STUDENT DECLARATION

This is to certify that I have completed the Summer Project entitled "**Online Cake Shop**" a web-based application, under the guidance of "Mr. Sanjeev Thapa" in partial fulfillment of the requirements for the degree of **Bachelor of Information Management** at Faculty of Management, Tribhuvan University. This is my Original Work and I have not submitted it earlier elsewhere.

Date: 2080-06-03

Name: Aashika Subedi

Signature:

……...

CERTIFICATE FROM THE SUPERVISOR

This is to certify that the summer project entitled "**Online Cake Shop**" a web-based application, is an academic work done by "**Aashika Subedi**" submitted in the partial fulfillment of the required for the degree of **Bachelor of Information Management** at Faculty of Management, Tribhuvan University under my guidance and supervisor. To the best of my knowledge, the information presented by him in the summer project report has not been submitted earlier.

……

Signature of the supervisor

Name: Sanjeev Thapa

Designation:

Date:2080-06-03

ACKNOWLEDGMENT

This project has been an excellent opportunity for me to explore my knowledge and skill. The success and outcome of this project required a lot of guidance and assistance from many people, and I am highly privileged to get the support to complete my project. All that I have done is only due to such supervision and assistance, and I would not forget to thank them. I want to extend my sincere thanks to all of them.

Special thanks to the University for including such a task in the curriculum of BIM. Thanks to our college, **Oxford College**, for providing the environment and supporting all the stages of this project. I would like to thank my project supervisor, **Mr. Sanjeev Thapa** and our Head of the IT Department, **Mr. Ashok Lalit Gurung**, for valuable guidelines, supervision, and suggestions to complete this project successfully.

My thanks and appreciation to all the people's direct and indirect help remained valuable and crucial at different project stages. This outcome is the result of their support and encouragement.

Name: Aashika Subedi
Exam Roll No: 10947/19

EXECUTIVE SUMMARY

Online cake shop is an online store from where users can browse, search and order the cakes they admire. Online cake shop comprises of two distinct entities i.e. admin and users. Admin can add or change categories of cake. Likewise, they can also list available cakes in the system. Users are those individuals who register in the system to buy cakes. In order to do that, they have to browse through the available catalog of cakes and select the one that they are interested in.

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ABBREVIATIONS

Abbreviation	Stands For
CSS	Cascading Style Sheet
DFD	Data Flow Diagram
ER (D)	Entity-Relationship (Diagram)
HTML	Hypertext Markup Language
HTTP	Hypertext Transfer Protocol
JS	JavaScript
SQL	Structured Query Language
UI	User Interface
UX	User Experience

Chapter I: Introduction

1.1 Background

Online cake shop was chosen for software project in the semester which is developed in web application platform. A web application is an application program that is stored on a remote server and delivered over the internet through a browser interface. Users can access a Web application through a web browser such as Google Chrome, Mozilla Firefox or Safari. Web applications typically have short development cycles and can be made with small development teams. The project is written in JavaScript, HTML5, CSS and Bootstrap.

Actually, online cake shop is a software application that is implemented by theatre to allow customers to orders the cakes. In addition to allowing customers to order online directly, these booking systems can also provide theatre operators with additional resources. It enables customers to orders dates, cakes selection, extras, and payment through online or cash on delivery. Most of the customer they can orders the cake from the home via online. The system now only works on desktop platform. PHP is used for development of the application.

1.2 Introduction to Organization

"KOSHELI CAKE HOUSE AND DESERTS" is a café located in Sainamaina-1, Ranibagiya. Established in 2021, the café had been running ever since. However, they lacked a basic system software to operate their task. This project is an update to their system operations.

1.3 Current situation of the organization

In current situation, the café has been running on manual methods in calculation and record keeping.

1.4 Problem Statement

In this modern era visiting market for buying and selling of the product will be very tidy process. Visting market for buying any kind of product will make different kind of difficulties such as traffic jam, accidental cases and lengthy process. So, this kind of system will help to reduce these kinds of problems and also save the time of merchant.

