E-RESTAURANT MANAGEMENT SYSTEM

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E-RESTAURANT MANAGEMENT SYSTEM

BALAKUMARAN NEHRUDEVAN

The report is submitted in partial fulfillment of the requirement for the
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UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2015

DECLARATION

I hereby declare that this project report entitled

E-RESTAURANT MANAGEMENT SYSTEM (e-RMS)

is written by me and is my own effort and that no part has been plagiarized without citation.

STUDENT : _____ DATE: _____

(BALAKUMARAN NEHRUDEVAN)

SUPERVISOR : _____ DATE: _____

(Ms. INTAN ERMAHANI A.JALIL)

DEDICATION

This report is dedicated to my parents, Mr. Nehrudevan Rajagopal
and Mrs. Santhy Nehrudevan for their full support on completing this project.

To my supervisor, Ms. INTAN ERMAHANI A.JALIL and all my friends, for making it all worthwhile and have provided encouragement and guidance all the way during the completion of the project.

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ABSTRACT

E-Restaurant Management System is a system that develops to change manual system into computerized system that used in restaurants. This system is developed in website and can be accessed for 24hours. It is used by the restaurants administrator and the staff itself. Through this system, user is able to record all the information about any single transaction into the database. For cashier, they would be able to calculate the total price according to the table and be able to generate daily report. For waiter, they would be able to take order using smartphone. For chef, they would be able to check the kitchen display for the order and once done with the order, they would be able to check the kitchen order as well. In addition, there are many inventions of smartphones in this era of science and technology. In the market, smartphones are getting cheaper and users can simply access to a website once they have the internet access. Thus, almost everyone owns a smartphone. So this would easy and convenient for a restaurant to use this system. While, the aim of the project is to develop a web based and integrated with mobile support application that will help the restaurant to manage their orders.

ABSTRAK

Sistem Pengurusan E-Restaurant adalah sistem yang dibangunkan untuk mengubah sistem manual ke dalam sistem berkomputer yang digunakan di restoran. Sistem ini dibangunkan dalam laman web dan boleh diakses untuk 24 jam. Ia digunakan oleh pentadbir restoran dan kakitangan itu sendiri. Melalui sistem ini, pengguna dapat merakam semua maklumat tentang apa-apa urus niaga tunggal ke dalam pangkalan data. Untuk juruwang, mereka akan dapat untuk mengira jumlah harga yang mengikut jadual dan dapat menjana laporan harian. Untuk pelayan, mereka akan dapat mengambil pesanan menggunakan telefon pintar. Bagi tukang masak, mereka akan boleh menyemak paparan dapur untuk sesuatu pesanan dan mereka juga dapat untuk memeriksa pesanan yang diterima dapur juga. Di samping itu, terdapat banyak kajian terhadap telefon pintar dalam era sains dan teknologi. Dalam pasaran, telefon pintar semakin murah dan pengguna hanya boleh mengakses ke laman web apabila mereka mempunyai akses internet. Oleh itu, hampir semua orang memiliki telefon pintar. Jadi ini akan mudah dan selesa untuk restoran untuk menggunakan sistem ini. Walaupun, tujuan projek ini adalah untuk membangunkan satu system berasakan web dan disepadukan dengan aplikasi sokongan mudah alih yang akan membantu restoran untuk menguruskan pesanan mereka.

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CHAPTER I

INTRODUCTION

1.1 Project Background

Computers have turn out to be a part of the life for getting to any sort of information. Currently, a twenty first century life is loaded with innovative growth and in this high technological lifetime it is exceptionally troublesome for an association to survive without using the technology. The World Wide Web gave a rapid incredibility to the creation of an increasing worldwide information database. An enterprise could likewise utilize the technology instruments to share information within the enterprise itself or outside.

Proposed topic is an e-Restaurant Management System with Mobile Support, which is a system for the restaurant to use in order to take order from the customers. In other words, e-RMS is an incorporated system, created in order to help restaurant management peoples by empowering waiters into quickly taking orders using the smartphones and the order will be naturally send to kitchen system so that the chef can continue to cooking once received the order. This will reduce the amount of minutes to sit tight for the dinner serving. In meantime, the orders also will consequently send to cashier's system so that they can issue a receipt for the order. Paper based is the existing system that was used before where a waiter uses paper to note down the order of customers.

