



An Undergraduate Internship/Project on Flight Meal Management System of Biman Flight Catering Center-BFCC

Final Report

By
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April 21, 2022

Dissertation submitted in partial fulfillment for the degree of
Bachelor of Science in Computer Science

Department of Computer Science & Engineering, **Independent University, Bangladesh**

Attestation

I certify that this report contains the project “Flight meal management system” partially done by me during my internship period. I also certify that my work is genuine based on the requirements provided by my workplace and based on what I have learned and implemented during my internship. I also assert that neither this project nor any part of it has been submitted elsewhere for any degree of recognition.

Signature

Nafiz Fuad

Date

Name

Acknowledgement

First of all, and most importantly I like to thank Almighty Allah for giving me an opportunity to complete my under graduation from one of the top private universities in Bangladesh, for landing me an internship in a well of a company where I have implemented most of my knowledge from my university to my internship project.

I would also like to express my gratitude towards my supervisor Mr. Rubayed Mehedi, Researcher, Center for Cognitive Skill Enhancement, Department of Computer Science and Engineering, Independent University, Bangladesh (IUB for his valuable guidance and support, compassion, time, insightful comments, and thoughtful advice on various aspects of my internship and the preparation of this report. I've chosen this moment to gratefully acknowledge his contribution.

I would also like to express my gratitude towards CEO of Excellent soft Mr. Faruq Muttakin sir for giving me an opportunity to acquire an internship in an industry standard project and to start my career as a software engineer.

Finally, I would like to express my deepest gratitude towards my family for supporting through the crucial period of my internship and through my university life. I would always be grateful to them.

Nafiz Fuad

April 21, 2022

Dhaka, Bangladesh

Letter of Transmittal

April 21, 2022

Mr. Rubayed Mehedi,

Researcher,

Center for Cognitive Skill Enhancement,

Department of Computer Science and Engineering,

Independent University, Bangladesh.

Subject: Submission of Internship Report Autumn, 2021.

Dear Sir,

This is to inform you with due honor and respect that I am Nafiz Fuad from the Internship Course of Spring 2022, I would like to submit my internship report on the “Flight meal management system” web application.

I would like to express my gratitude to you and thank you for supporting and supervising in every step of my internship project. Without your support and help the internship project would have been incomplete. My internship has enlightened me with some new experience and changing my point of view towards the corporate world.

I hope that this report meets all the requirements and criteria and fulfills your expectations. I would also apologies if I made any mistake in this report and a consideration for any mistake would mean a world to me.

Sincerely,

Nafiz Fuad

ID: 1720542

Evaluation Committee

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Signature

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Name

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Supervisor

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Signature

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Name

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Internal Examiner / Panel Member

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External Examiner / Organizational Supervisor

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Signature

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Name

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Head of the Department / Convener

Abstract

I have worked with the web development team at Excellent-soft as a Web Developer Intern. During my internship, I was assigned a project to build a Web Application “Biman Flight Catering Center”. This application is going to create a digital solution for Biman Flight Catering Center and different airlines to simplify the food management system. Airlines and BFCC employees can access, view items, add items to their cart for shopping, and checkout meal requisition. I discussed the project goals, its scope, as well as the details of the project management plan in the report. This report also includes a literature review, project management, and financing, methodology, result and analysis, and future works.

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Chapter 1

Problem Statement: Flight Meal Management System of Biman Flight Catering Center-BFCC

Introduction

1.1 Overview/Background of the Work

Biman Flight Catering Center-BFCC is a stand-alone international flight catering service provider of Hazrat Shah Jalal international-airport, Dhaka. BFCC has to serve meal daily around 100 flights including Biman's domestic and international flight. BFCC needs to manage the orders, advice in time and uplift the items accordingly. Each airline submits their meal requisition manually and advice for their flights and BFCC also manages all the orders following a manual process. Therefore, BFCC needs to develop a system to receive meal advice, manage catering orders, productions, delivery, and billing through a web application.

This task has been assigned to our company, Excellent Soft which is a vendor institution of Biman Bangladesh Airlines. I have joined in this company as a Laravel developer intern and as a graduate of Computer Science background my objectives and tasks are to develop a platform for BFCC to bring a solution for the meal management system out there. We are going to implement Laravel application development Services which help us to get the best web application. As a basic PHP framework for web application, Laravel has an excellent and structured way which follow MVC architecture makes it easier to use for developing web applications. It provides customized tags and techniques that authorize a more significant separation of application code and the presentation logic and viewing with the blade templating engine. In this web application, there will have two types of authenticated users mainly. They are airlines' staffs and BFCC staffs who can be able to login into their specific end through the system and an admin site which will be managed by BFCC authority. 'Flight Meal Management' system will make it smooth and simplify the operation of Biman Catering Center and different airlines.

1.2 Objectives

The main goal of my work is to provide a digital solution for Biman Flight catering Center and airlines to simplify their meal management system. There will be two end users, (i) Airline's staffs, (ii) BFCC staff and an admin panel controlled by BFCC authority.

1. Specific users can view the catering list with different categories and make order from their own end which will be controlled dynamically.
2. Airline staffs/representatives of each airline will submit their advanced flight meal requisition(advice) and orders against passenger book load.
3. The Operation Controller staffs of BFCC will follow the advice in their user end and submit demand sheets for catering preparation to the concern section (Hot Kitchen, Cold Kitchen, Bakery/Pastry and Dry Store) before 24 hours of the flight time.
4. System will prepare actual bill with products and services and an invoice will be generated.

1.3 Scopes

- Products will be showcased in the homepages of specific user after login and organized by category.
- Products can be added to cart by representatives/staffs of different airlines.
- Authenticated users can search their desired products, view their details, and add it to cart.
- If users are not authenticated, they will be firstly get authenticated by logging in.
- Airlines staff's user can checkout and place an order from the cart page and an invoice will be generated through the system.
- The Operation Controller staffs of BFCC will follow the orders advice in their user end and submit demand sheets for catering preparation to the concern section (Hot Kitchen, Cold Kitchen, Bakery/Pastry and Dry Store) before 24 hours of the flight time.

Chapter 2

Literature Review

2.1 Relationship with Undergraduate Studies

During my under-graduation studies, I needed to learn a lot of theories about of programming and designing an application from start to the end and most of the courses have lab work where I learned how to work jointly in a group. Now it is helping me a lot where I need to work with my colleagues to finish and a project up to delivery. Some of the university courses that are helpful related to my working experience are:

Data Structure and Algorithms: I want to keep these two courses together as they are very much related and dependent on one another. From these courses, I had to learn the basic and main topics about arrays, linked lists, pointers, stack, and queues. I had Learned a lot about time and space complexity being helpful for me to create faster working and smoother applications and providing user a great experience. During these courses I started to solve some competitive programming problems from different websites where I applied the knowledge from my data structures and algorithms to solve critical problems, which is now helping me a lot to solve logical and functional problems in the industrial fields.

Object-Oriented Programming: During this course I learned how the structure of my code should be familiar with classes and objects of OOP concept. In real life applications all my work is related to classes, objects, and functions and without the knowledge of the core concepts of object-oriented programming, it isn't possible to understand how the codes are working and fixing bugs.

Database Management: This was being the most important courses that I had to complete. I learned about how databases are designed in a well-organized way using rich pictures, 6 segment analysis along with UML functional, component, and functional decomposition diagram, and class diagrams etc. Designing databases is the most important and crucial thing as it is the core foundation of a project. With the learning

of how to take client requirements and converting it to a database schema and finally creating a project out of it is an important thing that I have learned during my under-graduation time.

Web Applications and Internet: From these courses I learned a lot starting from HTML, CSS, Bootstrap for the front-end designing and backend handling using raw php and Laravel framework including how the applications in web servers work, learning about http requests like get, post, put, delete, and update request helped me a lot to learn the framework that I am using in my assigned project. I have also learned to create APIs to interact with other frontend framework like react and flutter. By using git, I learned to collaborate and develop applications in a team environment was also taught in the course. I also learned about cPanel, and other cloud base services helping me a lot in day-to-day life.

2.2 Related Works:

Iqbal Catering Center: It is a food catering service provider company who have almost a similar platform. They provide food and catering services to different corporate sectors like Pran, Orion-group, Summit-power, Basundhara group and so on.

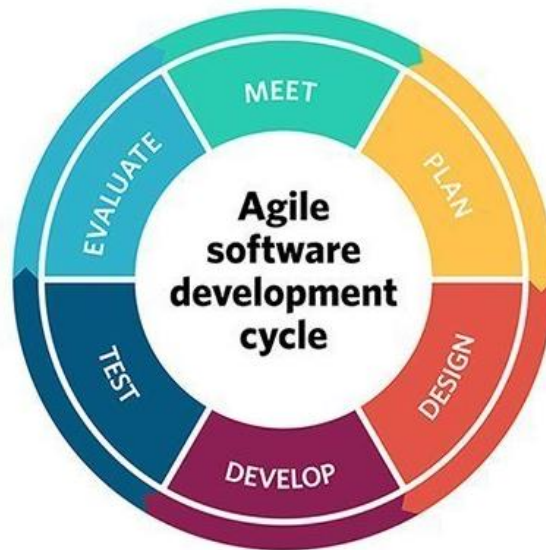
Food panda: It is the most popular platform in the country for food delivery services they also have their catering service section which is now renowned in the country.

Chapter 3

Methodology

A methodology is a process where a set of approaches, practices, processes, techniques, procedures, and norms that are used to solve a problem.

Agile approaches divide work down into small chunks with simple planning and avoiding long-term planning entirely. Iterations are brief periods of time that run anywhere from one to four weeks which includes planning, requirements analysis, design, coding, unit testing, and acceptance testing once a working product has been demonstrated to stakeholders. These are well-defined methods showing us exactly what steps to take next, why each step is important in the entire software development life circle, and how a project stage should be completed. For my project, I was suggested to use the Agile development methodology. An agile methodology is a form of project management technique that is primarily used in software development process.



Planning phase: I have discussed the project with my organizational supervisor and gathered all the requirements of different functionalities that will be involved in the web application. After writing down and clarifying all the requirements and doubts that I had, I will start to design the application.

Design Phase: I will have to design the whole application using Adobe Illustrator where I will start designing the whole web application from starting to end. After completion of designing, I need to show it to my client and my organizational supervisor.

Development phase: As I mentioned earlier, the whole application will be developed using php framework Laravel which will make all the static pages into dynamic and fully functional. As we know Laravel follow MVC architecture providing blade view which is. blade extension file. These views will be dynamic with Laravel custom admin site interacting with MySQL database. This phase may take the most amount of time. Besides, we must provide proper authentication and authorization of all types of users to maintain the proper security of the application.

Testing phase: It is the most interesting phase as more and more weird bugs may arise into action. The software would not be responded that well, we need to fix all the problem regarding the application. So, we may need to rewrite some of the code and need to manage algorithms time and space complexity to improve the action of the application.

Feedback/Review phase: This phase will help us to identify the lacking and problems of the system from a client's perspective. After getting the feedback, the web application can be updated and made better. From the utilization of each step of Agile methodology, we can see that Agile approaches can reduce overall risk and help the application to adapt any kind of changes.

Chapter 4

Project Management and financing

4.1 Work Breakdown Structure

This becomes a process to simplify works into smaller tasks. The works can be made more understandable and manageable with perfect approach. WBS is an important tool for project management as it integrates

scope, cost, and schedule baselines by ensuring that project plans are lying in a perfect alignment. A work breakdown structure outlines all of a project's processes, making it a crucial project management tool for planning of the whole project and scheduling it. WBS is considered into two types. One is deliverable based and another is phase-based. We are going to implement phase based WBS. In the diagram below the element 1 has six Elements. Each of these elements are phases of a project. The Level 2 Elements are the unique deliverables in each phase including the lower-level elements are all deliverables. Here the main phases of the project are Requirement collection, Designing, Development, Testing, and Deployment. Under them the child tasks are the tasks needed to be completed to complete the current phase and go to the next. It also includes cost estimation, resource allocation and risk assessment which is important for WBS helping us to get a larger view of the project. The WBS serves as a blueprint to help you achieve what appears to be a challenging task when it is constructed as comprehensively as possible.

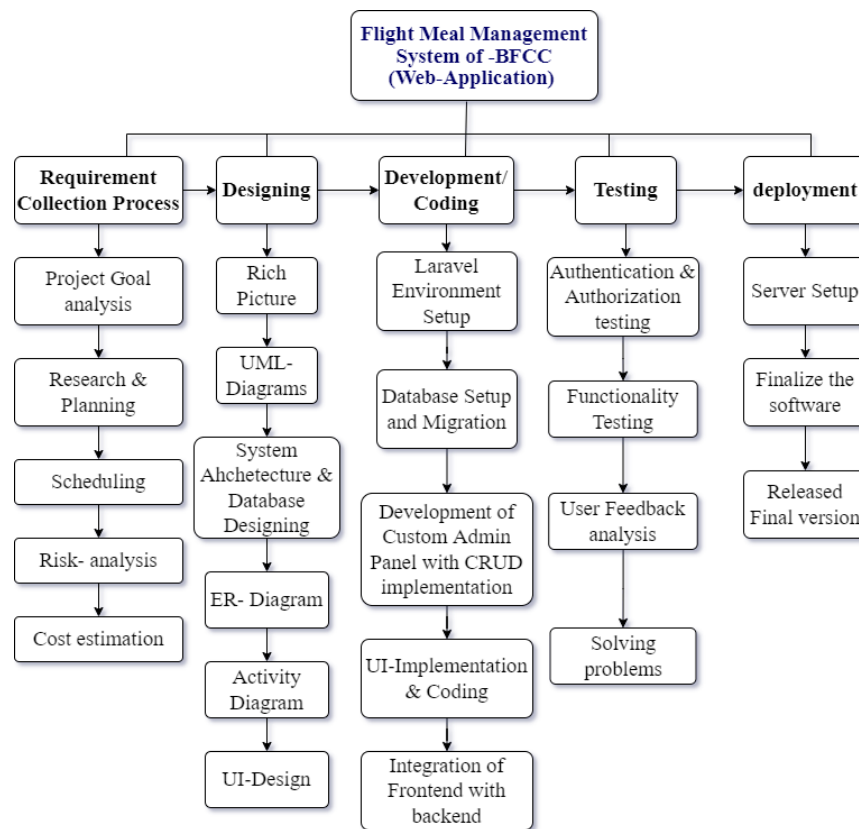


Fig: Diagram of WBS.

