# Hotel & Restaurant Management System

Omer Tarek[1], Wafaa Morsy[2] , Yousef Tamer[3] , Doaa Taha[4]
*[1]Misr University for Science and Technology*
*89554@must.edu.eg*
*[2]Misr University for Science and Technology*
*89558@must.edu.eg*
*[3]Misr University for Science and Technology*
*89405@must.edu.eg*
*[4]Misr University for Science and Technology*
*89617@must.edu.eg*

## ABSTRACT

Hotel & Restaurant Management System is a real time ordering system to manage the ordering process for restaurants. This website helps customers to order without having to wait for the waiters to serve them. The traditional way is taking the order using paper causing missing orders, or not correctly recording the customer's order. The traditional ordering system brings inconvenience to both staffs and customers; as it requires a lot of manual work. Nowadays, smartphones have been widely used in every aspect of our lives; so by having this ordering website, the time of ordering process has reduced.

## KEYWORDS:

Food , Restaurant , restaurants in hotel , order online , web-based online food from room

## INTRODUCTION

Using this website, customers just capture QR Code in the restaurant or hotel room for viewing the home page. Through it, they can view the menu and see the available dishes, have a look at offers & coupons, donate a meal to the poor, or make an order. To make an order, the user can filter available meals to find the most suitable for his desire. There's also a recommendation section based on best selling dishes. The user can order and choose the time of serving. After placing an order, it will be send through to the kitchen and gives the customer an estimated time for preparation and serving. When the customer wants to leave he can close the table form his phone, and choose a payment method and pay his check. Then the user is asked to give his feedback about the food quality, service and the website. This new ways of ordering will ultimately save time for the waiter to take up orders and this application improves the method of taking the order from customer. In addition, restaurant and hotel owners can add or manage their food menus and get notification the ordering food has been send to the customers.

As mentioned previously, the traditional way of ordering process requires a lot of manual work; causing some human errors; such as the probability of paper loss and the kitchen's staff can misinterpret the handwriting of order. All these human errors will cause dissatisfaction with the user experience. One of the problems faced by hotels using the traditional ordering system is the difficulties to update the new menu. If they want to change the menu, they have to reprint again. This will increase the cost and wastage of paper. Based on those problems, by implementing an electronic and efficient ordering service can avoid them. By using the proposed

system, the restaurant productivity and customer satisfaction can be improved. Another benefit of using this proposed system is avoiding human contact as much as possible. Also, managers save the wages paid to waiters, or save their time for other tasks.

.

# METHODOLOGY

Agile Methodology: The Agile model is a project management methodology purposely adopted for the development of sophisticated software. The framework allows for iterations, which helps a lot in minimizing mistakes and errors that commonly occur. The model divides the project into a series of development cycles or short time boxes, which are assigned to each professional on the project team. It is a collaborative approach the allows a response to rapid change. It is flexible enough to accommodate changes in project requirements , Other methodologies that fall under the Agile umbrella include:

1-Feature Driven Development (FDD) – a lightweight and incremental model that focuses on features as the name suggests. It features a series of iterations and inspections. This framework demands a high level of design expertise and planning.

2-Lean software development – it is an integration of the agile methodology and lean manufacturing principles and practices. Aim at optimizing time and reducing waste, cost and effort.

3-Scrum – focuses on the management aspects of software development in intricate knowledge work, research and advanced technologies with an emphasis on teamwork, iteration and accountability.

4-Crystal Methods – It is one of the most lightweight agile methodologies. It focuses on team member talent skills, interactions and communication—this model groups projects in terms of system criticality, team size and priorities.

5-Rapid Application Development (RAD)/ Rapid-application building (RAB)- focuses on timely delivery in a fast-paced environment with the use of prototyping and iterative development.

6-Adaptive Software Development (ASD) – It is an outgrowth of the RAD that provides continuous adaptation to change in project requirement or market needs.

7-Dynamic Systems Development Method (DSDM)- it is an iterative and incremental Agile approach based on RAD, but with governance and strict guidelines. It is applicable in four principal phases.

8-Extreme Programming (XP) – Focuses on software quality and responsiveness with emphasis on the changing needs of the client. It features a high-level collaboration with minimal documentation.

## DISCUSSION

Restaurant management systems are a type of restaurant management software intended to assist with the tasks associated with the day-to-day management of a restaurant or similar business. In this article, you can learn about what the technology does, the main features, and the different components that make up a sound system of this kind.

## CONCLUSION

From the above report which discusses about the customer preferences for restaurants in London , it can be concluded that the opening of restaurant in London is a profitable business .Since the organization who proposes to open the restaurants is an existing restaurant chain therefore it is a good opportunity for it to earn huge profits . The evaluation of financial viability of the project also suggests that the project is financially viable since the net present value is positive.

# REFERENCES

- [1] http://www.yhofoodie.com/product/cashier.html

- [2] http://umpir.ump.edu.my/id/eprint/12526/

- [3] https://techcrunch.com/2012/05/02/chownow-launches-as-a-food-ordering-platformfor-restaurants-on-facebook-and-ios/

- [4] https://www.sakaesushi.com.my/?fbclid=IwAR2Aqzqi500M9wQ8cU4xNKfrxGFHWzR2TnKUZRRoSkegUWCtcAGYV8h_Y5M

- [5] https://www.geeksforgeeks.org/when-to-use-each-sorting-algorithms/

- [6] https://www.freecodecamp.org/news/search-algorithms-linear-and-binary-search-explained/#:~:text=The%20binary%20search%20algorithm%20works,because%20it's%20faster%20to%20run

- [7] https://itchronicles.com/artificial-intelligence/speech-recognition-algorithms/

- [8] https://medium.com/@goodrebels/how-to-apply-machine-learning-to-customer-feedback-b81cb01d3c3c