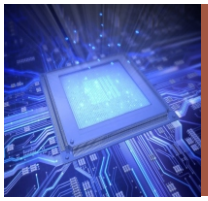

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Automated Food Ordering System

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Abstract:

Online food order system is a site planned essentially for use in the nourishment conveyance industry. This framework will enable inns and eateries to expand extent of business by decreasing the work cost included. The framework likewise permits to rapidly and effortlessly deal with an online menu which clients can peruse and use to put orders with only couple of snaps. Eatery workers at that point utilize these requests through a simple to explore graphical interface for proficient preparing.

Keywords

Waterfall model, Automation, Online Restaurant.

1. INTRODUCTION

In this era the computer has turned into a key part of our daily life as a result of the progression innovation of World Wide Web that becomes an internet. It permits people to share information with the whole world and save their energy and time. It also applies on the food industry and a lot of stakeholder has started working on online food system. Some big restaurants have budgets and can make their own systems for customers to receive and deliver food orders. But for some restaurants it is not feasible cause of expenditure on developing a complete online food order system[1]. They understand the need of online system which can lightens the work load on restaurant's staff.

Our proposed framework is an online sustenance requesting framework that empowers ease for the clients. It overcomes the hindrances of the customary queueing framework. Our proposed framework is a medium to arrange online sustenance bother free from eateries and in addition mess benefit. This framework enhances the technique for taking the request from client. The online sustenance requesting framework sets up a nourishment menu on the web and clients can without much of a stretch put in the request according to their desire. Moreover with a sustenance menu, clients can without much of a stretch track the requests. This framework additionally gives an input framework in which client can rate the nourishment things. Additionally, the proposed framework can suggest lodgings, sustenance, in view of the evaluations given by the client, the inn staff will be educated for the enhancements alongside the quality. The installment can be made on the web or pay-on-conveyance framework.

The aim of the project is to develop an efficient food ordering system that can be used in the food industry which can help the restaurants to easily and effortlessly manage daily food orders and their menus. There are numerous restaurants which are using traditional customer strategies for food ordering process particularly when customer doesn't prefer to appear to the venue.

By using the traditional customer strategy there are considerable chances of human errors while the restaurants deal with the extensive measure of clients and this issue can impact the reputation of the restaurant.

This project is to propose a suitable food ordering system for food industry to take care of the issue that specified formerly. The system can turn into a vital tool for restaurant to enhance the administration quality and performance. The restaurant can directly take the food order from the client rather than any third party. Each and every food ordering transaction can help the

restaurant to analyze and make menu which is suitable for online customer to increase his interest in the restaurant's food. In addition to this it can likewise give efficiency to the restaurant by limiting human errors and providing good quality customer service. In client's viewpoint he is more satisfied when he is picking his food item directly from the menu as instead of giving his order through telephone call.

2. LITERATURE REVIEW

Research work focuses building an outline and a build up of the web sustenance requesting framework in the eatery. Specialized activities of web based Ordering System including frameworks engineering, capacity, impediments and suggestions were displayed in this framework. It was trusted that with the expanding utilization of handheld gadget, for example android phone in eateries, inescapable application will turn into a critical apparatus for eateries to enhance the administration angle by limiting human blunders and by giving higher quality client benefit[2-3].

Improvement in software is one of the most tough and time ingesting mission [4-5]. A laptop is useless with out the software, so software program improvement interest require concerted attempt and group paintings of a collection of humans. To guide the humans in developing software program, many models to be had, but, Waterfall version or known as linear sequential existence cycle version is an critical considering the fact that it's far a basis for software improvement purpose[6]. Waterfall version is a classic traditional model since it helps developers to recognize required step to undergo for engaging in a improvement. This software program method is time ingesting, though, it helps to identify an accurate set of necessities and the requirements could be carry into the improvement phase. Indirectly, this approach courses the builders to provoke proper process earlier than designing and imposing source codes. The stages of waterfall version include five stages[7-8]. The tiers are system making plans, gadget evaluation, system layout, system implementation and system operation and assist. Each section need to be completed before next one begins. At the end of each stage, the task is reviewed to make sure compliance with necessities[9-10]

3. PROPOSED METHOD

The system of Restaurant will be on two platforms which are system printer and computer based. Either he can receive its food orders on the system printer device would be available with the system or he can connect his printer with the computer or laptop to get the print out of the food order.

