PES UNIVERSITY, BANGALORE

Department of Computer Science and Engineering

# SOFTWARE REQUIREMENTS SPECIFICATION
# for
# Dine In Application

**Version 1.0 approved**

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# Table of Contents

**Table of Contents** ..... **ii**
**Revision History** ..... **iii**
**PES2UG20CS410+PES2UG20CS408**

**1. Introduction** ..... **4**
1.1 Purpose ..... 4
1.2 Intended Audience and Reading Suggestions ..... 4
1.3 Product Scope ..... 4
1.4 References ..... 4
**PES2UG20CS408**
**2. Overall Description** ..... **5**
2.1 Product Perspective ..... 5
2.2 Product Functions ..... 5
2.3 User Classes and Characteristics ..... 6
2.4 Operating Environment ..... 6
2.5 Design and Implementation Constraints ..... 7
2.6 Assumptions and Dependencies ..... 7
**PES2UG20CS409**
**3. External Interface Requirements** ..... **7**
3.1 User Interfaces ..... 7
3.2 Software Interfaces ..... 8
3.3 Communications Interfaces ..... 8
**PES2UG20CS409**
**4. Analysis Models**

**PES2UG20CS410**
**5. System Features** ..... **10**
5.1 System Feature 1 ..... **Error! Bookmark not defined.**
5.2 System Feature 2 (and so on) ..... 12
**PES2UG20CS421**
**6. Other Nonfunctional Requirements** ..... **13**
6.1 Performance Requirements ..... 13
6.2 Safety Requirements ..... 13
6.3 Security Requirements ..... 13
6.4 Software Quality Attributes ..... 13
6.5 Business Rules ..... 13
**7. Other Requirements** ..... Error! Bookmark not defined.
**Appendix A: Glossary** ..... **14**

**Appendix B: Field Layouts** ..... Error! Bookmark not defined.
**Appendix C: Requirement Traceability matrix** ..... Error! Bookmark not defined.


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# Revision History

| Name | Date | Reason For Changes | Version |
|---|---|---|---|
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# Introduction

## Purpose

We aim to develop a software that provides customers a single platform to make their restaurant going experience better. It allows the customer to place their order, call for assistance and make secured payments. On the other side, it also helps the restaurant in tracking the orders placed and managing their customers in an efficient way. The system has been designed to do a lot more than just place orders. This system will help to manage and run the restaurants systematically.

## Intended Audience

This document is intended for different types of readers such as restaurant owners, their customers and obviously all the team members. It will be used by us at different stages or software development to ensure we are on the right track. By reading this document a reader can learn about what the project is implemented for.

## Product Scope

The software aims to ease the process of ordering food in restaurants. It also simplifies the process on the restaurant's side as it would require less manpower to carry out the same operations.

## References

*https://www.coursehero.com/file/72868648/SRS-FOR-ONLINE-FOOD-DELIVERYpdf/*

*https://www.slideshare.net/Aurnob0071/software-requirements-specification-for-restaurant-management-system*

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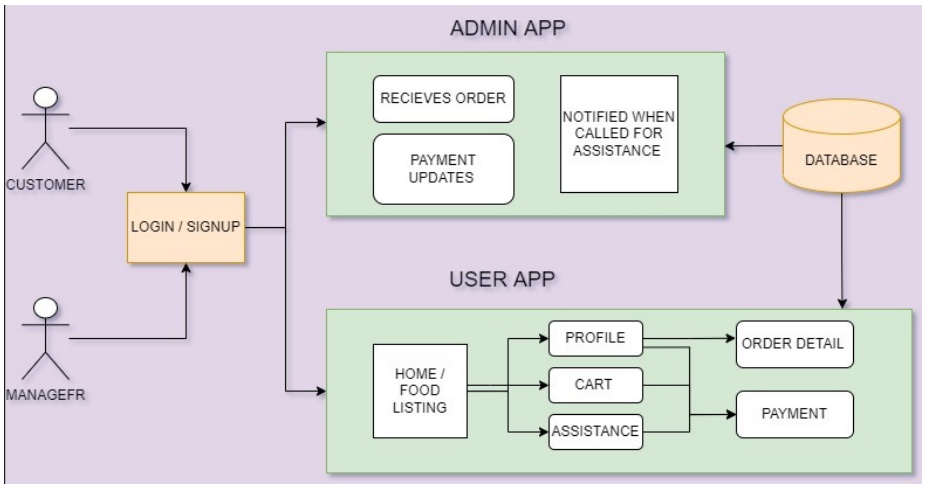
# Overall Description

## Product Perspective

This software is a replacement of the current ordering systems in place which is not consistent across restaurants.