1.5 Literature Review

I did various search available online cake web sites and application. While surveying I mainly focused on the online systems of countries like Nepal and India. While searching and researching system focused basically on the platform and framework in which the application has been developed. The bakery's story began in Chrzanow, Poland, in a building in which Napoleon had spent the night. I believe the bakery opened around 1825 and was last known as Morris Juncker's Bakery. I relate MY story to you as told to me by Sigmund Juncker, one of the original three brothers. Since there were no mixers at the time, everything was truly handmade. The dough was placed in a trough and everything was mixed by hand. Two of Morris' children, Sigmund and Sol, went to work at the bakery at only ten years old due to a bakers' strike in 1932. The European Era of my family bakery ended when Sigmund and Sol were 19 years old and the family was sent to concentration camps in 1941.

On May 8, 1945, Sigmund arose early, so he could awaken everyone in the camp, which was one of his jobs. On this day, Liberation Day, he arose to find no SS officers watching or even in the camp. The SS fled in such a hurry and luckily had not even turned on the electrified fences. Sigmund found wire cutters and actually cut the wires on the gate, giving him and the other prisoner's freedom. Sigmund was the first to take a breath of freedom outside the gate. He fell and literally kissed the ground.

Bread History is committed to create an exceptional range of buns, pastries and cakes that are progressive in style, flavor and design to satisfy the market needs. The headquarter is located at Juru Light Industrial Area, acting as the central kitchen to support all the bakery chain. With the best of traditional techniques whilst embracing modern technologies, I provide the highest quality of bakery by maintaining high hygiene standards. Bread History is well-known for its Song (chicken floss), Spicy Song (spicy chicken floss), Croissants, Japanese Hokkaido Loaf, Caramel Macchiato Loaf, and Pumpkin Loaf. A famous Taiwanese Chef, Mr. Kung Chin Tzu became our pastries consultant since 2014 to maintain the premium quality of pastries that is an absolute treat to the senses. The online store allows customers to order online in advance and collect their order for free at nearby Bread History outlet. I am upgrading my customer services and soon, I will be launching my mobile App and activating our delivery services as well.

Karapetrovic and Willborn (2012), proposed a School Management System that characterizes a complex, often web based software system which pools multiple task specific subprograms under a shared User Interface (UI).

Numerous studies have highlighted the benefits associated with the adoption of IMS. Improved data accessibility and accuracy, enhanced communication between stakeholders, streamlined administrative processes, and increased operational efficiency are among the primary advantages (Gupta & Vohra, 2020). These benefits lead to an overall improvement in the quality of education delivery and institutional performance.

1.6 Objective of the study

1.6.1 General Objective

i. To develop problem-solving skills
ii. To Complete the curriculum of BIM.

1.6.2 Specific Objective

i) To provide information about various cake products in different category.
ii) To provide easy services to the customers.
iii) To deliver cake products online.

1.7 Methodology

It is necessary to include a consideration of the concepts and theories which underlie the methods. The methodology is the systematic, theoretical analysis of the methods applied to the study. It compromises the theoretical analysis of the body of the methods and principles associated with a brand of knowledge. The primary method of data collection was used in gathering information. The interview schedule was administered to the founder of "KOSHELI CAKE HOUSE AND DESERTS", and there was a positive response in terms of questions related to the project.

1.7.1 Data and Information

Data are collected through interviews, observation, and the internet. It is collected for the purpose of analysis. Data becomes information after being processed, information gives off facts when data supports it and facts are what data reveals.
The data and information are collected from two major sources:

a. Primary Data

In this project, data have been collected directly through interviews and observation. An interview was held with the owner of the organization.

b. Secondary Data

In this project, the data and information are also collected through secondary sources like the internet, newspaper, magazines, books, reports, etc.

1.7.2 Project framework

Waterfall Model is used to develop this system. In waterfall model, each phase must be completed before next phase can begin and there is no overlapping in the phases. This means, output of previous phase works as input to another phase.

