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**College of Computing**

**and Informatics**

**Department of**

**Computer Science**

**TITLE: Cafeteria Management system PROPOSAL**

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# **Introduction**

A Cafeteria Management system is a comprehensive solution that optimizes and automates cafeteria operations in various settings.

such as corporate offices, colleges/universities and hospitals. This system simplifies processes like meal order processing, billing and payment, resulting in a seamless cafeteria experience. By utilizing digital signage for menu displays, chef's kiosks, and a smart mobile app, long queues are eliminated, enhancing the ordering experience and offering a wide range of easy food choices.

Choosing a Cafeteria Management system for your facility brings tangible benefits, including improved efficiency, reduced waiting times for payment and ordering, and a more enjoyable dining experience for consumers or students.

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# **Background of the organization**

Most methods of cafeteria management systems are not efficient and they require more work, time and energy. The current way which most cafeteria’s used is by hiring waitresses and they took order and serve customers. It’s bulky and waste of time for both customers and waitresses.

# **1.3 STATEMENT of the problem**

The cafeteria management system faces various challenges that hinder its effectiveness in delivering efficient services and ensuring optimal customer care. These challenges include:

* Long queues and cash payments: One of the main challenges faced by cafeteria management systems is the issue of long queues for ordering food and the need for cash payments. This can lead to a waste of time for students and staff, as they have to wait in line to place their orders and make payments.
* Paper-based manual processes: Many cafeteria management systems still rely on manual processes, such as paper-based order forms and manual data entry. This can be time-consuming and prone to errors, leading to inefficiencies in the system.
* Inefficient data analysis: Without proper data analysis tools and systems in place, cafeteria management may struggle to analyze and utilize the data collected from orders, inventory, and customer preferences. This can hinder decision-making and optimization of operations.
* High manpower requirements: Cafeteria management systems often require a significant amount of manpower to handle orders, payments, and food preparation. This can lead to potential inefficiencies in managing the workload.

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# **1.4 Objectives of the project**

## **1.4.1 GENERAL objectives**

The general objective of implementing a computerized cafeteria management system is to transform the manual and paper-based system into a computerized and well-organized form. This will streamline operations, improve efficiency, and enhance the overall management of the cafeteria.

## **1.4.2** **Specific objectives of the project**

* Reducing the complexity of the food ordering system: By implementing a computerized cafeteria management system, the aim is to simplify the process of ordering food. This will eliminate the need for manual order forms and streamline the entire ordering process.
* Minimizing the time for ordering food: With a computerized system in place, the objective is to reduce the time it takes for students/customers to place their food orders. This can be achieved through features such as online ordering and online payment allowing for faster and more efficient transactions.
* Improving employee productivity: The implementation of a computerized system can help improve employee productivity by automating tasks such as order processing and payment handling. This will free up employees' time, allowing them to focus on providing better customer service.
* Easy access to the menu for customers: A computerized cafeteria management system can provide customers with easy access to the menu through digital displays or mobile applications. This will enable them to make informed choices and place their orders more efficiently.
* Efficient and easy analysis of data: By digitizing the cafeteria management system, data analysis becomes easier and more efficient. The system can generate reports on sales, and customer preferences, providing valuable insights for decision-making and improving operations.
* Implementing an efficient payment method for customers: With a computerized system, the objective is to provide customers with convenient and efficient payment options. This can include cashless payment methods such as mobile banking,

Tele birr etc. reducing the need for cash transactions

# **1.5** **DATA Collection Methodology**

We will use interview and document analysis in order to determine the information that is used in the existed system, that is important to develop the system.

# **1.5.1 Data collection tools and techniques**

1. **Interview**

We have gathered information by interviewing the cafeteria management system staffs about the existing system. We have asked some prepared questions for the cafeteria management system manager to get the necessary information about the existing system.

1. **Practical observation**

It helps us to get more real information about how the organization performs it’s function, and this helps us to strengthen the data gathered through interviews.

# **1.6 Scope and limitation**

## **1.6.1 Scope of the project**

The scope of this project is limited to the following:

* Online ordering food for students: students can easily access food menu list by their smart phone and order food.
* Food menu list management: the manager can access the food menu list and manages it. i.e. he/she can update the item, insert new item, check availability of item, delete the food that they terminate making it,
* General report generates: can generate general report about the food that are consumed with in the given day. Example total income that gets from sold food. i.e. total money without tax, with tax, and total money for tax only.
* Customer order management: the cashier can easily manage the ordered food. And when the food ready to eat they serve for customers by checking the food id that generated when the customer pays for food during the ordering process.

Easy bill generates for customers who ordered food: when the customer orders the food after selecting the food and inserting the food quantity the system requires account number and debits the amount that the food requires and then generates.

## **1.6.2 Limitation of the project**

* The project focuses only on food orders, menu list managements and bill generate but it doesn’t include many other cafeteria management system features. Such as employee management, hiring, firing and other related works.

## **1.7 Functional Requirements of your project**

1. **Menu Management:**

* The system should allow menus to be created and added to the cafeteria, including sections and items.
* It should support easy configuration and customization of the menu.
* Ability to add, edit, and remove menu items.
* Ability to set prices, and availability of menu items.

**2. Order Management:**

* The system should allow orders to be created and added to tables.
* Ability to specify quantities ordered

**3. User Management:**

* Role-based access control for different user types, such as administrators, managers, and cashier.
* Secure login and authentication mechanisms.
* Ability to manage user accounts, permissions, and privileges.

**4. Reporting and Analytics:**

* The system should provide reporting and analytics capabilities to track sales, inventory, and other relevant data.
* Generate reports on sales, revenue, popular items, and customer preferences.

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# **conclusion**

In conclusion, a computerized/automated cafeteria management system offers numerous benefits for improving the efficiency and productivity of a cafeteria. By streamlining the ordering process, automating management, and providing centralized data and reporting, the system enables employees to work more effectively and focus on delivering excellent service to customers. and contactless ordering can enhance the overall dining experience and increase customer satisfaction. However, it is important to consider the limitations and challenges that may arise during the implementation and use of such a system, such as user adoption, system compatibility concerns. By addressing these limitations and leveraging the functional requirements, a well-designed and properly implemented cafeteria management system can significantly enhance the operations and productivity of a cafeteria.