Information is normally kept on the paper. Similarly as with anything paper based, it is natural for things to get harmed or being lost because of flame or accidents or just generally lost. There is wastage of money, resources, and time in this.

The fundamental idea of interest in the system is where it greatly shortens the ordering procedure for the customer and restaurant as well. This framework likewise incredibly relieves the burden on the restaurant's part, as the whole procedures of taking orders are computerized. Once the order is lodged in the system, it will go into the database and then fetched, in practically continuous, by a desktop system on the restaurant's side. In the application, all the items in the order cart are shown, alongside with the information, in an easy to read manner and concise. This permits the restaurant employees to rapidly undergo the orders as they are lodged and to produce the needful meals with minimal confusion and delay.

1.2 Problem Statement

- Nowadays, many restaurants deal their business by manual particularly when taking customers order. The restaurant waiters generally take the customer order by manual system which is by utilizing a paper. This is an issue for restaurant waiter where the likelihood of lost and duplicates customer information or order may happen. Moreover, it would influence to reputation of restaurant in work management of ordering.
- The difficulties experienced by the extant system provide a noteworthy downside to the acknowledgment of consumer loyalty and productivity. The experience of ordering in many restaurants is not satisfying for the customers. Customers normally have to make a lengthy hold up before getting their meals done specifically in the time of crest hours and this will bring about wastage of time furthermore can influence the restaurant's reputation.

1.3 Objectives

- To automate the manual ordering strategy by utilizing the web service application.
- To enhance the efficiency of administration site by empowering them to produce reports effortlessly and efficiently.
- To bolster the Go-Green innovation by decreasing the usage of papers.

1.4 Scope

This restaurant management system will be an electronic application coordinated with Android support as well; which major dialect of programming language will be PHP. The principle idea is to improve the efficiency and simplify the ordering process for the customers and restaurant, assurance of information precision and security during the access to the system. Customers are ready to view a viewable confirmation that the order was placed effectively right towards the end of request process in the waitress mobile system.

1.5 Project Significance

- This system will be going to assist customers and administrator in the restaurant particularly the part of food ordering as per table.
- This system likewise can decrease the utilization of papers.
- This system is ready to produce daily report for the administrator whenever.
- This system likewise ready to decrease the monthly cost for paper to record all the day by day report and also food ordering process where usage of paper will happen.

- This system likewise creates an automated system in characterizing the finest arrangement in every ordering problem confronted by administrator, waiters, and customers.

1.6 Expected Output

This eRMs system is required to create a PC managed system to deal with all the restaurants data. This system spare data in the database and have the capacity to decrease the use of papers. This system additionally helps to decrease the monthly cost for the paper usage which used to record the daily report of restaurant. Moreover, this system has a steady of information as the PC managed activities which were more productive, viable, efficient and systematic. This system likewise will have the capacity to store waiter's information, menu's information, produce receipt, make an order, and generate daily report. Otherwise, this framework will transform from the manual framework to a modernized framework which is more efficient.

1.7 Conclusion

eRMS are produced as a framework based programming. Chapter 1 describes every issue happened by utilizing the manual system. Project scope and project objective distinguished the answer for most of the issues. Project Significance likewise being discloses to persuade advantages that can be assembled by the system. The system ideally able defeat many issues in the manual framework. Chapter two expounds the project methodology and literature review.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

This e-RMS framework is a web-based system which made to help those restaurant administration staff lessen their workload and decrease the time taken to complete a food ordering task. This e-RMS system will be operated for 24 hours. It can spare all data successfully and effectively. Besides that, it gives daily or monthly report generation to facilitate the staffs who is working in the restaurant.

2.2 Fact and Finding

2.2.1 Decision Support on Restaurant Management System

Decision making is a focal piece of business practice at every level of management. The three phases of decision making are recognized as intelligence, design, and decision. All these are firmly identified with the periods of critical thinking. The very term decision support system emphasizes the collaboration expected between human and computer processes. An early pioneer of decision

support system (DSS), Scott-Morton, composes that the DSS methodology require a technique for meshing the analytic force and information processing capabilities of the PC with the manager's critical thinking procedures, problem solving processes, and needs. While, a recent definition of DSS has a likewise wide scope and assumes human association and combination.

