

A Project Report
on
Restaurant Management System

*Submitted in partial fulfillment of the
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Master of Computer Applications



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CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the thesis/project/dissertation, entitled "**Restaurant Management System.**" in partial fulfillment of the requirements for the award of the "Bachelor Of Technology" submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the period of month, Year to Month and Year, under the supervision of Name... Designation, Department of Computer Science and Engineering/Computer Application and Information and Science, of School of Computing Science and Engineering , Galgotias University, Greater Noida

The matter presented in the thesis/project/dissertation has not been submitted by me/us for the award of any other degree of this or any other places.

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This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Supervisor Name

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My heartfelt thanks!

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CERTIFICATE

The Final Thesis/Project/ Dissertation Viva-Voce examination of Anjani Kumar Singh and Suraj Prakash has been held on 22/12/2021 and his/her work is recommended for the award of Bachelor of Technology(CSE).

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Place: Greater Noida

Abstract

It is an android based application which is a multi-faceted software that helps streamline of restaurant's operation . it will access by all the android phone and restaurant can use to feed their menu into android based phone to make it easier for the dinners to flip,swipe& tap through the menu .The simplicity and ease of access of a menu are the main aim of this project.

The program is being implemented to reduce manual labor and increase the accuracy of work in the restaurant area.The system manages and maintains customer records and online ordering. This Android app is made to file for user-friendly interface. So that the Customer can easily add and remove food items. Unique restaurant menu card has a variety of foods available in the restaurant. By using the location order menu, the customer can simply clickand food order. The messaging module tells the supplier to give you some food. And the tracking track follows order. The billing system adjusts the bill according to the food delivered. This program completely eliminates unnecessary time. Every order is linked to each seat in the table, and orders are made by one customer at a time, just as it is open paper, but with great accuracy. Items can also be easily shared across the table, moved or modified, and re-marked cost scan be calculated in real time.

The purpose behind this project is to reduce the paper work and improve the performance of the restaurant. Using this android based application task would be performed in less amount and more efficiently. Feedback module would help the restaurant check for how well they performing , monthly/yearly figures can be checked by the billing module to see trends in sales and profit

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INTRODUCTION

It is an android based application which is a multi-faceted software that helps streamline of restaurant's operation . it will access by all the android phone and restaurant can use to feed their menu into android based phone to make it easier for the dinners to flip, swipe& tap through the menu .The simplicity and ease of access of a menu are the main aim of this project.

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LITERATURE REVIEW

The current system is paper based. Papers are used in restaurants for displaying the traditional menu cards, writing down the orders of customers, storing the records of customers. The disadvantages of paper based system are that papers can get easily damaged by stain marks, they can be lost due to fire or accidents or can get lost in general. Hence, time and money is wasted. As traditional menu cards are paper based, any changes that need to be made in the menu will require reprinting of the entire menu card, leading to wastage. For small changes, reprinting the entire menu card is impossible. Changes in the menu card cannot be made dynamically. It is inefficient to access a particular record from the stack of papers. This system is time consuming. One has to call a waiter number of times till he notices it, and wait for him to arrive at their table to take their order. Also the waiter can misinterpret the customer's order since he is writing the order on paper, and the case of serving a wrong dish is possible. The management of restaurants has improved with time. Each waiter is assigned a group of tables, and after taking orders for a table, the waiter enters the order (list of meals, drinks ordered by the customer or a group of customers) into the system at the PC. The waiter usually has an idea of the dishes that are unavailable before taking an order. The system must confirm the availability of dishes. If a food item is not available, the system must allow the waiter to modify (change or even delete) a customer's order. Meals to be prepared are sent to the kitchen, drink orders are sent to the bar. Starters and main course orders are generally taken together. Drinks and dessert orders can be taken separately. The chefs in the kitchen can view the dish orders on their screen, prepare them in an appropriate order and confirm preparation to the system when complete, similarly with the bar. When a waiter sees the completion indication on his terminal, he collects the meals/drinks/desserts and takes them to the table. The

waiter can also check on the status of dish and drink orders. At the end of the meal, the waiter orders the system to print the total bill and he enters the payment details for it. The management has the choice of giving discounts. The system keeps records of the numbers of customers served by each waiter and the amount of money taken by them. These statistics can be viewed by the management. The next advancement was “QORDER”. It is a portable ordering system for Android devices. Here the waiter approaches the customer’s table with the QOrder, a hand held device, rather than the traditional notepad. He uses the touch screen to enter the order information and then sends it to the kitchen in real time for processing. Simultaneously, the POS system receives the sales information for the purpose of billing. QOrder uses WIFI to easily access every corner of the restaurant, encompassing all the tables establishes within. Once the customer wishes to leave, the waiter uses his belt printer to print the receipt and processes payment with the handheld unit much like he would on the POS system. But there are still many areas which require serious attention. Like, making dynamic changes in the menu card, to get rid of the heap of paper based records, to assure the customer that he’ll be served with what he has ordered, to record the customer feedback.

Some of the existing systems are mentioned below:

- PixelPoint

PAR PixelPoint Company uses this software for restaurant management. The system consists of the company’s hardware and software. This network system is TCP/IP compatible, enabling sending of information through both wireless and conventional networks. - LRS Restaurant Server Pager Starter Kit This system reduces the waiting time of clients and improves the food-ordering service quality

in restaurants. The on-site paging system for sending the order data is used at UHF frequency or the frequency range of 467 MHz. - Implementation of Network-based Smart Order System The Smart Order System in Restaurants (SOSIR) has been modified to take order from the client's table through RS-232 signal, which is sent to the cashier counter. The cashier counter system is connected to a database. When the clients' orders are sent the cashier counter system will screen and prioritize the orders before sending the information to the kitchen for the chef to cook. Personal Digital Assistant (PDA) based systems A number of wireless systems like WOS, i-menu, FIWOS were developed when new technologies and approaches being introduced to automate the food ordering process. All the above systems were PDA- based. The feature of PDA systems was that customers or waiters key in ordering process. Using wireless technology there was easy communication between the PDA's and server. But PDA based system also had several drawbacks. PDAbased system increased the restaurants expenditures. PDA systems also did not provide any real time feedback from customers. Menu cards in the PDA's were not attractive and uninformative as it did not support images.