4.2 Process/Activity wise Time Distribution

Activity Name	Duration (Days)	Work Percentage
Requirement Collection	5	11
Designing	7	15
Development	25	48
Testing and Feedback	9	17
Deployment	5	9
Total	51	100

It is very important to accurately estimate the overall time required to accomplish the project depending on the activities to be completed. It is also important to create priorities and set goals to complete a successful project. The development phase is by far the most important because it takes the longest to complete. Because we are working in order, if one task is delayed, the rest of the tasks will be delayed as well. As a result, it is really important to complete tasks according to the estimated schedule.

4.3 Gantt Chart

A Gantt chart is often used in project management which is one of the most popular and useful ways of showing activities of tasks or events in relation to time. A list of the activities is on the left side of the chart, and a suitable time scale is along the top. Each activity is represented by a bar, whose position and length indicate the activity's start, duration, and end dates. A Gantt chart helps us visualize a project's timetable and offers us a clearer picture of what's going on. Below there is a Gantt chart based on the project activities and their distributed time.

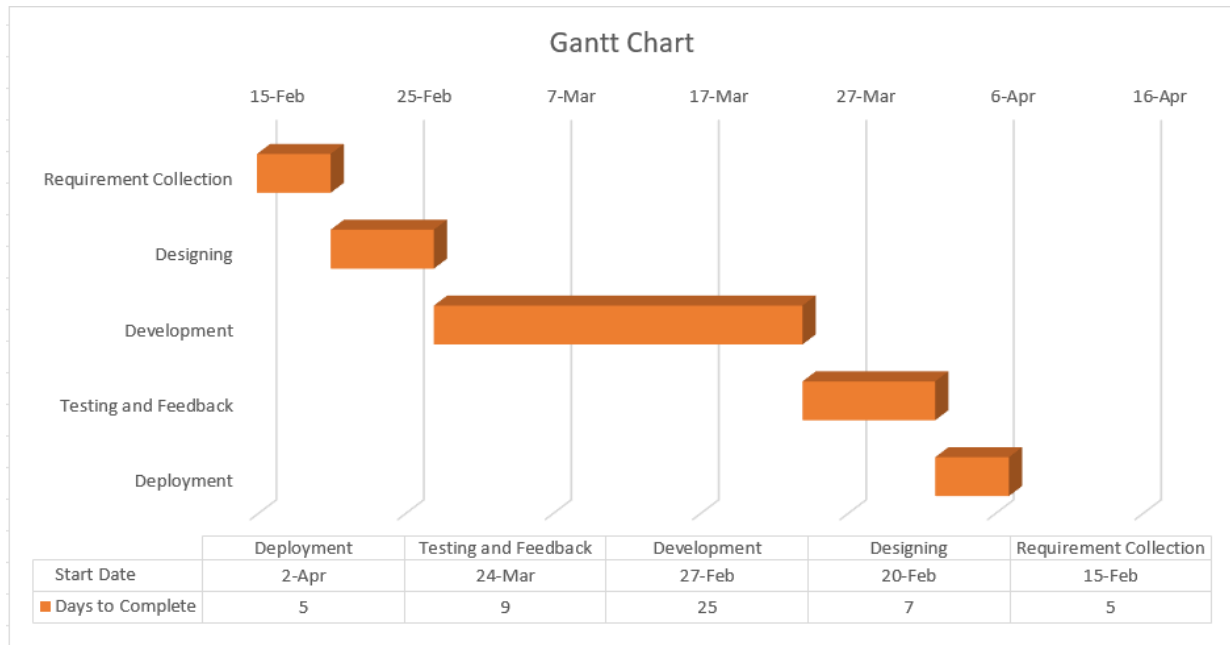


Figure: Gantt Chart

4.4 Process/Activity wise Resource Allocation

The process of time allocation and planning all the resources in the most efficient and effective way which can be defined as resource allocation. Projects will always require resources, even though they can be scarce at times. Therefore, the project manager is responsible for the proper timing and allocation of these resources during the project schedule. Therefore, resource allocation is about managing the project and delegating resources to ensure that it runs as smoothly and efficiently as possible. The table below shows how resources are allocated.

Task	Resource Allocation
Requirement Collection	10%
Designing	20%
Development	45%
Testing and Feedback	15%
Deployment	10%
Total	100%

4.5 Estimated Costing:

Cost estimation is one of the most essential aspects of project planning and management. It is based on the number of resources, budget and time required for the scopes of the project. Since cost estimates are for cost estimates and not actual costs, the given pie chart shows the details below.

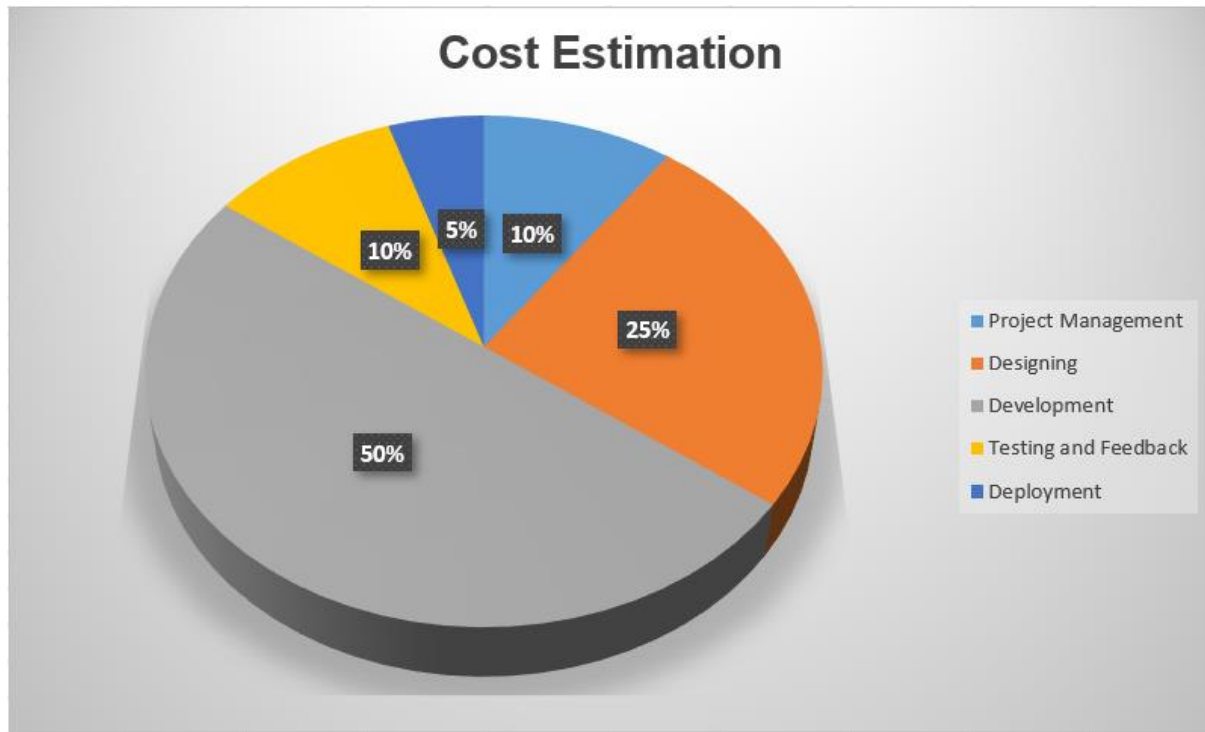


Figure: Pie chart of Estimated costing

Chapter: 5

Body Of the project

5.1 Work Description: We are going to build a web application for Biman Flight Catering Center (BFCC) which is named as "Flight meal management system" which will simplify the task of BFCC and their client airlines. This application will find a way to generate a solution for all the catering staffs and airlines staffs for managing their food order and management in an automated way. The main purpose of our proposed application is to manage the meal order related stuffs and all. The users of the system will mainly be the BFCC and Airlines employee who will be able to visit the specific URL to find the universal homepage. This page will be generated for all type of users i.e., user form anywhere can access

this URL. There will be placed login and registration button for the specific user authentication of the system in the right nav section which will be redirected into the registration and login page. The airline staffs will register according to the criteria and can be able to view their specific dashboard after successful login and registration. They can now be able to view the catering list with different category, can make order, and submit their advanced flight meal requisition against passenger book load. First, they need to add their required products into their cart and then they can place an order for checking out. They can view their all orders and advanced orders in the cart where they can review for making any change. At the bottom section, there will have checkout and go button for placing an order and invoice generation. The operation controller staffs of BFCC will follow the advice and order list and submit the demand sheet for catering preparation to the concerned section. The requisition and order can be changed at the last moment which will be redirected from the LMC (Last Moment Change) placed in the navigation section. All the catering items available in the BFCC canteen will be viewed and changed dynamically by a custom admin panel which is created using Laravel and MySQL database.

The admin login will be redirected by a secret URL which will bring the admin dashboard after successful login. Admin can add different product and can make any significant changes like update, delete, edit through the dashboard. The changes made by admin will be reflected and visualized from the home section of the airline's employee from their end.

This application will mainly be handled by Laravel 8 as a backend and frontend both. As we know Laravel is followed by MVC (Model, View, Controller) pattern having the view part as blade.php extension file over there, all the requests would be developed and handled like get/ post/ delete/ put.

5.2 Requirement analysis

5.2.1 Rich Picture: The rich picture illustrates the visual representation of the web application, Flight meal management system. In this Rich picture, we can see how the workflow of the total system takes place from user placing an order to admin's response toward the order.

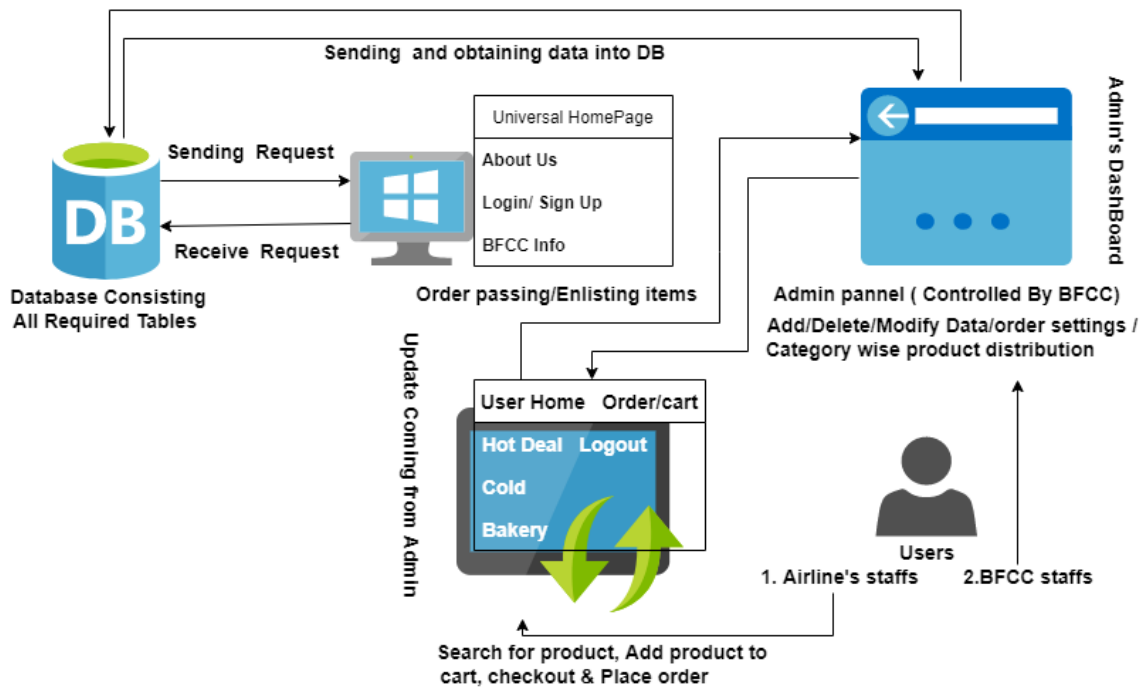


Fig: Rich Picture of Biman Flight Meal management system

5.2.2 Functional and Non-functional requirement

Functional requirements are those product features which developers must implement to enable users to accomplish their tasks. On the other hand, A non-functional requirement specifies criteria that can be used to judge the system operation, rather than specific behaviors. They are contrasted with functional requirements that define specific behavior or functions. The functional and non-functional requirements of this system are defined here.

Functional requirement:

1. When user will register into the system, all the credentials will be stored into the database.
2. When a user tries to login, it will validate if the email and the password is correct or not.
3. A user will be redirected into his homepage when a new registration happens.
4. Users can search for their desired product from the item tables in their homepage after successful login.
5. User can add/ edit/ delete their desired products into cart.
6. All the categories should be shown in the homepage of specific users.
7. Users have to login before checkout if they are not logged in.
8. Users will have to checkout for placing an order.
9. Users (BFCC) can view their orders in their orderlist.
10. Stored information will be secured and cannot be tampered with.