The main modules of the system are

3.1. Restaurant Module

The restaurant staff can first make the login for the restaurant and later can do these things.

1. Add/update restaurant menu any time.
2. Get online food order from the customer.
3. Get online table reservations from the customer.
4. Check the restaurant statistics in graphical form for the sales purpose and marketing policies.

3.2. Customer Module

The customer can create the account using sign up. He can search the list of restaurants on the basis of his location. He can choose the type of order which can be delivery and the food which he wants to order. He can make order and can track it.

3.3. Bill Calculator

The bill calculator will create the final order amount that user has to pay for his order. Here user can either register his address for later use or will enter his phone number and address for that particular food order. User also needs to select the order type either its delivery or Pickup.

3.4. Process Model

Water fall model is used as a process model[4]. The waterfall model is a Linear sequential design process in which progress is going gradually downwards through the phases of Requirements. The water fall model consist of 5 steps[5]. These steps are as following

- Requirement gathering
- System design
- Implementation
- Testing
- Deployment of system
- Maintenance

These steps also shown in figure 1 in form of block diagram.

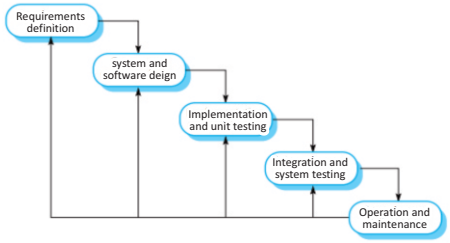


Figure 1 The waterfall model (Sommerville 2016)

3.4.1 Requirements

This phase needs the understanding of what we need to design and what is its function or purpose. The system's services, constraints, and goals are established after the discussion with system users. They are then defined in detail and serve as a system specifications[6]. (Sommerville, 2016). We divide requirements into functional and non-functional.

3.4.2 Functional Requirements

Functional requirements define the capabilities and functions that a system must be able to perform.

- The system enables the customer to create an account, login to the system and place an order.
- The customer specifies whether the order is to be picked up or delivered.
- The system displays the food items ordered, the individual food item price and the amount calculated for that order.
- The system generates an email which shows the status of the order to the customer.
- The customer can track his order on the system.
- The customer can reserve a table in any restaurant allows it to do so.
- The customer can review restaurant.
- The system enables the restaurant owner to register his restaurant on the system.
- The restaurant owner can enter the menu details in the system and can edit them.
- The restaurant owner can print all the food orders.
- The system enables the restaurant view, create, edit and delete food category and descriptions
- The system allows the confirmation of any pending orders.
- The system enables the restaurant owner to see the graphical analysis of the restaurant sales and can generate the analytical report.
- The system enables the restaurant owner to update any information for a food item.

3.4.3 Non Functional Requirements

A non-functional requirement is a requirement that specifies criteria that can be used to evaluate the operation of a system instead of exact behavior.

- The non-functional requirements include:
- There should be sufficient network bandwidth.
- The system should be easy to maintain
- The system should be efficient and responsive.
- The future work or expand ability should be possible.
- The system should be secured.
- The system should be usable.

3.4.4 System Design

The requirement specifications from the first phase (Requirement Definition) are studied in this phase and system design is prepared accordingly. The system Design helps in specifying hardware, modules, interfaces and system requirements and also helps in elaborating the overall architecture of the system.

3.4.5 Design diagram

The very basic design of the online food ordering system is shown in the picture below. Customer and Restaurants are main entities and they are dealing with each other through the online food ordering system.

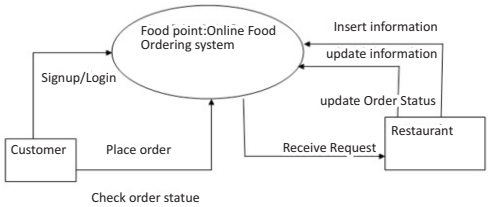


Figure 2: Flow Chart Of Food Ordering System

3.4.6 Implementation

In the implementation the actual application is developed. The application is developed in small programs which are called units. In the food ordering system two main modules Customer and Restaurant are implemented and dealing with each other in the system. The detail of the implementation is given below.

