

Canteen Management System

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1. INTRODUCTION

1.1 MOTIVATION

By definition, a canteen is a type of food service location in which there is little or no waiting staff table service. This Canteen Automation System enables the end-users to register online, read and select the food from the e-menu card, and order food online by just selecting the food that the user wants to have using the android application. A cafeteria management system simplifies the inventory management and ingredient tracking necessary to adhere to school nutrition standards. It allows you to easily record and keep tabs on the quantities of approved ingredients used to prepare school meals.

1.2 APPLICATION

A cafeteria management system simplifies the inventory management and ingredient tracking necessary to adhere to school nutrition standards. It allows you to easily record and keep tabs on the quantities of approved ingredients used to prepare school meals. When quantities are depleted to pre-determined levels, the system can generate reorders, ensuring that the right ingredients are available when they're needed — and avoid staff making unauthorized substitutions. Additionally, the system can be configured to prevent the ordering of ingredients and foods that don't meet program guidelines.

A cafeteria management system turns the tough job of administering a school lunch or meal program into an easier one and provides a great return on your technology investment.

The canteen Management System helps to work seamlessly in the dining facility without any hassle. This software helps to automate the canteen facility and makes it transparent.

2. PROBLEM DEFINITION

A manual system involves paperwork in the form of maintaining various files and manuals. Maintaining critical information in the files and manuals is full of risk and a tedious process. Including a framework showing how to apply Internet

technology progressively as skills and confidence grow, the project demonstrates the route from adapting materials to developing an online environment. Nowadays people don't have much time to spend in the canteen by just there and waiting for the waiter to take their order. Many customers visit the canteen during their lunch break and recess so they have limited time to eat and return to their respective offices and colleges. So this software helps them to save time and order food whenever they want without calling the waiter again and again.

3. TECHNOLOGY USED

3.1 Hardware and Software Requirements

Software Requirements:

Name of component	Specification
Operating System	Windows 98, Windows XP, Windows7, Linux
Language	Java 2 Runtime Environment
Database	MySQL Server
Browser	Any of Mozilla, Opera, Chrome etc
Web Server	Tomcat 7
Software Development Kit	Java JDK 1.7 or Above
Scripting Language Enable	JSP (Java Server Pages)
Database JDBC Driver	MySQL Jconnector

Hardware Requirements:

Name of component	Specification
Processor	Pentium III 630MHz
RAM	128 MB
Hard disk	20 GB
Monitor	15" color monitor
Keyboard	122 keys

3.1 Description of Library Used

The EMS is made using HTTP, bootstrap, HTML, JavaScript, and MongoDB is used. For the front, we have used HTML, bootstrap, and JavaScript is used to make the page Dynamic. Nodejs is used as backend language to connect the MongoDB database to the frontend project

1. Main Features of Canteen Management System

- **Creating Order**
The task can be created in CMS and can be placed by a customer to a chef.
- **Bill**
Bill can be generated for every order.
- **Item**
A new item can be added or an existing item can be removed or edited
- **Inventory**
Inventory can be edited by the chefs or the admins.
- **Add User**
Customers can be added by creating new login with register forms

2. User Interfaces

The User Interface will be punchy and attractive and minimalist. The User interface will be simple and intuitive so that everyone can easily understand and use it.