Non-functional requirement:

1. The user interface must be friendly and intuitive for the easy access of the users.
2. Navigation should be easier with a good user experience.
3. The application will be smooth and loading time should not be lengthy.
4. The system should be monitored properly to minimize the number of bugs.
5. The system needs to be built in such a way that it can be maintained, updated, or modified easily to add more features later.

5.3 System Analysis**5.3.1 Six System Analysis:**

Process	System Roles					
Registration	Human	Computing Hardware	Non-computing hardware	Software	Database	Communication & Network
	Airline staffs (user)	Laptop/Desktop/Smartphone (via web browser)	N/A	Windows/Android/ iOS (Via web browser)	Flight meal Management DB with MySQL	Internet Connectivity (Wifi/MB)
Login	Airline & BFC staffs (user)	Laptop/Desktop/Smartphone (via web browser)	N/A	Windows/Android/ iOS (Via web browser)	Flight meal Management DB with MySQL	Internet Connectivity
View Catering List	Airline staffs (user)	Laptop/Desktop/Smartphone (via web browser)	N/A	Windows/Android/ iOS (Via web browser)	Flight meal Management DB with MySQL	Internet Connectivity
View item details	Airline staffs	Laptop/Desktop/Smartphone (via web browser)	N/A	Windows/Android/ iOS	Flight meal Manage	Internet Connectivity

	(user)			(Via web browser)	ment DB with MySQL	
Search	Airline staffs (user)	Laptop/Desktop/Smartphone (via web browser)	N/A	Windows/Android/ iOS (Via web browser)	Flight meal Management DB with MySQL	Internet Connectivity
Add to cart	Airline staffs (user)	Laptop/Desktop/Smartphone (via web browser)	N/A	Windows/Android/ iOS (Via web browser)	Flight meal Management DB with MySQL	Internet Connectivity
Checkout and Confirmation	Airline staffs (user)	Laptop/Desktop/Smartphone (via web browser)	N/A	Windows/Android/ iOS (Via web browser)	Flight meal Management DB with MySQL	Internet Connectivity
Last Moment change	Airline staffs (user)	Laptop/Desktop/Smartphone (via web browser)	N/A	Windows/Android/ iOS (Via web browser)	Flight meal Management DB with MySQL	Internet Connectivity
Showing all orders and status	Airline staffs (user)	Laptop/Desktop/Smartphone (via web browser)	N/A	Windows/Android/ iOS (Via web browser)	Flight meal Management DB with MySQL	Internet Connectivity

Fig: Six system analysis of flight meal management system.

5.3.2 Feasibility Analysis

After completing all the required information collection and before jumping into development which will take the longest time, we must complete a feasibility analysis which is referred to the measurement of a

software product in terms of how useful the product development will be for the business according to a practical analysis. These studies are conducted for several reasons, including determining whether a software product is suitable in terms of development, implementation, and project value to the organization. The feasibility study of this web application is mainly focused on three factors. Those are discussed below.

- i) **Technical Feasibility:** Technical feasibility includes an evaluation of the proposed system's software, hardware, and other technical requirements which needs to be identified if the required software and hardware are available or not. As we are using Laravel for both the frontend and backend which are free and MySQL gives us database support and there are laptops, pc is available to develop and test the output, so at the end, we can say that it's technically feasible.
- ii) **Operational Feasibility:** "Flight meal management system" is going to be a complete solution to simplify the operations of Biman Catering Center and different airlines. The Users of the Application will be the (i) admin who will control the application's data from the admin panel (ii) Employees of Biman flight catering center (iii) Airline's agents. 'Flight meal management' system will make it smooth and simplify the operation of Biman Catering Center and different airlines. So, without a doubt we can say that this application is operationally feasible.
- iii) **Economic Feasibility:** By Economic Feasibility we mean to find out the cost and benefits and analyze whether the final product is economically feasible or not in terms of both development costs and manufacturing costs. As this application is going to be beneficial for the Airline's and BFCC users/customers by saving their time and energy, so the final product will be a good investment to move on. Eventually this app will be turned into a business which can also cut down the cost of manual operation, so in conclusion we can say that this app is economically feasible at all.

5.3.3 Problem Solution Analysis

1. Technical Vulnerabilities

The challenge we're facing: To fix technical vulnerabilities, we have faced some challenges and solving them will inevitably "infiltrate" our web app during the development process such as cross-site scripting, SQL injection etc. therefore, with the help of Laravel we are-

- i. Coming up with a shield against all major security vulnerabilities. &
- ii. The codebase has been constantly examined and monitored.

2. Securing Authentication and Authorization System

The challenge we're facing: We need to implement secured user authorization and authentication system to protect unauthorized users from gaining access into our app's resources/critical data. Laravel puts at our

disposal, right out-of-the-box, everything we need for building secured authentication and authorization system.

3. Automated Testing with Laravel Framework

- The challenge we're facing initializing automated testing sessions, which are much more time-effective and usually more perfect than the manual ones. the Laravel PHP framework comes with a solution as PHP unit tests and a phpunit.xml file.
- It's equipped with functionalities capable of expressive testing by simulating common user behaviors like as link clicking, filling out forms and so on.

4. URL Routing configuration

- Firstly, to define a clean and simple URL routing so that the application should clearly understand the user's intention, specifically which page he/she'd like to navigate to, and we find all our Laravel PHP framework's routes in its app/Http/routes.php file.

5.3.4 Effect and Constraints Analysis

The users will login or register to place their catering order by adding items into their specific cart in the web application. Catering lists will be shown as per the agreement with the Biman flight catering center and the airlines agents will be able to take order according to other criteria. 'Flight meal management' system will make it smooth and simplify the operation of Biman Flight Catering Center and different airlines. Airline's stuff will notify the returnable item to the catering center as per the terms and conditions. After that, sending notification to the controller of operation of specific airlines when meal preparation is done automatically. With this application the BFCC authority can give a good customer support to the airline's staffs.

5.4 System Design

5.4.1 UML Diagrams: A UML diagram can be defined as the visual representation of a system that is based on the Unified Modeling Language (UML). The Unified Modeling Language is called as a developmental, modeling language in software engineering field that provides a standardized way to visualize the design of the system. From many kinds of UML diagrams, in this section Use case and Activity diagram is illustrated for our project.

Use-case Diagram: A use case diagram is a kind of behavior diagram that reflects the visible interactions between actors (users) and the system. This Use-case diagram below depicts the whole system of Flight meal management system of BFCC along with relevant use cases and actors and connects them.

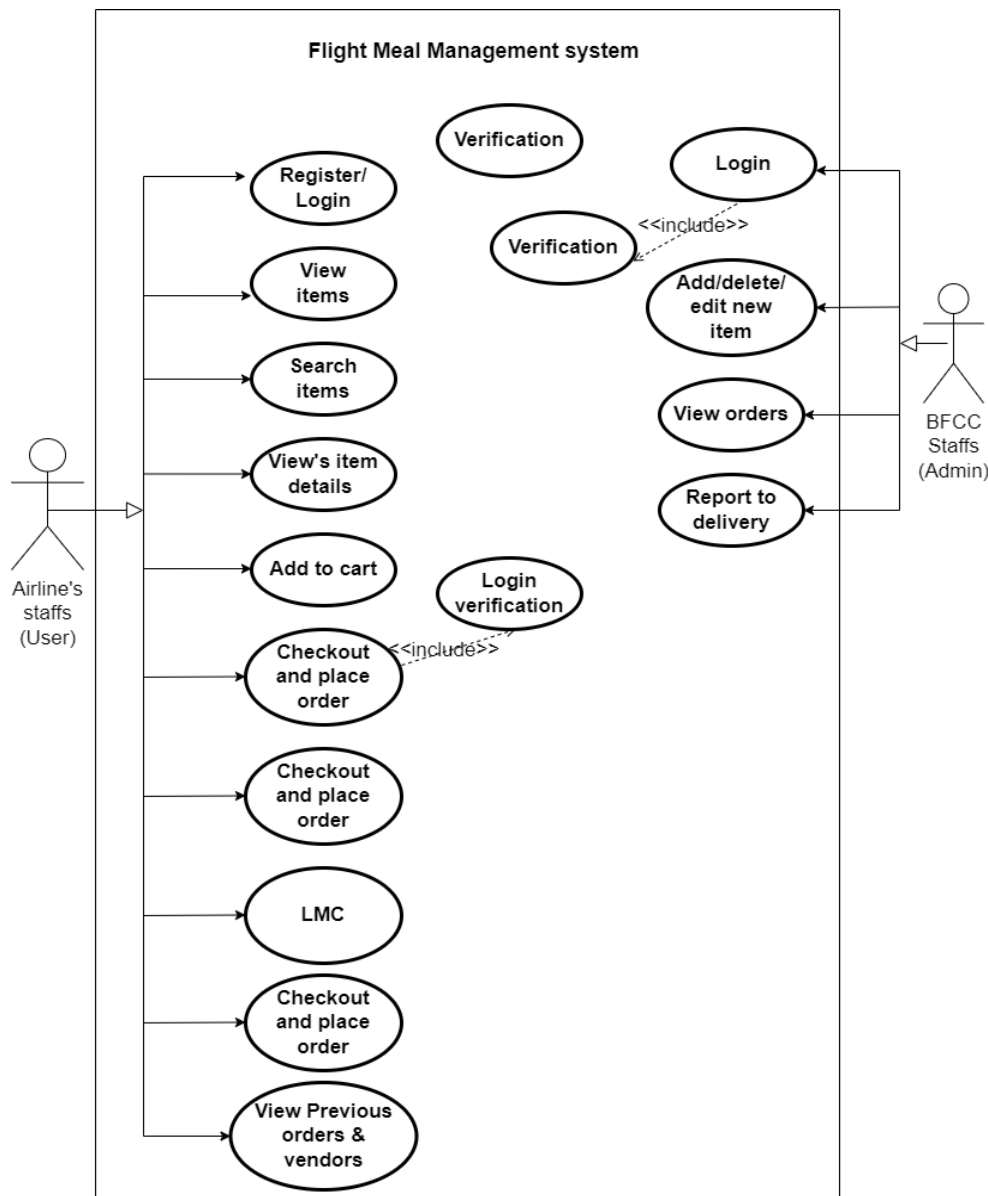


Fig: Use-case diagram of Flight Meal Management system of BFCC.

Activity Diagram: This Activity diagram states and illustrates the whole activity of the system, the user performs when they get access to the Flight meal management web application. When they visit the URL and log in successfully, they can view their desired catering items and add to cart, after that they can advance to checkout and order placing. If they are not logged in, they will be redirected into the login page and asked to login first. In the checkout page they will fill up the necessary details and can easily place an order. The activity diagram is shown below.