The mobile market is growing in each year replacing the demand for traditional desktop applications. This makes software development for mobile devices an interesting and attractive industry to work in. The primary motivation for this project stems from the desire to learn and gain experience in android apps and web sites development as well as an interest in the design and development of distributed systems. The paper based menu system is very tiresome and need lots to wait by the customers to get noticeable by a waiter in a busy restaurant. And hence such a system will surely be a blessing for both customer and restaurant owners, which motivated us to work on our project more.

We aim in providing an advanced menu display using android mobile phones at restaurants with a tablet menu that would recommend dishes based on a recommendation algorithm. In addition to this we run the app on an Android based tablet and not on an iOS based tablet which is more expensive alternative. We use a cloud based server for storing the database which makes it inexpensive and also secured. Developers of similar applications maintain that customers who seat at tables outfitted with tablets spend about 10% more than those at other tables (“people buy more when they can do so instantly, without waiting for service”).

MODULE

1: Login Module :- In login module the customer and restaurants login will be taken while they already registered on the application. Every manager/user will have login id and password to login to the application.

2: Registration Module This module is displayed to the visitors if they need to perform some order placements, and new registration for restaurants who wants to do business with us on our online restaurant management application.

3: Add/Update/remove Menu This module is for admin. Admin have rights to insert, update (modify) and delete the data in database as per his/her necessary requirements.

4: Account Management Module :- There will be an account manager who will manage all the online order transaction and he/she will be responsible for issuing printed copy of customers payment receipts.

5: Station Tracking Module :- This module describes the current location of any particular area over the usage of internet connectivity and GPS. This module is useful to find the location of order placed and for estimated time delivery.

6: Place Order Module :- The activity is performed by customer itself whose registration is already done. Once the verification is done by application, the order gets confirmed and delivery will be given to the dedicated customers address.

7: Carting Module :- This is additional feature given to add the food items in customer's virtual basket just like pending orders or the orders which customer wants to do later. But, if the customer is first time visiting then he/she will unable to place order until he/she do registration to our application.

8: Order Manage Module:- In case, the customer come to know that the food or service of restaurant is not good and estimated delivery time is too much as expected then he/she can manage his/her orders under order manage module.

9: Messaging Module :- The private window for conversation between customer and customer executives will be given inside the application where they can ask about any kind of queries to the executives 24/7.

10: Logout Module :- The last module describes that after placing order or performing some actions on the application the customer will click logout profile.

System Features Tablet on table:-

There will be a tablet on each table

. This will allow the customers to browse the food items for the time they wish.

This will allow the customers to browse the food items the way the customer wish.

Customer feedback:- Customer can enter the feedback about the service and the food served. This helps the Restaurant owner to analyse the service and make necessary changes if needed.

This also helps the Customer's to decide a particular food item with a positive feedback.

Searching Item:-

Customer can search a particular food item according to name, price, category etc. This saves a lot of time of customer to order an item.

Offers for Customer:- The Restaurant owner can post various offers on tablet.

This will help the customer as well as the restaurant owners.

Attractive Presentation:- The Menu is organized in an attractive way.

There are images of every food item which will make the view of customers more clear about how the food will look like after delivery.

here is an attractive use of Various themes and colour schemes.

Sorting an Item:- The food items will be sorted according to price, season and user ratings.

This helps the customer to find or select a food item which has a good rating and which is liked by a many customers.

This also helps the Restaurant owner to make changes in a particular food item if it has low ratings which improves the quality of food.

Time to Serve:- The menu includes the approximate time to be served of a particular food item. This will help the customer to select the food item accordingly.

Modifiable Menu:- The menu can be modified by the Kitchen manager.

AIMS and Objective

This system aims at increasing the quality and speed of service. This system also aims at increasing attraction of place for large range of customers. In current formal dining environments, some form of physical static menu is utilized to convey the available food and beverage choices to customers. Said menus are generally paper based and hence impose restrictions on the textual real estate available and the ability a restaurateur has to update them. This document specifies the requirements for a restaurant paper menu and ordering replacement strategy to alleviate the problems associated with the current archaic method. Implementing this system gives a cost-efficient opportunity to give the customers a personalized service experience where they are in control choosing what they want, when they want it – from dining to ordering to payment and feedback.

Objectives Tablet on table:-

- There should be a tablet on each table.
 - This will allow the customers to browse the food items for the time they wish.
- Customer feedback:-
- Customer should be able to enter the feedback about the service and the food served.
 - This helps the Restaurant owner to analyse the service and make necessary changes if needed.
 - This also helps the Customers to decide a particular food item with a positive feedback.
- Searching Item:-
- Customer should be able to search a particular food item according to name, price, category etc.
 - This saves a lot of time of customer to order an item.
- Offers for Customer:-
- The Restaurant owner can post various offers on tablet.
 - This will help the customer as well as the restaurant owners.

Attractive Presentation:- • The Menu should be organized in an attractive way with suitable imagery.

Sorting an Item:- • The food items should be sorted according to price, season and user ratings.

- This helps the customer to find or select a food item which has a good rating and which is liked by a many customers.

- This also helps the Restaurant owner to make changes in a particular food item if it has low ratings which improves the quality of food.