Customer

How to search a Restaurant

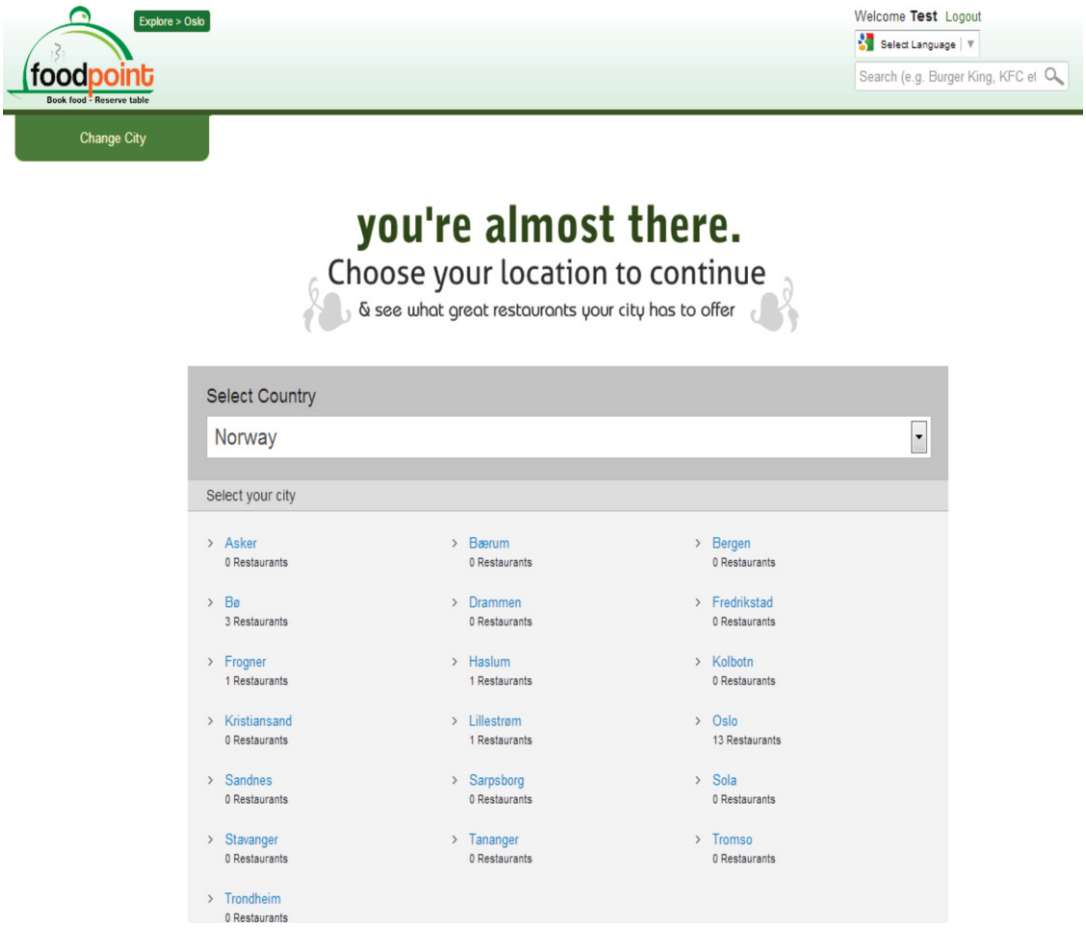


Figure 3: Design of front page

Order food

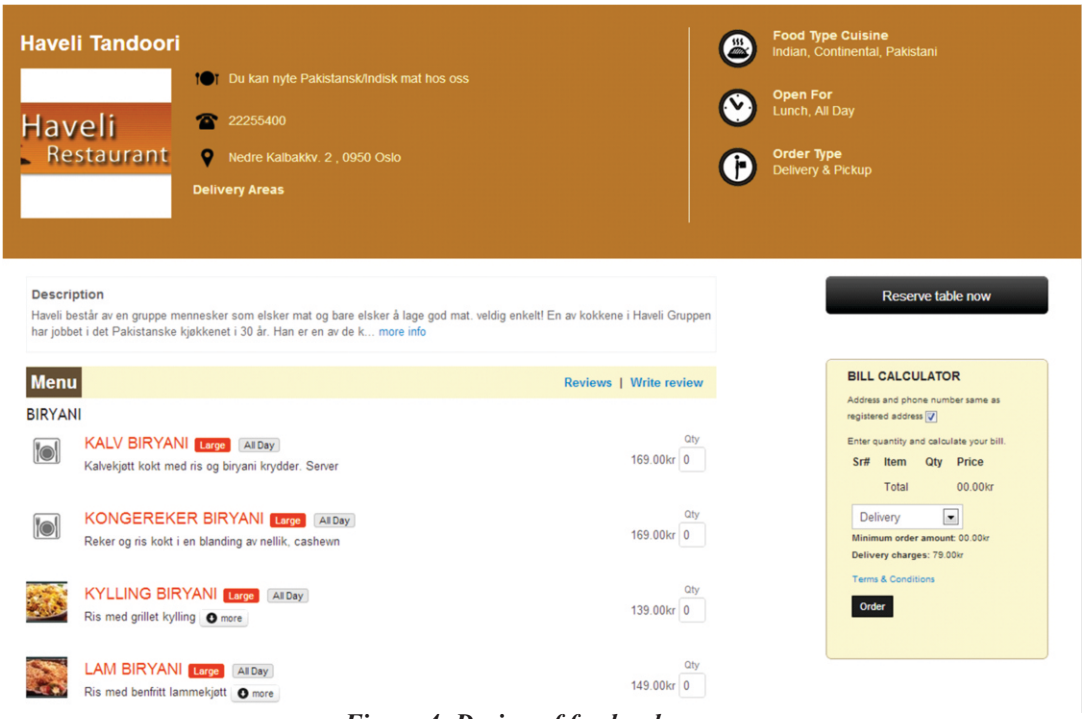


Figure 4: Design of food order page

Reserve Table

Bill calculator

