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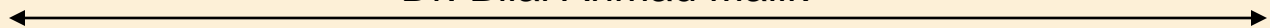
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*Of*

*Science, Engineering and Information Technology*

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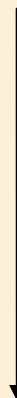


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NAIRJC JOURNAL PUBLICATION

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**ISSN NO: 2454 -7514**

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## AUTOMATED FOOD ORDERING SYSTEM TO IMPROVE THE PERFORMANCE OF FOOD COURTS IN MALLS USING MOBILE APP.

PROF. YUVRAJ NIKAMIN, KOMAL WAGHMARE, SHNEHAL PATEKAR,  
JAYSHREE SURYAWANSHI & NIKHIL RAJGURU

### ABSTRACT

*Relating and taking into consideration of today's Mall systems, the concept of paper provides easy efficient and more reliable way to cope and deal with customer's needs. The idea works over the traditional system which takes too much time of customers and the situation of long queues and billing hassle. The system is an application. I.e. Android Application supported with Wi-Fi network, to facilitate communication between restaurants and their target customers for order management and billing. The system will improve the overall performance of the restaurants. To relatively reduce the time consumption of the systems the CFCMM model is used. Dynamically working of this system/application lets you utilize and save your time (users as well as owners) to serve you their valuable services with no stumbling blocks in between.*

**Keywords:** - Mobile Computing, User Authentication, Android Application, Wireless Communication, m-commerce, Shopping cart, Food court management systems, Online payment systems.

### INTRODUCTION:-

The framework examined in this paper is for better administration of nourishment requests for the sustenance courts at shopping centers. The principle center of the framework is to spare client's time of requesting and charging. The point of the thought disclosed further is to annihilate disadvantages of the present line framework utilized for nourishment requesting which prompts loss of profitable customer's time. The framework capacities by utilizing remote correspondence framework at the shopping center for associating eatery application and the versatile application which will be introduced on the clients handheld gadget like portable , PDAs .

Interfacing Food Courts in Mall utilizing Mobile App (CFCMM) which is a versatile application will make it workable for the clients to request sustenance online specifically shopping center. Besides, the rundown of sustenance thing alongside the subtle elements of cost and depiction can be seen by the client. The client can

utilize the truck choice to add things to the truck or expel things from the truck. This will empower the client to choose which things they need to request and think about menu cards of various sustenance courts. Once the request is put, the client will get the affirmation and can continue for the installment after which the client will get the affirmation message from the server.

Portable have turned out to be a piece of the life for getting to any sort of data. Life in the 21st century is brimming with innovative progression and in this mechanical age it is exceptionally troublesome for any association to make due without using innovation. The World Wide Web contributes incredibly to the formation of a continually expanding worldwide data database. It could likewise be utilized as a system to share data inside a venture.

In today's period of fast food and take-out, numerous eateries have concentrated on brisk arrangement and rapid conveyance of requests instead of offering a rich feasting knowledge. Until as of late, these conveyance requests were put via telephone, however there are numerous drawbacks to this framework, including the burden of the client needing a physical duplicate of the menu, absence of a visual affirmation that the request was set accurately, and the need for the eatery to have a representative noting the telephone and taking orders. What I propose is an internet requesting framework, which is a procedure of requesting nourishments online pertinent in any sustenance conveyance industry. The primary favorable position of my framework is that it extraordinarily rearranges the requesting procedure for both the client and the eatery. At the point when the client visits the requesting site page, they are given an intelligent and up and coming menu, complete with every single accessible choice and powerfully altering costs in Light of the chose choices. Subsequent to making a determination, the thing is then added to their request, which the client can audit the points of interest of whenever before looking at. This gives moment visual affirmation of what was chosen and guarantees that things in the request are, indeed, what was intended.

#### **RELATED WORK:-**

Every shopping mall consists of many food courts ranging from a minimum of five food courts to a maximum of twenty or more food courts. A food court is a place where people can relax and have they meals with their families or friends. Often customers have to visit more than seven to eight food courts until they can make up their minds from exactly which food counter they would like to place their order. This poses as a huge task of searching for a reliable food counter according to the customer's satisfaction. On an average the footfall of about

