

Daffodil Smart City, Birulia, Savar, Dhaka-1216
23 November 2024

Md. Sabur Khan
Founder & Chairman
Daffodil Family

Subject: Submission of Application Agreement for GreenGarden Food Delivery Web Application

Dear Sir,

We, **Md. Sulyman Islam Sifat (ID: 211-15-4004)** and **Sultana Siddique Chaity (ID: 211-15-3957)**, are pleased to submit our application agreement for the development of the GreenGarden Food Delivery Web Application System. This project, part of our academic endeavors at Daffodil International University, is designed to create an efficient, user-friendly, and innovative platform that aligns with industry standards and fulfills the requirements of both customers and administrators.

At GreenGarden, we value the creation of client-focused applications, balancing technical expertise with clear communication. Our goal is to deliver an innovative, tailored, and cost-effective solution, ensuring exceptional performance and on-time completion, while meeting all specified requirements.

Enclosed is the detailed application agreement, which outlines the components and features of the proposed system. We kindly request your review of the document. Should it meet your expectations, we would greatly appreciate your signature and confirmation to proceed with the development process.

Thank you for your time and guidance. We are committed to delivering a high-quality solution and look forward to your feedback.

Yours sincerely,
Md. Sulyman Islam Sifat
Sultana Siddique Chaity
GreenGarden Food Delivery Web Application Project Team

Enclosure: Application Agreement Document

1.0 Project Overview

The **GreenGarden Food Delivery System** is designed to efficiently connect customers with their favorite food items. The platform aims to provide an intuitive, easy-to-navigate interface for customers, allowing them to browse a diverse menu, select dishes, and complete orders seamlessly. On the admin side, the system includes tools to manage inventory, track orders, and maintain overall service quality. Built with responsive design principles, the system offers consistent functionality across all devices, including desktops, tablets, and mobile phones.

The backend is developed using PHP and MySQL, with Flowbite UI components for an engaging front-end experience. The system includes features such as customer menu browsing, admin login, and CRUD operations (Create, Read, Update, Delete) for menu management. It aims to enhance the online presence of food establishments and improve operational efficiency with real-time order processing, scalability, and robust data management.

1.1 Feature Analysis

The **GreenGarden Food Delivery System** consists of various features that enhance user experience and system efficiency. These include:

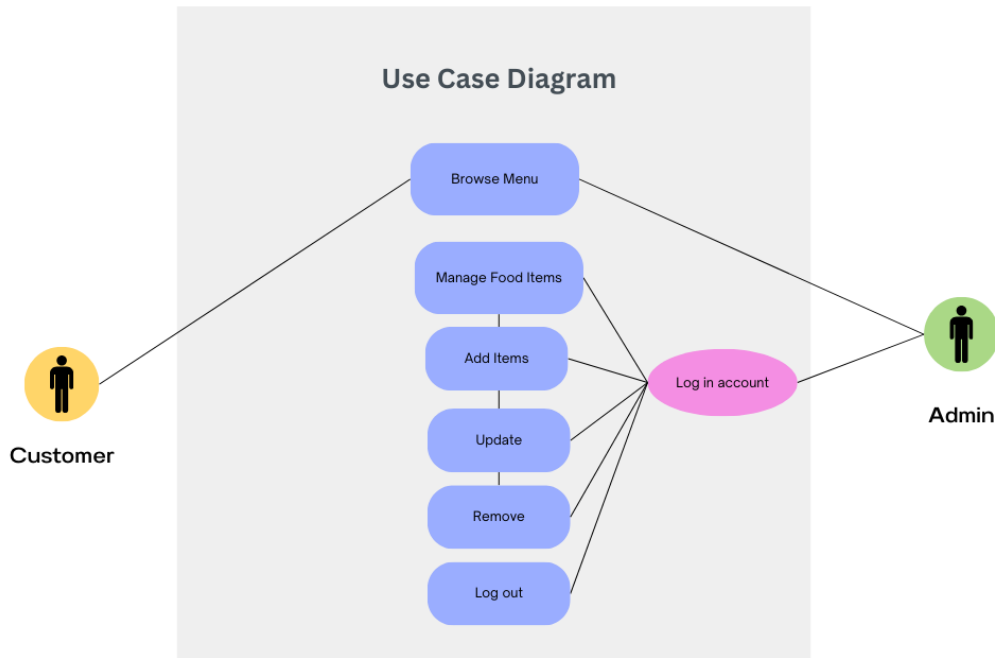
- **Customer Features:**
 - **Menu Browsing:** Customers can view a variety of available food items.
 - **Admin Features:**
 - **Admin Login:** Secure access to the admin dashboard.
 - **Menu Management (CRUD Operations):** Admins can add, edit, or remove food items in the menu.
 - **Order Management:** Admins can manage and track customer orders.
 - **Inventory Management:** Admins can track the availability of food items and update stock accordingly.
 - **User Management:** Admins can manage registered users, including viewing and modifying user details.
 - **Reports and Analytics:** Admins can generate reports related to sales, order trends, and inventory to make data-driven decisions.
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2.0 UML Design

The Unified Modeling Language (UML) design provides a comprehensive visualization of system interactions between users (actors) and system components. Two primary diagrams are included to depict the functionality of the system:

Use Case Diagram

The use case diagram highlights the interaction between the actors (users) and the system's primary functionalities.