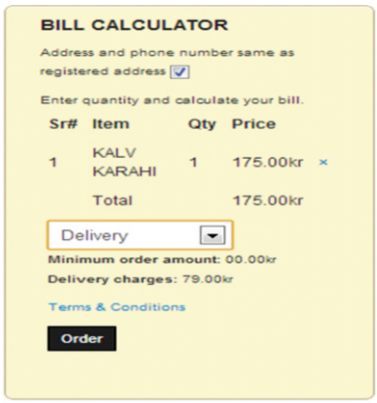
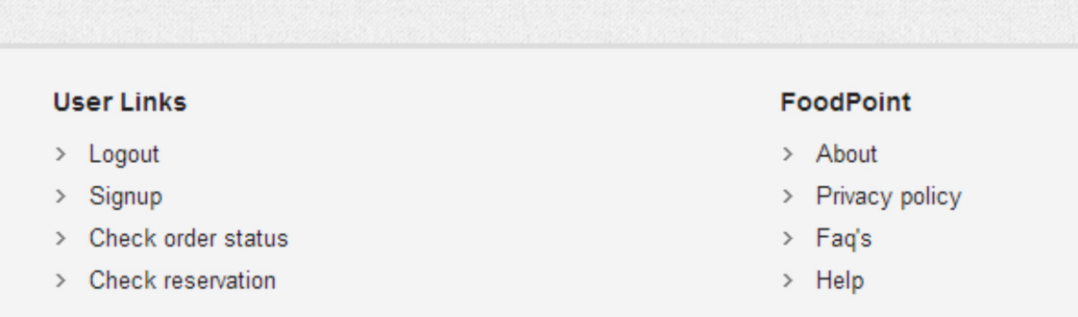


Figure 5: Design of Bill Calculator

Track the order
The Check order status link can be accessed at the end of the web page to track the order.



