



Faculty of Computer Science and Information Technology

Restaurant Reservation System

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Restaurant Reservation System

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
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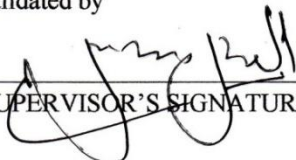
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ABSTRACT

A technique becoming more common across the restaurant industry is restaurant owners setting up their business's website to allow online reservations. These systems are designed to reduce the number of open tables a restaurant has by promoting restaurants on their sites and making the reservations for them. This report details the development of a restaurant reservation system so that customers can reserve tables through a reservation system. Business owners can keep track of the reservation list by storing all the data recorded in the database system. They can also view and delete their customers' reservation details. Both admin and customers need to login first in order to gain access to the system. The technologies used to develop this proposed system are HTML, CSS, XAMPP, PHP and MySQL.

ABSTRAK

Teknik yang menjadi lebih biasa di seluruh industri restoran adalah pemilik restoran yang menyediakan laman web perniagaan mereka untuk membolehkan tempahan dalam talian. Sistem ini direka untuk mempromosikan restoran di laman web mereka dan membuat tempahan untuk pelanggan mereka. Laporan ini memperincikan perkembangan sistem tempahan restoran supaya pelanggan boleh menempah meja terlebih dahulu dalam talian. Pemilik perniagaan boleh menjejaki senarai tempahan dengan menyimpan semua data yang dicatatkan dalam sistem pangkalan data. Mereka juga boleh menayangkan dan membuang maklumat penempahan pelanggan mereka. Kedua-dua pentadbir dan pelanggan perlu log masuk terlebih dahulu untuk mendapatkan akses kepada sistem. Teknologi yang digunakan untuk membangunkan sistem yang dicadangkan ini ialah HTML, CSS, XAMPP, PHP dan MySQL.

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CHAPTER 1 : INTRODUCTION

1.1 Project Title

Restaurant Reservation System

1.2 Introduction

Restaurant Reservation System is a system which will help restaurants to deal and fully control their management. In order for restaurant administrators to keep an organized business and reduce waiting time for customers, it is important to have a reliable and efficient restaurant reservation system. This system gives customers the freedom to book a reservation whenever and wherever they please without having to call the restaurant. After customers make their reservations, the record will be kept in a database. Manual or walk-in reservation is now a second choice, as this proposed system is ready at your service.

1.3 Problem Statement

Customers will have to call the restaurant to check if table booking is available and some even have a walk-in reservation which is a hassle as customers need to go all the way to the restaurant just to reserve a table. Customers also need to wait for them to dine in if they did not call the restaurant in the first place. Restaurant staffs need to jot down the reservations manually by penciling names and necessary details on paper. This paper-and-pencil reservation method can lead to human error and overbooking if performed incorrectly. Time is also wasted for the staff to make reservations for their customers as this time can be used to clear tables and take other customers' orders.

1.4 Objectives

The main goal of this project is to develop an online system for reserving tables for restaurants.

There are three objectives that are highlighted in order to achieve this particular goal:

1.4.1 To develop a system for customers to make table reservations.

1.4.2 To maintain the restaurant's functions in a systematic manner.

1.4.3 To avoid waiting time for customers to dine.

1.5 Methodology

Waterfall Model is used for this system. Each of the steps in Waterfall Model follows in a sequential manner without overlapping or iterative steps. The Waterfall Model phase includes requirements, design, implementation, integration and testing, system deployment and maintenance.