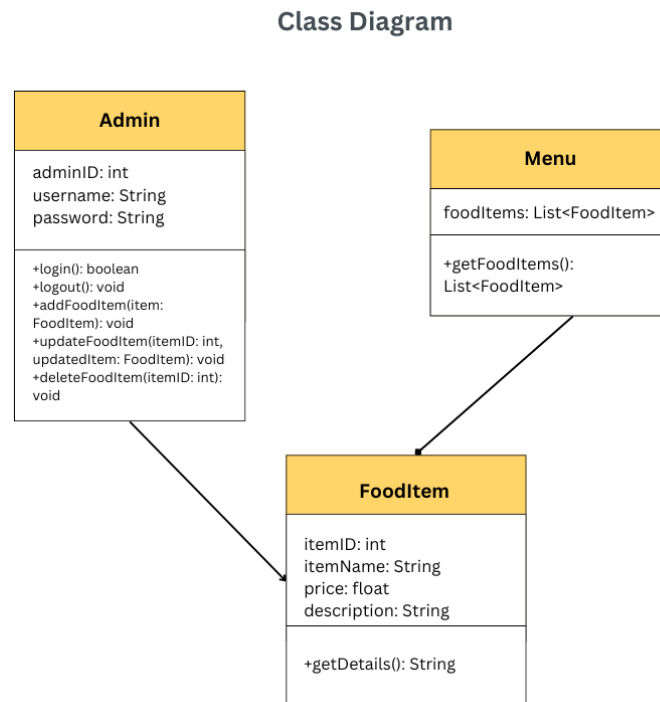
- **Actors:**
 - **Customer:** Represents the end user who can interact with the system to browse the menu.
 - **Admin:** Represents the system administrator responsible for managing the menu and maintaining the system.
- **Use Cases:**
 1. **Browse Menu:**
 - **Actor:** Customer
 - **Description:** Allows customers to view the available food items in the system without requiring authentication.
 2. **Admin Login:**
 - **Actor:** Admin
 - **Description:** Enables the administrator to securely log in and access the admin dashboard for system management.
 3. **Manage Food Items (CRUD Operations):**
 - **Actor:** Admin
 - **Description:** Allows administrators to perform Create, Read, Update, and Delete (CRUD) operations on food items.

4. Log Out:

- **Actor:** Admin
- **Description:** Enables the administrator to securely log out of the system after completing management tasks.

Class Diagram

The class diagram illustrates the structural components of the system, their attributes, methods, and relationships.



- **Classes:**

1. **Admin:**

- Represents the administrator of the system.
- **Attributes:**
 - `adminID: int`: Unique identifier for the admin.
 - `username: String`: Admin username for authentication.
 - `password: String`: Admin password for authentication.
- **Methods:**
 - `+login(): boolean`: Authenticates the admin and grants access to the system.
 - `+logout(): void`: Logs out the admin securely.
 - `+addFoodItem(item: FoodItem): void`: Adds a new food item to the menu.

- `+updateFoodItem(itemID: int, updatedItem: FoodItem): void`: Updates details of an existing food item.
- `+deleteFoodItem(itemID: int): void`: Deletes a food item from the menu.

2. Menu:

- Represents the menu of available food items.
- **Attributes:**
 - `foodItems: List<FoodItem>`: A collection of all food items.
- **Methods:**
 - `+getFoodItems(): List<FoodItem>`: Retrieves the list of food items for browsing.

3. FoodItem:

- Represents individual food items in the menu.
- **Attributes:**
 - `itemID: int`: Unique identifier for the food item.
 - `itemName: String`: Name of the food item.
 - `price: float`: Price of the food item.
 - `description: String`: Description of the food item.
- **Methods:**
 - `+getDetails(): String`: Returns the details of the food item.

• Relationships:

- **Admin ↔ FoodItem**: The Admin class performs CRUD operations on FoodItem instances (association).
- **Menu ↔ FoodItem**: The Menu class contains multiple FoodItem instances (composition).