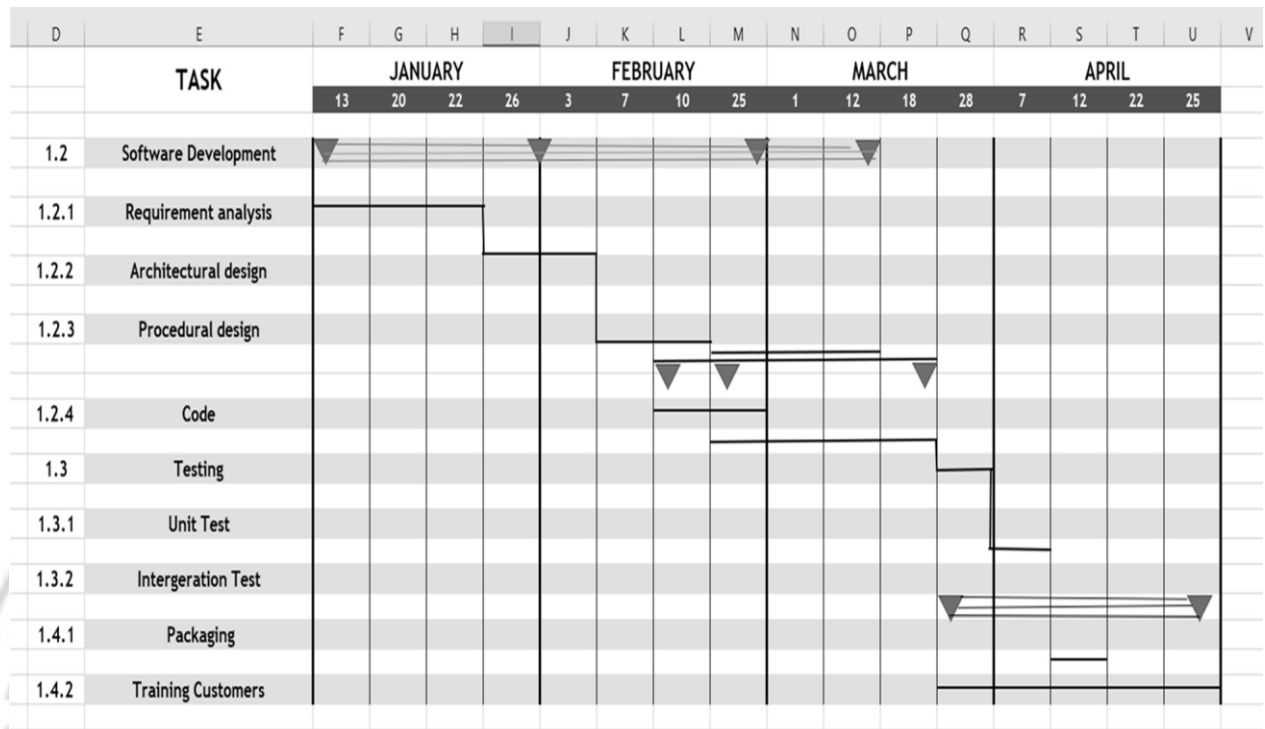
3. Software interface: -

A software interface illustrates the connection between product and software components including databases, tools, operating systems, libraries and integrated components. Identifies and describes the purpose of each data item or message coming in the system. A software interface characterizes all the services needed and nature of communication.