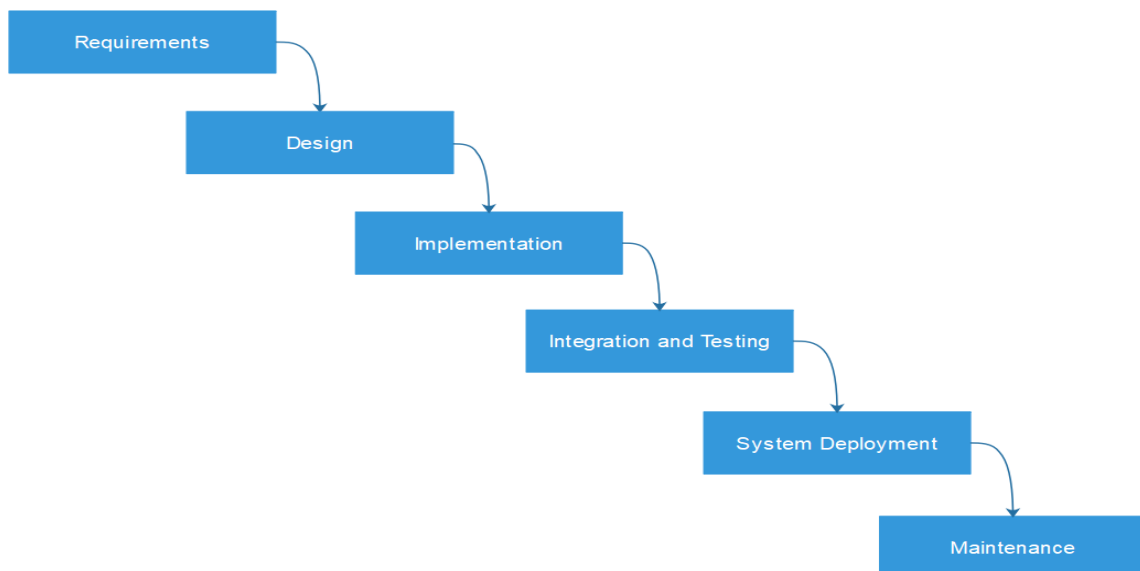


Figure 1.1: Waterfall Model

- 1. Requirements:** Project requirements are reviewed and substantiated in a specification document, and if these requirements are valid, a feasibility assessment is conducted. Consideration is given to restrictions and constraints that could impact the entire process.
- 2. Design:** The system has precise firmware and user configuration criteria including data layers, frameworks, data centers, etc. A design configuration report is created to highlight design engineering specifications such as programming language, components, data sets, architectural design and facilities.
- 3. Implementation:** From the previous stage, inferences are drawn and a robust product is developed. They invariably execute code in small parts that are incorporated at the end of this or the start of the next phase.
- 4. Integration and Testing:** When all coding is completed, consumer research can commence. Testers will meticulously find and report any problems. If major problems occur, re-evaluation may need to take place.
- 5. System Deployment:** To test its output, the software is deployed in a live setting. It becomes accessible to end-users when the software is utilized. Occasionally, this phase also comprises real-time user training to interact system perks.

6. Maintenance: The software is backed and retained to assure that it works as intended. If users experience errors while using it, the primary aim of this stage is to solve them. Such alterations emerge whether as a result of user triggered demands for change or as a outcome of complications discovered during the system's live use. Routine inspections and support for the developed software is offered to the user.

1.6 Project Scope

This project is developed for the use of restaurant administrators as well as customers. The scope of this project is to create an online system for reserving tables for restaurants. Restaurant administrators won't have to maintain the manual files and bookings anymore since everything is recorded in a web-based system. Restaurant staffs don't have to bother pencil down every reservation the customers made. Customers can make reservations quickly and easily through this system and they can do it anywhere and anytime as per their preference of location and time. The basic skills needed to develop this system are HTML, PHP, CSS and MySQL.

1.7 Significance of Project

This system is developed mainly to help restaurant administrators to keep their business record in a computerized system and customers to make table reservations easily without a fuss. Restaurant staffs no need to worry about making human error in jotting down their customers' reservation manually as everything is done online. Customers can minimize their waiting time if they make a reservation prior to the preferred time they wish to dine.

1.8 Project Schedule

The project schedule is used as guidance for the development of the proposed project.

