

# **Software Engineering Stage II**

## **Canteen Automation System**

**Atharva Phand 111803092**  
**Chaitanya Shinge 111803099**  
**Amey Dhongade 111803110**

## **Problem Statement**

To design an application for the canteen to prevent queuing delay.  
To reduce waiting time of customers.

## **Abstract**

Let us understand the problem through an example. At CoEP Boat Club, during peak hours, i.e. 1pm - 3pm (lunch) and 4pm - 6pm (after college), there is a sudden increase in customers and too many orders than the rest of the day. The difficulty faced by the cooks of the canteen team is they have to prepare many orders continuously in a short span of time.

In a general view; college canteens, restaurants face a similar situation daily. Many people are already at their tables enjoying their meals, plus a queue of customers for takeaway. Yes, there is a reasonable amount of staff in the kitchen assigned different tasks and types of dishes to prepare. But in the scene described above, it may happen that the quality of the food is degraded sometimes, few orders are forgotten to prepare, some orders are not prepared completely or as expected, customers may cancel their orders due to time overhead and complaints from customers, etc. We as the owner of the canteen/restaurant would not want this to happen. We would always like to serve our customers in the most gentle and proper way, deliver good quality dishes and want the customers to visit again and again and also recommend others to our canteen. Our project solves the above listed difficulties to a great extent.

## **Aim**

The canteen app will help in preventing queuing delay as well as reduce the waiting time for the order which will result in a smooth running canteen system.

## **Objectives**

Orders are placed beforehand. Canteen team gets an organized list of orders beforehand. Thus giving more ample time in preparation and serving of orders which results in less waiting time, which prevents long queues. To ensure correct serving of food and beverages to the customer using OTP. Notification regarding the order will be sent to customers.

## **Functional Requirements**

Internet Access

Android App (Versions >= Lollipop)

# **Summary about Project Development**

## **Overview**

Canteen automation system will help to tackle the problem of queue delays, unnecessary waiting for orders. This system is helpful to both, the canteen team as well as the students and teachers. The organized manner in which the order are received will help in the efficient way in serving the food and the beverages. This will prove useful to those who have limited time at hand. All in all, with the above mentioned features, will be of great use to any college.

## **Features**

- Students / Teachers can order beforehand. This prevents delay and a very less queuing delay.
- As orders are received earlier, the burden imposed on the canteen team is reduced, moreover gives more time to prepare better quality dishes.
- The chances of getting a seat increases due to less waiting time.
- Suggestion section is also present in the app, for the betterment and quality of the dishes.
- Adding new orders to the existing ones is also there, given that the new order is placed in that stipulated time.
- Updated menu which will help in telling customers what all is there in the menu, thus again preventing the queuing delay.
- OTP verification which will in help in delivering the order to that particular person
- Canteen deluxe offer, where a student/teacher can pay on a monthly basis and receive discounted prices on any item they order.