Software Requirements Specification

for

QuickCanteen

(Canteen Automation System)

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

The purpose of this document is to present a detailed description of QuickCanteen. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for developers, clients (canteen owners) and students.

1.2 Product Scope

The system is a Canteen Automation System that is designed for students and canteen owners and can be used to streamline the process of ordering and serving food at canteens. Unlike the manual ordering system used at most canteens, using this system will minimize the long queues of students at the canteen and will hence reduce the chaos in the canteen. The system is designed to allow student to make payment via online payment methods thus making exchange of cash easier. The system makes it easier for canteen owners to get feedback from students about the food served and service of the canteen.

2. Overall Description

2.1 Product Perspective

In today's fast paced world, where students do not have time for waiting in queues in the overcrowded canteens. Canteen managers have little time to ask for feedback on their food from students alongside managing the chaos in the canteen, QuickCanteen is a canteen automation Web Application that connects students and the canteen managers. Unlike the current manual ordering system, it allows students to view the menu of any canteen and order food at anytime, anywhere and allows students to pay via online wallets which further ads to the convenience of both the parties. Once the basic prototype gets launched successfully, the application will be extended to provide the students with the facility to order food days in advance and also specify the time they need it prepared.

2.2 Product Functions

QuickCanteen connects the canteen managers and students by allowing students to order food from the canteens and allowing canteen managers to get feedback from students. It supports payment via e-wallets thus reducing chaos in the canteen during rush hours.

1. System allows students and canteen owners to register themselves and also allows them to log into the system.

2. System allows system administrator to verify canteen owner details while registration.

3. System allows system administrator to perform backend maintenance tasks and view usage statistics from time to time.

4. System allows canteen owners to add, delete and modify the food items they provide.

5. System notifies the respective canteen owners as and when a new order in placed in the canteen.

6. System allows the canteen owners to view their pending orders.

7. System allows canteen owners to set pending order limit for their respective canteens.

8. System allows canteen owners to send a notification to the students when their order is prepared.

9. System allows canteen owners to view the feedback given to them by the students.

10. System allows students to view menus of different canteens.

11. System allows students to order food from different canteens. However, the order won't be accepted if the number of pending orders for that canteen has reached its limit.

12. System allows students to pay for their orders via online payment methods but not cash on delivery.

13. System allows students to cancel their orders but the cancel request can be made atmost 10 minutes after placing the order. The cancel request however, can be denied by the canteen owner at his will.

14. System allows student to give feedback to the canteen owners about the served food and service of the canteen.

User Classes and Characteristics

- **Admin**

There will be only one admin of the entire system who will perform back end tasks like monitoring usage statistics and verifying canteen details.

- **Canteen Managers**

The managers of the various canteens registered on the system. The canteen managers will have the power to accept orders, approve/deny order cancellation request and set maximum pending order limit.

- **Students**

The students of various colleges registered on the system. The system will allow the students to view menus of various canteens, place orders, make payments via online payment methods and also give feedback for different canteens.

2.3 Operating Environment

The system shall work in all standard desktop web browsers including Google Chrome, Mozilla Firefox and Internet Explorer.

The system will require a working internet connection.

2.4 Design and Implementation Constraints

The system is to be developed on .NET Framework and is to use Microsoft SQL Server for database requirements.

2.5 Assumptions and Dependencies

It is assumed that users of all classes are well acquainted with online payment methods and uses his credit/debit card to transfer money to and from his/her bank account.

3. External Interface Requirements

3.1 User Interfaces

Users of all user classes will interact with the system with through web forms which can be navigated using .NET web controls. The web controls will comply to .NET Framework 4.5.2.

3.2 Software Interfaces

The software manages information about various canteens, orders placed and about the students registered on the system on Microsoft SQL Server.

3.3 Communications Interfaces

The students as well as canteen managers will communicate with the system via HTTP-compliant web browsers only.

4. System Features

4.1 System allows students and canteen managers to register themselves.

4.1.1 System allows canteen managers to register themselves and their canteen.
Input: Canteen manager details
Output: “Thanks for registering”

4.1.2 System allows students to register themselves.
Input: Student details
Output: “Thanks for registering”

4.1.3 System allows students to log into the system.
Input: Login details
Output: “Logged in”

4.2 System allows students to place order and pay for their orders via online methods.

4.2.1 System allows students to view menus of different canteens.
Input: Name of canteen
Output: Menu of chosen canteen

4.2.2 System allows students to choose food items from menu.
Input: Food items
Output: Total amount, Order number

4.2.3 System allows students to pay for their orders via online wallets.
Input: Wallet used
Output: Payment success / payment failed

4.2.4 System adds placed order to the respective canteen order database in FCFS manner.
Input: Order
Output: New order notification to canteen manager

4.3 System will notify students when their order is prepared.

4.3.1 Change the order status to ‘prepared’.
Input: Order number
Output: “Order ready”

4.3.2 System will notify students about preparation of order.
Input: Order number
Output: Notification to students

4.4 System allows students to cancel the order at the discretion of the canteen manager

4.4.1 System allows students to make cancellation request.
Input: Cancel request
Output: Cancel request notification to canteen manager

4.4.2 System allows canteen manager to accept or deny cancellation request at his discretion.

Input: Approval/Denial

Output: Notification to student

4.5 System allows students to give feedback to a canteen

4.5.1 System allows students to give feedback about a canteen.

Input: Rating

Output: “Thank you for your feedback”

4.6 System allows canteen managers to modify the menu of their respective canteen

4.6.1 System allows canteen managers to update the menu.

Input: Update information

Output: Updated menu

4.7 System allows system administrator to track usage records and perform system maintenance

4.7.1 System allows system administrator to check usage records.

Input: Usage record request

Output: Usage record

4.7.2 System allows system administrator to verify canteen manager details at the time of registration.

Input: Canteen manager registration details

Output: “Details verified”

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The system should work smoothly and there should be no request drops even during peak hours at the canteen.

5.2 Security Requirements

The system should ensure that SQL injection does not happen and should also provide for captcha during logging in so that robot logins do not occur.

Appendix A: Glossary

Canteen manager: The person entitled with the responsibility of running a canteen and the one who registers the canteen on the system.

Student: The students using this system to access services of canteens.

Admin: The person entitled with the responsibility of managing the software and improving it.