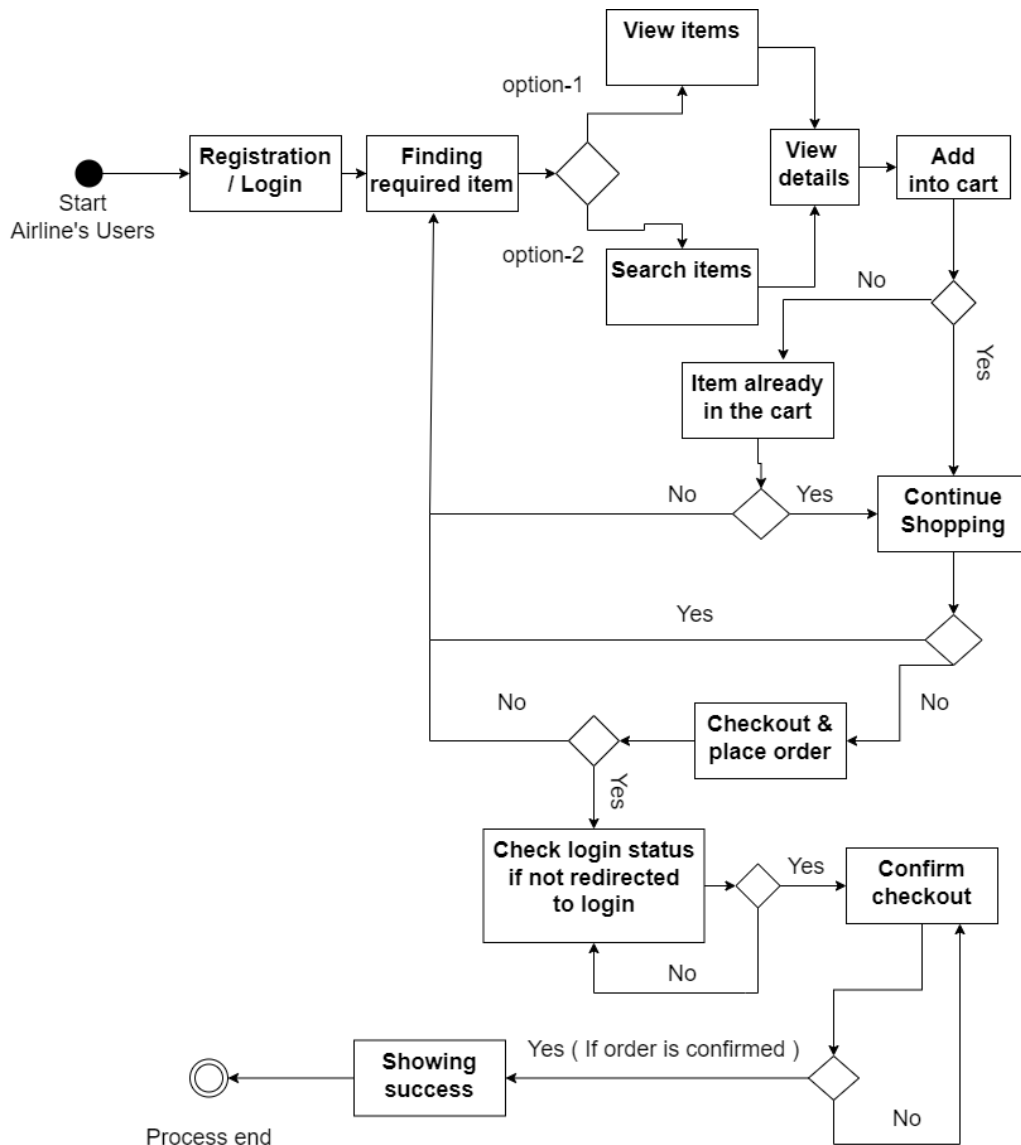
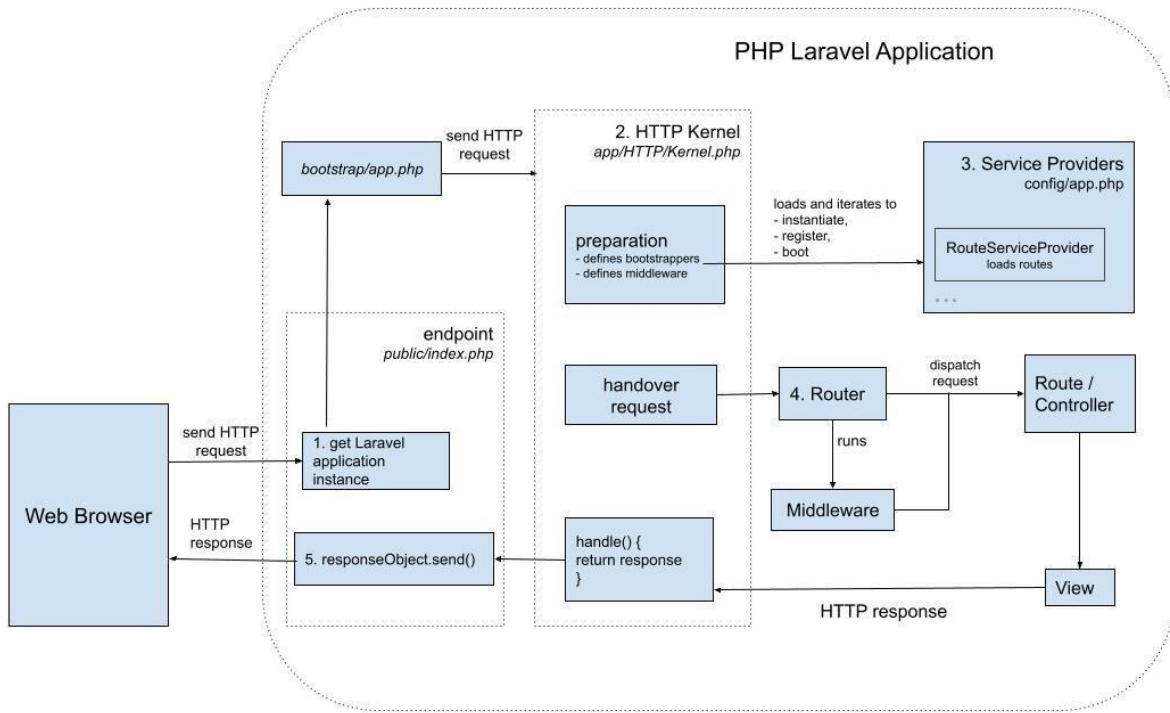


Fig: Activity diagram of Flight meal management system.

5.4.2 Architecture



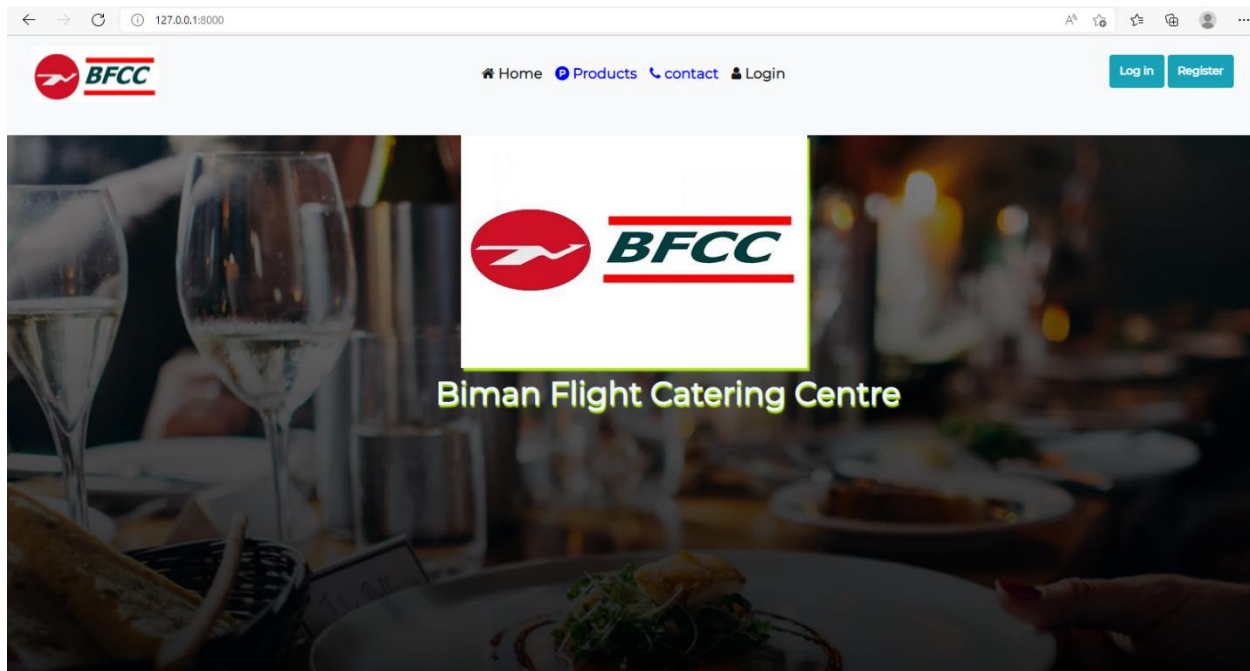
The full form of MVC is 'Model View Controller'. It represents the architecture adopted by developers while building applications. With this MVC architecture of PHP framework Laravel, we can understand the application structure with regards to how the data flow of the application works.

MVC, software architecture separates domain/application/business logic from the rest of the user interface by separating the application into three different parts: the model, the view, and the controller.

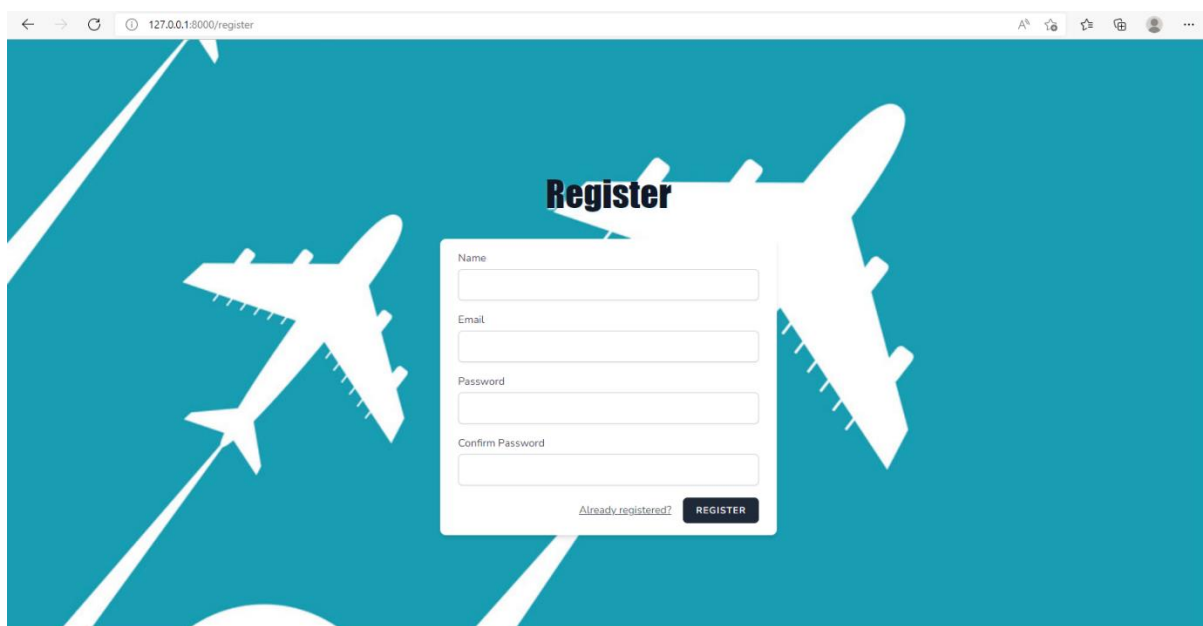
The model handles fundamental behaviors and data of the application by collaborating with database. It responds to requests for information, respond to instructions for making change the state of the information. In short, it does the data-management of the whole application. Laravel was created to make it easier for developers to work with PHP based projects. With Laravel, we don't need to think much about the setup, architecture, and dependencies of a project and jump directly into the project.

5.5 Implementation

Universal Homepage:

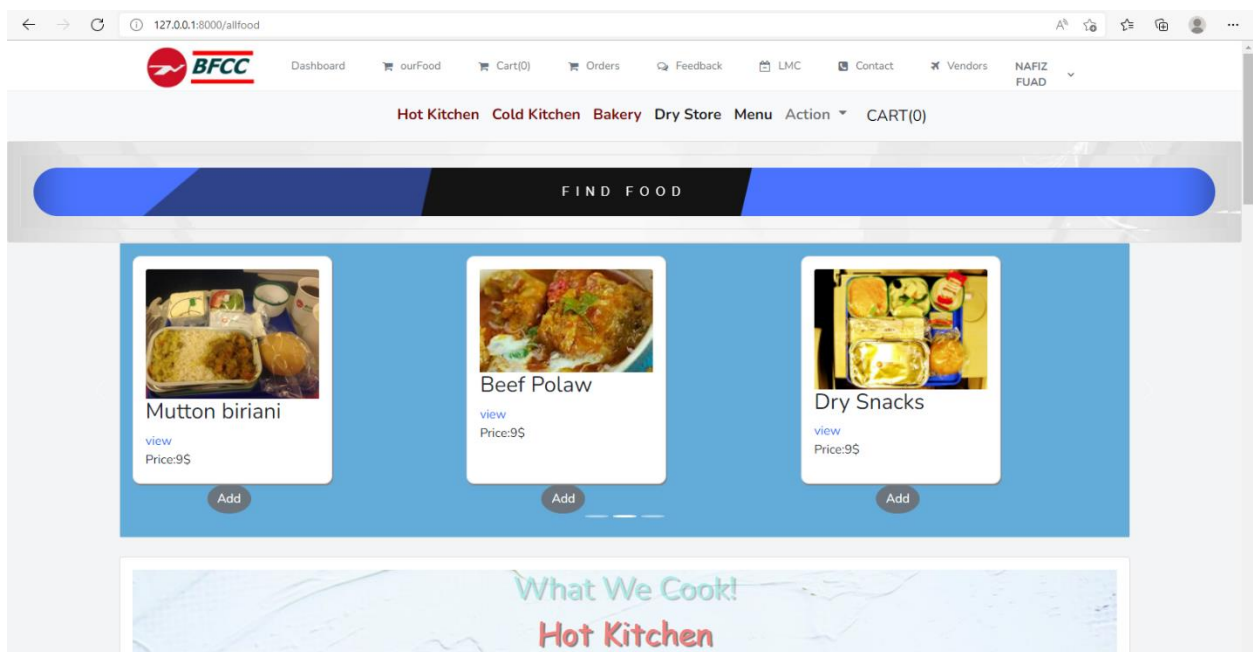


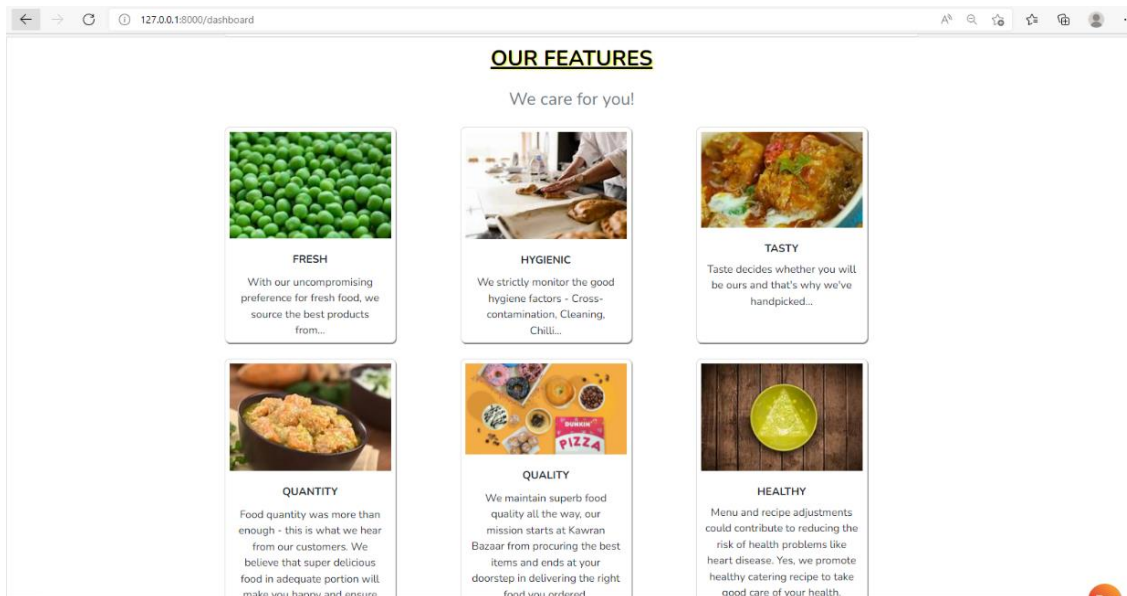
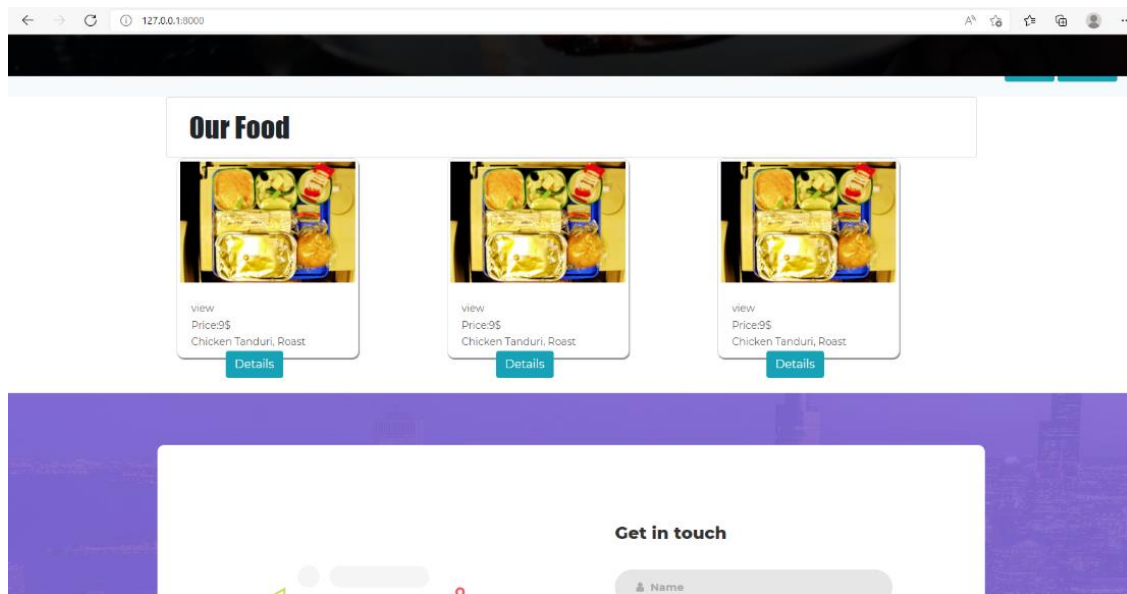
Registration and login page

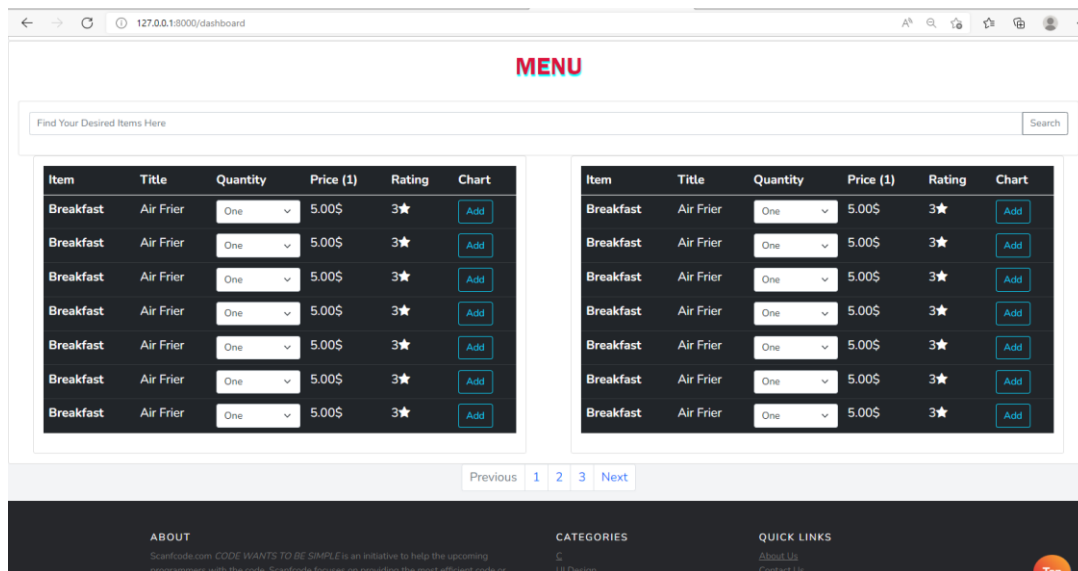




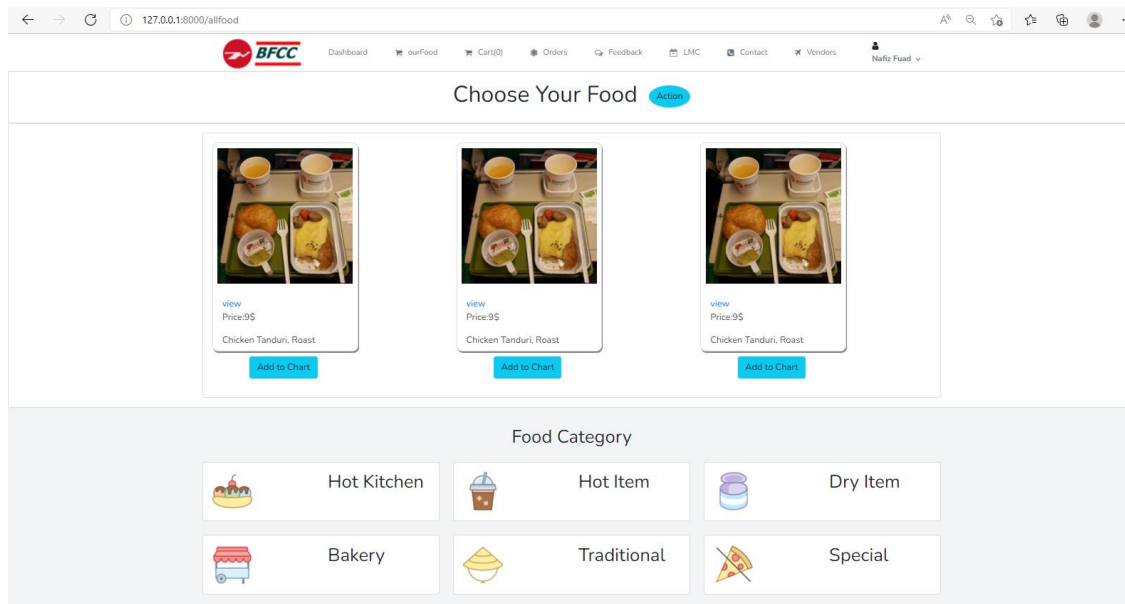
Airline's User Dashboard



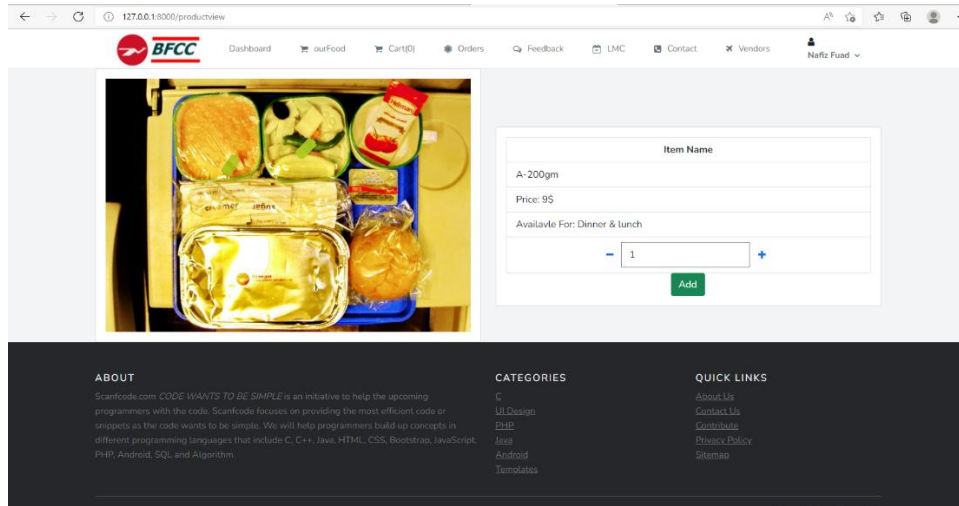




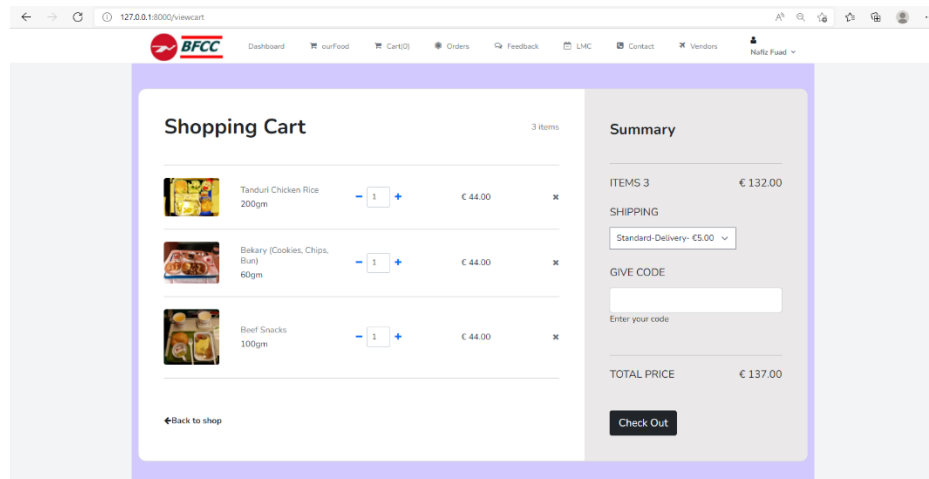
All Food Page



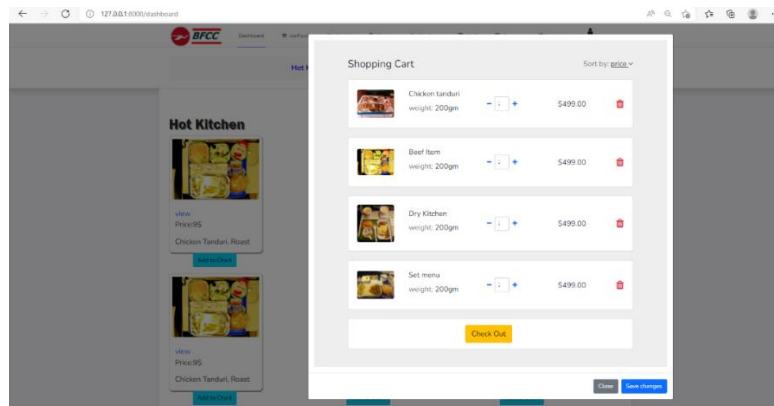
Food Details Page



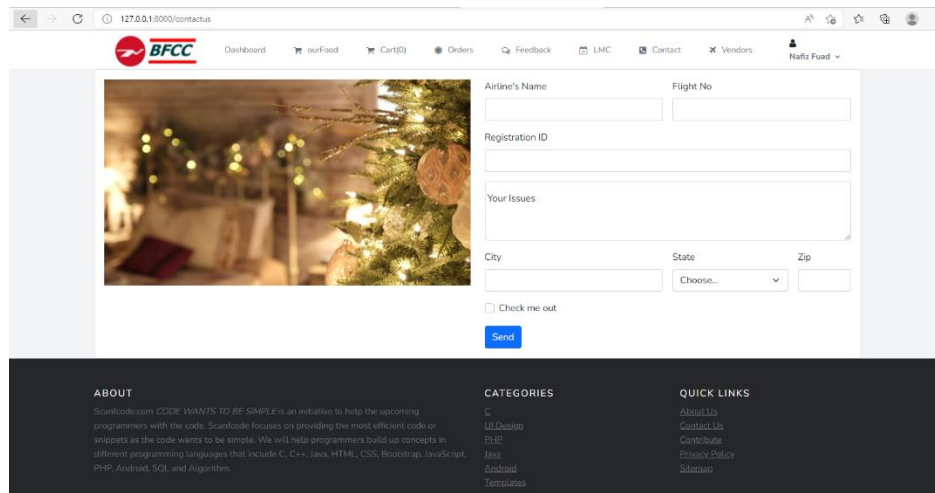
Cart



Modal Cart



Contact page



127.0.0.1:8000/contactus

BFCF Dashboard ourFood Cart(s) Orders Feedback LMC Contact Vendors **Nafti Foad**