20,000-25,000 people to the food court on weekdays. The numbers swell-up to 35,000-40,000 people, over the weekend's which makes it hard to manage the orders and degrade server performance. The traditional food court order management system uses a self-service scheme, wherein customers need to visit each food court to place their order and must collect their orders on their own. Customers have to visit more than seven to eight food courts until they can make up their minds from exactly which food counter they would like to place their order. This poses as a huge task of searching for a reliable food counter according to the customer's satisfaction. Electronic token based system uses a separate hardware device that is given to the customer when the customer arrives at the counter. The system only saves waiting time but not the billing and ordering time. In Tablet device based system, every table has a tablet which is installed with an application to take orders and make payments. The drawback here is that the system is expensive since every table requires a tablet device. Here the problem of long queue is not solved and safety of tablet device cannot be completely ensured. To overcome the limitations of above technologies we proposed a system which is efficient in quick orders and delivery. This motivated us to find a system based on smart phone app which makes it smooth to place the order, give feedback and pay bill. Only requirement will be to go and collect food since food court counter will be self-service. The system uses a mobile application that shall run on Customers who arrive at the food court in a mall once installed on the mobile phone. The mobile app will connect to food court server for taking order and making payment via mall Wi-Fi system or via internet.

## ALGORITHMS USED:

### 1) Binary Search

There are many searching algorithms but binary search is used for searching particular food item from the food court. At the point when the qualities are in sorted request, a superior approach than the one given above is to utilize parallel inquiry. The calculation for paired inquiry begins by taking a peek at the center thing  $x$ . In the event that  $x$  is equivalent to  $v$ , it stops and returns genuine. Else, it utilizes the relative requesting of  $x$  and  $v$  to take out portion of the cluster (if  $v$  is not as much as  $x$ , then it can't be put away to one side of  $x$  in the cluster; also, in the event that it is more prominent than  $x$ , it can't be put away to one side of  $x$ ). When half of the cluster has been wiped out, the calculation begins again by taking a peek at the center thing in the staying half. It stops when it finds  $v$  or when the whole exhibit has been dispensed with. The most pessimistic scenario time for double inquiry is corresponding to  $\log_2 N$ : the number of times  $N$  can be separated down the middle before there is nothing cleared out. Utilizing enormous  $O$  documentation, this is  $O(\log N)$ . Take note of that parallel inquiry in

an exhibit is essentially the same as doing a query in a splendidly adjusted parallel hunt tree (the base of an adjusted BST is the center esteem). In both cases, if the present recognition is not the one we're searching for, we can dispense with half of the rest of the qualities.

## 2) Algorithm for Sorting:

This algorithm is used for sorting the types of food items in particular food court. Quick sort although the shell sort calculation is essentially superior to anything addition sort, there is still opportunity to get better. A standout amongst the most well-known sorting calculations is quick sort. Quick sort executes in  $O(n \log n)$  by and large, and  $O(n^2)$  in the most pessimistic scenario. Be that as it may, with legitimate insurances, most pessimistic scenario conduct is improbable. Quick sort is a non-stable sort. It is not a set up sort as stack space is required. For further perusing, counsel Cormen. The quick sort calculation works by apportioning the cluster to be sorted, then recursively sorting every segment. In Partition, one of the cluster components is chosen as a turn rate. Values littler than the rotate rate are set to one side of the turn, while bigger qualities are put to one side.

