improve the core expertise of the hotel. Which has proved to be the appropriate means of mass application of developed information technology, particularly with the constant intensification of information, changing competition from the models of management and hospitality industry that, in the traditional sense, gain new growth opportunities [1].

Prominent hotels around the world have fallen over themselves to explore, promote and implement integrated information about hotel management. Modern hotel is the combination of customer sites like business culture, catering facility, rooms and a number of other facilities. In order to enhance work efficiency, minimize operating costs, boost service management and quality standards, and support economic efficiency, there is need of machines (computers) to develop modern information technology, due to a huge community and business programs. The enhancement in computer technology leads to create potential opportunity to bring the change in hotel management practices.

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II. SOFTWARE ARCHITECTURE:

The hotel management framework has huge development both at abroad and home, increasingly advanced commercial systems are in operation and has great application in mid-sized-scale to large-scales hotel industries. Software associated with Hotel management which is based on the b / s structure must occur with the development and popularity of the Internet. With the further growth and improvement of domestic applications, internal apps will become unavoidable replacing imported software to become the standard management software in high-star hotels. A lot of content in commercial systems is not suitable for hotels, and the one-time investment is high for these systems. On the server side, the technology of software architecture is related to b / s, installation of the system, maintenance and modification can be resolved which reduce the complexity in hotel management, as well as saving the costs of the system maintenance and Hotel's technology. When the system is used by an administrator, it is easy to update instantly at runtime when only needing a browser to operate all modules to reach "zero clients" interface [2].

III. HOTEL MANAGEMENT ANALYSIS USING INFORMATION TECHNOLOGY:

The analysis of Hotel management conducted using information technology comprises of three major aspects i.e. Technical feasibility, Feasibility of using and economical aspects.

III.I. Technical Feasibility:

Technical feasibility management data system includes information processing technology (such as input/output, information processing and response time), scalability, reliability, security, environmental adaptability, sustainability, and many other aspects, mainly analysing whether technical conditions can perform development work smoothly, can meet developers' needs. B / s mode can be used to build this framework, incorporating hItem Intranet techniques in line with the technology development pattern. Database server using MySQL database is capable of handling large amounts of data while maintaining data integrity and providing many advanced capabilities for management. The availability, reliability and ease of use ensure good data base programming conditions. Hence, the software platforms of applications are already developed and practical, this is technically feasible [3].

III.II. Feasibility of using:

Today, the computer-aided technology, which is simple and effective hotel management method is only used by high star hotel management, and each hotel has different needs, but most of the current management system's concept of a project could not be extended to general hotel management. "Hotel management information system" utilizing viability research focused mainly on the actual environmental and situational factors of the company. Therefore, when conducting feasibility analysis, it is first focused on specific industries, especially business critical jobs such as system orientation, awareness of Head of Department and General Manager of the hotel. However, when system uses feasibility analysis, it should recognize environmental conditions, especially special situations in business activities such as getting the organization and guest registration rapidly when community guests get [4].

III.III. Economic Feasibility:

Economic feasibility mainly assesses and analyses the financing needs and capital efficiency construction project which include input-output ratio, budget estimates, investment benefit analysis, investment payback period, and so on. The maintenance and development of the hotel management information system needs hotel spending, but as a significant aid to the hotel management, it can drastically improve the department's productivity after it is put into use, its improved quality of service, and business volume, would far exceed the initial investment. Hence the use of management information systems by the hotel has good returns on investment and a strong economic viability.

IV. REQUIREMENT ANALYSIS:

Requirements analysis is the process of analysing requirements definition, is the start of the project's development and planning period. Needs review job is to fully explain the software's purpose and performance, classify software design limitations and software interface information with other elements of the framework, and determine the usefulness of user specifications. Review of specifications encompasses business needs, technical criteria and production requirements [5].

IV.I. Analysis of business requirements:

- Room management technology can accommodate consumer reservations through various means, such as telephone books, electronic reservations and front desk reservations.

- Hotel rooms have different degrees which allow the program to be able to categorize room management and book different room styles to match accessible rates, book discount scheduling settings such as lowest price, easy to fit person travellers and party bookings.

- Check function

- Keep an eye on the present status of all available items, such as cleaning the room that was checked out, to track if the guest is staying. Based on the information of customer occupancy, you must provide a guest data management function to accomplish cohesive management of hotel information guests, like checking dates queries, customer inquiry ID number, changing guest contact information, etc.