Airline's Name Flight No

Registration ID

Your Issues

City State Zip

☐ Check me out

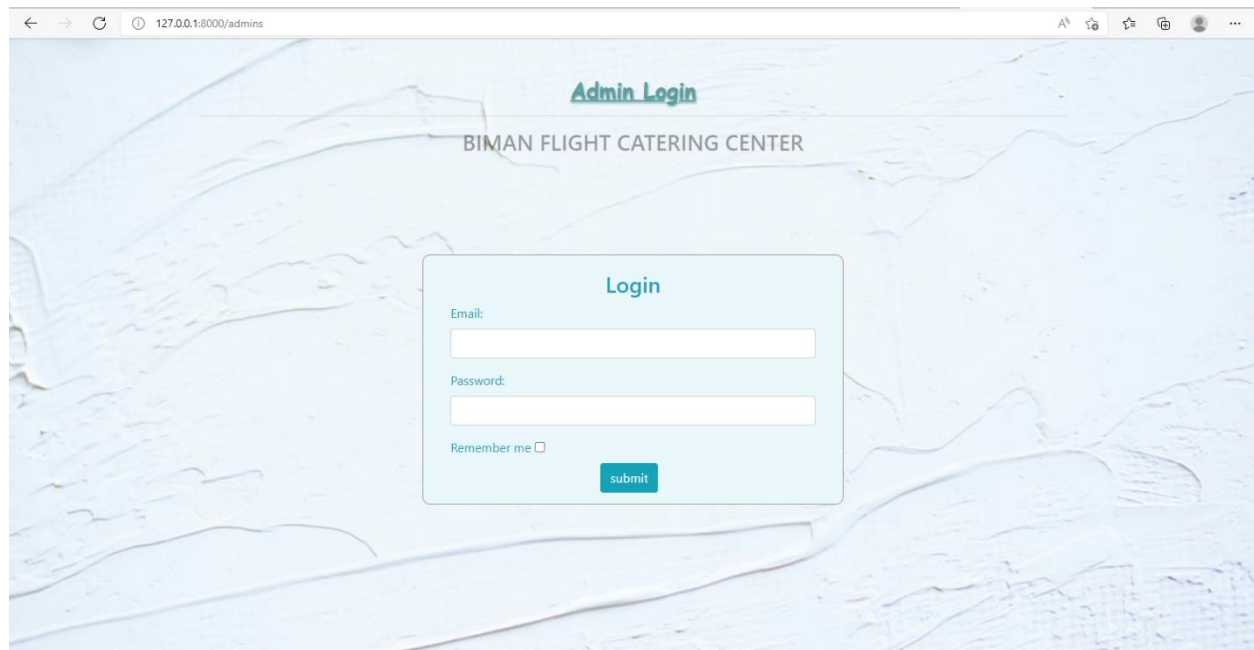
Send

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Scantcode.com CDDF WANTS TO BE SIMPLE is an initiative to help the upcoming programmers with the code. Scantcode focuses on providing the most efficient code or snippets as the code wants to be simple. We will help programmers build up concepts in different programming languages that include C, C++, Java, HTML, CSS, Bootstrap, JavaScript, PHP, Android, SQL, and Algorithm.

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Admin Login page



127.0.0.1:8000/admins

Admin Login

BIMAN FLIGHT CATERING CENTER

Login

Email:

Password:

Remember me ☐

submit

Admin's (BFCC) Dashboard

The screenshot shows the Admin's (BFCC) Dashboard. The left sidebar contains a menu with items: Dashboard, Banner (1), Add New Banner, Show Banner, Category (3), Add Category, All Category (selected), Post (3), Add Post, All Posts, Charts, and Gallery. The main content area displays a 'Members' table with columns: Id, Category Name, Description, Image, Status, and Actions. The table lists two members with IDs 42 and 43. Member 42 has a category name 'Why do we use it?' and a description about Lorem Ipsum. Member 43 has a category name 'Where does it come from?' and a description about the origins of Lorem Ipsum. Both members have a status of 'Active' and an associated image. The Actions column for each member contains three icons: a green plus, a blue refresh, and a red trash.

Id	Category Name	Description	Image	Status	Actions
42	Why do we use it?	using 'Content here, content here', making it look like readable English. Many desktop publishing packages and web page editors now use Lorem Ipsum as their default model text, and a search for 'lorem ipsum' will uncover many web sites still in their infancy. Various versions have evolved over the years, sometimes by accident, sometimes on purpose (injected humour and the like).		Active	
43	Where does it come from?	Contrary to popular belief, Lorem Ipsum is not simply random text. It has roots in a piece of classical Latin literature from 45 BC, making it over 2000 years old. Richard McClintock, a Latin professor at Hampden-Sydney College in Virginia, looked up one of the more obscure Latin words, consectetur, from a Lorem Ipsum passage, and		Active	

Admin's Data Inert Page

The screenshot shows the Admin's Data Inert Page, specifically the 'Add Category' form. The left sidebar is the same as the dashboard. The main content area has a header 'Add Category' and a form with two fields: 'Category Name' and 'Category Description'. The 'Category Description' field is a rich text editor with a toolbar containing various formatting options. Below the form, there is a 'File Upload' section with a 'No file selected' button and a 'Choose File' button. At the bottom of the form, there is a blue 'Add Category' button.

5.6 Testing

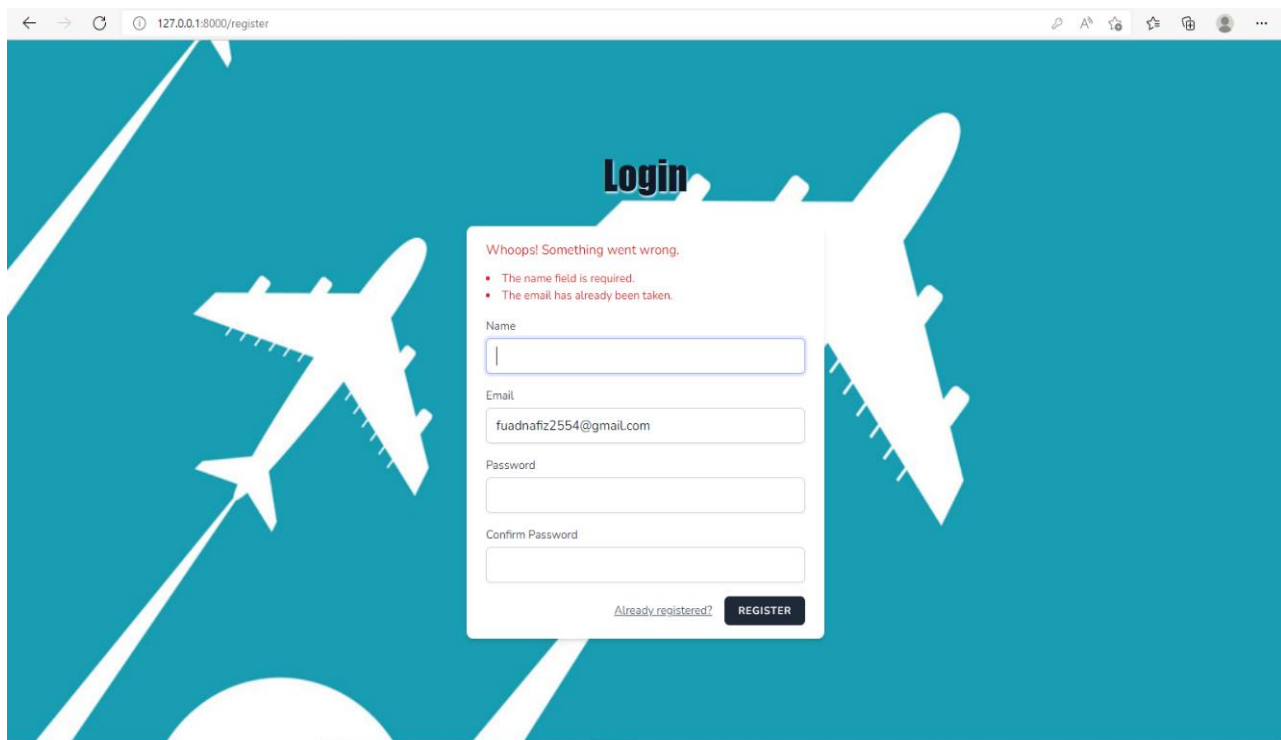
Test Case No.	Scenario	Test Steps	Test Data	Expected Results	Actual Result
T-01	Register	Enter name, email and password and press register button.	name, email, and password.	Redirect to login screen	According to The expectation
T-02	Login	Enter Valid Email and password in input field and press the login button	Email and Password	Redirected into user dashboard.	Working fine.
T-03	Viewing and adding items	Scrolling down the cursor in the user dashboard. Find the desired product and press add to cart button.	Desired Product name.	Redirected to the dashboard for further selection.	According to The expectation
T-04	Last Moment Change	View cart and make required changes and save.	N/A	Redirected into user dashboard.	According to The expectation
T-05	Checkout	Go to cart page Click on checkout button.	N/A	Redirected to user dashboard and invoice generation takes place.	According to The expectation.
T-06	Logout	Press the logout button.	N/A	Redirected to universal homepage.	Working fine.

Chapter: 6

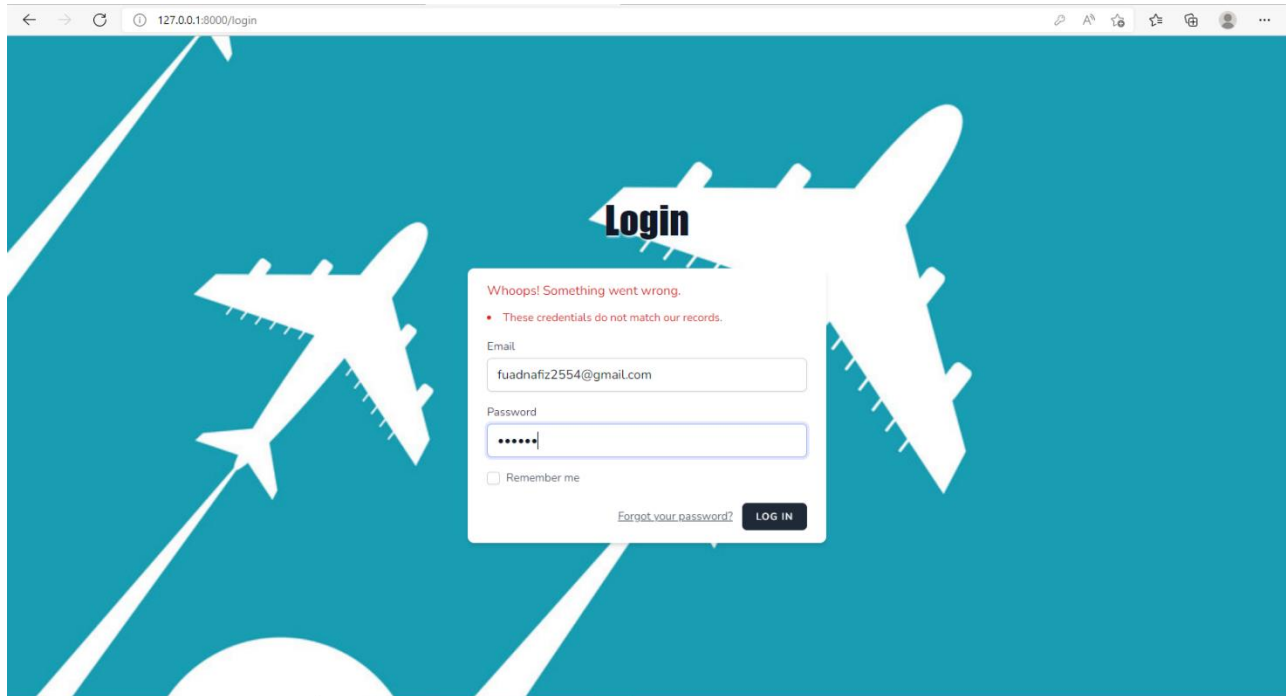
Result & Analysis

After finishing some works related testing our application, coming into a solution where it shows how the application acts in different situations. A Proper application testing is an essential task to defend bugs when the program remains in live mode. The main purpose of software testing is to detect faults in the application which let the process approved and ensured whether the developed system meets all the requirements or not. There are some features of our application showing the expected outcome.

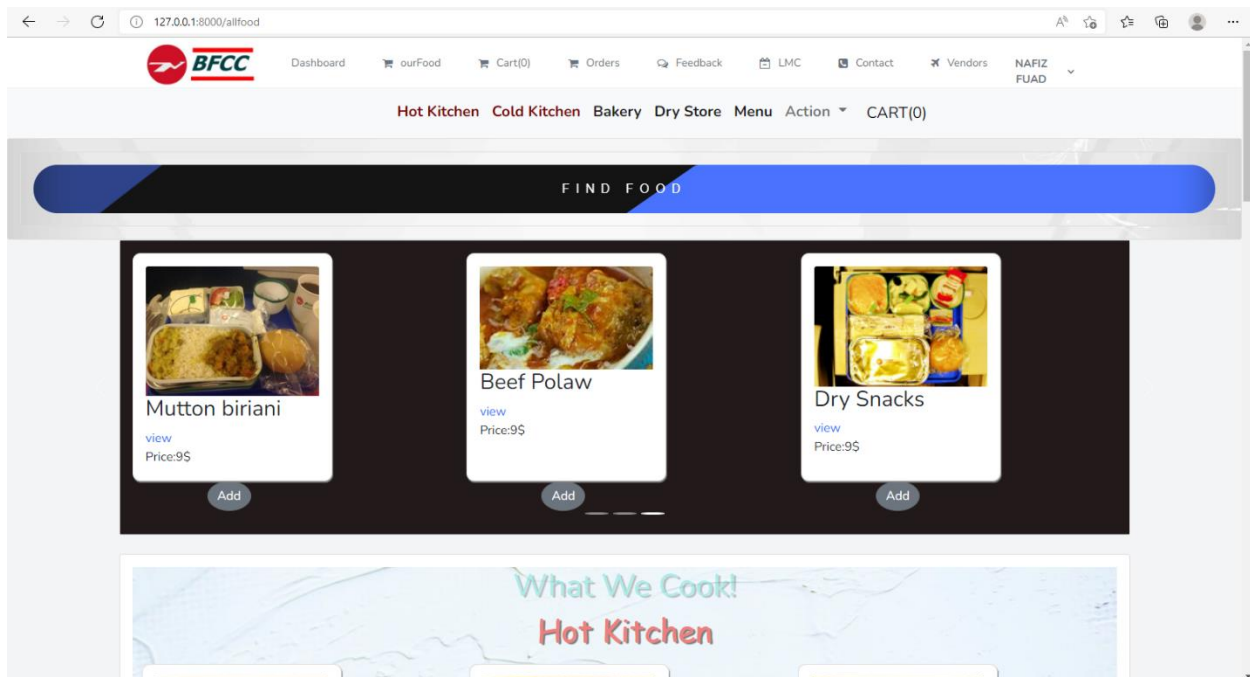
Registration with incorrect credential: If any of the field of registration remains empty then it will notify to fill up that specific field if it is required. If the email is invalid, it will notify that the email format is not valid.