2.2 Screenshot of SQL Table

The following screenshot represents the structure of the SQL tables used in the **GreenGarden Food Delivery System**:

- **Food Items Table**: Contains information about available food items.
- **Admin Table**: Stores admin credentials and related data.

<div><div>⏪</div><div>⏩</div></div>			id	name	description	price	image_path	rating
<input type="checkbox"/>	<div><div><div>Edit</div></div><div><div>Copy</div></div><div><div>Delete</div></div></div>		1	Grilled Chicken	Fresh asparagus with a poached egg and hollandaise...	11.00	assets/food_1.webp	3.50
<input type="checkbox"/>	<div><div><div>Edit</div></div><div><div>Copy</div></div><div><div>Delete</div></div></div>		2	Vegetable Salad	Classic Caesar salad with fresh croutons.	10.00	assets/food_2.webp	0.00
<input type="checkbox"/>	<div><div><div>Edit</div></div><div><div>Copy</div></div><div><div>Delete</div></div></div>		3	Endive Salad	Endive with blue cheese, walnuts, and vinaigrette.	10.99	assets/food_3.webp	5.00
<input type="checkbox"/>	<div><div><div>Edit</div></div><div><div>Copy</div></div><div><div>Delete</div></div></div>		4	Grilled Halloumi	Grilled halloumi served on a bed of fresh vegetabl...	13.99	assets/food_4.webp	4.00
<input type="checkbox"/>	<div><div><div>Edit</div></div><div><div>Copy</div></div><div><div>Delete</div></div></div>		5	Spinach Lasagna Rolls	Lasagna rolls filled with spinach and ricotta.	11.99	assets/food_5.webp	3.00
<input type="checkbox"/>	<div><div><div>Edit</div></div><div><div>Copy</div></div><div><div>Delete</div></div></div>		6	Chicken Wrap	Juicy chicken wraps with onions and fresh herbs.	9.99	assets/food_6.webp	0.00

<div><div><div>↔T↔</div><div>▼</div></div></div>				id	email	password
<div><div><div><div><div></div></div></div><div><div>Edit</div><div>Copy</div><div>Delete</div></div></div></div>	1	sulymansifat@gmail.com	greengarden			

3.0 Technical Analysis

3.1 Software Requirements

- **Frontend Technologies:** HTML, CSS (Tailwind CSS), JavaScript, Flowbite UI components.
- **Backend Technologies:** PHP (for server-side scripting), MySQL (for database management).
- **Development Tools:** Visual Studio Code, phpMyAdmin.
- **Testing Tools:** Postman (for API testing), Selenium (for UI testing).
- **Browser Compatibility:** Modern browsers such as Google Chrome, Mozilla Firefox, and Microsoft Edge.

3.2 Hardware Requirements

- **Server Requirements:**
 - **Minimum:** Dual-core CPU, 4GB RAM, 20GB HDD/SSD.
 - **Recommended:** Quad-core CPU, 8GB RAM, 50GB SSD.
- **Client Requirements:**
 - **Minimum:** Device with a modern web browser, 1GB RAM.
 - **Recommended:** Mobile phone, tablet, or computer with an updated browser.

3.3 Configuration

- **Server Environment:** Apache or NGINX (XAMPP or WAMP for local development).
 - **Database Configuration:** MySQL 5.7 or higher for storing food items, order details, and customer information.
 - **Deployment:** Can be deployed on cloud platforms such as AWS, Azure, or a VPS provider with LAMP stack support.
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4.0 Cost Analysis

The **GreenGarden Food Delivery System** involves the following estimated costs:

Category	Estimated Cost
Domain Registration	\$10/year
Hosting Service	\$50/month
Development Team	\$5,000 (one-time cost)
Maintenance	\$500/year
UI/UX Design	\$300 (one-time cost)
Security Certificates	\$100/year
Total Estimated Cost	\$6,360

These costs ensure a smooth and secure food ordering environment for customers and effective operations management for administrators.