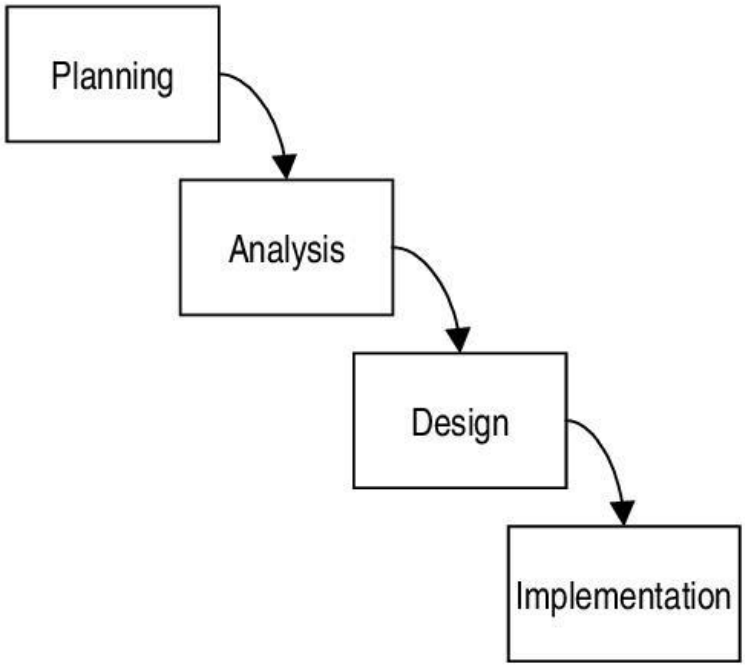

Figure 1.1 Water Fall Model of Online Cake Shop

The Online cake shop is developed using waterfall model. The reason for choosing this approach is its simplicity. Likewise, we were accustomed with the objectives and intended course of action that were going to follow to make this project a reality. Hence, waterfall model seemed to be the best method to implement this project. The major steps that we undertook while following waterfall model of development are as follows:

Planning: In this phase, we just planned about what and how our system will be. We facts about why do we really need this system.

Analysis: Here, we analyzed old projects, currently used systems, and what problems we faced. We analyzed the need and requirements of potential customers and their expectations from the system. With combined and processed facts, we finalized some requirements for our project. Later we decided requirements, target users and targeted platforms for our system.

Design: In design phase, we designed database schemas, interface designs, process modeling etc. In short, we designed everything from how our system will look alike to how it'll work. Also, we designed workflows and architectural designs of our system.

Implementation: Finally, we moved to our coding, and testing part. We used previous phases' outputs as input to this phase. That means, we implemented each study and designs made earlier. Not only that, we even tested our system by preparing different test cases for unit and system testing.

1.7.3 Tools and Technologies Used

The tools used in this system development includes:

i. UML Diagrams: Draw.io
ii. Front-End: HTML, CSS, JS, Bootstrap 5
iii. Back-End: PHP
iv. Database: MySQL
v. Code Editor: Visual Studio Code, Sublime Text
vi. Hardware requirement: PC or Laptop, Window as operating system.

1.7.4 Technique of the project report

1.7.4.1 Problem Analysis

In this modern era visiting market for buying and selling of the product will be very tidy process. Visting market for buying any kind of product will make different kind of difficulties such as traffic jam, accidental cases and lengthy process. So, this kind of system will help to reduce these kinds of problems and also save the time of merchant.

1.7.4.2 Feasibility analysis

Feasibility is defined as the practical extent to which a project can be performed successfully. To evaluate the feasibility, a feasibility study is performed, which determines whether the solution considered to accomplish the requirements is practical and workable in the software.

1.7.4.3 Economic feasibility

The project is developed using open-source tools. No any paid version of software and professional developers are used to build the project. No any other hardware resources are required except PC.

1.7.4.4 Technical feasibility

The project is developed within the limit of current tools and technology. The system is developed using existing development tools and technologies.

1.7.4.5 Operational feasibility

Users are expected to be satisfied by the outcome of the project. It is a free open-source application so will be easily available to all the users.

Chapter II: Task and Activities Performed

2.1 Analysis of task, activities, problem issues

2.1.1 Analysis of task

The organization was visited for the requirement collection. After the requirements were collected, the major task was to break down the proper procedure and build the working framework. The organization visit helped to analyze various aspects of the organization and find out the problems that can be solved by the software build.

2.1.2 Problem and issue

After visiting the organization, I found out that they were manually conducting their sales and also, do not have a system to manage their employee information. The bill printing system was also outdated and manual, leading the system prone to errors. Also, the owner wanted a digital system to handle his overall business operations. This simple web-based application can act as the best solution to the owner's problem. So, there's a win-win situation in this case.

The following ER-diagram will try to solve the problems and issues of organization, which is drawn after the analysis tasks done on the organization.