- The menu can be modified by the Kitchen manager.

RELATED WORK

The world has contracted with technology. Technology had affected the restaurants with greater impact. RFID technology, digital menus, service robots and others are some examples of advanced technology are coming to the future restaurants. However, the restaurant service process has to stay customer-centred and it will mainly include human service also in the future Customizable Wireless Food Ordering System with Real Time Customer Feedback is discussing, the design and implementation of a customizable wireless food ordering system with the help of a real-time customer feedback for a restaurant (CWOS-RTF). The CWOS-RTF enables restaurant owners to set-up the system in wireless environment and update menu presentations easily. Smart phone has been integrated in the CWOS-RTF. Instead of using PDA's to interface with customers, they leverage smart phones to provide necessary interfaces for customer to view and order menu. With private login system, customers can view and make order and receive updates in real-time and collect receipts right from the smart phone itself. It allows restaurant owners to manage orders from customers instantaneously whenever he or she logged in into the system. The existence of wireless technology and the emergence of mobile devices enable a simple yet powerful infrastructure for business application. Some early efforts have been made to utilize both technologies in food ordering system implementations. However, the food ordering systems that have been proposed earlier exhibit limitations, primarily in cost effectiveness, allowing customizations and supporting real-time feedback to customer's implementation to facilitate real-time communication between restaurant owners and customers. A preliminary testing suggested that the CWOSRTF has the potential to eliminate the limitations of existing food ordering systems. The objectives of the proposed system are:

To automate food ordering system at Restaurants so that it can eliminate or at least minimize the current problems in conventional system.

To utilize wireless communication and smart phone technology in implementing the automated system.

To facilitate more intuitive interfaces and customization for the restaurant owner to update the menu content on the customer devices

To enable real-time feedback between the restaurant owner and customers on the order status.

External interfaces Requirements

User Interfaces User Tablets:

This type of the tablets is especially for the use of normal users coming in the restaurant. These tablets will consist of the whole menu of the restaurant. They will be enabled with the Wi-Fi connectivity. The items in the menu are non editable for these types of the tablets. So, the user can not interfere in the menu and make changes in it. The tablets should be able to display all the items of the menu with sufficient visibility. Customer from any layer of the society should be able to handle and operate all the functions easily. **Manager Tablets:** These tablets are especially for the use of the restaurant manager. The manager should be able to control the function of whole restaurant from a single tablet. He can access any tablet and should be able to make changes to the menu. Like he can change price of particular item or he can disable particular item which is not available at that particular time. **Display at Kitchen:** These are present at the kitchen near chef so that he should be able to see what a particular has ordered. All the ordered items are displayed on the screen giving the table number below. They should be

sufficiently large to be seen by chef at a reasonable distance. Chef should be able to denote a particular item that is ready.

Hardware Interfaces

There are three external hardware devices used by the proposed system, each related to a user interface. These devices are the wireless tablets and the displays. All the devices must be physically robust and immune to liquid damage and stains. The devices (with the possible exception of displays) must also have good industrial design aesthetics, as they are to be used in place of normal restaurant tables and notepads and will be in direct contact with customers. The devices behave as 'terminals' in the sense that they never have a full system image, do not store data and are not used for the core logic of the system. However, they should be fully capable tablets that can use textual data from the server along with local UI/interpretation code to display UI elements and take input. All order and transaction records should be stored on the server, not these tablets. The performance of dumb terminals over an area the size of a restaurant is likely to be unacceptable. In all the cases, the hardware device takes information from the proposed system and processes the information to display. It also provides user input information to the proposed system.

3.3.3 Software Interfaces

We will require interface with a JSP/Servlet that stores the information necessary for our system to operate. The JSP/Servlet must be able to provide, on request and with low latency, data concerning the restaurant's menu, employees (and their passwords) and available dietary requirements. Additionally, it should take and archive data provided to it. This data will include records of all orders and transactions (system states and state changes) executed. JSP/Servlet must store all data such that it can be used for accounting, as well as accountability.

3.3.4

Communication Interfaces The DOSRUA will interact with a WiFi to maintain communication with all its devices.

Non-Functional Requirements:

This subsection presents the identified non-functional requirements for the subject of proposed system. The subcategories of non-functional requirements given are performance safety, security and software quality attributes.

Problem Formulation

In our current situation we face few troubles like misunderstanding while we order food(from Customer's point of view). Doubt on Waiters (from Manager's/Management's point of view). To revoke this type of problem we need this software.

To solve all this type of Problem we develop an android application for restaurant ordering system and provides facility to update the menu. To develop a software at kitchen and cashier to receive order from server. Customer should be able to enter the feedback about the service and the food served by e-restaurant android application. With this system customer can order food easily and order's copy will go directly to kitchen room , cash counter and restaurant owner immediately

Required Tools

Software and Hardware

Requirement Software

1. Java
2. Android Development
3. Microsoft .Net
4. Microsoft SQL

Hardware Requirement

1. Windows/Linux/Mac
 1. RAM: 8GB
 2. ROM: 500 GB

2.Android Phone

JAVA

Java is the technology of choice for building applications using managed code that can execute on mobile devices.

Android is an open source software platform and Linux-based operating system for mobile devices. The Android platform allows developers to write managed code using Java to manage and control the Android device. Android applications can be developed by using the Java programming language and the Android SDK. So, familiarity with the basics of the Java programming language is a prerequisite for programming on the Android platform. This article discusses where Java fits in mobile application development and how we can use Java and Android SDK to write applications that can work on Android devices.