## Product Functions:

### Restaurant Side

- Menu database
- Receive Customer Orders
- Receive payment updates
- Get notified when called for assistance

### Customer Side

- Customer Registration
- Make secure payments
- Add food items to cart
- Call for assistance
- Scan the Restaurant Specific QR Code

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## User Classes and Characteristics

There are two classes in developing this software: Restaurant and Customers

- Restaurant customers can be considered as one of the user classes. They will be the most frequent users of the application. The customers must be able to
    1. Register on the application and create an account.
    2. Scan the QR code to obtain the menu of the respective restaurant.
    3. Add different items from the menu to their cart.
    4. Get information about availability of different items.
    5. Call for assistance
    6. Make secure payments

- Restaurant owners are the other category of users who will be interacting with our software. Functions or characteristics:
    1. Add their menu in the database.
    2. Update different items according to the demand.
    3. Get orders from different tables.
    4. Get notified when called for assistance.
    5. Receive payment updates

## Operating Environment

**Operating System:** Minimum Windows XP or Windows Vista. Better suited for Windows 7, 8, 10, 11.

**Other Requirements:** Camera/Gallery for scanning the QR Code, Internet connectivity.

## Design and Implementation Constraints

- The user should have sufficient knowledge of computers.
- The users must know the English language, as the user interface will be provided in the mentioned language.
- The payment gateway should be highly secure as the transaction contains sensitive information.

## Assumptions and Dependencies

Scanning the QR code functionality can be affected if the required permissions are not from the system for the camera. Issues with the internet can affect the working of the software.

# External Interface Requirements

## User Interfaces

The user interface will be implemented using any android smartphone browser. The interface will be user friendly so that every kind of customer is able to place orders easily. Restaurants will be able to update their menu items using the restaurant section of the app.

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## Software Interfaces

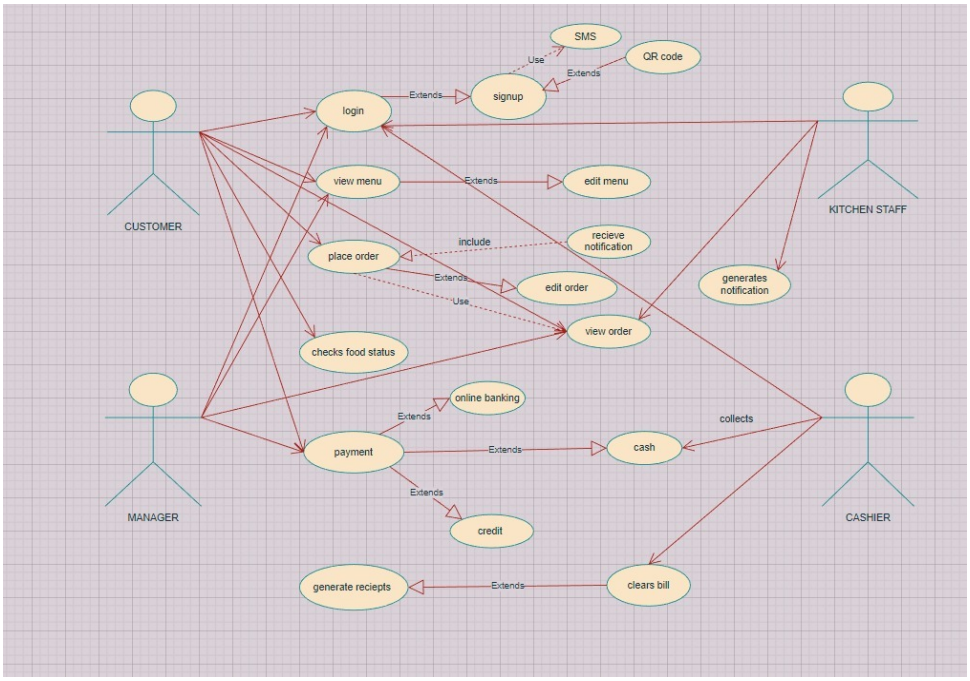
**Front End -** Flutter framework with Dart, HTML, CSS, JS

**Back End -** Python, Flask

## Communications Interfaces

Communication function requires the Internet Protocol Version 6 along with http protocol.

