ACADEMIC
World Academic Union

ISSN 1746-7659, England, UK
Journal of Information and Computing Science
Vol. 12, No.2, 2017, *pp*.113-122

Design and implementation of an online booking system for a cinema house

Raphael Akinyede[1], Temitayo Balogun[1], Gabriel Iwasokun[1]
[1] *Department of Computer Science, The Federal University of Technology, Akure, Nigeria, E-mail: femi_akinyede@yahoo.com; roakinyede@futa.edu.ng.*
(Received November 02, 2016, accepted February 11, 2017)

Abstract. As businesses are getting better, and many lifestyle changes. The movie community has not changed preferences. Many people still queue to pay for placement to watch movie in cinema houses. For those who hated queueing, they would buy a VCD or DVD to watch at home. The introduction of e-services has shown that e-commerce website can promote a trendy way for people to perform booking/reservation. As far as the subject matter is concerned, online booking systems can be developed for bus stations, airports, hotels, cinemas and other centers that engage in reservation. However, in this research, we developed an online booking system for cinema house called FLOW entertainments. We used Hypertext MarkUp Language, Cascading Style Sheet and JavaScript for the front end and MySQL database as the back end; and PHP as the scripting language. The designed system was implemented using the XAMPP package. XAMPP comes with the Apache as the server, NetBeans and Dreamweaver CSS were used at the customer-side for the development. The developed system was successfully tested on a computer system with a 4 gigabyte RAM and a DUAL CORE processor with a processor speed of 2.16GHz.

Keywords: e-commerce; online booking, reservation; Hypertext MarkUp Language; Cascading Style Sheet and JavaScript.

1. Introduction

According to Zozi [1], online booking systems bring tour and activity business owners into the 21st century and it is defined as making a reservation or appointment for a service via the Internet. When you pair the technology with old-school customer service, your business gets an exciting edge for selling services and filling activities. With it, customers can book for show tickets online and pay via the Internet beforehand using debit/credit or master cards, etc. After an online payment, customer will receive a booking code or serial number which is unique for entry and also a form or ticket with the code on it will be printed by the customer. The ticket will include the passport of the customer for security against theft. In case of loss of ticket, the customer can go online to request for another one; and this differs a lot from the traditional booking, which involves long hours queuing for tickets. Some major areas of application include;

- Hotel for booking rooms
- Cinema houses
- Airport for booking tickets
- Event Organizations for football shows and concert seat reservations
- Bus and train bookings
- Used in making reservations in healthcare

1.1. Historical perspective of e-booking systems

Booking systems was brought to being by seat reservations which began with airline reservation and the history of airline reservations systems began in the late 1950s when American Airlines required a system that would allow real-time access to flight details in all of its offices, and the integration and automation of its booking and ticketing processes. As a result, Sabre (Semi-Automated Business Research Environment) was developed and launched in 1964. Sabre's breakthrough was its ability to keep inventory correct in real time, accessible to agents around the world. Prior to this, manual systems required centralized reservation centres, groups of people in a room with the physical cards that represented inventory, in this case, seats on airplanes. Wikipedia, [2], reported that in 1946, American Airlines installed the first automated booking system, the experimental electromechanical Reservisor. A newer machine with temporary storage based on a magnetic

drum, the Magnetronic Reservisor, soon followed. This system proved successful, and was soon being used by several airlines, as well as Sheraton Hotels and Goodyear for inventory control. It was seriously hampered by the need for local human operators to do the actual lookups; ticketing agents would have to call a booking office, whose operators would direct a small team operating the Reservisor and then read the results over the telephone. There was no way for agents to directly query for the system.