THE CHOICE OF JAVA

What made Java be the technology of choice for mobile development for the Android platform? The Java Programming Language emerged in the mid-1990s; it was created by James Gosling of Sun Microsystems. Incidentally, Sun Microsystems was since bought by Oracle. Java has been widely popular the world over, primarily because of a vast array of features it provides. Java's promise of "Write once and run anywhere" was one of the major factors for the success of Java over the past few decades.

Java even made inroads into embedded processors technology as well; the Java Mobile Edition was built for creating applications that can run on mobile devices. All these, added to Java's meteoric rise, were the prime factors that attributed to the decision of adopting Java as the primary development language for building applications that run on Android. Java programs are secure because they run within a sandbox environment. Programs written in Java are compiled into intermediate code known as bytecode. This bytecode is then executed inside the context of the Java Virtual Machine..

USING JAVA FOR BUILDING MOBILE APPLICATIONS

The mobile edition of Java is called Java ME. Java ME is based on Java SE and is supported by most smartphones and tablets. The Java Platform Micro Edition (Java ME) provides a flexible, secure environment for building and executing applications that are targeted at embedded and mobile devices. The applications that are built using Java ME are portable, secure, and can take advantage of the native capabilities of the device. Java ME addresses the constraints that are involved in building applications that are targeted at mobile devices. In essence,

Java ME addresses the challenge of executing applications on devices that are low on available memory, display, and power.

There are various ways to build applications for Android devices, but the recommended approach is to leverage the Java programming language and the Android SDK.

THE DALVIK VIRTUAL MACHINE (DALVIK VM)

The Android platform leverages the Dalvik Virtual machine (Dalvik VM) for memory, security, device, and process management. Although the internal intricacies of how the Dalvik Virtual Machine works is not that important to an average developer, you can think of the Dalvik VM as a box that provides the necessary environment for you to execute an Android application sans the need of having to worry about the target device.

To get started using Java for Android, you should first download and install Android Studio. You then may want to take advantage of the SDK Manager to download and install the latest SDK tools and platforms.

Microsoft.Net

.NET Framework used for

.NET Framework is used to create and run software applications. .NET apps can run on many operating systems, using different implementations of .NET. .NET Framework is used for running .NET apps on Windows.

Who uses .NET Framework?

Software developers and the users of their applications both use .NET Framework:

Users of applications built with the .NET Framework need to have .NET Framework installed. In most cases, .NET Framework is already installed with Windows. If needed, you can [download .NET Framework](#).

Software developers use .NET Framework to build many different types of applications—websites, services, desktop apps, and more with Visual Studio. Visual Studio is an integrated development environment (IDE) that provides development productivity tools and debugging capabilities. See the [.NET customer showcase](#) for examples of what people are building with .NET.

Need .NET Framework?

You need .NET Framework installed to run applications on Windows that were created using .NET Framework. It's already included in many versions of Windows. You only need to [download and install .NET Framework](#) if prompted to do so.

How does .NET Framework work?

.NET Framework applications are written in C#, F#, or Visual Basic and compiled to Common Intermediate Language (CIL). The Common Language Runtime (CLR) runs .NET applications on a given machine, converting the CIL to machine code. See [Architecture of .NET Framework](#) for more info.

The main components/features of .NET Framework

The two major components of .NET Framework are the Common Language Runtime (CLR) and the .NET Framework Class Library. The CLR is the execution engine that handles running applications. The Class Library provides a set of APIs and types for common functionality. See [Architecture of .NET Framework](#) for more info.

What is the difference between .NET and .NET Framework?

.NET and .NET Framework share many of the same components and you can share code across the two. Some key differences include:

.NET is cross-platform and runs on Linux, macOS, and Windows. .NET Framework only runs on Windows.

.NET is open-source and accepts contributions from the community. The .NET Framework source code is available but doesn't take direct contributions.

All of the innovation happens in .NET.

.NET Framework is included in Windows and automatically updated machine-wide by Windows Update. .NET is shipped independently.

MICROSOFT SQL

What is SQL Server?

- It is a software, developed by Microsoft, which is implemented from the specification of RDBMS.
- It is also an ORDBMS.
- It is platform dependent.
- It is both GUI and command based software.
- It supports SQL (SEQUEL) language which is an IBM product, non-procedural, common database and case insensitive language.

Usage of SQL Server

- To create databases.
- To maintain databases.
- To analyze the data through SQL Server Analysis Services (SSAS).
- To generate reports through SQL Server Reporting Services (SSRS).

- To carry out ETL operations through SQL Server Integration Services (SSIS).

SQL Server Components

SQL Server works in client-server architecture, hence it supports two types of components – (a) Workstation and (b) Server.

- **Workstation components** are installed in every device/SQL Server operator's machine. These are just interfaces to interact with Server components. Example: SSMS, SSCM, Profiler, BIDS, SQLEM etc.
- **Server components** are installed in centralized server. These are services. Example: SQL Server, SQL Server Agent, SSIS, SSAS, SSRS, SQL browser, SQL Server full text search etc.

Instance Of Sql Server

- An instance is an installation of SQL Server.
- An instance is an exact copy of the same software.
- If we install 'n' times, then 'n' instances will be created.
- There are two types of instances in SQL Server a) Default b) Named.
- Only one default instance will be supported in one Server.
- Multiple named instances will be supported in one Server.
- Default instance will take the server name as Instance name.
- Default instance service name is MSSQLSERVER.
- 16 instances will be supported in 2000 version.
- 50 instances will supported in 2005 and later versions.

Advantage Of Instances

- To install different versions in one machine.
- To reduce cost.
- To maintain production, development, and test environments separately.
- To reduce temporary database problems.
- To separate security privileges.
- To maintain standby server.

SQL Server is available in various editions. This chapter lists the multiple editions with its features.