Sign up/ Register User

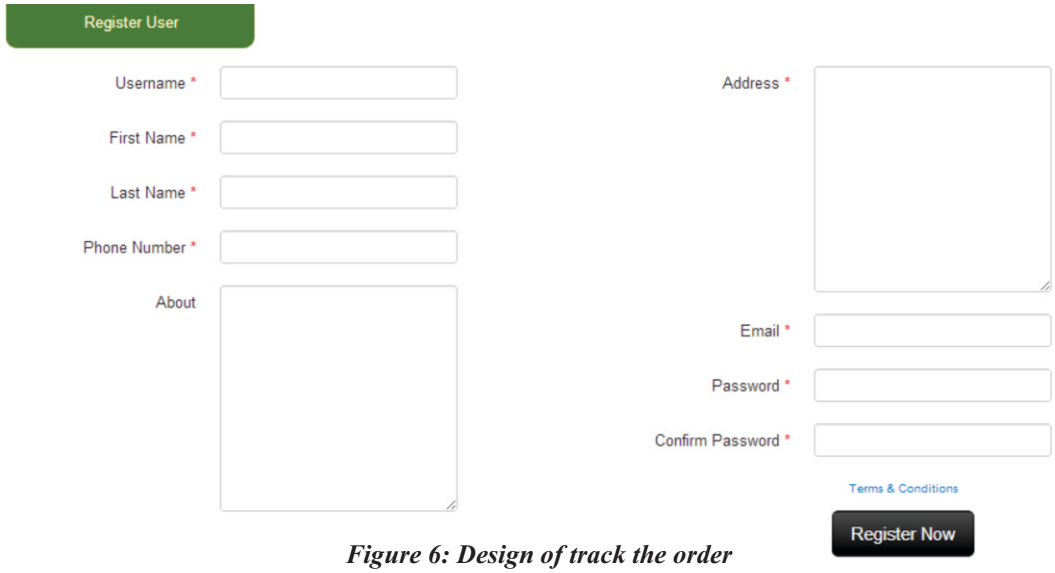


Figure 6: Design of track the order

Restaurant
Register Restuarnt

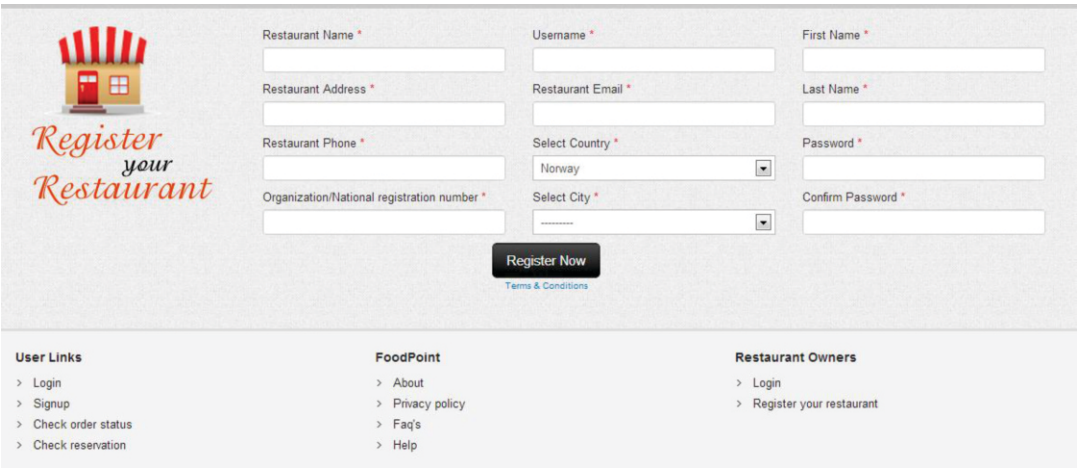
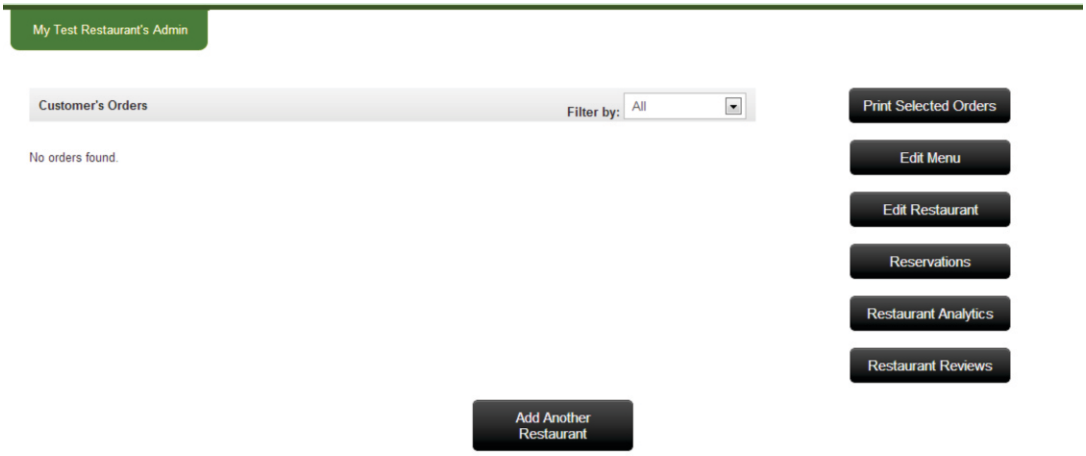
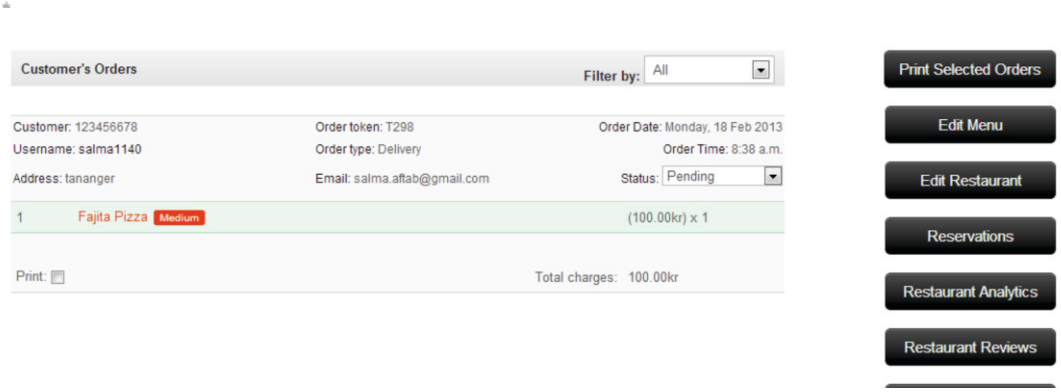