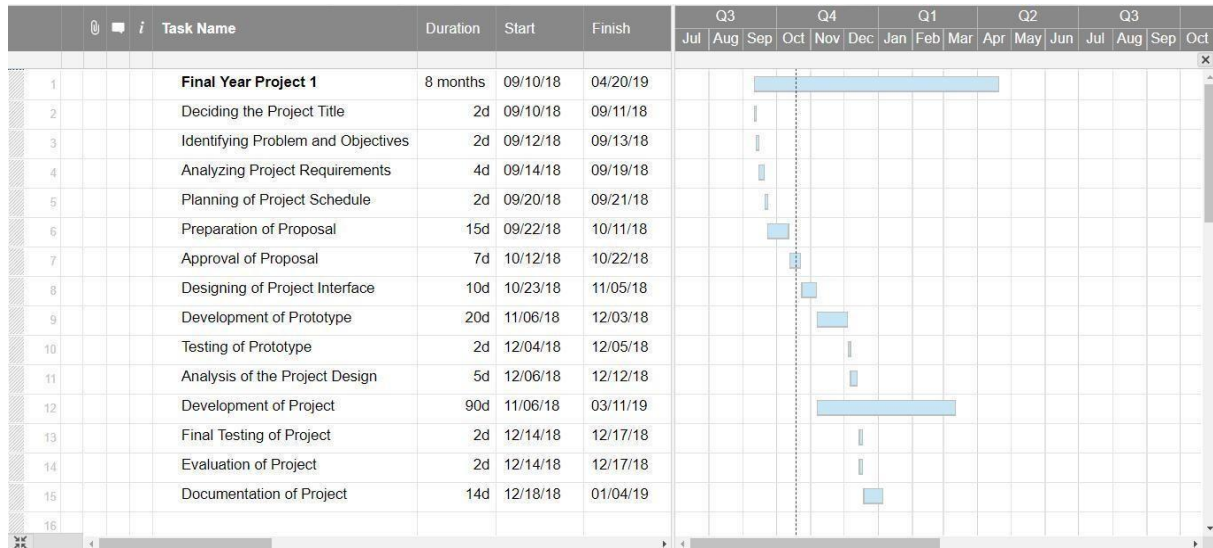


Table 1.1: Project Schedule

1.9 Expected Outcome

The expected outcome of this project is a proper reservation system that functions to help customers to reserve a table and to keep a systematic business record to ease the jobs of the restaurant administrators. The system should meet the both the admin and customers' needs and requirements. Record filing should not be a problem for the restaurant administrators anymore as everything can be done by the tip of their fingers. Walk-in reservation and the act of being waitlisted also not going to be a problem because customers can book a table online, anytime and anywhere they want as well as they now can go to the restaurant according to their booked time slot without worrying that they have to wait to dine in.

1.10 Project Outline

Chapter 1 : Introduction

In chapter 1, an introduction of the proposed project is defined in detail. This chapter is inclusive of the problem statement faced by the current system, objectives of the new system to achieve the main goal, the methodology used, project scope that stated the limitation of the project, project significance, project schedule and the expected outcome of the project which is to develop a proper, online system for restaurants for reserving tables and keeping the record organized.

Chapter 2 : Literature Review

In chapter 2, a comparison between existing system and the proposed system is reviewed. The similarities of the two systems are studied as well. The shortcoming of the existing system and the revised solution which is to be implemented in the proposed system is discussed. The similarities and new features are compared in order to outline the gaps in the existing system.

Chapter 3 : Methodology

In chapter 3, the methodology used is explained for the development of the proposed project. The method section is to provide sufficient detail about the project and also to determine its validity. It also describes the procedure of the data gathering and the statistical treatment of the data. Users' needs and requirements are collected and interpreted. Context Diagram, Level 0 Diagram, Level 1 Diagram, Level 2 Diagram, and Entity Relationship Diagram are used to sketch the system's database design for further logical progression.

Chapter 4 : Implementation

In chapter 4, the product of the proposed project's analytic process is made into a physical architecture. The implementation of the new system and its structure is depicted using screenshots and interface layouts. The testing process for the proposed project is being conducted and the result is recorded and analyzed. The testing done in the system is conducted by going through a pilot experiment to see if it is functioning properly and its feasibility is evaluated.

Chapter 5 : Testing

In this chapter, several testing on the system were done to ensure that the system meets its operational requirements and to optimize user experience and performance. Testing helps deliver a software application of quality. The primary goal of testing is to ensure system with minimal error and that the system has fulfilled the objectives stated in the first chapter. The testing of the proposed system comprises of two major parts; functional testing and non-functional testing.

Chapter 6 : Future Work

In chapter 6, a conclusion of the new project is projected. The purpose of this chapter is to get better understanding of the findings and results. A summary of the project as well as the actual findings and research is discussed and presented. The summary is inclusive of the process of evolution in the project's progressive development. Recommendations for further research end this chapter.

CHAPTER 2 : LITERATURE REVIEW

2.1 Introduction

The food industry is the second largest employer in the United States and each year these businesses come and go due to economics and stock growth (Young, Clark, McIntyre, 2006). The National Restaurant Association (NRA) has 500,000 members up to date. According to IBIS World, \$329 billion worth in revenue has been perceived by this industry independently, where chain restaurants execute a crucial part in this; not to forget almost 6 million people are employed leading to an outstanding growth rate of about 2.5% and 3.8%, respectively.