Other airlines soon established their own systems. Delta Air Lines launched the Delta Automated Travel Account System (DATAS) in 1968. United Airlines and Trans World Airlines followed in 1971 with the Apollo Reservation System and Programmed Airline Reservation System (PARS), respectively (Agianaku, [3]). Soon, travel agents began pushing for a system that could automate their side of the process by accessing the various ARSes directly to make reservations. Fearful this would place too much power in the hands of agents, American Airlines executive Robert Crandall proposed creating an industry-wide Computer Reservation System to be a central clearinghouse for U.S. travel; other airlines demurred, citing fear of antitrust prosecution.

A computer reservations system (CRS) is a computerized system used to store and retrieve information and conduct transactions related to air travel. Originally designed and operated by airlines, CRSes were later extended for the use of travel agencies. Major CRS operations that book and sell tickets for multiple airlines are known as global distribution systems (GDS) (Wikipedia, [2]). Airlines have divested most of their direct holdings to dedicated GDS companies, who make their systems accessible to consumers through Internet gateways. Modern GDSes typically allow users to book hotel rooms and rental cars as well as airline tickets. They also provide access to railway reservations in some markets although these are not always integrated with the main system. And now in the world today, online booking experiences are important for customers and are likely to influence future online travel portals. Based on CWT client transactions for North America [4]), online booking still has a long way to go in our world today. Based on the analysis carried out by CWT Travel Management Institute in 2006 and as shown in figure 1, the comparison of transaction costs online.

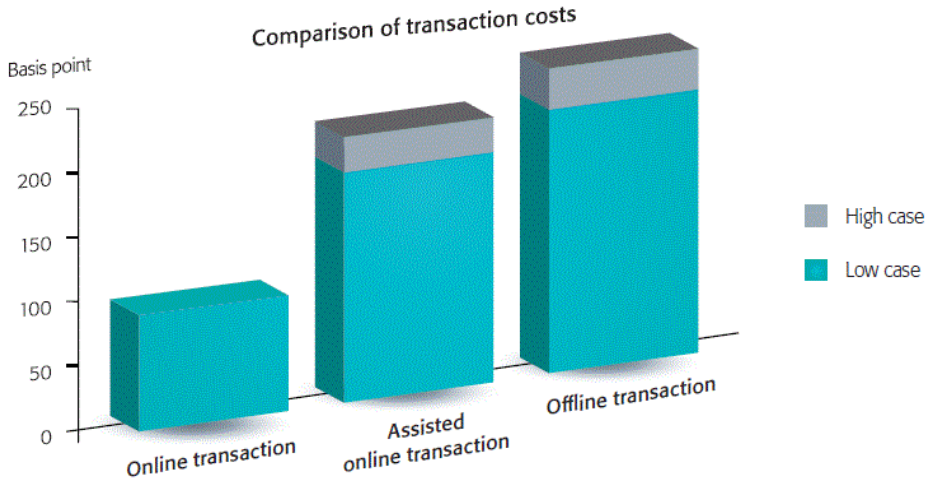

Figure 1. Comparison of transaction costs online (Source: CWT Travel Management Institute [5])

1.2. Review of related works

Naomi *et al*., [6] developed an automated Ticket Reservation System for the Millennium Forum. The work incorporated features that aided the process of online booking for visually impaired customers. Though, the application was designed for customers to reserve theatre tickets for various shows, but customers may become distracted or tired having to listen carefully to a long spoken dialogue. In addition, is the difficulties in understanding accents, for example, Irish accents.

Alex, [7] developed a user-friendly online hotel booking web interface. The work analyzed the primary user interface and usability aspects of the booking process within hotel websites and also suggested improvements that can be made to many commonly used business to customers (B2C) booking-process designs. However, the research was limited in that it has the same level of occupancy in each room. This is a problem because, in numerous hotels, the rate per room is different depending upon the status of the room.

Ainin, *et al*., [8] analyzed e-Ticketing as a new way of making purchase. In their work, they identified e-ticketing trends among urban communities particularly in Kuala Lumpur, its usefulness, reliability, security, conveniences and efficiency. They later developed an application that allows customers to pay for ticket