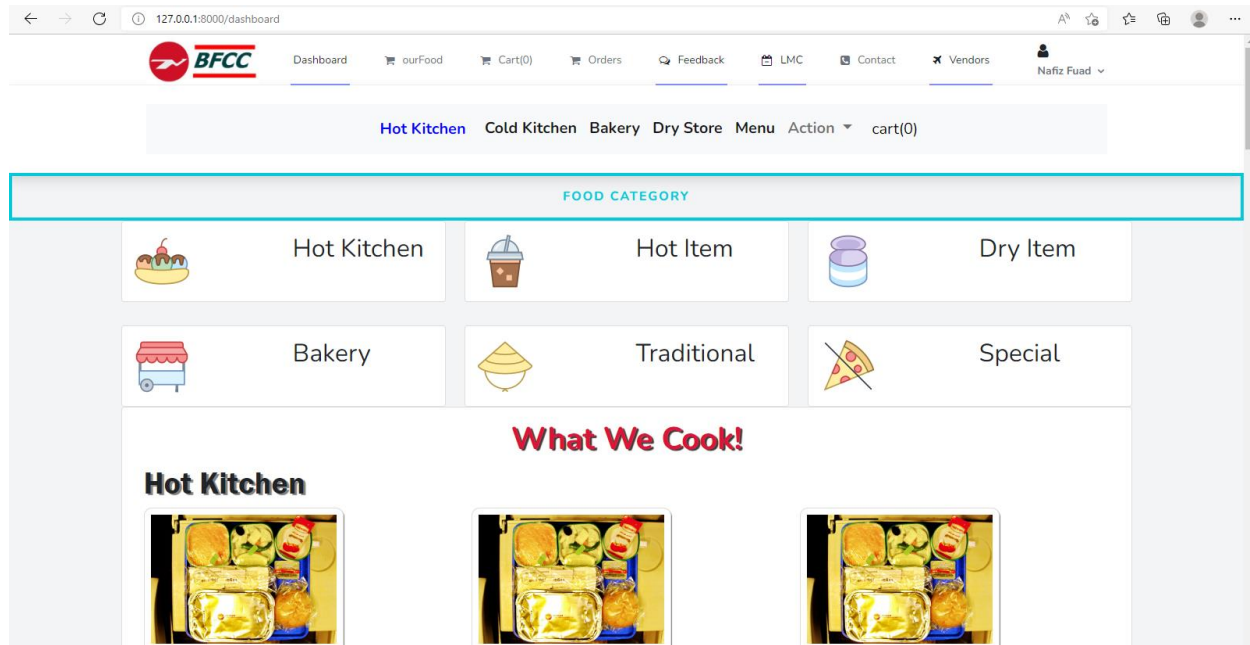


Login with wrong credentials: If the email is invalid it will notify that the email format is not correct. If both the email and is inserted but one of them did not match with the information in the database, then it will say “Oop! Something went wrong. The credentials do not match our record.” If all the given credentials are correct it will redirect back to the dashboard of the specific user.

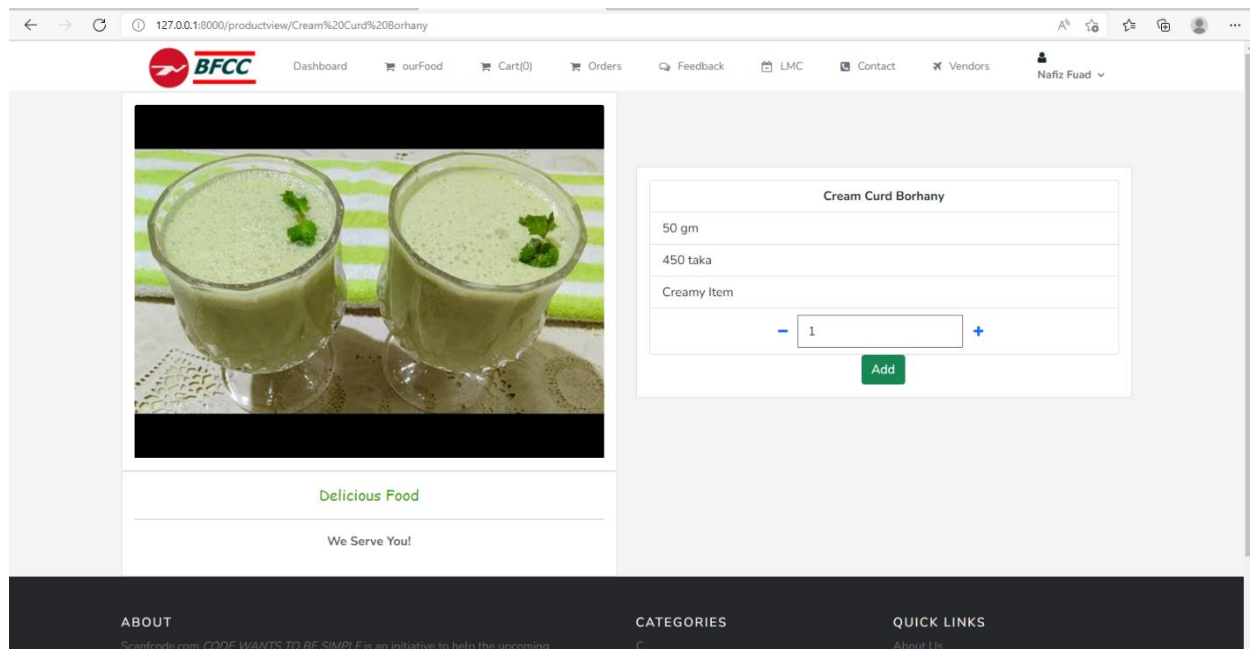


Product showcase: After successful login, the user dashboard will be visible for each specific user as followings which will reflect the product (in our case food items), There are also different section for categorizing the catering item as hot kitchen, cold kitchen, bakery, dry-store, and others. Airline's user can add them into their cart for doing business with BFCC.

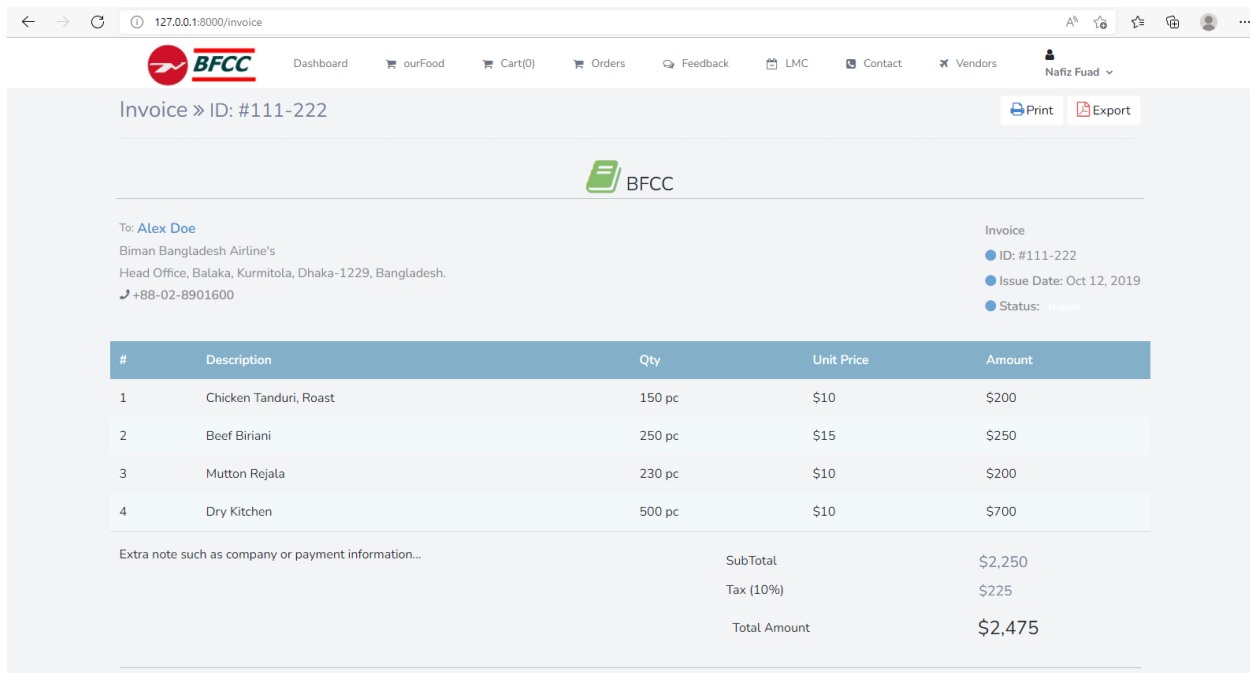
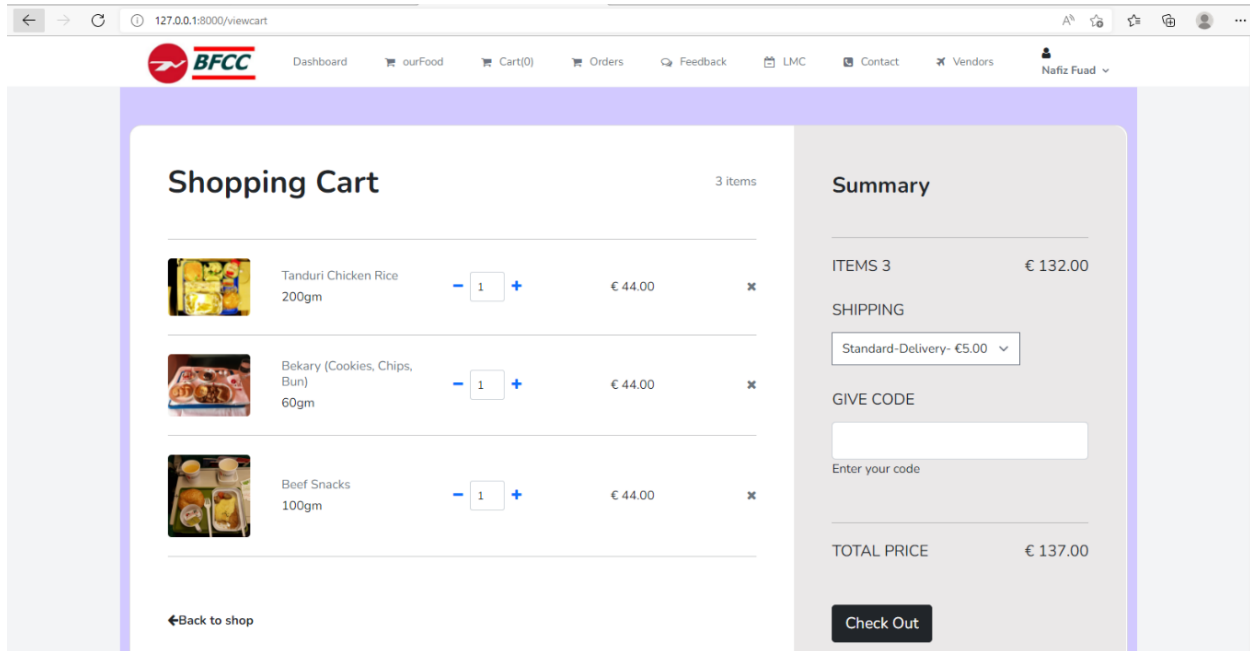