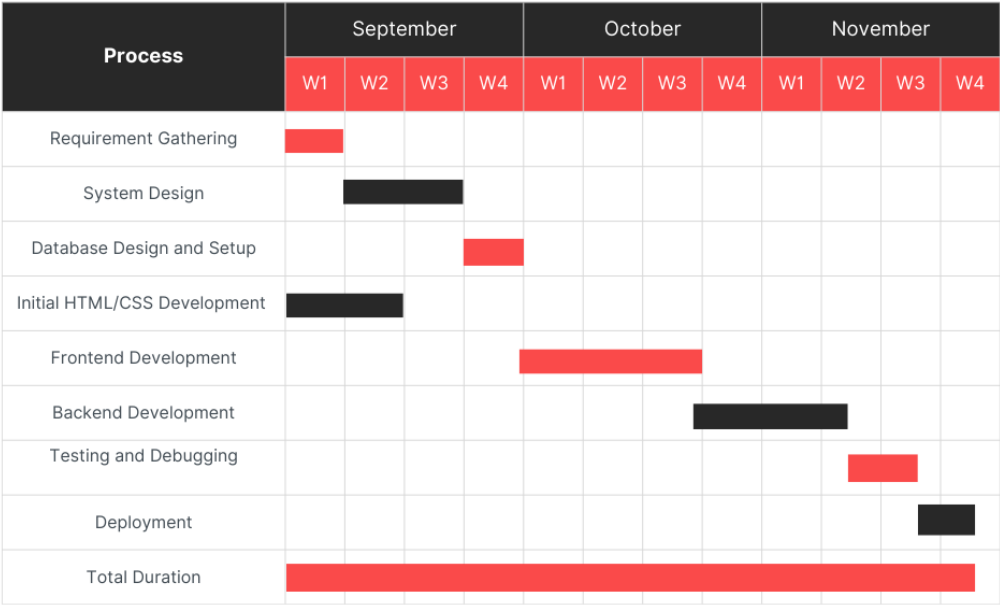
5.0 Payment Terms

We propose the following payment terms for the development of the application:

1. **10%** - To be paid upon acceptance of this proposal.
 2. **40%** - To be paid upon signing of the application development agreement.
 3. **25%** - To be paid upon demonstrating 70% completion of the application.
 4. **25%** - To be paid upon the completion of the application.
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6.0 Project Timeline

The **GreenGarden Food Delivery System** development follows a structured timeline to ensure all deliverables are met efficiently. The Gantt chart outlines the different phases of the project:



Gantt Chart Graph

Detailed Breakdown of Gantt Chart Tasks:

- 1. Requirements Gathering (1 week):**
 - Understand the project's goals and requirements by identifying system features, customer needs, and admin functionalities.
 - Includes discussions, interviews, and requirements documentation to define the scope of the GreenGarden Food Delivery application.
- 2. System Design (2 weeks):**
 - Create the system architecture, user interface designs, and workflow diagrams.
 - Design Unified Modeling Language (UML) diagrams, including wireframes and system architecture to outline the application's components and their relationships.
- 3. Database Design and Setup (1 week):**
 - Design the database schema, including tables, constraints, and relationships for entities such as food items, orders, users, and ratings.
 - Set up the environment to ensure data consistency, integrity, and efficient management.
- 4. Initial HTML/CSS Development (2 weeks):**

- Build the basic frontend to create an initial version of the system's interface for presentation to the teacher on September 14, 2024.
 - 5. **Frontend Development (3 weeks):**
 - Develop advanced user interfaces using **HTML**, **CSS (Tailwind CSS)**, and **JavaScript**, ensuring responsiveness.
 - The frontend includes customer-facing features such as browsing food items, adding items to the cart, and sign-in/sign-up forms, as well as admin functionalities.
 - 6. **Backend Development (3 weeks):**
 - Implement server-side logic using **PHP**, including CRUD operations for food items, user authentication, and integration with **MySQL**.
 - The backend will handle business logic, data processing, and interactions between customers, admins, and the database.
 - 7. **Testing and Debugging (1 week):**
 - Conduct **unit testing**, **system testing**, and **UI testing** to ensure that the application meets all functional requirements.
 - Identify and resolve issues to guarantee smooth user experience and reliable performance. This also includes regression testing after updates.
 - 8. **Deployment (1 week):**
 - Deploy the system to a live environment, including configuring hosting, setting up databases, ensuring server readiness, and performing final checks.
 - This ensures that the **GreenGarden Food Delivery System** is fully operational, live, and accessible to users with secure and efficient performance.
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7.0 Responsibility

This application is commissioned by **GreenGarden Food Delivery System**. All responsibilities rest with GreenGarden Food Delivery System. The application will be developed by **Md. Sulyman Islam Sifat** and **Sultana Siddique Chaity**, as a project of the **GreenGarden Development Group**, supervised by **Mr. Golam Rabbany**.

7.1 Contact Information

You can get in touch with us through any of the following ways:

- **By Phone:**
 - **Md. Sulyman Islam Sifat:** 01989594541
- **By Email:**
 - sifat-15-4004@diu.edu.bd

We look forward to hearing from you soon!

8.0 Agreement Signatures

Client Signature

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Md. Sabur Khan

Founder & Chairman, Daffodil Family

Supervisor Signature

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Mr. Golam Rabbany

Lecturer, Daffodil International University

Developer Signatures

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Md. Sulyman Islam Sifat

Student, Daffodil International University

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Sultana Siddique Chaity

Student, Daffodil International University