- **Enterprise** – This is the top-end edition with a full feature set.
- **Standard** – This has less features than Enterprise, when there is no requirement of advanced features.
- **Workgroup** – This is suitable for remote offices of a larger company.
- **Web** – This is designed for web applications.
- **Developer** – This is similar to Enterprise, but licensed to only one user for development, testing and demo. It can be easily upgraded to Enterprise without reinstallation.
- **Express** – This is free entry level database. It can utilize only 1 CPU and 1 GB memory, the maximum size of the database is 10 GB.
- **Compact** – This is free embedded database for mobile application development. The maximum size of the database is 4 GB.

- **Datacenter** – The major change in new SQL Server 2008 R2 is Datacenter Edition. The Datacenter edition has no memory limitation and offers support for more than 25 instances.
- **Business Intelligence** – Business Intelligence Edition is a new introduction in SQL Server 2012. This edition includes all the features in the Standard edition and support for advanced BI features such as Power View and PowerPivot, but it lacks support for advanced availability features like AlwaysOn Availability Groups and other online operations.
- **Enterprise Evaluation** – The SQL Server Evaluation Edition is a great way to get a fully functional and free instance of SQL Server for learning and developing solutions. This edition has a built-in expiry of 6 months from the time that you install it.

SQL Server supports two types of installation –

- Standalone
- Cluster based

Checks

- Check RDP access for the server.
- Check OS bit, IP, domain of server.
- Check if your account is in admin group to run setup.exe file.
- Software location.

Requirements

- Which version, edition, SP and hotfix if any.
- Service accounts for database engine, agent, SSAS, SSIS, SSRS, if any.
- Named instance name if any.
- Location for binaries, system, user databases.
- Authentication mode.
- Collation setting.
- List of features.

Pre-requisites for 2005

- Setup support files.
- .net framework 2.0.
- SQL Server native client.

Pre-requisites for 2008 & 2008R2

- Setup support files.
- .net framework 3.5 SP1.
- SQL Server native client.
- Windows installer 4.5/later version.

Pre-requisites for 2012&2014

- Setup support files.
- .net framework 4.0.
- SQL Server native client.
- Windows installer 4.5/later version.
- Windows PowerShell 2.0.

SDLC model

This application is made using the SDLC waterfall model.

1. Analyze Needs: - Analyze needs based on their application.

Required features in the application are: -

a. New Order: - Application for a new order to be used to place orders.

b. Order History: - Order History is a feature that will be used to display customer order history, will be used to display incoming orders, update order status, provide courier, and display order history with this feature.

c. Restaurant Profile: - The restaurant profile reflects the restaurant profile.

d. Order Status: - Order status is a feature that will be used to display order status which includes "received order" which means order received by restaurant, "order confirmed" means guaranteed restaurant, "cooking" means - another ready for restaurant, "delivery order" means the order has been delivered, and "done" means that the order has worked. Customers can also display the delivery map while the situation is "in the delivery plan".

2. System Design: - Performing the flow of application design on the side of the restaurant, on the customer side; user experience design; UML design; submit a use case, class diagram, sequence diagram, and task diagram;

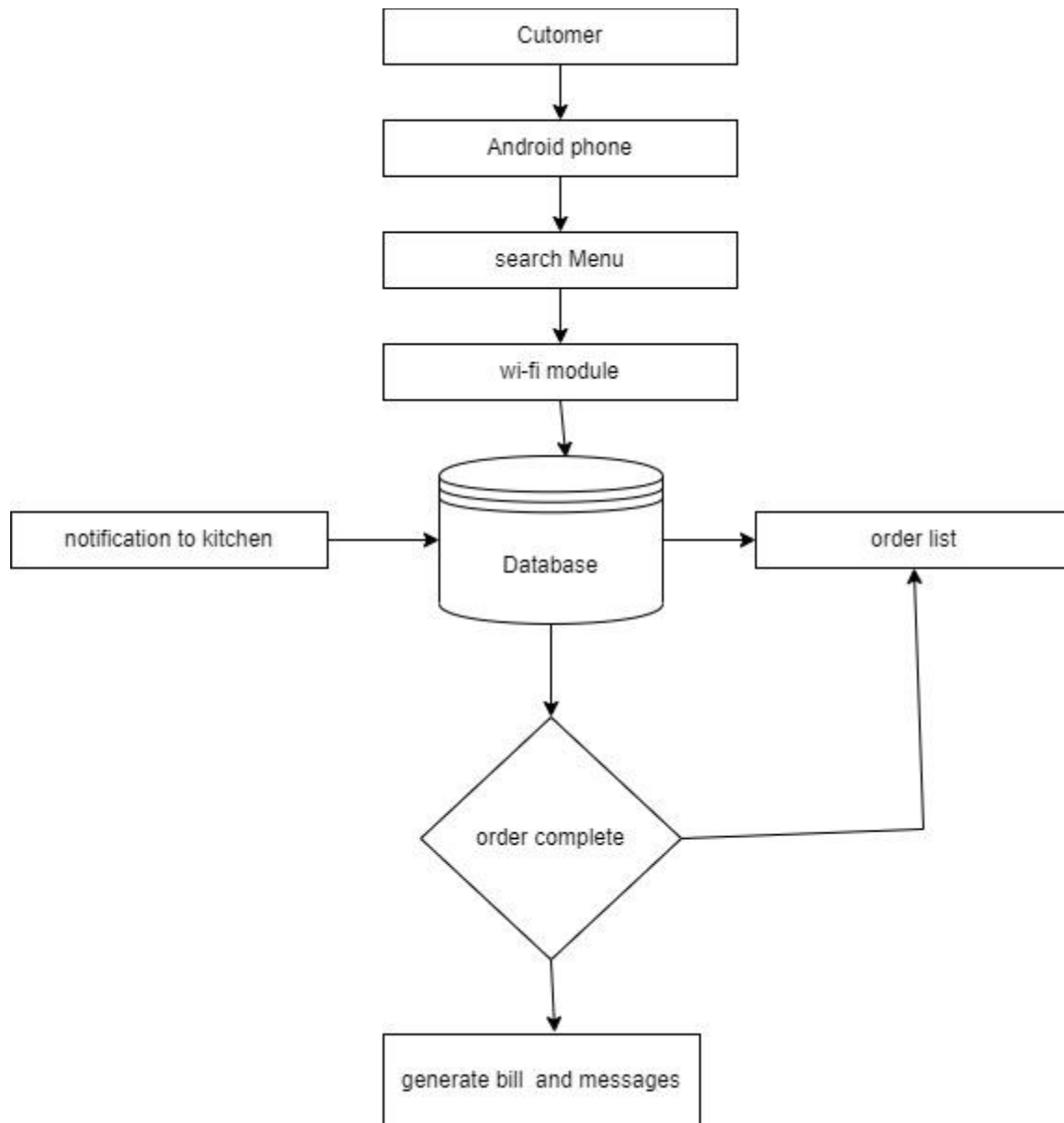
3. Implementation and evaluation of the unit: -This is the stage of application development; incorporates website design and translates the design result made in previous sections into programming language codes. After that, a system unit test will be performed