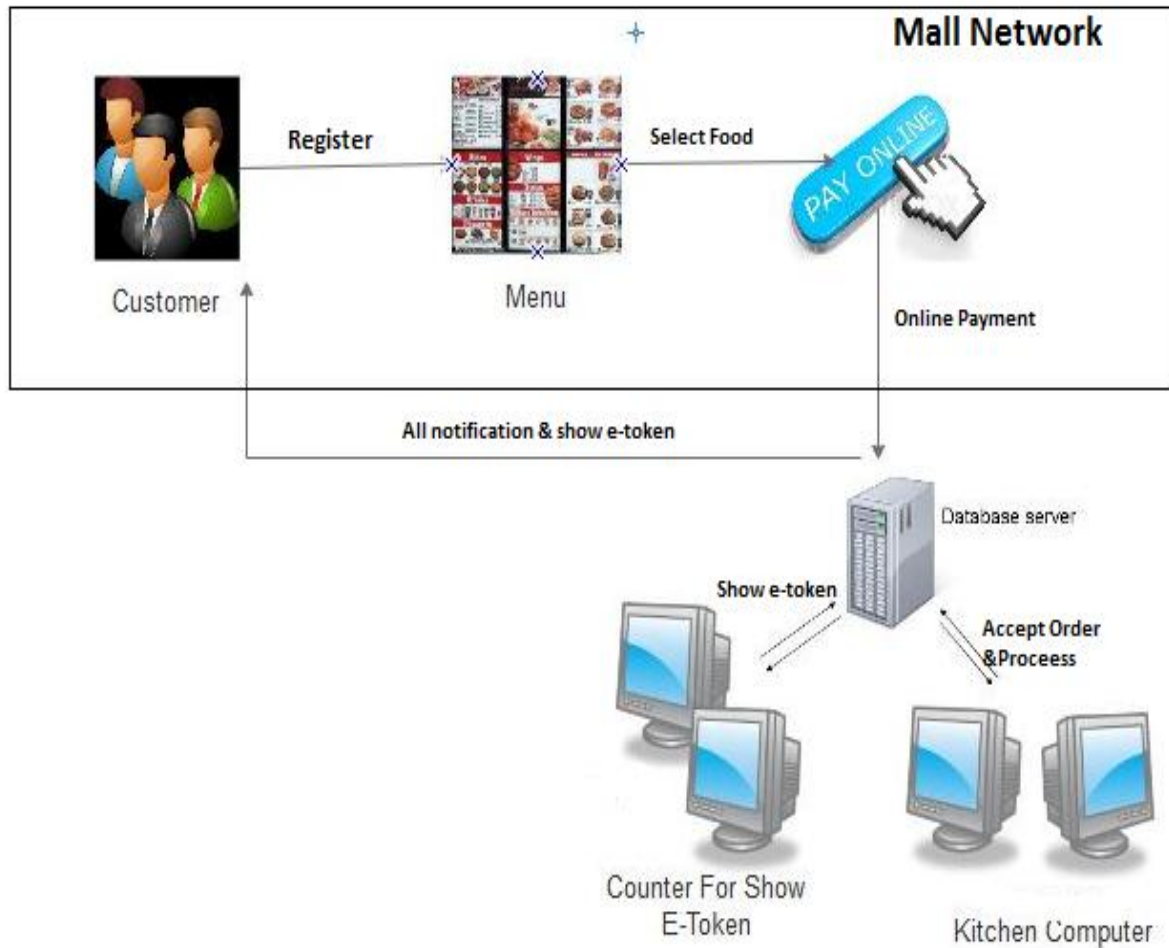
## PROBLEM STATEMENTS

In the busy schedule of life people used to visit malls on weekends. So there are some possibilities often occurs like crowd on same place. So waste of time, and some inconvenience people as well owners have to face. There is no such current system that enables you to choose the things to eat by sitting on the table at Malls. Time consumption and too much rush in queues.

## SOLVING APPROACHES:-

- To reduce the time consumption in queue system in malls, for food delivery.
- To make the system flexible in accordance to predict and find the solution on possibilities of crowd on same place/or in a same queue.
- Securing the wastage of time for billing process and payment transactions.
- Use of android system to ensure an easy, suitable service via wireless connection (just sitting on the single table in a particular mall environment).

**PROPOSED ARCHITECTURE**



In the proposed system, we present some of the system description and which will provide a clear system overview. Firstly owner of the restaurant will create an admin login and logged into the admin system and insert a menu list which is available on the restaurant and also he can update the menu items into the system at every day. Every day he advertise the promotion strategies on to menu which is available. When the customer comes to the mall then he/she can connected to the mall network after that customer has to login the various food systems which is available into to the mall. After the login customer can assign a unique identification number to access the ordered menu. The customer information and menu choices and payment status are sent to the admin and kitchen system over wireless network. The admin and the kitchen staff will receive the ordered lists on their system from the customer system. Kitchen system categories customer menu and started work on that. After compilation of the customer order kitchen system update the completion status in main admin system. The admin



system can update the order status. The customer can thus view his order status on their smartphone and enter feedback regarding restaurant service and services.

### CONCLUSION:-

By utilizing remote correspondence and versatile application will empower effective requesting and installment framework to lessen lines at nourishment courts in shopping Center. The framework. Examined in the paper will embodiment great administration and enhances general sustenance court experience of client making the poor request administration handle basic for the counters at the nourishment court. In this Project, we exhibit a robotized sustenance requesting framework with-continuous client input. This framework is advantageous, successful and simple along these lines enhancing the execution of eateries staff. It will likewise give nature of administration also, consumer loyalty. General conclusion is that, this is an astounding sustenance requesting framework for the eatery part, made by consolidating the Android and Wireless innovation. The framework can be further stretched out to enlist and connection numerous eateries to improve the eating background of clients.

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