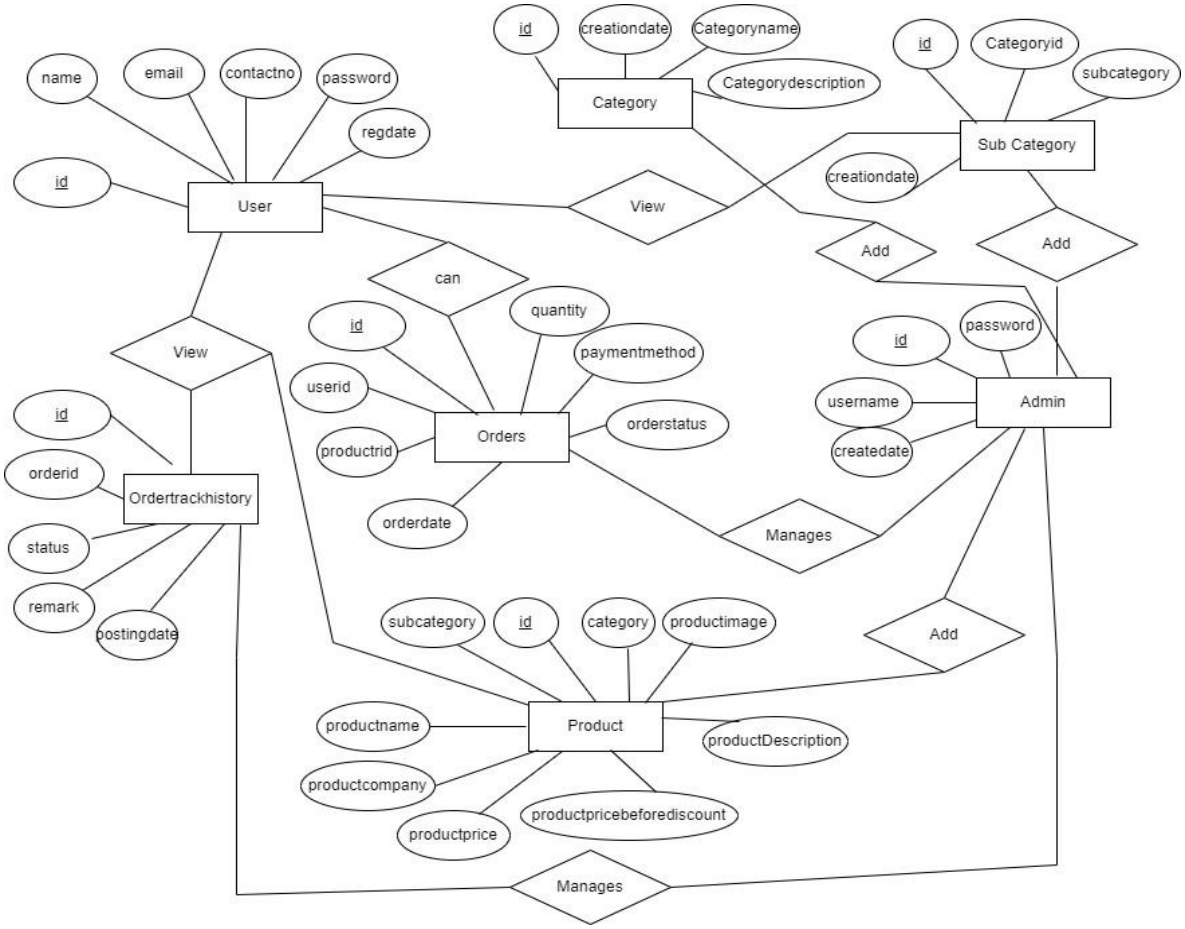

Figure 2.1 ER diagram online cake shop

ER-Diagram Description

An entity-relationship diagram (ERD) is a data modeling technique that graphically illustrates an information system's entities and the relationship between those entities. An ERD is a conceptual and representational model of data to represent the entity framework infrastructure.

2.2 Analysis of possible solution

2.2.1 Requirement Analysis

The Requirement analysis results in the specification of operational characteristics of software: indicates interface of software with other system elements and establishes constrains the software must meet. The requirement analysis is mainly categorized into two types functional and nonfunctional:

2.2.2 Functional Requirement

Functional requirements define the fundamental actions the system must perform. The functional requirements of the system are:

i. The Bakery Shop Management System should have a staff that is able to understand and use the GUI for insertion, deletion, and update of the data.

ii. Insertion, deletion, and update of products, stocks, orders, and sales should be done via the system.

iii. The admin must be able to see the orders of the product made by customers.