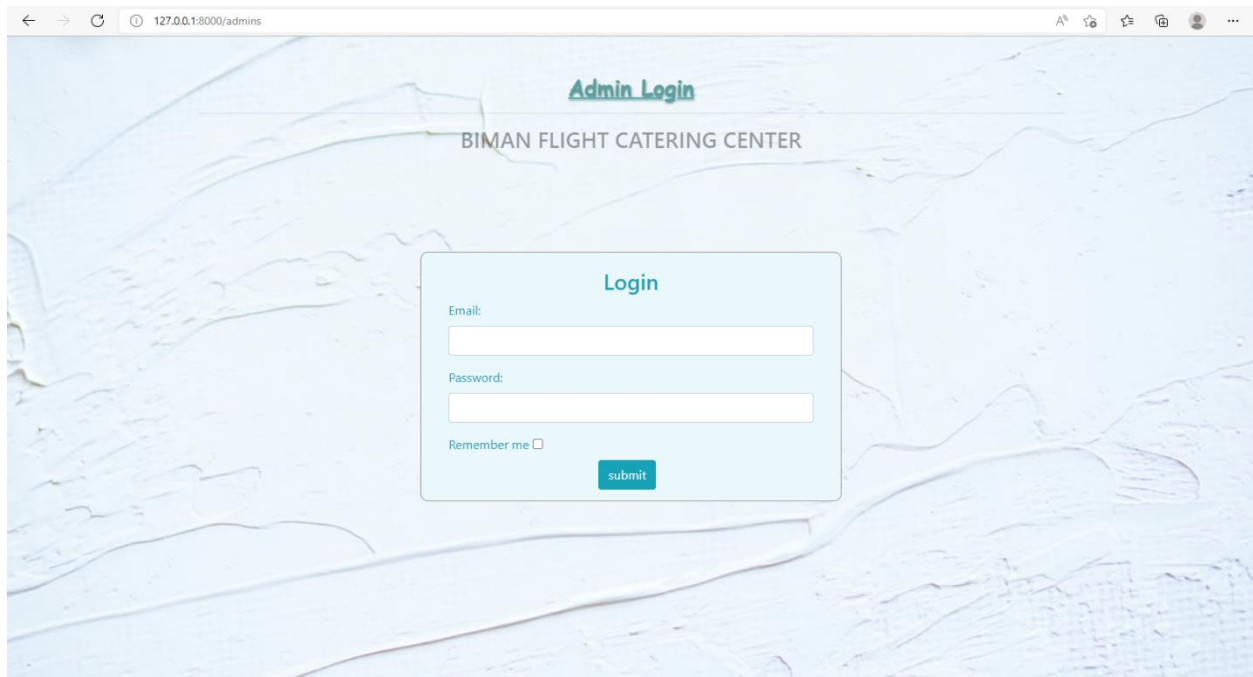
Product details page: User dashboard makes all the available product visible which is handle dynamically from the admin panel. By clicking on each specific product, user will be redirected into the specific details page of that product individually. They can add the product from the details page also.



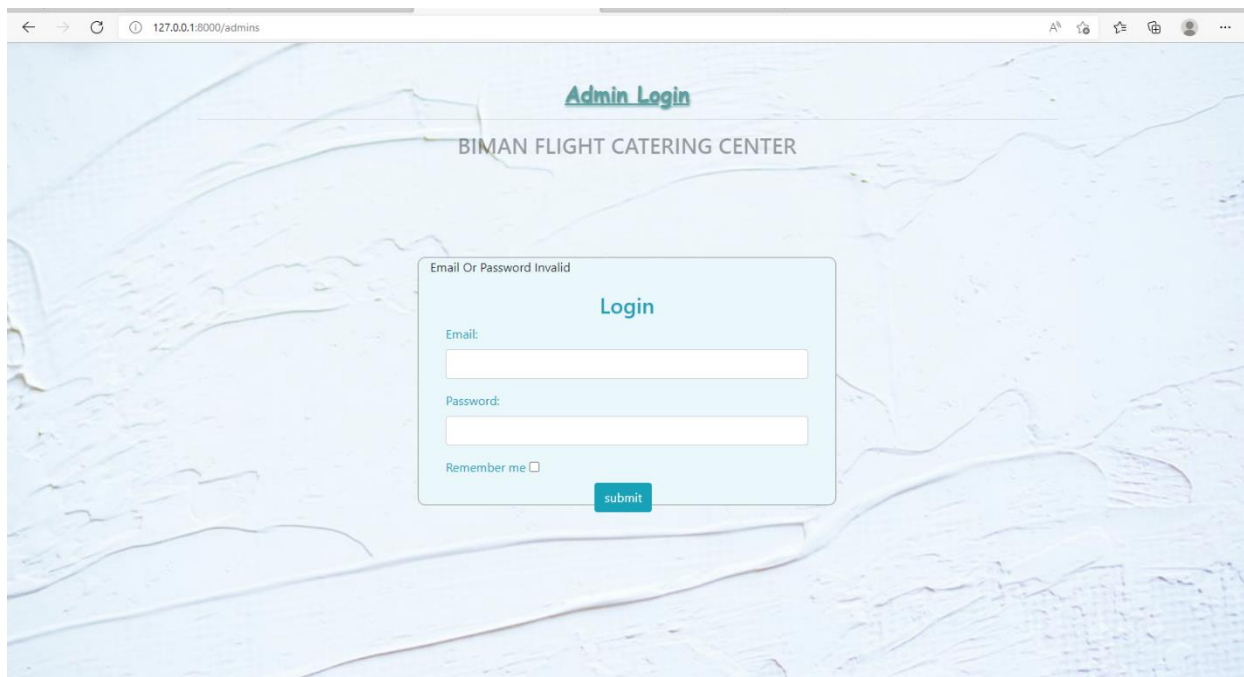
Cart page & product selection: When the user selects any product and click on the add button, it will be visible in the cart section. After completing the selection, the products are ready for checking out and placing as order. When the order will be placed, an invoice will be generated according to the food items ordered.



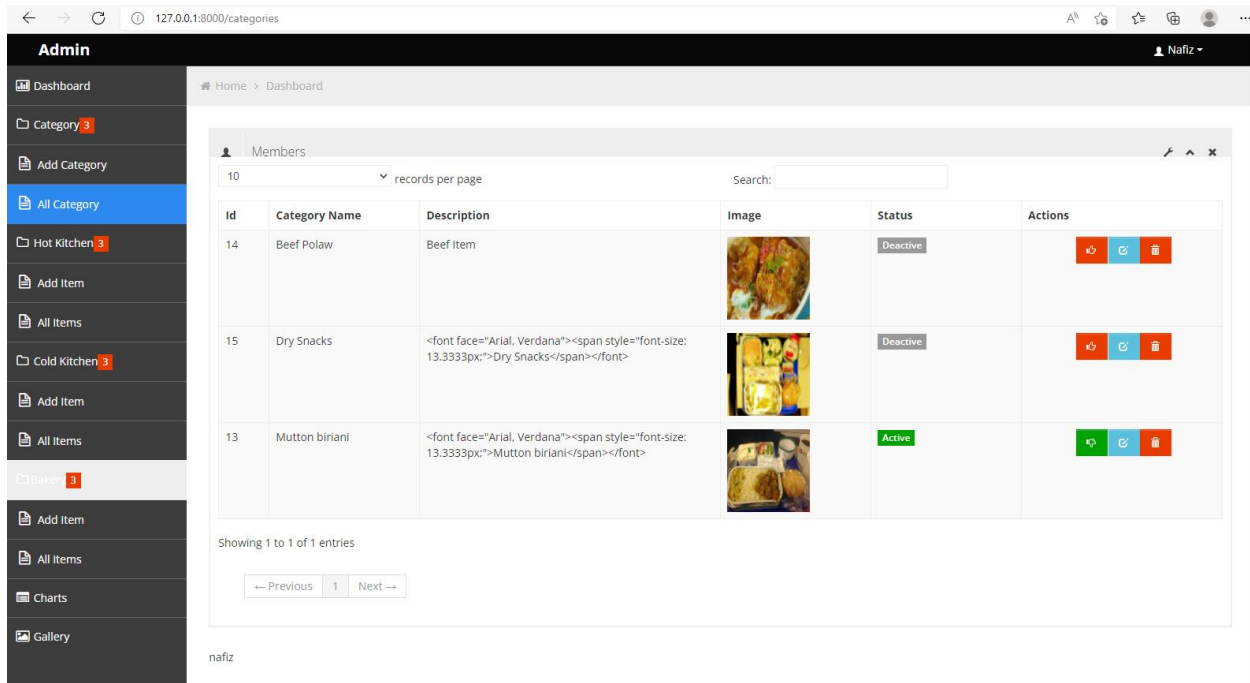
Admin section for dynamic product and order management: We will provide a custom admin portal for managing the different catering items dynamically from the backend. Before that, a secret URL will redirect into admin login page. If the login credential doesn't match, it stays in the same page telling "Username or password is incorrect". After successful admin login, the user will be redirected into admin's dashboard for making any change required like as create, update, delete and order management of the catering lists.















If the login credential doesn't match,



When login becomes successful, the following admin dashboard becomes visible for controlling admin's functionalities.



The screenshot shows an Admin Dashboard with a sidebar menu on the left and a main content area. The sidebar menu includes options like Dashboard, Category, Add Category, All Category, Hot Kitchen, Add Item, All Items, Cold Kitchen, Add Item, All Items, Make, Add Item, All Items, Charts, and Gallery. The main content area displays a table of menu items under the 'Members' tab.

Id	Category Name	Description	Image	Status	Actions
14	Beef Polaw	Beef item		Deactive	  
15	Dry Snacks	Dry Snacks		Deactive	  
13	Mutton biriani	Mutton biriani		Active	  

Showing 1 to 1 of 1 entries

← Previous 1 Next →

Chapter 7

Project as Engineering Problem Analysis

7.1 Sustainability of the Project/Work

In the project profession, sustainability is a business approach that balances the environmental, social, and economic components of project-based work to meet present stakeholder needs without compromising or overburdening future generations. Project sustainability was one of the main focuses when the Biman Flight Catering System was planned. Biman's local and international flights require BFCC to provide meals on around 100 aircraft every day. BFCC must keep an eye on the orders, provide timely recommendations, and uplift the items as needed. Each airline files its own food requisitions and advises on its flights, and BFCC keeps track of everything manually. Which is very timeconsuming. Informing all departments by hand is also an issue. The main goal was to endure all these tasks of the aircraft with a product that would fulfill all their requirements.

7.2 Social and Environmental Effects and Analysis

Catering services can be difficult to provide at times. Timely suggestions for 100 aircrafts every day are a difficult task to keep, from collecting food requisitions to uplifting products to aircraft, including LMC (Last Moment Change), Monitoring, and Informing all departments about any updates. This is also time-consuming and might be inconvenient for the Catering Center's workers as well as the Biman staff. This application will save a lot of time, and employees will be able to manage and monitor their work from anywhere. They would have a lot of free time to do other things. As a result, their social interactions with friends and family would increase getting more time to build strong relationships.

If we think about the environmental effects, the catering staffs will not have to collect the demand sheets manually which is very much time consuming. When food will be ordered by airlines staffs with the help of the website, they can view all the existing items and can make their demand sheets according to their requirement which will make the order process faster and smoother. It will also create a bridge in between both the employee by creating communication in between. As a result, the environmental and the atmosphere of BFCC along with Airlines would get better day to day which is a step in the right direction to the future.

7.3 Addressing Ethics and Ethical Issues

Customers are so reliant on their computers and mobile phones these days that an application can acquire a massive amount of internal and external data about them. While developing and launching an application, there are certain laws and ethics that must be followed. Some of them are as follows:

Collecting only relevant user data:

Only the most pertinent user data is collected for the purposes of company security and report generation. The information would be retained and preserved solely in databases, ensuring that it would not fall into the wrong hands.

Managing database security:

The database and backend server are both highly secure. The server's primary cPanel allows someone up to three attempts to log in; if they do not log in during those three attempts, their IP address will be permanently blocked. The database's credentials are managed by the firm itself.

Chapter 8

Lesson Learned 8.1

Problems Faced During this Period

Through my process of making this application I faced a lot of problems.

Understanding the Project Requirement and Office Environment

Understanding the initial requirement was difficult for me because, as a new member of the team, I needed to first learn how and what they were working on. The folder structure they used and how they wrote their code.

Adapting to New Technologies

They had preferred frameworks, so I had to study some of them before I could start working.

Keeping up to Speed

As it was my first time, learning new technologies and putting them to use was a slow process for me initially.

Identifying and Fixing Bugs

It was difficult to identify a bug at first because the frameworks were unfamiliar to me. however, some bugs take a long time to identify and fix.

8.2 Solution of those Problem

Understanding the Project Requirement and Office Environment

I learnt how to properly structure code, write the model, view, and controllers, which coding pattern to use, and how to write less code to accomplish the same amount of work.

Adapting to New Technologies

After my office hours were over, I went home every day and learned Laravel technology at night to keep up with my internship work. This project would not have been completed if I hadn't put in those extra hours.

Keeping up to Speed

My work speed was slow because I was learning new technologies and applying them to a real-world project. I was able to enhance my speed with regular effort.

Identifying and Fixing Bugs

I learnt how to properly debug as well as some quick and easy debugging techniques from the senior developers.

Chapter 9

Future Work & Conclusion

9.1 Future Works

This are the list of features that could be added in the application:

Mobile Application

We could also develop a mobile application for Android/iOS. It will make the work more convenient and easier for everyone.

Chat System

Users would benefit from a live chatting system since they could contact immediately with the support personnel without having to wait.

Multi-vendor Functionalities

In the future app could enable multi-vendor that means any other airlines can sign up for their meal requisition. This function would be great for the growth of the application.

9.2 Conclusion

I have discussed all the aspects of this web application but to give a summary about some technical terms is that this project (Web Application) is completely made using the Laravel framework. Only the Biman staff and Catering service staff can access, view items, and order food. I could never have imagined working as a full-time software developer before my undergraduate studies. I continued to learn new things from each of my respected faculty members, which is why I am here now. I would not be in the position I am in now if it weren't for them. I truly appreciate all the faculty's efforts, as they attended classes early in the morning, late in the evening, and even ate lunch late to attend our classes. Our teachers, who had led us here, are the actual heroes. Thank you to all my professors; being a software engineer would be a dream without them.

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The End

