# 1.1 ABOUT THE PROJECT

Online Catering Management is a fully computerized system that focuses on meeting the requirements of a customer. It is an online system that enables the customer to select and book catering service for a particular event. Various food items are available depending on the Category. Different categories are available such as Drinks, Starters, Main Course and Deserts. Different events are available such as Wedding, Betrothal, Birthday, Anniversary etc.

The customer can book the required catering service by registering into the system by entering his/her details and thereafter with a valid login ID. The Customer may go through different food items He/She wish to book based on categories. If the customer wants to book a food item, they can add it to their shopping cart. They can remove the food item from the cart. Customer needs to register on the site before checking out so that they can login using same id password next time. He/She can make the payment through a credit/debit card. Once the customer makes an effective payment catering service for specified number of people is booked.

The administrator plays a very important role in the Online Catering Management system. The administrator controls the entire database and system. He/ She can also login using the email id and password and perform operation like add, edit, delete, and view the food items. The administrator can also add and view staff details. The administrator has the superuser. Staff also have several duties in this system. Staff manages the food Item and event details.

The output of the project contains menu bar with different navigation functions those are transaction, report, and exit. When we click on the master link on the menu bar it can provide customer details, staff details, category details, item details, event details and booking details. In this manner, the Online Catering Management focuses on simplifying the Catering management and booking.

Front End: PYTHON

Back End: SQL

**2.1 SYSTEM STUDY**

The Online Catering Management provides user friendly interface which can be operated by anyone with little knowledge about the computer system. It stores the information needed for catering management in a database which can be accessed by the administrator, staff, and customer. It should maintain a well-organized database for storing the information regarding the Catering. This helps to eliminate the storage of invalid data. System study refers to the process of examining a situation with the intent of improving it through better process and methods. System study is, therefore, the process of gathering and interpreting facts, diagnosing problem, and using the information to recommend changes in the system, in other words it means a detailed explanation of description. Before computerizing a system under consideration, it must be analysed. We need to study how it functions currently, what are problems and what are the requirements that the proposed software should meet.

The main components of making software are:

• System and software requirements analysis

• Design and implementation of software

• Ensuring, verifying, and maintaining software integrity

**2.1.1. Existing System**

The existing system is not very convenient as the customer must spend lot of time and resources to go to the offline catering office. It is tedious and time-consuming process. Existing system was a manual system. And it was found to be inefficient in meeting the growing demands of the population. There are also frequent chances of data redundancy and data is easy to lose.

**2.1.2 Proposed System**

The objectives of the proposed system are to overcome the major limitation of existing system enabling effective management of the customer details thereby improving the booking experience. The online catering management is a suitable one. Comparing prices and options can be done more easily in online catering management system. The customer can log into the website and explore the wide range of food items available for booking. It also provides customer with different types of categories such as drinks, starters, main course, and deserts. For the ease of customer, the website can be accessed 24\*7. It is more efficient and reliable than the existing system. This system understands the needs of the customer, and everything is available at the click of fingertips.

**2.1.3 Feasibility Study**

Feasibility study is made to see if the project on completion will serve the purpose of the organization for the amount of work, time and effort spent on it. Study lets the developer foresee the future of the project and its usefulness. Finding out whether a new system is required or not. The study is carried out to the best system that meet performance requirement. This entails identification, description and evaluation of candidate system and selection of the best system for the best system for the job. It simply identifies whether the proposed system is feasible to the organization or not. There are three aspects in the feasibility study portion of the preliminary investigation.

• Technical feasibility

• Economic feasibility

• Operational feasibility

**2.1.3.1. Technical Feasibility**

The system must be evaluated from technical viewpoint first. The assessment of this feasibility must be based on outline design of the system requirement in the terms of input, output, programs, and procedure having identified an outline system, the investigation must go on to suggest the type of equipment, required method of developing the system, method of running the system once it has been designed. The project should be developed such that the necessary functions and performance are achieved within the constraints. The project is developed with latest technology. There are only minimal constraints involved in this project.

**2.1.3.2. Economic Feasibility**

Here an evaluation of development cost weighted against the ultimate income or benefit derived from the developed system. The cost for the development of the project has been evaluated and we want to check that the cost does not exceed beneficial cost of the system. The economic and financial analysis is used for evaluating the effectiveness of the candidate system. This project also undergone economic feasibility study and found that it is feasible. So, the cost for development does not exceed its beneficial cost. This brought to as the conclusion that the system is economically feasible in the context.

**2.1.3.3. Operational Feasibility**

In operational feasibility the entire application is checked whether the system will be used if it is developed and implemented. Also, it is checked whether there will be resistance from user that may undermine the possible application benefits. There is no barrier for implementing the system. The system also helps to access the information immediately as need arises. Thus, the system is found to be operational feasible

# 2.2 USER CHARACTERISTICS

**The system has three users**

# Administrator

* + 1. **Staff**

# Customer

**2.2.1 ADMINISTRATOR**

Administrator or Admin is the super user and main controller of this system. Administrator controls all the activities of catering system. Admin can add and view Staff. He/ She can add, edit, and view item. He/ She can add, edit, view event details and can also view the all the bookings.

# 2.2.2 STAFF

Staffs are responsible for maintaining the catering system. Staff can edit their own details. Staff can add, edit, and view categories. Staff can add, edit, view Items. They can also add, edit, view different events. Staff can also view all bookings.

# 2.2.3 CUSTOMER

Customer can perform various activities. Customer can register themselves. Customer can edit his/her details. Customers can browse different Food Items and book the required number of dishes based on event by paying through online method.

**2.3 SYSTEM SPECIFICATION**

**2.3.1 Hardware Specification**

The selection of hardware is very important for the existence and proper working of any software. When selecting the hardware, the size and capacity requirements are also noted. Below are the hardware details required by the system.

|  |  |
| --- | --- |
| Processor | Intel Core i5-1021 1.60GHz |
| RAM | 8 GB |
| Storage | 512 GB and above |
| Other | Keyboard and Mouse |

**2.3.2 Software specification**

|  |  |
| --- | --- |
| Operating System | Windows 7/8/8.1/10/11 |
| Front End | Python |
| Back End | MySQL |

**2.3.3 About the Software Tools and Platform**

**FRONT END SPECIFICATION: PYTHON**

Python is an easy to learn, powerful programming language. It has efficient high-level data structures and a simple but effective approach to object-oriented programming. Python’s elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms.

The Python interpreter is easily extended with new functions and data types implemented in C or C++ (or other languages callable from C). Python is also suitable as an extension language for customizable applications.

Python is dynamically typed, and garbage collected. It supports multiple programming paradigms including structured (particularly procedural), object-oriented and functional programming. It is often described as a "batteries included" language due to its comprehensive standard library.

**BACKEND SPECIFICATION: MYSQL**

A database is a separate application that stores a collection of data. Each database has one or more distinct APIs for creating, accessing, managing, searching and replicating the data it holds.

Other kinds of data stores can also be used, such as files on the file system or large hash tables in memory but data fetching, and writing would not be so fast and easy with those type of systems.

Nowadays, we use relational database management systems (RDBMS) to store and manage huge volume of data. This is called relational database because all the data is stored into different tables and relations are established using primary keys or other keys known as Foreign Keys.

**MODULES & DESCRIPTION**

There are six modules. They are: -

**1. Staff Management**

**2. Customer Registration**

**3. Food Management**

**3.1 Category Management**

* 1. **Item Management**

**4. Event Management**

**5. Booking Management**

**6. Payment Management**

# STAFF MANGEMENT

This module manages all the staffs working in the catering system. Staff details such as staff\_id, staff name, staff address etc. are stored using this module by the admin. The admin can also update and view the details of staff in this module. Staff can log into their accounts using the password provided by the admin and can view their details. Staff manages category, item, and event.

# CUSTOMER REGISTRATION

This module deals with the registration of the customer. The customer himself can register into the system. The customer also can edit and view his profile after registration. The admin and staff can view the details entered by the customer. Customer can browse the food items by categories. They can book food items for specific event by paying online.

# FOOD MANAGEMENT

This module deals with the Food management. This module is mainly maintained by the staff. But the admin can also add, edit and view all food items in the system.

This module can further be divided into category and item management.

# CATEGORY MANAGEMENT

This module deals with the type of food. They can be drinks, starters, main course, and deserts. Staff can add, update and view category. Admin also has the same privilege as staff.

# ITEM MANAGEMENT

This module manages item based on different categories such as drinks, starters, main course and deserts. Staff adds Item. Staff can also edit and view different items. Admin also has the same privilege as staff.

1. **EVENT MANAGEMENT**

This module manages different events where food is to be served. They include weddings, birthdays, parties etc. Staff can add, edit and view different events based on which customer can book food items for desired number of people. Admin can also add edit and view different events.

# CART MANAGEMENT

This module contains the details of item present in the cart. The customer can add more than one item into the cart at a time. The item entered the cart stored permanently so the customer can go back and continue his shopping. The customer also can view and edit the item present in the cart.

# PAYMENT MANAGEMENT

In this module we manage the payment made by the customers. Customer can pay online using debit or credit cards. The food order is booked after successful payment.

**3.2. DATA FLOW DIAGRAM**

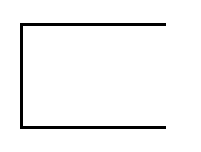
A data flow diagram is graphical tool used to describe and analysis movement of data through a system. These are central tool and the basis from which the other components are developed. The transformation of data from input to output, trough processed, may be described logically and independently of physical components associated with the system. These are known as the logical data flow movement of data between people, departments, and workstations. A full description of a system consists of a set of data flow diagrams.

A DFD is also known as a “bubble chart” has the purpose of clarifying system requirements and identifying major transformations that will become programs in system design. So, it is the starting point of the design to the lowest level of detail. A DFD consists of a series of bubbles joined by data flows in the system.

In the DFD, there are four symbols

Process that transforms data flow

Source or Destination of data



Data store

Information or Dataline

**Rules for drawing data flow diagrams**

Rule 1: Establish the context of the data flow diagram by identifying all the net input and output data flows.

Rule 2: Select a starting point for drawing the DFD.

Rule 3: Give meaningful labels to all data flow lines.

Rule 4: Label all processes with action verbs that relate input and output data flows.

Rule 5: Omit insignificant functions routinely handled in the programming process.

Rule 6: Do not include control or flow of control information.

Rule 7: Do not try to put too much information in one DFD.

Rule 8: Be prepared to start over.

# Level 0 DFD Showing Online Catering Management



**Level 1 DFD Showing Online Catering Management**

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**Level 2 DFD Showing Staff Management**



**Level 2 DFD Showing Customer Registration**

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**Level 2 DFD Showing Food Management**

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**Level 2 DFD Showing Event Management**

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**Level 2 DFD Showing Cart Management**



**Level 2 DFD Showing Payment Management**



**3.3 ENTITY RELATIONSHIP DIAGRAM**

The ER model is a conceptual data model that views the real world as a construct of entities and associations or relationships between entities. A basic component of the model is the Entity-Relationship diagram, which is used to visually represent data objects. The ER modelling technique is frequently used for the conceptual design of database applications and many database applications and many database design tools employ its concepts.

Entity Type

Weak Entity Type

Relationship Type

Attribute

Key attribute

Multivalued attribute

**ER Diagram Showing Online Catering Management**