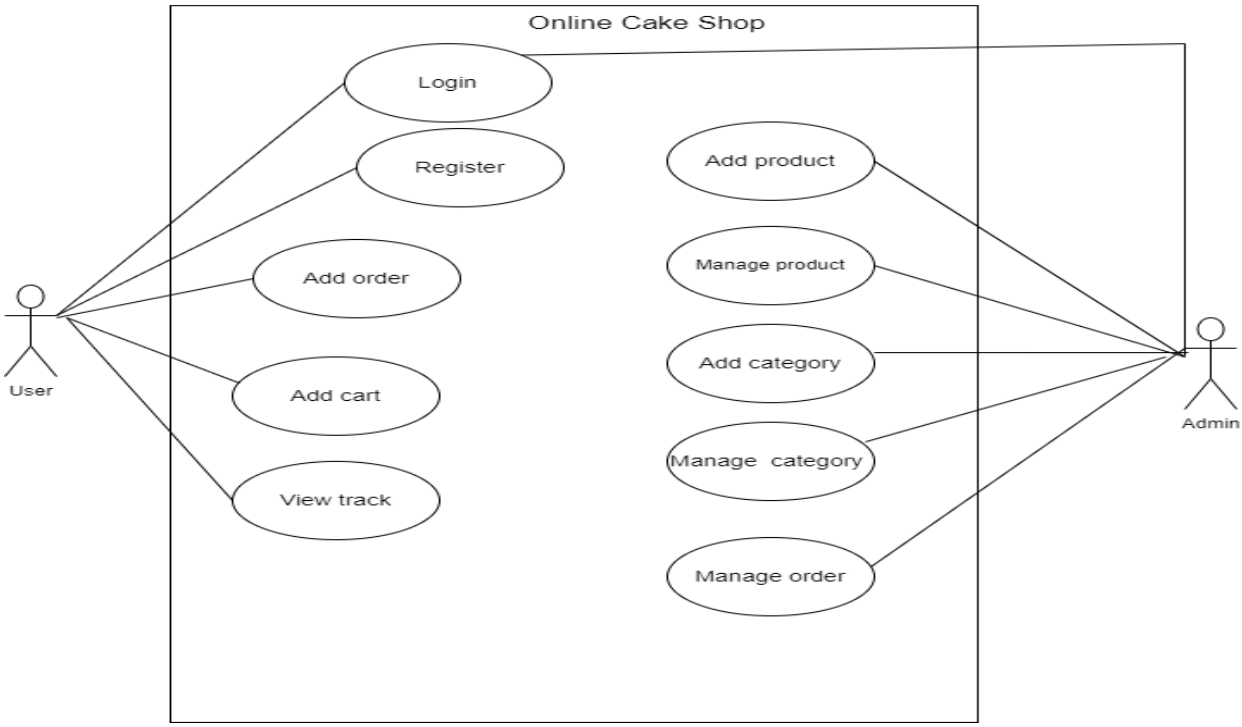

Figure 2.2 Use Case Diagram for Online Cake Shop

2.2.3 Non-Functional Requirement

i. **Performance:** Depends on compatibility of browser.

ii. **Maintainability:** System is enabled of database coordination which means the register information will be maintained and taken into system.

iii. **Usability:** It is easy to use the system

iv. **Security:** Secure and good privacy qualities

v. **Compatibility:** The system runs on web platform of the operating system.

2.2.4 Sequence Diagram

Sequence diagrams are dynamic modeling approaches used in object-oriented based projects. The sequence diagram shows the communication between the system objects or classes. The sequence diagram is shown below:

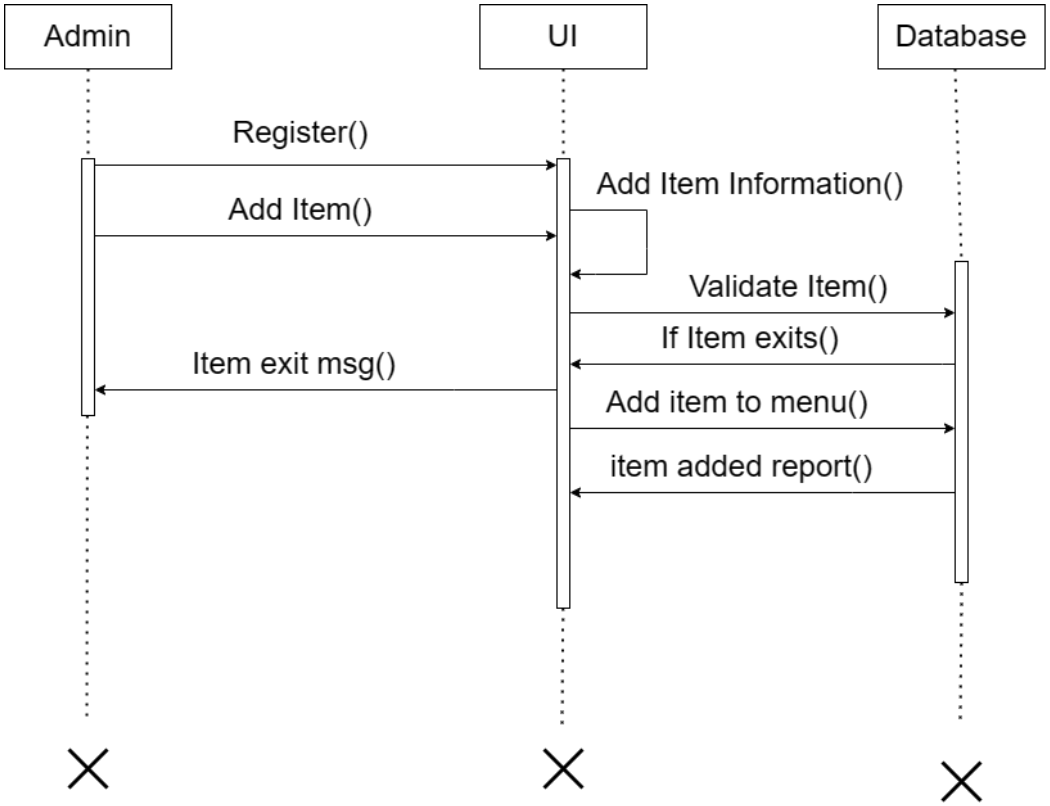

Figure 2.3.1 Sequence Diagram for Add Item

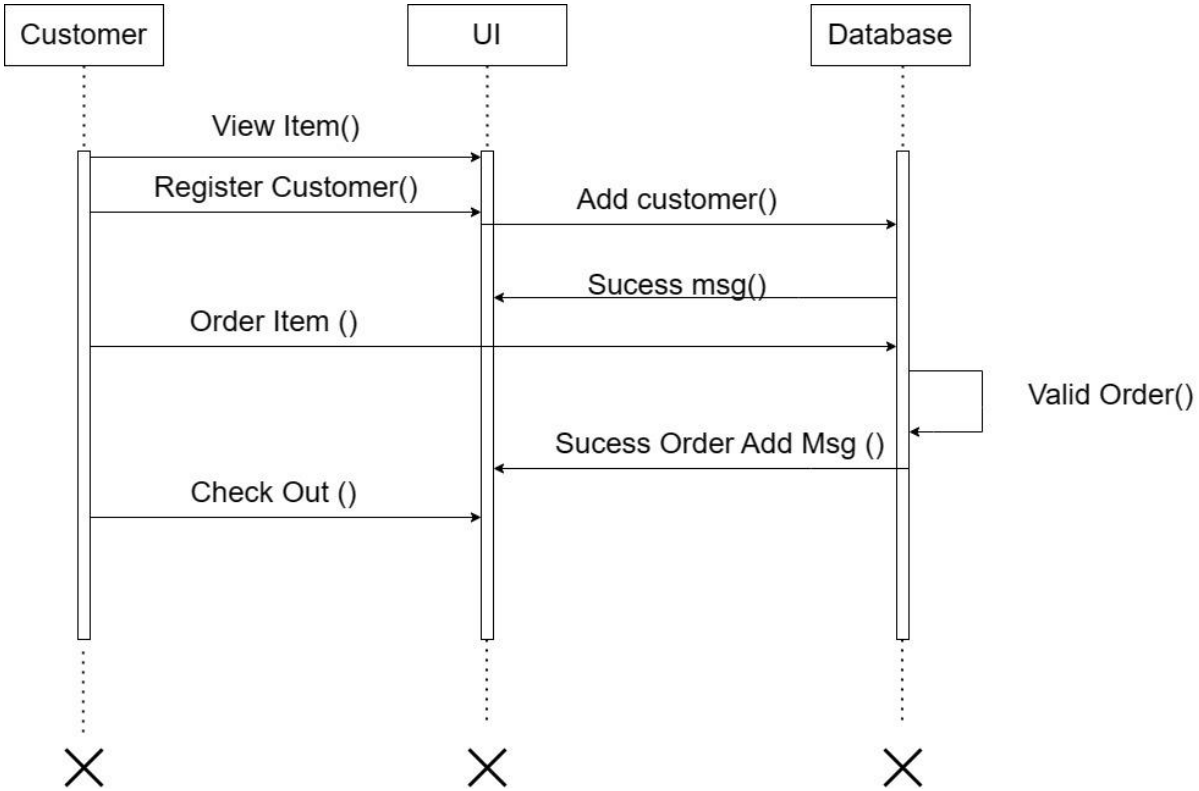

Figure 2.3.2 Sequence Diagram for Order Item

2.2.7 Testing

2.2.7.1 Test Cases for Unit Testing

Unit testing is a software development process in which the smallest testable parts of an application are individually and independently scrutinized for proper operation. The main objective of unit testing is to isolate written code to test and determine if it works as intended. Unit testing is an important step in the development process because it can help detect early flaws in code which may be more difficult to find in later testing stages.

S.N	**Test Cases**	**Test Data Input**	**Expected Outcome**	**Obtained Test Result**
1	Check with Valid Data	Correct email and other credentials	Enter Dashboard	Pass
2	Check login with empty fields	Username….. Password….	Must show error in login	Fill out the fields
3	Check with invalid email	Username: pp@gmail.com Password:12345	Enter the valid email	Invalid details
4	Admin authentication	With correct username and password	Can login to administrator panel	Able to manage admin panel

Table 2.1 Unit Test For Online Cake Shop

2.2.7.2 Test Cases for System Testing

System Testing is the testing of a complete and fully integrated software product. Usually, software is only one element of a larger computer-based system. Ultimately, software is interfaced with other software/hardware systems. System Testing is

actually a series of different tests whose sole purpose is to exercise the full computer-based system.

S.N	Test Cases	Test Data Input	Expected Outcome	Remarks
1	Login Without Register	Username: pp@gmail.com Password:12345	User not registered	Fail
2	Check login with empty fields	Username:…..... Password:.....….	Must show error in login	Fill out the fields
3	Is registered admin able to login	Username:admin Password:admin	Administrator must be able to login	Admin successfully logged in