2.2 Overview of Objectives

The main goal of this project is to develop an online system for reserving tables for restaurants. There are three objectives that are highlighted in order to achieve this particular goal:

2.2.1 To develop a system for customers to make table reservations

Customers have to call the restaurant to check if table booking is available and some even have a walk-in reservation which is a hassle as customers need to go all the way to the restaurant just to reserve a table. Besides that, everything is paper based; from customers' orders to business records. Paper is a very fragile material and can be easily damaged due to human error such as accidental water spillage and this causes waiter won't have order records of the customer and damaged records cannot be retrieved anymore. Hence, in 1998, an idea of developing restaurant reservation system exists (Baltazar, 2012).

2.2.2 To maintain the restaurant's functions in a systematic manner

Everything is based on paper before the computerized based system exists solely for keeping the records. If the manager wants to audit the reservation records then, all of the data needed is in a book. It is not an efficient way of searching the records. Now, business owners or restaurateurs subscribe to these restaurant management services with a price included in order to assist them in reserving tables for customers and to keep an organized system.

2.2.3 To avoid waiting time for customers to dine in

Upon arrival, customers might have to join in a serving line for their turn as it is possible that no table is available at that moment. This leads to customer dissatisfaction. After the existence of online reservation system, customers have the opportunity to make reservations online. Parameters such as time, cost and location are without a doubt deeply affect customers' reserving decisions.

2.3 Review on Similar Existing Systems

2.3.1 Hansonic Hotel Reservation System (HHRS)

Hansonic Hotel Reservation System is a web-based application that allows customers to make enquiries online and book for services providing the required details. It is inspired by the virtual tour feature that was seen in the Shangri-La Hotel in Singapore. The system was developed by Bemile, Achampong and Danquah from Methodist University College Ghana Dansoman, Ghana. This system is developed for Hansonic Hotel where they used to have manual booking system. The main goal for this system is for their customers make reservations at their own pace. The system is monitored by system administrator and its features are form filling which is used to make enquiries and reservations, approving or deleting enquiries as well as virtual tour.

The tools and technology used for this system are :-

- Macromedia Dreamweaver
- HTML
- Adobe Flash
- PHP
- phpMyAdmin

Dreamweaver offers shift and interoperability functions, the ability to detect and supplant text or code lines via keywords and iterations throughout the page. Internet explorer was the browser used for the project as it is free and comes with all windows based operating system. A document file will be sent to the user's computer once the browser has connected to a website. The browser interoperates HTML commands which contained inside it and displays the document as a web page. Graphics, video and interactive content were added to the pages by Adobe Flash.

Subsequently, PHP has been used to program the server, which are basically queries used to link the website to the database.

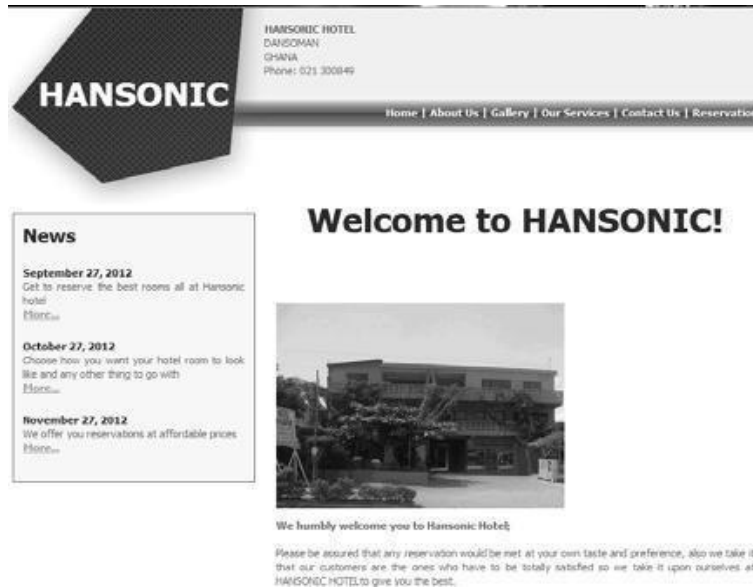


Figure 2.1: User Interface



Figure 2.2: Administrator Interface