4. Integration and system testing: - After conducting system unit testing in the previous phase, all applications and websites will be integrated into a single system. After that, a system test will be done.

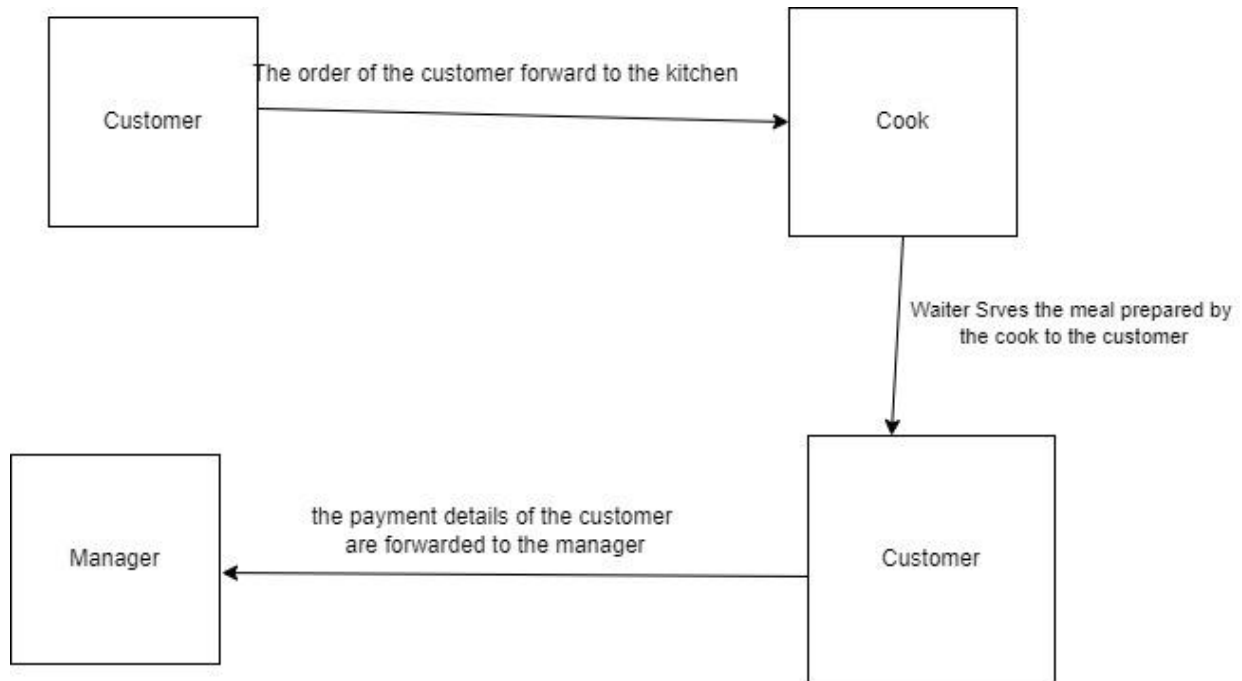
5. Operation and care: - After performing the integration in one program, any changes or alterations are required and the previous stages can be reversed.

Proposed System

Each table in the restaurant is accompanied by an Android phone. All the applications of the food menus containing details uploaded on android phones. All the digital components such as the android phone(containing app menu) and Wi-Fi module are connected wirelessly to create a Wi-Fi network.



ARCHITECTURE



- The customer first enters the restaurant. He occupies the desired table. Every table has a tablet fixed to it. The tablet consists of android software which assists the customer in his food ordering procedure. It has various sections like offers, menu, modes of payment, feedback etc.
- The customer is greeted with a welcome screen on the tablet. He can use the tablet as a guest or can login into his account.
- Once he has logged in, he can view his previous transactions in the restaurant. He can then browse through the offers section, if any, and select any desired offer he wants to.
- The customer can browse through the menu and select his desired food items. Once he's done, he can confirm his order.
- His order is transferred directly to the LED screen placed in the chef's kitchen. The LED monitor consists of grid structure, wherein each section of the grid

represents the table in the restaurant. Once the order is confirmed by the customer, it appears in that particular grid on the LED monitor.