Decision Support Systems is a computer based framework which brings together the information from an assortment of sources, analysis of information, help in the organization, and facilitate the evaluation of presumptions underlying the use of particular designs. A DSS is additionally a system that the human user plays a fundamental and intelligent role inside. A strategic decision support system present the three difficulties of their own where it is typically imprecisely described and qualitative, it is more inclined to be taken by the most senior managers thus convenience, or the likelihood of end-user development is highly attractive, and in conclusion it is shared among the managers thus obliged a distributed system. DSS if compared is likely more a service than a product.

2.2.1.1 Case Study on Decision Support for Railroad Transportation System

The European Union has an unmistakable approach in the space of transportation systems and gives the primary goals of this critical efficient field. The White Paper of the European Commission proposes a couple measures to go for developing a European transport system. In that file, the Intelligent Transportation Systems (ITS) have an imperative spot since they can possibly give answers for the 21st century European transportation. Those solutions consider the transportation productivity, velocity and its security of travelers. Particular constituents of ITS are Decision Support Systems in Transportation (DSST), which are used at the operational and hierarchical administration levels. These are intelligent systems that backing the decider, an individual or a group of persons in drawing nearer complex situations and decision making procedures. Decision Support Systems (DSS) guarantee the PC support for the conscientious

decision-making for solving problems that require vast sum information handling and improvement of complex situations utilizing this information. Decision Support Systems are intuitive, PC based systems that help the decision makers to understand and solve unpredictable, unstructured or semi- organized decision problems where a human expert assistant would be generally needed.

The setting of the contextual investigation is the need of the Romanian Railway Company (CFR) to supply an improved railroad capacity on the transportation lines. This is an after effect of the development of two international railways: “Corridor IV” (from west to east) and “Corridor IX” (from north to south). Both passages are getting through the Southern Carpathian Mountains. The decision makers need to consider some specialized distinct options to increase the transportation stream limit on these lines. One option is to multiply three or four times the limit of the current railroad lines in the middle of Bucharest and Ploiesti. Another arrangement is to finalize the work on hold, yet thinking seriously about the development hazards on an unsteady sliding regular ground. There is a third option, that of discovering another railroad in the middle of Pitesti and Romanic Vice. Typically, in the sequel the decision analysis will consider the speculations costs and the yearly benefit.

The Precision Tree of Palisade is an example of decision analysis software which can be included as an add-in to Microsoft Excel. The Precision Tree framework incorporates different tools for defining and examining decision trees and influence diagrams. In the software product, all decision model qualities, including the probabilities, are entered specifically in spreadsheet cells, much the same as some other Excel models. It likewise permits connecting values in the decision model straightly to areas specified in the spreadsheet model. The results of comprehending that model can be used as payoffs for every way through the decision tree. All estimations of adjustments happen progressively, that is, as the tree is altered, all payoffs and node values are consequently recalculated. All analysis results are reported directly in Excel for simple customization, printing, and saving. The user has not to take in an entire

new arrangement of arranging charges since all reports can be altered like some other Excel worksheet or graph.

2.2.2 Android Features in Restaurant Management System

Android is a portable mobile operating system (OS) based on the Linux kernel and currently developed by Google. With a user interface based on direct control, Android is planned basically for touchscreen mobile devices, for example, cell phones and tablet PCs, with specialized user interfaces for TVs (Android TV), cars (Android Auto), and wrist watches (Android Wear). The OS uses touch inputs that freely correspond to real-world actions, like swiping, tapping, squeezing, and opposite squeezing to control on-screen items, and a virtual console. Regardless of being basically designed for touchscreen input, it has likewise been utilized in game consoles, digital cameras, normal PCs, and other different electronics hardware.

Starting June 2013, the Google Play store had more than few millions of Android applications distributed, and more than fifty billion applications downloaded by users. Google released the Android's source code under open source licenses, although most Android gadgets ultimately ship with a combination of open source and proprietary software, including restrictive software developed and authorized by Google. Android is mainstream with innovation organizations which require a low-cost, ready-made and adjustable OS for high-tech gadgets. Android's open source nature has energized a big community of developers and devotees to utilize the open source code as an establishment for community-driven projects, where it includes new elements for advanced user or convey Android into gadgets which was officially released running under other OS.

There are few advantages and disadvantages that we will confront when using an Android product, where the preferences are it gives an excellent