Table 2.2 System Test for Online Cake Shop

Chapter III: Discussion and Conclusion

3.1 Discussion

The project covers the problem that was identified during the organization visit and the solution to the problem was solved by developing software. The aim of project was to make it easier to manage the sales and stocks of the bakery shop. Huge time and efforts were spent for the completion of this project. Despite all those challenges and problems, the project was completed in the specified time estimated for the project. The system was tested by the owner of the store and other people who are indirectly involved in this project. The system is assumed to be very helpful to "KOSHELI CAKE HOUSE AND DESERTS".

3.2 Conclusion

The system was successfully completed in time as per the objectives. After the evaluation of the system within the organization, the system is expected to fulfill all the requirements and prove to be beneficial for users and admin. The evaluation from users and admin of this system in the organization proved that the system will turn out very effective and convenient to use.

This summer project helped to acquire practical knowledge about the working procedure in the organization in real-time. In conclusion, this project helped to enhance skills and learning as well as helped to gain abilities to work in a real environment.

3.3 Future Recommendation

The primary aim of this project has been met. All the objectives that were presented have been completed and given positive results in the end. Even if some problems are solved by this project and still problems and requirements are not implemented by this project, they can be solved in upcoming future days. Some of the future enhancements of this project are:

i) Online Payment systems like E-Sewa, Khalti, and mobile banking can be added.
ii) More interactive user interface can be added.
iii) Customer membership can be added.
iv) More secure login can be updated.

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Appendices