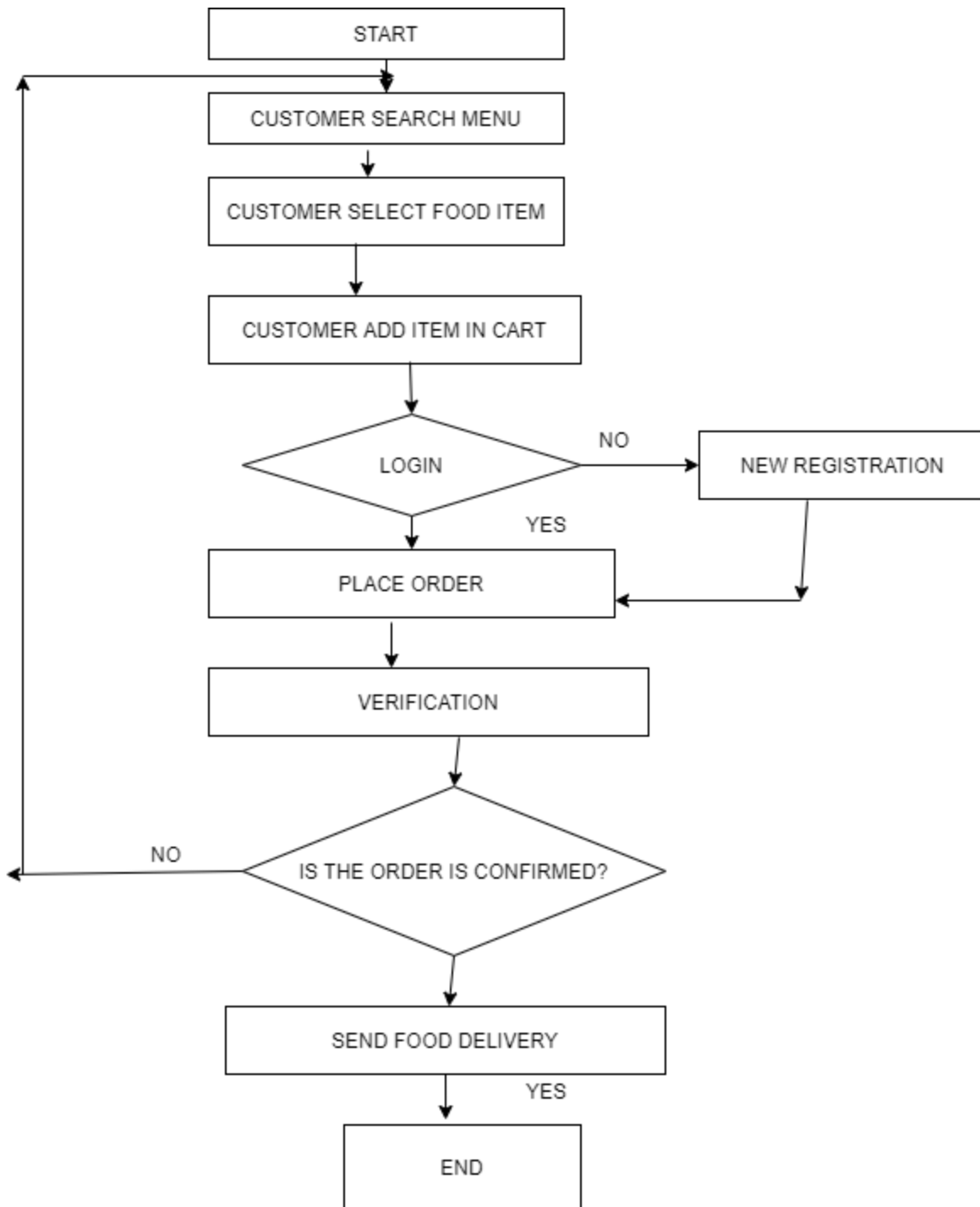
- The chef then cooks the meal and sends a confirmation signal to the waiter. The waiter then collects the meal and dispatches it to the corresponding table.
- Once the customer finishes his meal, he has the option of providing feedback. The feedback of one customer helps the new customers to decide their orders.
- On completion of the above procedure, the customer is then shown his total bill in the 'Payment' tab. The Payment tab consists of two choices, Cash or Card. If the customer wishes to pay via cash, he is required to provide the respective amount to the waiter. If he wishes to pay via Card, he is required to complete his transaction at the manager's table by swiping his card.