Figure 7: Design of register restaurant

Enter / Edit Menu

Edit Restuarnt





Print selected orders

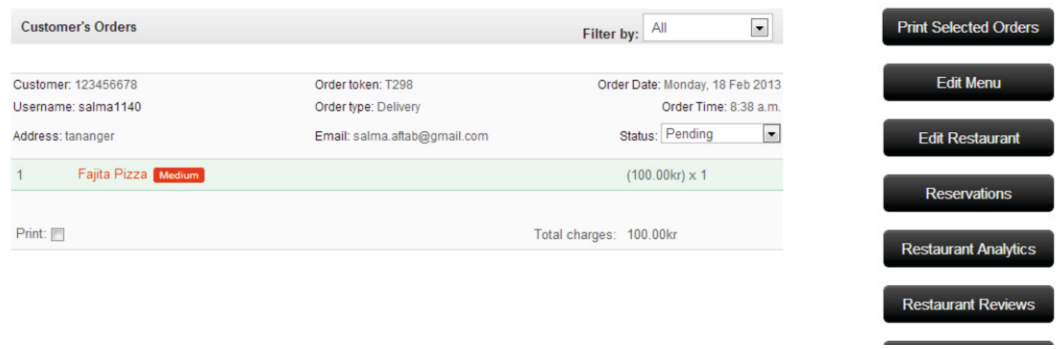
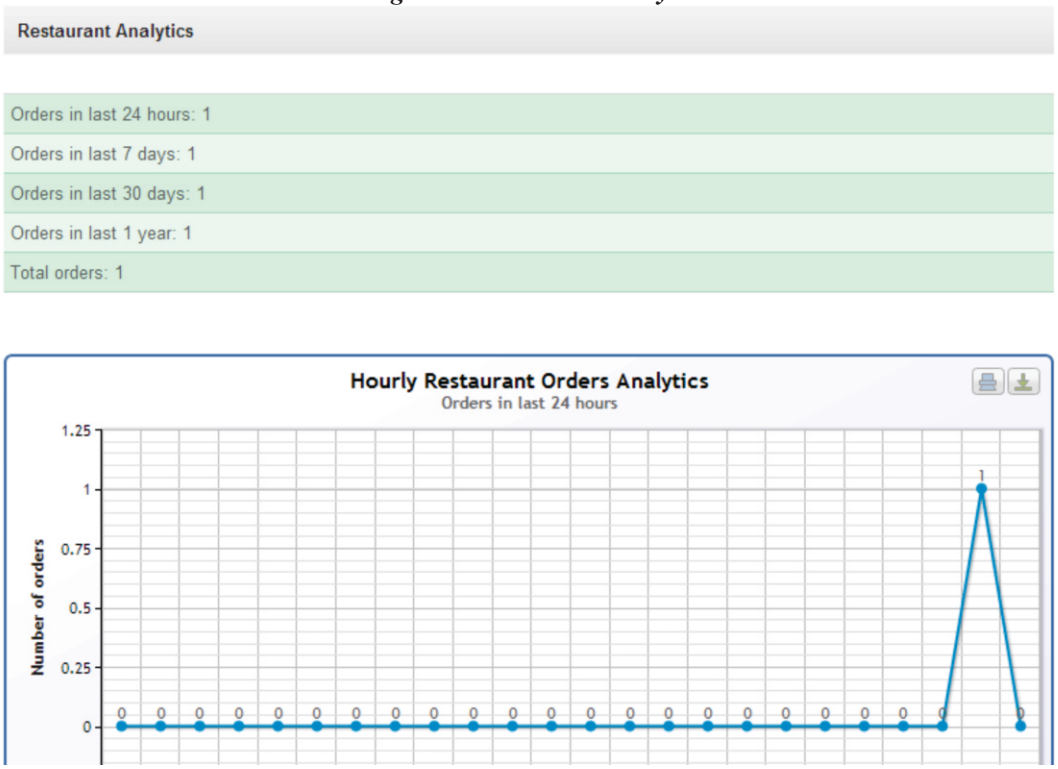