- A system of hotel management must have a module of recognition in order to distinguish between each business (accommodation, cashier, registration, hospitality and other services) to which the workforce is engaged, which means that the system must set the login module [6].

IV.II. Analysis of Functional requirement:

A system of Hotel Management comprises of both foreground and background parts, the front office is accountable for booking, cashier services and reception, the background used by administrators for managing systems such as room settings, room type, financial management, operator settings and warehouse administration. Requirements for functioning Cash register. The requirements for an integrated cash register system comprises of: cash register fees for project settings, numerous methods of payment (cash, business summary report and accounting).

Requirement for setting the room: Room is the main product of the hotel; room management is an important part of the hotel business. The most important tasks of room management are to update the room status, providing information as to whether space is open, for sale, clean rooms, dirty rooms and other detail, in order to bring comfort to the allocated room reservation receptionist. Room control requires specific tasks including changed room state, space management, post management, room supply items object management, room background scan, front desk test inventory, room cleaning, housekeeping, internal housekeeping report administration [7].

Requirements for financial management: financial management is the cornerstone of Hotel Management, it has the following technical requirements: account creation, initial accounting, bookkeeping, registration, voucher schedule, other management analysis document, comprehensive collection, investigation feature, processing capabilities, a range of reports and production records. Requirements for management of warehouse: The function of warehouse management comprising of modifications in the new warehouse, construction management, daily account handling, adjustment of prices, including records and statistical code, price, name, unit price, etc. of outbound inbound items any period or any day. Document analysis covers posts, reporting of inbound and outbound inventories, inventory forecasts, production of documents, etc. Operator setup tool: This software is used for handling hotel operator information, adding new operator information, updating current operator information, and removing operator information [8].
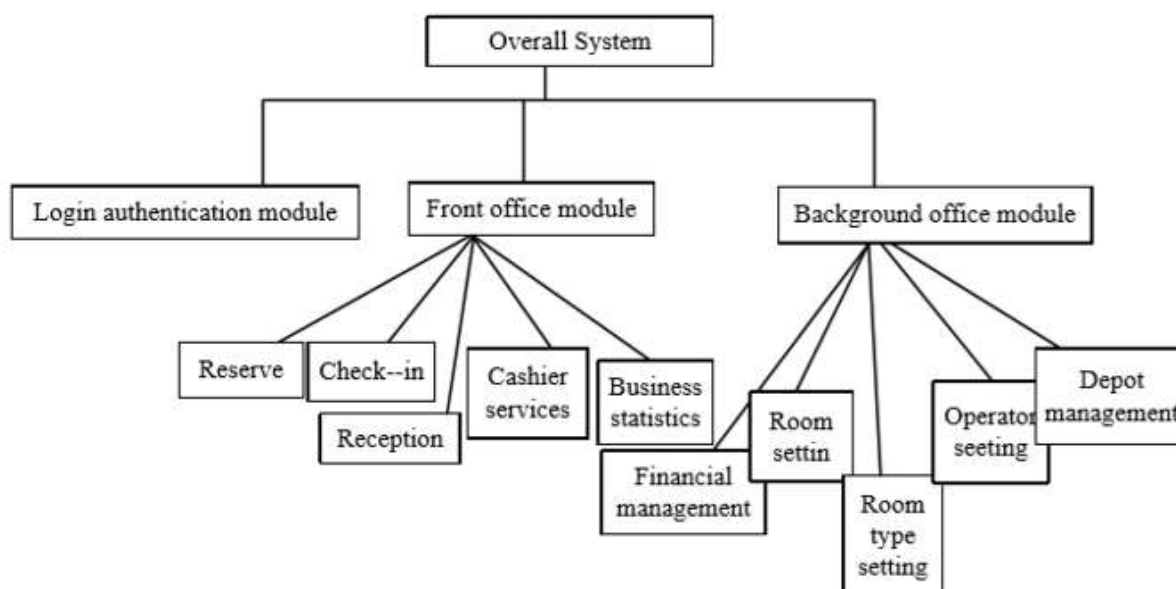

Fig. 1: Systems function diagram

IV.III. Analysis required for development:

Irrespective of the level of hotel, the need of future steps would be the enhancement of information and network, its primary business demands show mainly the demands of the business network process and the requirements of the process of hotel information. It demonstrates primarily in: capabilities of remote query processing with business requirements, collaboration with other appropriate demand units including other businesses like the Ministry of Public Security, hotels, travel agencies, needs of hotel information such as

electronic door locks, program-controlled equipment exchange, magnetic card consumers and other requirements of business process.