Complete work plan layout

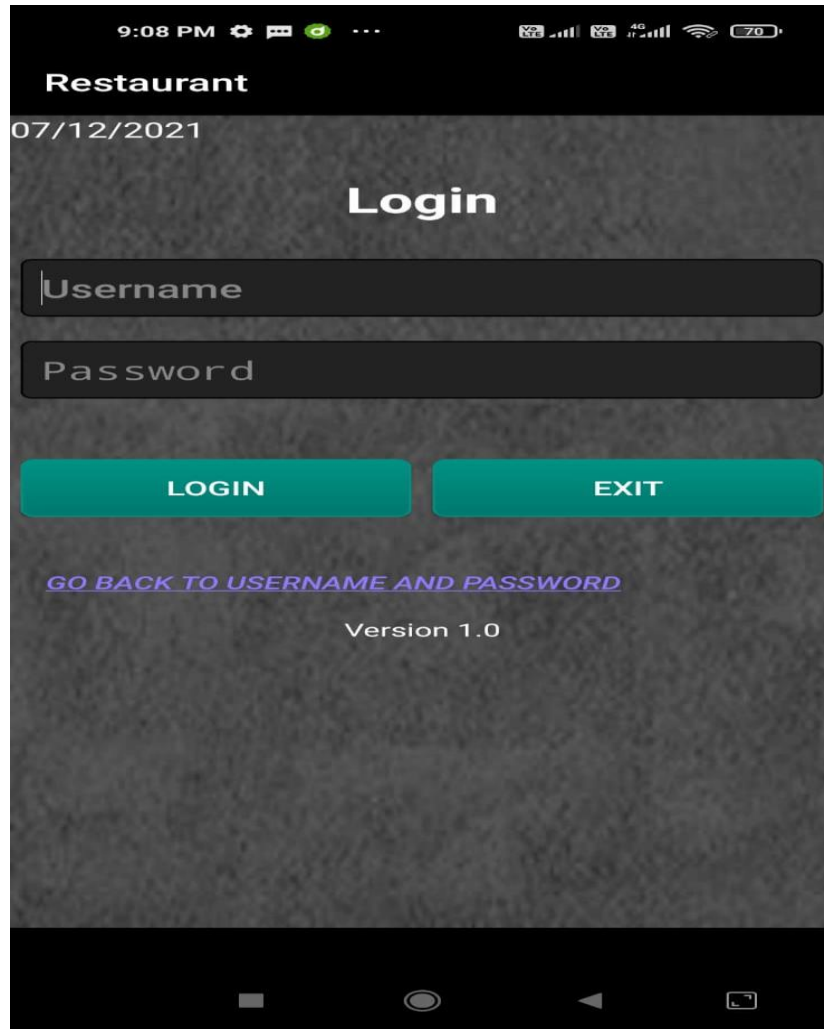
Our main aim is to increase the efficiency of the food ordering and reduce human errors and provide high quality services to the customers of the restaurants. The application on the tablets must be able to communicate with the other devices. Fig.1 shows flow chart of the android application.

The customer sees the categorized menu card on the android app. The selection of food items is done by person if he/she visiting our application with or without login and registration module. At this stage, the registered and non- registered persons can add food items in their shopping kart for temporary purpose. If the customer wants to buy selected items then condition will be checked weather customer login is done or not. If login is not done then application will force customer to login first before ordering something.

For performing all activities in project we will create one database consists of all restaurants listed along with their daily food items and costs. Once completing login task, the customer will place order from his nearest searched local restaurants searched via server. After this the verification of customer order will be done by making call given by customer at the time of login registration. After successful verification admin will check is the order is confirmed by customer if not the whole process begins from start.



RESULT AND IMPLEMENTATION





ADD ITEM



SEARCH ITEM



NEW ORDER



EDIT ORDER



REPRINT



REPORTS

9:11 PM

VoLTE 4G 69

Add Item



Restaurant

11/12/2021

Item Name

Prize(Rs.)

Active

yes



ADD ITEM

Search



Restaurant

11/12/2021

Item Name

SEARCH

Burger	Rs. 90	
Coffee	Rs. 30	
Dosa	Rs. 70	
Pizza	Rs. 235	
Roll	Rs. 55	



New Order



Restaurant

11/12/2021

Table No 

Order No:
000001

Item Name

Quantity

Amount : 0

NEXT

SUBMIT

Total : 0

SrNo

ItemName

Qty Prize(Rs.)

9:16 PM

VoLTE 4G Wi-Fi 68

Reprint



Restaurant

11/12/2021

Parcel



Order No



Reports



Restaurant

11/12/2021

Cash Book

11/12/2021

11/12/2021

SHOW

SrNo Date Order No TableNo ItemName Qty Prize(Rs.)



1 2 3 4 5 6 7 8 9 0

q w e r t y u i o p

Project Summary/Conclusion

The restaurant management android application is implemented to reduce manual processes, to solve problems like doubts on waiters. Customers should be able to enter the feedback about the service and the food served by the e-restaurant android application so that owner can see how the staff is working. By using this app owner can give serve the customer in the best possible way. The data can be edited but the new proposed application will have correct records so that the owner can check.

Thus the need for tablet food ordering is analyzed and its advantages over the traditional food ordering system in restaurants are studied.

It is concluded that the proposed tablet food ordering system is time saving and error free as compared to the traditional system

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Communication mail of Research Paper

The screenshot shows a Gmail interface in a web browser. The browser's address bar displays the URL: `mail.google.com/mail/u/0/?tab=rm#inbox/FMfcgzGIIVphJmgJgpcblqdZfJmSnNs`. The Gmail header includes the search bar and navigation icons. On the left sidebar, the 'Inbox' is highlighted with 1,414 messages. The main content area shows an email from 'Microsoft CMT' with the subject 'International Conference for Convergence in Technology : Submission (695) has been created.' The email body contains the following text:

Hello,

The following submission has been created.

Track Name: I2CT2022

Paper ID: 695

Paper Title: RESTAURANT MANAGEMENT SYSTEM

Abstract:
An android-based app with many features that helps direct the operation of a restaurant. it will access all the android phones and restaurants I can use to put their menu on the android based phone to make dinner easy to turn, swipe and click the menu. This program is designed to reduce manual labor and to increase the accuracy of the work in the restaurant. The system controls and maintains customer records and orders online. This Android app is designed to install an easy-to-use interface. So that the Customer can easily add and remove food items. A different restaurant menu card has a variety of foods available in the restaurant. By using the local order menu, the customer can simply click and order a meal. The message module tells the supplier to supply you. And the tracking track follows the order. The payment system adjusts the bill according to the food delivered. This program eliminates unnecessary time. All orders are attached to each seat on the table, and orders are made by one customer at a time, just as it is a blank sheet of paper, but with great accuracy. Items can be easily shared across the table, delivered or organized, and re-marked costs can be calculated in real time. The project aims to reduce paperwork and improve restaurant operations. Using this android-based app will be done cheaply and effectively. The

The Windows taskbar at the bottom shows the search bar, taskbar icons, and system tray with a temperature of 21°C, weather 'Haze', and time '4:36 PM' on '12/21/2021'.

