***Software Requirements Specification***

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Cafeteria Management System

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1. **Introduction**
   1. **Purpose**

The purpose of this document is to present a detailed description of the Cafeteria Management System. 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 both the stakeholders and the developers of the system.

* 1. **Scope of Project**

This software system will be a Cafeteria Management System that will help to manage and run the cafeteria business systematically.

We will provide an app that can be used by the customers to order drinks and snack . the owner have full control on the system where he can evaluate the work of the chief ,waiters through the feedback that given by the customers on this app . This will lead to hire less waiters and more payoff to the owner . the customers can make payment through debit or credit cards using POS which will be integrated with the management software . this app present information about current discount , and calorie chart of the drinks and snack . the system will store information about daily expenses ,feedback of the customers , information about employees and about all food and its prices ,this all to generate reports to the owner by the system admin .

* 1. **Glossary**

|  |  |
| --- | --- |
| **Term** | **definition** |
| System admin | System admin is the person who is responsible for managing the whole system and who has full access to the system. |
| System user | System user is the person who will use or operate the system but with limited privilege . |
| Database | Collection of all the information monitored by this system. |
| Field | A cell within a form. |
| Software Requirements Specification | A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document. |
| Stakeholder | Any person with an interest in the project who is not a developer. |
| Point of Sale (POS) | A point of sale system is either a stand-alone machine or a network of input and output devices used by cafeteria . |
| cashier | Cashier is the person who is responsible for managing cash and sales transactions in a cafeteria. He processes refunds and exchanges . He also balance the cash and generate reports for debit and credit cards. |

* 1. **References**

-IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

**-**www.wikipedia.com-free online encyclopedia .

**1.5. Overview of Document**

The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to present drinks and a lot of snack for the technical requirements specification in the next chapter. SRS V 1.0 18Mai 2021The third chapter, Requirements Specification section, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product. Both sections of the document describe the same software product in its entirety, but are intended for different audiences and thus use different language.

**2.0. Overall Description**

**2.1 System Environment**

***chef***

***CMS DB ***

***Waiter***

***Cashier***

***Customer***

***Cafeteria Management System***

***Admin***

*The Cafeteria Management System has five active actors and one cooperating system.*

*the customer can access to the system through wifi connection*

*and create account on the app then order what he wants.*

*The chef prepare the snack after he receive the order and then he tell the system that the order is ready .*

*The waiter takes the order from the chief and deliver it to the right table.*

*The cashier receive the payment from the customer through the system .*

*Now the admin can count total earning , expenditure and generate reports to the owner .*

**2.2 Functional Requirements Specification**

the use cases for each of the actors are described separately in this section.

*2.2.1 Customer Use Case*

Use case: order snack ,drinks..

Diagram:

Order snack, drinks..

customer

*Brief Description****:***

the customer can order snack after he check the menu on the app, then

see his payment receipt and pay.

*Initial Step-By-Step Description*

Before this use case can be initiated, the Customer has already has the app and create account on it .

1-the customer check the menu on the app .

2-he can see the calorie chart , prices and components then chooses what he want.

3-the customer press the order button.

4-after finish of eating, he chooses the way of paying and pay.

**Xref** : section 3.2.1 ,order meal

2.2.2. Chef Use Case

Use case: prepare the meal

Diagram:

Prepare the meal

Chef

**Brief Description :**

The Chef prepare the meal after he receive the orders.

*Initial Step-By-Step Description:*

1-the chef receive the order ,and check if it can be taken or not.

2-he confirms the order that is ok.

3-he starts preparing the order .

4-when he finish he tell the waiter to deliver this order.

5-the chef can also edit what the ingredients are available and what are demanded.

**Xref** : section 3.2.2 ,prepare meal

2.2.2. Waiter Use Case

Use case: deliver the meal

Diagram:

deliver the meal

Waiter

**Brief Description :**

The Chef deliver the meal after it is ready.

*Initial Step-By-Step Description:*

*1-He takes the order that is ready from the kitchen.*

*2-he deliver it to the right table.*

*3-finally he mark the order that is delivered.*

**Xref** : section 3.2.3 ,deliver meal

2.2.2. Cashier Use Case

Use case: Take payment

Diagram:

Take the payment

cashier

**Brief Description :**

The cashier is responsible to take the payment from the customer .

*Initial Step-By-Step Description:*

*1-the cashier take the payment from the customer and save it into the database.*

*2-he can check if the customer is eligible for discount and take the payment accordingly.*

**Xref** : section 3.2.4 ,Take the payment

2.2.2. Admin Use Case

Maintain the system

Admin

Generate Reports

Use case: Maintain the system

Diagram:

Maintain the system

Admin

**Brief Description :**

The Admin has full control on the system so he can maintains the whole system.