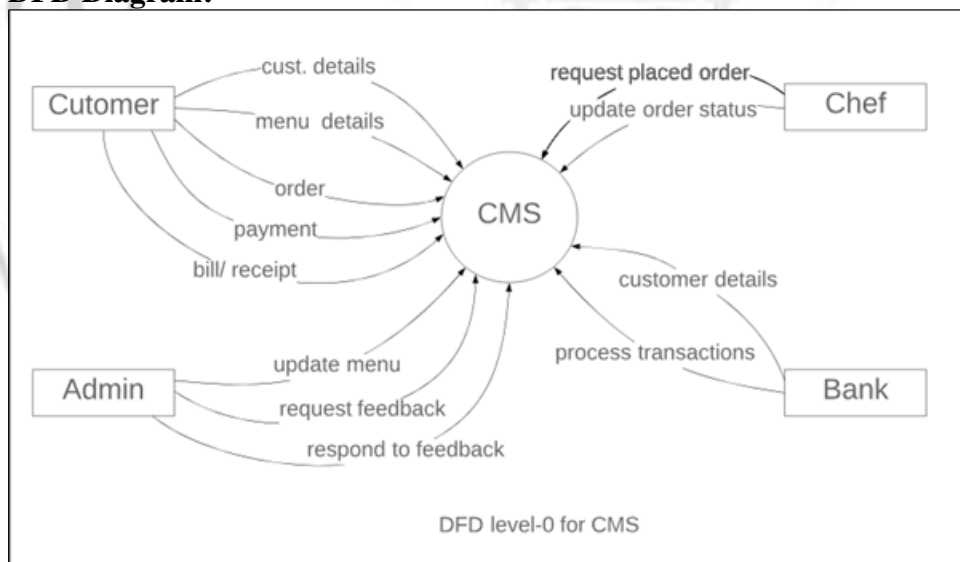
4. Hardware Interface: -

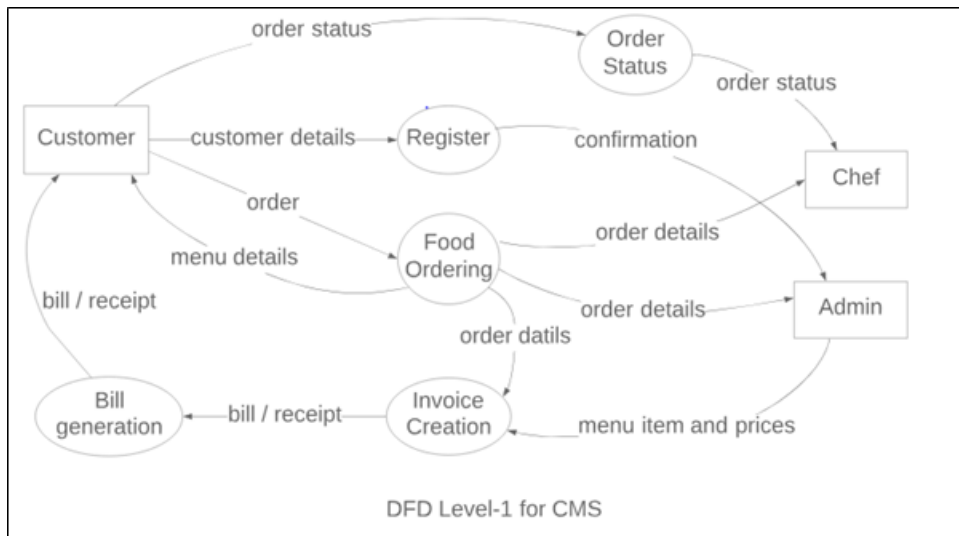
- **Laptop/Desktop PC** - Purpose of the pc is to give information when Patients ask information about doctors, prescriptions or available laboratory tests.
- **Display Unit (LED/LCD Monitor/TV)** - To display information about the hospital and for displaying the channel number when the patients come to see their consultants.
- **Laser Printer** - For printing bills and reports.
- **Wi-Fi router** - To be used for internet network operations inside of a hospital and simply data transmission from pc to server.