IV.IV. Design for Hotel Management System:

The functional requirements of hotel management specify then entire system of hotel management, intended not only to take into consideration the theoretical system of management information systems, but also to recognize the high-level specificity of the hotel industry required for real-time management, reliability, safety and healthy, and so on. Hotel management information system comprises of systems associated with back office and front office, systems are built to follow the basic principles of management information system and certain design principles should also be followed as per the peculiarity of the hotel management.

IV.V. Design for Front Office:

• Number of users' simultaneous access to a library in the front Office device program, which is very common, if not managed properly, will trigger a network deadlock, difficult recovery, data loss, seriously, it will have incalculable results for the hotel business. Thus, during system design, create a mechanism for accessing shared data or essential portion, utilizing PV activity to control the process, simultaneously to minimize dispute sharing, increase system security, and often allow exclusive use of the database in multiples, like log file system separated into 10.

• Good user environments and operational conveniences. Computer users ask the program to complete a task through the user interface, and also to respond to user requests or comments through the application of the user interface. The user interface is thus the representation of system functions in front of the consumer, which is to give users the ability to use the program. Friendly interface would have: a desirable format, integrated with screen user operation, this operation is easy to understand, consumers may get help at any time, expressing it mainly through the menu design, window, screen design, etc.

• Design for safety and reliability. With the growth of networks, and in recent decades many enterprises have been exposed to disclosure of client information, the hotel management information system has also had problems with this. To ensure correct and efficient data security and reliability, the program must provide a range of data protection infrastructure like confidentiality, reliability, honesty, and regulation of competition, and so forth [9].

IV.VI. Design for Back Office:

Hotel back office system design follows the general software design principles, the design of which is premised on financial transactions, including accounting (fixed assets, financial transaction, payroll, cash bank, warehouses, procurement, etc.), cost analysis (financial analysis, profitability analysis, cost analysis, etc.), decision support, etc.

• The financial accounting principles: Financial accounting, which is handled by financial transactional, meets some criteria during the design process:

a) Standardization and Uniformity. For easy entry and delivery, bookkeeping voucher should use standardized fill feature, such as receipt, voucher payments and unified file transition. Written summary accounting to be standardized as far as possible, using fixed lines to best effect.

b) The role of report generation is essential to software package performance.

c) The financial management program should have mandatory monitoring features.

- Principle for promoting decision making, modelling and financial planning as guidance. The following modular components comprise of a financial report prediction subsystem:

a. The section for estimating financial planning serves as strategic modelling and preparing of the medium-term financing programmes.

b. Cost planning module can get its estimates of costs and other functions.

c. Module for the budgeting of projects. Calculate the expenses of the work and schedule the project budget according to existing standards and values.

d. Viability research software Venture Projects is used for venture viability study, joint venture projects [10].

Its framework will integrate uses of Java JDBC technologies to achieve Java-MySQL relation. DBC (Java Database Connectivity) is a Java API for executing SQL statements, and can provide centralized access to multiple relational databases composed of a series of Java-written interfaces and classes. JDBC offers a typical API for database programmers, and is able to develop more advanced interfaces and tools to allow database designers to still use pure Java API to write database apps.

V. CONCLUSION

Today, technology of information management has been driven by global information flow at the boundaries of time, hence the information management framework will become a warm and important issue to the whole society. Computer science is maturing with the advancement of technology and science; they play an extremely important position in all facets of society. People could give software systems a lot of difficult work to process, thus improving the efficiency of the work. In this paper, the hotel management framework is to examine and build based on the current computer technology growth.

By analysing the system's feasibility and analysis of variety of needs, modularizing the system, analysing and simply introducing the function of each module, then providing a conceptual basis for management system realization given the logical structure of the management system's database design. This management system needs to overcome the deficiencies of the modern software that computation is not systematic and strict, such as heavy workload, data transfer is not timely, mistake-prone management statistics and so on; enhances the hotels' competitiveness.

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