*Initial Step-By-Step Description:*

*1-the system admin maintains the whole system.*

*2-he ensure better and secure service.*

*3-he can solve any error appeared in the system.*

**Xref** : section 3.2.5 , Maintain the system

Use case: Generate Reports

Diagram:

Generate Reports

Admin

**Brief Description :**

The Admin can generate reports to the owner of the cafeteria.

*Initial Step-By-Step Description:*

*1-the system admin generate reports depending on the information into database of the system , and sends them to the owner.*

*2-according to requests of the owner ,he acts.*

*3-he can solve the problem, improve the service, order improving the meals depending on the feedback of the customers.*

**Xref** : section 3.2.6 , Generate Reports

***2.3 User Characteristics***

The customer must know how to use the app with all of its features and how to create account on it.

The chef must know how to use this app to receive the orders ,and prepare all of meals and drinks that the cafeteria order them.

Waiter just will know how to locate the right table through the app and deliver meal to it.

System admin must know how to manage all the system and solve all problems or errors that may show on this app.

Also he must know to query information from database to generate reports to the owner.

The cashier must have knowledge in account business.

***2.4 Non-Functional Requirements***

-The product will based on local server with high speed Internet capability.

-database system.

-payment system with full security through POS system.

-the time of preparing meals must be accepted.

-the whole system is secured ,just the admin can access the database.

***3.0. Requirements Specification***

***3.1 External Interface Requirements***

There are many types of interfaces in this system :

**User interface:**

It will implemented on any android smartphone app browser.

The customers can give feedback this app easily with some demo comment or if they are keen to write their review by own they can do it.

**Hardware interface:**

There shall be logical address of the system in IPV6 format.

**Communication interface:**

Communication function required IPV6 and it will follow HTTPS. It will use FTP for whole system with local server.

And email communication .

***3.2 Functional Requirements***

The Logical Structure of the Data is contained in Section 3.3.1.

3.2.1 Order Snack, Drinks..

|  |  |
| --- | --- |
| **Use Case Name** | Order Snack, Drinks.. |
| **XRef** | Section 2.2.1,order snack, drinks..,  Section 7.1 |
| ***Trigger*** | The customer assesses the app |
| ***Precondition*** | Having app with connection to network and create account |
| ***Basic Path*** | 1-the customer chooses drinks or snack  2-he checks the menu to show What is available  3-when he chooses what he want, the calorie chart, current discount and prices are showed  4-after he decides he press order and wait .  5-after the customer finish its meal he can make feedback and express of his opinion through special fields in the app .  6-finally,he chooses the way to pay the payment. |
| ***Alternative Paths*** | If the customer chooses a snack or drink that isn't available,  Menu of alternative snack or drinks that are similar is showed. |
| ***Post condition*** | The order is delivered to the customer. |
| ***Exception Paths*** | The customer may abandon the order process at any time. |
| ***Other*** | The feedback and customer's notes send to the admin to store it in the DB. |

***3.3 Detailed Non-Functional Requirements***

***3.3.1 Logical Structure of the Data***

*The logical structure of the data to be stored in the*

*database is given below.*

*Deal with*

*employees*

*meals*

*The data descriptions of each of these data entities is as follows:*

***Meals data entity:***

|  |  |  |  |
| --- | --- | --- | --- |
| ***Data Item*** | ***Type*** | ***Description*** | ***Comment*** |
| ***name*** | ***Text*** | ***Name of meal*** |  |
| ***prices*** | ***Number*** | ***Price the meal*** |  |
| ***Daily expenses*** | ***Number*** | ***The expenses amount of this meal*** |  |
| ***feedback*** | ***text*** | ***The customer's notes on this meal*** |  |

***Employees data entity:***

|  |  |  |  |
| --- | --- | --- | --- |
| ***Data item*** | ***type*** | ***description*** | ***Comment*** |
| ***Id*** | ***Integer*** | ***Number for the employee*** |  |
| ***Full\_name*** | ***Text*** | ***The full name for the employee*** |  |
| ***Salary*** | ***Number*** | ***Its salary*** |  |
| ***skills*** | ***text*** | ***The skills that he has and evaluation to it*** |  |

***The Logical Structure of the data to be stored in the app is as follows:***

|  |  |  |  |
| --- | --- | --- | --- |
| ***comment*** | ***description*** | ***type*** | ***Data item*** |
|  | ***Id of meal*** | ***integer*** | ***Id*** |
|  | ***Name of meal*** | ***text*** | ***Name*** |
|  | ***Price of meal*** | ***number*** | ***Price*** |
|  | ***Calories that meal has*** | ***text*** | ***Calorie chart*** |
|  | ***This meal has discount or not*** | ***boolean*** | ***discount*** |

***3.3.2 Security***

*The source code for this system shall be maintained in configuration management tool.*

*Only admin can access to the data in database so the system will be secured.*

*The system will use secured POS system for payment.*

*The system will use HTTPS that is protocol with more secure.*