4. Implementation:

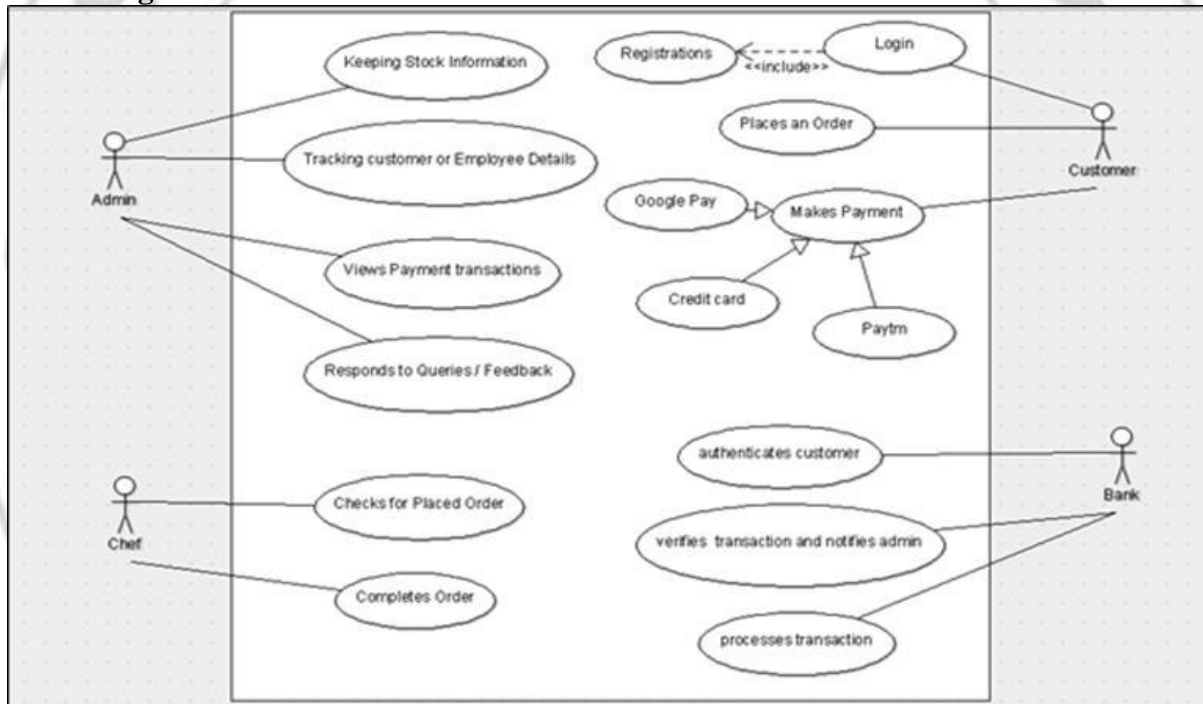


DFD Diagram:

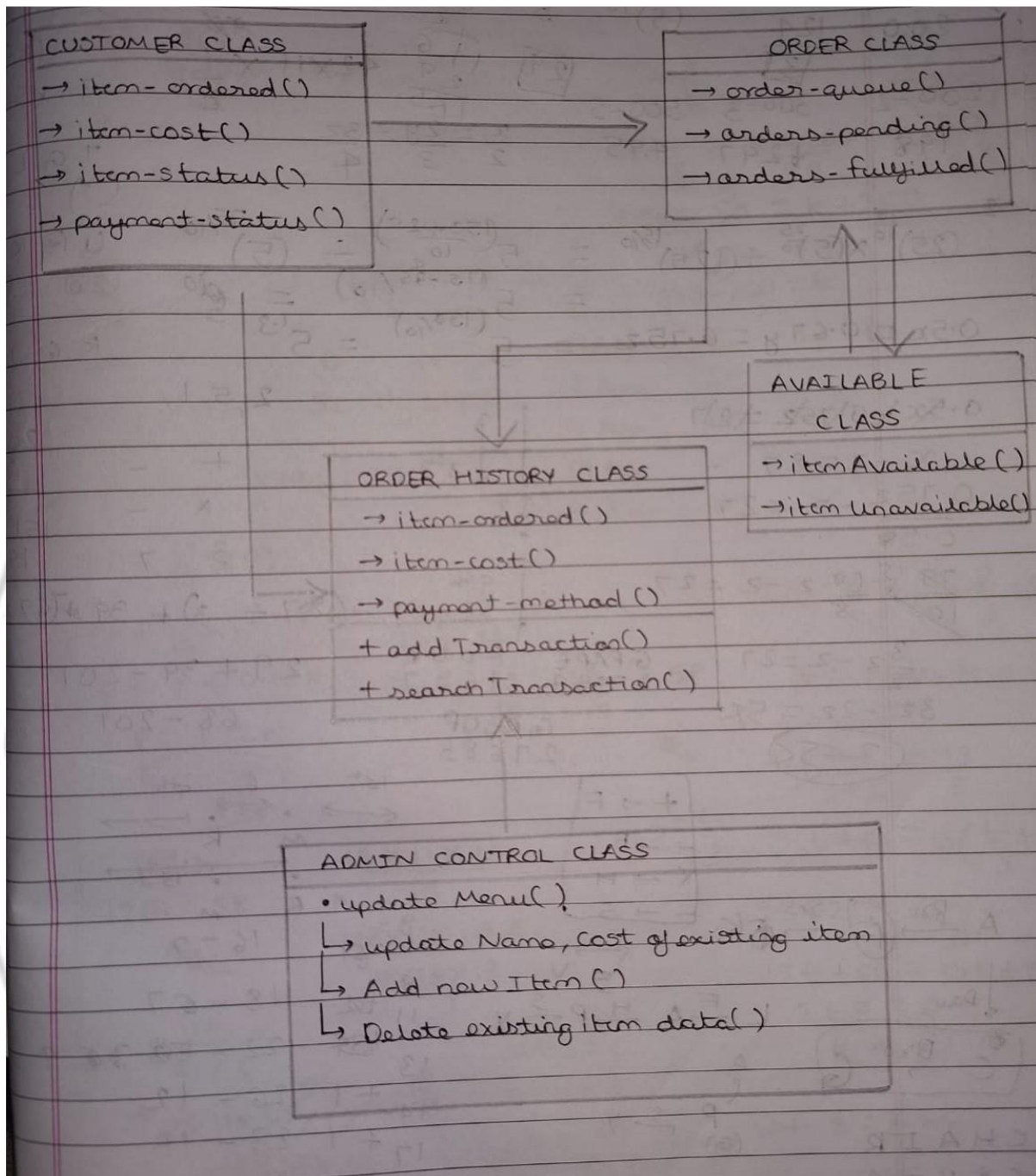




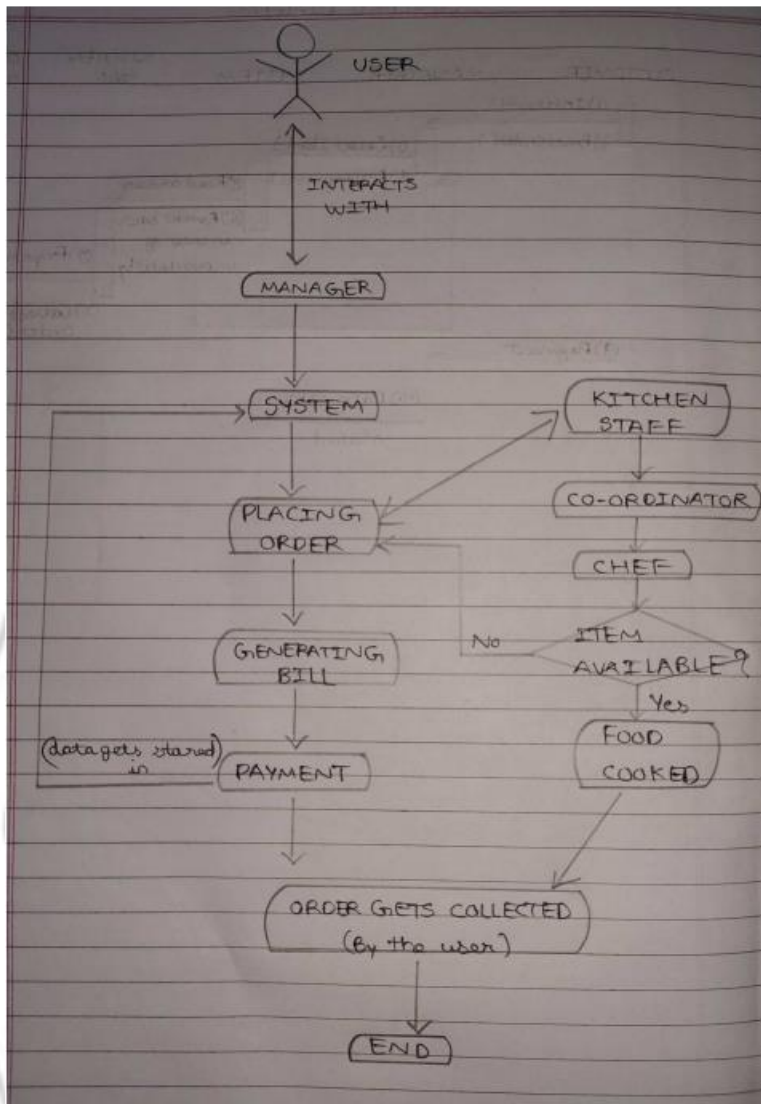
UML Diagram:



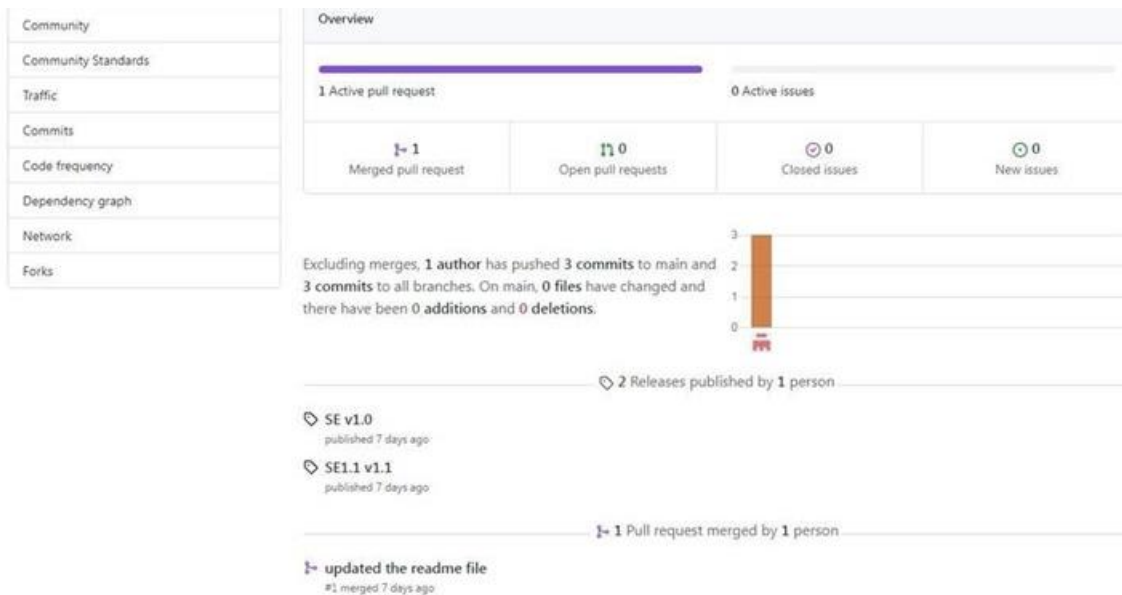
Class Diagram:



Collaboration Diagram:



Version Control:



5. Conclusion

The development of the Canteen Management system involved many phases. The approach used is a top-down one concentrating on what first, then how, and moving to successive levels of details. The first phase started with a detailed study of the problems and prospects of ordering in Foods. In the course of this study, many problems were discovered to have hindered the effectiveness of the existing manual system. These problems, information needs, and activities were documented and later used as the basis for system design, which immediately followed the first phase. The design phase was concerned primarily with the specification of the system elements in a manner that best met the organization's business needs. During this phase, strict adherence was made to proven software engineering principles and practices. To implement this design, a computer program was then written and tested in a Visual Studio .Net environment. It is hoped that the effective implementation of this software product would eliminate many problems discovered during systems investigation.

6. References

[1] en.wikipedia.org

[2] Microsoft Developer Network (MSDN): <http://msdn2.microsoft.com/en-us/default.aspx>: This is a valuable online resource, and is a must for any developer using Microsoft tools.

[3] <http://www.asp.net/>: This is the official Microsoft ASP.NET web site. It has a lot of: tutorials, training videos, and sample projects.

[4] <http://www.isr.umd.edu/Courses/BARASENSE623/secured/Class%20Handouts/Trade-Off1.pdf>