Figure 8: Restaurant Analytics



3.4.6 Testing

All the developed modules in the system are integrated into the system after testing them. Software testing is very important to develop any quality application which is free from any error or failure.

3.4.7 Deployment

In this phaseapplication is ready to deploy in customer environment.

3.4.8 Maintenance

This phase is all about services and maintenance for the online food ordering application. There is the possibility that restaurant requires any specific change in the system or in any module. This part also deals with any kind of error or issue arises after delivering everything to the customer.

4. RESULTS

The system will provide the comfort and ease to both the customer and the restaurant. This system allows the employees to serve customers with the minimal delay contrast with the paper based food order system, since what the staff need to do is get the print out of the order from either system printer or their own way to get the print out. They process is it and deliver it to the customer. It eliminates the need of order taking process and moves the staff to the next step. It can also make the customers to enjoy their meals within a short period of time and can increase the contentment and turnover rate of the customers.

4.1 Strength

It is very beneficial for food industry because it provides a possibility to customer to place his order anywhere and everywhere with the minimized time period. He doesn't necessarily needs to go to the restaurant to pick his food. Meanwhile it helps the restaurant owners to provide better customer service by using the data analysis they get from the system. They are better able to make their marketing and sales strategies by using that data.

4.2 Limitations

The main limitation of this system is

internet technology based. The system will not operate if there is no internet. This is the medium to transfer data.
It is understandable that it cannot hit each and every customer in the market. Some customers are just comfortable with the way they are doing and they never want any change. But it can help many others.

5. CONCLUSION

In this manner, design of the proposed framework depends on client's need and is client focused. The framework is created in considering all issues identified with all client which are incorporated into this framework. Extensive variety of individuals can utilize this on the off chance that they know instructions to work android advanced cell. Consequently, execution of Online Food requesting framework is done to help and understand one of the vital issues of individuals. In view of the consequence of this exploration, it can be finished up: It helps client in making request effectively; It gives data required in making request to client.

The Food site application made for eatery and chaos can help eatery what's more, mess in accepting requests and adjusting its information and it is likewise made for administrator with the goal that it helps administrator in controlling all the food framework. With online sustenance requesting framework, an eatery and wreckage menu online can be set up and the clients can without much of a stretch place arrange. Likewise with a nourishment menu web based, following the requests is finished effectively, it keep up client's database and enhance the nourishment conveyance benefit. Having an eatery menu on web, potential clients can without much of a stretch access it and place arrange whenever it might suit them. Subsequently, an computerized sustenance requesting framework is introduced. The proposed framework would pull in clients and adds to the proficiency of keeping up the eatery, nourishment requesting and charging segments. Extent of the proposed framework is legitimate on the grounds that in huge sum people groups are moving to various urban areas so extensive variety of individuals can make an utilization of proposed framework

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