# Analysis Models



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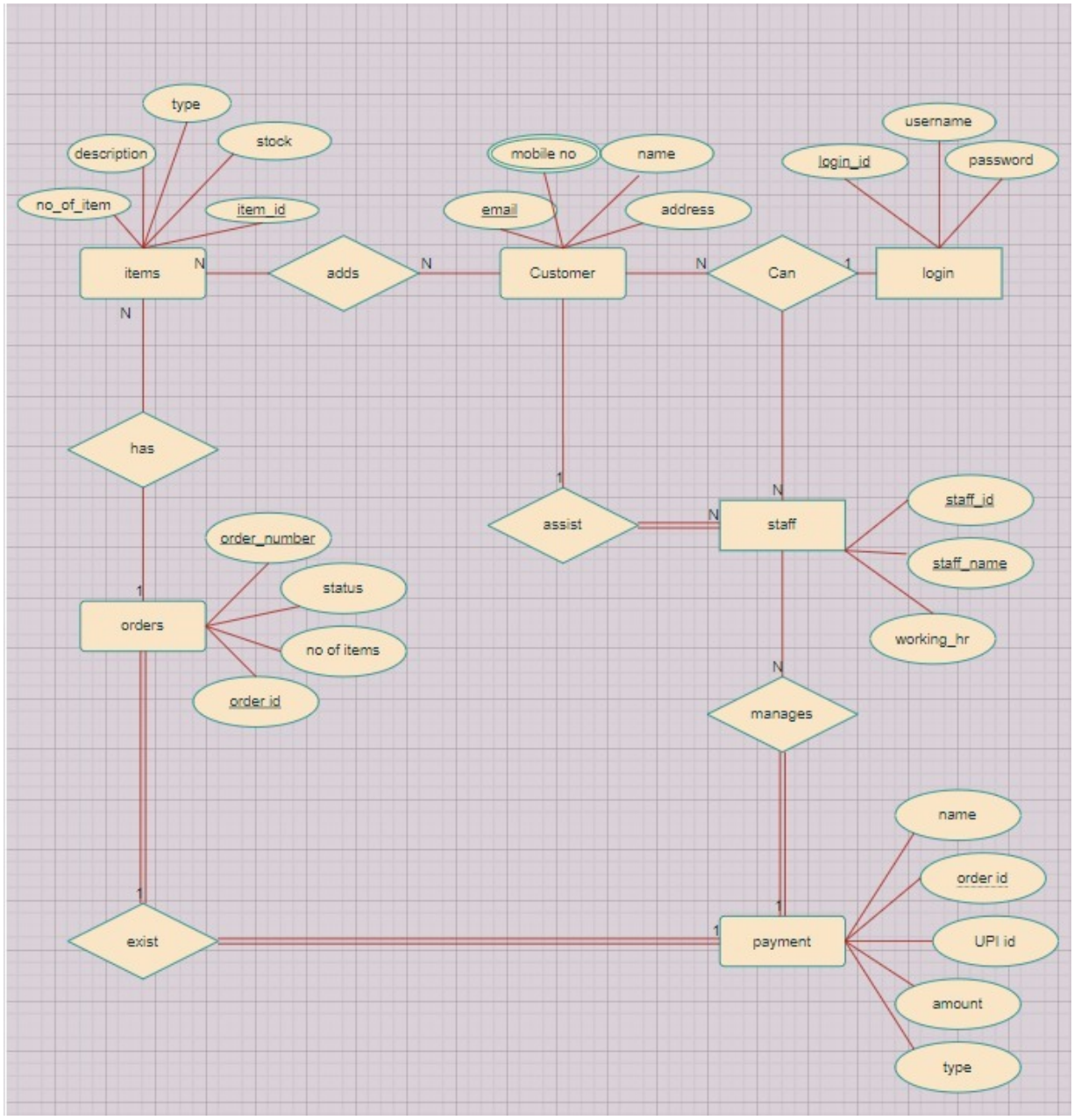
## E-R Model



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# System Features

**LOGIN / REGISTRATION PAGE**

5.1.1 Description and Priority

The user will be able to login and register with their desired roles i.e Restaurant or Customers.

