

**Tribhuvan University**

**Faculty of Humanities and Social Sciences**

**Cloud Kitchen**

**A PROJECT PROPOSAL**

**Submitted to**

**Department of Computer Application**

**DAV College**

***In partial fulfillment of the requirements for the Bachelor in Computer Application***

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# **1.INTRODUCTION**

Nepal is a food-loving nation and Nepalese cuisine are made up of many elements from different cultures and customs. As the development of modern era people have been well educated in tech industry and have developed several types of food delivery services.

Before the introduction of cloud kitchen people have been using the concept of traditional restaurants and that arises many problems like high cost of setting up like rents, staffing and other utilities. One of the major problems faced by traditional restaurants were the limited geographical area and sitting arrangements because the more number of customers there are the less sitting arrangement are possible.

Cloud kitchen is also known as virtual kitchen, it is a concept where food is prepared and delivered without physical store or dine in area. The cloud kitchen is one of the restaurants industry’s fastest-growing subsectors and it is more intelligent way to run a restaurant. There are no dine-in customers in a cloud kitchen; instead, food is exclusively produced in a commercial kitchen for delivery or takeout. With the help of Cloud kitchens restauranteurs can easily grow an already existing business or launch a digital brand. The method of placing an order for food via a website or another application, either for delivery or pickup, is known as online food orderingThey are mostly singly handed to prepare the food after order through online platforms are they are generally delivered by third party delivery services such as Pathao, Indriver and Sajilo delivery apps.

Cloud kitchen concept is less expensive, cost-effective concept introduced in these days. They operate singly with kitchen staff and delivery person which is directly related to reduce cost related to staffs /people compared to traditional restaurants. It is a not a physical based store/kitchen so they can be quickly move to new area if demand changes. When your business starts to grow you don’t have to worry about increasing dinning spaces or hiring large number of staffs to attend and serve them you just need to add some staffs if needed and add some appliances and all set up.

## **2. PROBLEM STATEMENT**

In our daily life, it is seen that there are many problems faced by traditional restaurants. Some of the restaurants are still being failed to pay the high rent of the restaurants. The lack of trained employees is the another problem for restaurants sector. It is difficult to maintain the service and quality of food as people expect because of limited dining area and the more number of customers are there it can be difficult to serve on time and maintain the customer orders. As in the context of now we have seen many restaurants have focused on their good ambience only, but customers are unsatisfied from their decreased quality and taste of food. As like big hotels restaurants doesn’t get much facilities compared to them and that causes service quality to be compromised.

Because of the above-mentioned issues, it is desired to develop cloud kitchen system which can help the people to get food in their own place and to solve the time of people from the problems of traditional restaurants.

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# **3. OBJECTIVE**

* To utilize a virtual/commercial kitchen for the purpose of preparing food for delivery and takeout with no dine in services.
* To gather customer feedback and use it to improve continuously.

**4**. METHODOLOGY

**4**.1 Requirement Identification

### **Study of Existing System:**

By the documentation provided in Foodmandu Online food delivery system in their web page I have studied that Foodmandu is an existing online kitchen which is being used by many users through the delivery partner and live tracking and many more feature on that existing system.

The system consists of portals i.e:

1. Backend:

The backend feature of Foodmandu are as:

* User Management
* Account Management
* Inventory Management
* Order Management
* Payment Gateway Integration
* Security Measures
* Order dispatch and Delivery management.
* Delivery partner integration
* Compliance and Regulatory Tools
* Point of sales (POS) system
* Customer Relationship Management

1. Limitation of existing system:

* High order requirement as the Foodmandu accepts the minimum order of Nrs.1000

### Requirement Collection:

1. Functional Requirements:

* Order Management System
* Menu Management
* Inventory Management
* Delivery Logistics
* Customer Relationship Management
* Payment and Billing System
* Marketing and Promotions
* Customer Details

1. Non-Functional Requirements

* User friendly UI
* Data Backup
* Efficient operations
* Data security

## **4.2 Feasibility Study**

### **Technical Feasibility:**

For the front end of this project, HTML, CSS, and JavaScript are scheduled to be utilized. PHP is planned to be used for server-side programming, and MySQL is expected to be used as the database. These technologies are well known technologies for the development of the web application. This project needs desktop or laptop which is easily available at the market. So, this project can be said technically feasible.

### **ii. Operational Feasibility:**

This project has simple UI and modules are not complex so it can is user friendly. Order to order details can be easily tracked and what are available for the users can be listed in the system. In business point of view, it has many features needed for a business such as kitchen/inventory management and new opportunity to experiment different restaurant concepts and menus. So this project can be said operationally feasible.

### **iii. Economic Feasibility:**

This project determines the positive economic benefit to the business that the proposed system will provide. It typically involves a cost/advantages analysis and it’s the most frequently used method for evaluating the effectiveness of a new proposed system. I have also established the low estimation for the development of this website. This system can be said economically feasible.

## **4.3 High Level System Design**

### Data Flow Diagram

**A diagram of a food processing process

Description automatically generated**

Figure: Level 0 Data Flow Diagram

**A diagram of a user flow

Description automatically generated**

Figure: Level 1 Data Flow Diagram

## **Methodology**

The requirements for development of the project are well familiar and the given period of time for the development of this project is slightly less so, waterfall model is suitable for developing this project. The project is divided into six phases:

1. Requirement Analysis
2. System Design
3. Implementation
4. Testing
5. Deployment
6. Maintenance

Requirement

Analysis

System

Design

Implementation

Testing

Deployment

Maintenance

Figure: Waterfall Model

# **5. GANTT CHART**

A screenshot of a project

Description automatically generated

# **6. EXPECTED OUTCOMES**

* A system that can be faster and morecost-efficient than establishing a traditional restaurant.
* A food delivery system that can properly meet the quality expectations of customer.

# 7. REFRENCES

1. F*oodmandu: Online Food Delivery system in Nepal* (2010)

Available at: <https://foodmandu.com/> (Accessed: January 25,2024)