Priority- High priority

5.1.2 Stimulus/Response Sequences

A database will be maintained for all the registered restaurants to keep a track of all the menu items and for the customers to keep a count of the orders placed. The users would be able to login in to the app after which the respective roles are decided.

5.1.3 Functional Requirements

Requirement 1: The software must maintain a database consisting of all the mentioned details.
Requirement 2: Software must be user friendly and efficient.

**SCANNING QR CODE**

5.1.1 Description and Priority

The user will be able to get the menu of the restaurant after scanning and processing the QR Code offered by the restaurant.

5.1.2 Stimulus/Response Sequences

After logging in on the customer's side, the user will be asked to scan/upload a QR Code using which the menu will get loaded.

5.1.3 Functional Requirements

Requirement-1: The software must have an upload/scan QR Code feature.
Requirement-2: This feature must be user friendly and efficient.

**MODIFY CART**

5.1.1 Description and Priority

The customer would be able to add or delete different items from the menu. They can also delete items from the cart.

Priority- High priority

5.1.2 Stimulus/Response Sequences

For placing orders, the customer can add the required items to cart and then can proceed to payment.

5.1.3 Functional Requirements

Requirement-1: The software must maintain a database for all the cart items.
Requirement-2: It must be able to efficiently shortlist candidates based on higher match percentage

**PAYMENT**

5.1.1 Description and Priority

The customer would make secure payments according to the items added to the cart .

Priority- High priority

5.1.2 Functional Requirements

Requirement-1: The software must be highly secure for the payments.

**NOTIFICATIONS**

5.1.1 Description and Priority

The restaurant should get regular notifications on the orders being placed and payments. They should also get notified when called for assistance.

5.1.2 Stimulus/Response Sequences

- When called for assistance
- On order placed
- On successful transactions

5.1.3 Functional Requirements

Requirement-1: The software must be efficient and fast for getting all the notifications on time.

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# Other Nonfunctional Requirements

## Security Requirements

The payment system would be highly secure to avoid any discrepancies

## Software Quality Attributes

1. Usability: This is the measurement of ease of use.

**The system must be:**

- Easy to use for uploading the menu and updating it.
- Provide consistent user interface standards and conventions at both the restaurant and the client side.
- Easy for new or infrequent users to learn to use the system

2. Correctness: The application should be correct in terms of its functionality, calculations used internally and the navigation should be correct. This means that the application should adhere to functional requirements.

3. Testability: The system should be easy to test and find defects. If required, it should be easy to divide into different modules for testing.

4. Interoperability: Interoperability of one system to another should be easy for the product to exchange data or services with other systems. Different system modules

should work on different operating system platforms, different databases, and protocol conditions.

# Appendix A: Glossary

# Appendix B: Field Layouts

An Excel sheet containing field layouts and properties/attributes and report requirements.

**Sample sheet with information required to register the customer**

| Field | Length | Data Type | Description | Is Mandatory |
|---|---|---|---|---|
| Account Number | 16 | Numeric | | Y |
| ISFC code | 11 | Alphanumeric | | Y |
| Card Amount | 20 | Numeric | | Y |
| Mandate Start Date | 8 | Date | Date of Mandate Registration | N |
| Mandate End Date | 8 | Date | Date of Mandate Expiry | N |
| Status | 25 | Alphanumeric | Status of Registration | Y |
| Customer Name | 60 | String | | Y |
| Reject Reason Code | 4 | String | Reject Reason code in case mandate is rejected | N |

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**Sample Report Requirements: Include the fields to be included in the report**

| **Registration Report** | **Transaction Report** |
|---|---|
| Bank Account Number | Transaction Reference Number |
| ISFC Code | Bank Account Number |
| Bank Name | IFSC Code |
| Account Status | Bank Name |
| Account Type | Customer Name |
| Customer Name | Card Number |
| Card Number | Debit Transaction Amount |
| SI Start Date | Transaction Date |
| Status | Status |
| Remarks | Debit Attempt Number |
| | Remarks |

# Appendix C: Requirement Traceability Matrix ( To be decided)

| Sl. No | Requirement ID | Brief Description of Requirement | Architecture Reference | Design Reference | Code File Reference | Test Case ID | System Test Case ID |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |