

---

## Greenery

---



### Bangladesh University of Business and Technology(BUBT)

CSE 400 - Software Development IV

Under The supervision of,

**Tahsina Tabassum**

Assistant Professor

Department of Management

BUBT

By

Prionto Arefin Prio ID:19202103405

Md. Nafees Ashker ID:19202103403

Md. Mamun Miah ID:19202103422

Md. Shahin Alam ID:19202103340

Mushfiq Alam Sami ID:19202103420

Department of Computer Science and Engineering

Bangladesh University of Business and Technology

21 July 2023

## Declaration

We do hereby declare that the project works presented here with entitled as, “Greenery” are the results of our own works. We further declare that the project has been compiled and written by us and no part of this project has been submitted elsewhere for the requirements of any degree, award or diploma or any other purposes except for this project. The materials that are obtained from other sources are duly acknowledged in this project.

### Signature of Developers

---

Prionto Arefin Prio, Id:19202103405

---

Md. Nafees Ashker, Id:19202103403

---

MD. Mamun Miah, Id:19202103422

---

Mushfiq Alam Sami, Id:19202103420

---

Md. Shahin Alam, Id:19202103340

## Approval

I do hereby declare that the project works presented here with entitled as, "Plant ordering application", are the outcome of the original works carried out by Prianto Arefin Prio, Md. Nafees Ashker, Md. Mamun Miah, Mushfiq Alam Sami and Md. Shahin Alam under my supervision. I further declare that no part of this project has been submitted elsewhere for the requirements of any degree, award or diploma or any other purposes except for this project. I further certify that the dissertation meets the requirements and standard for the degree of Doctor of Philosophy in Computer Science and Engineering.

---

Chairman

Md. Saifur Rahman

Assistant Professor and Chairman

Department of Computer Science Engineering

Bangladesh University of Business and Technology (BUBT)

---

Supervisor

Tahsina Tabassum

Assistant Professor

Department of Management

Bangladesh University of Business and Technology (BUBT)

## Acknowledgement

We are deeply thankful to Bangladesh University of Business and Technology (BUBT) for providing us such a wonderful environment to peruse our project. We would like to express our sincere gratitude to **Tahsina Tabassum**, Assistant Professor, Management, BUBT. We have completed our project with her help. We found the project area, topic, and problem with her suggestions. She guided us with our study, and supplied us many articles and academic resources in this area. She is patient and responsible. When we had questions and needed her help, she would always find time to meet and discuss with us no matter how busy she was. We also want to give thanks to our CSE department. Our department provide us logistic supports to complete our project with smoothly. We would also like to acknowledge our team members for supporting each other and be grateful to our university for providing this opportunity for us.

## **Abstract**

"Greenery" is a plant ordering application that offers a user-friendly platform for browsing, selecting, and ordering a wide variety of plants for homes, gardens, and workplaces. With a vast catalog of plants, the app provides detailed descriptions, images, and valuable information about each species. It also features a wishlist function, personalized recommendations, secure payment options, and multiple delivery choices. The app partners with local nurseries and reliable delivery services to ensure prompt and efficient delivery, maintaining freshness and quality. The social platform encourages community engagement and knowledge sharing, creating a supportive community for like-minded individuals. "Greenery" caters to businesses and organizations seeking to enhance their spaces with greenery, offering bulk ordering options, customized plant packages, and corporate gifting services.

# Contents

<b>Declaration</b>	<b>iii</b>
<b>Approval</b>	<b>iv</b>
<b>Dedication</b>	<b>v</b>
<b>Acknowledgement</b>	<b>v</b>
<b>Abstract</b>	<b>vi</b>
<b>List of Figures</b>	<b>viii</b>
<b>1 Introduction</b>	<b>1</b>
1.1 Name of the project . . . . .	1
1.2 Vision, Mission, Objective . . . . .	2
1.2.1 Vision . . . . .	2
1.2.2 Mission . . . . .	2
1.2.3 Objective . . . . .	3
<b>2 Overview</b>	<b>4</b>
2.1 Introduction of the team member with task and designation . . . . .	4
<b>3 Data analysis</b>	<b>5</b>
3.1 Data gathering technique . . . . .	5
3.2 Input Design . . . . .	5
3.3 Output design . . . . .	6
3.4 Data Organization . . . . .	7
<b>4 Implementation</b>	<b>9</b>
4.1 GANTT Chart . . . . .	9
4.2 Evaluation . . . . .	9

## List of Figures

2.1	Team member role and designation . . . . .	4
4.2	GANTT Chart . . . . .	9

# 1 Introduction

## 1.1 Name of the project

The **"Greenery"** Plant purchase System project aims to create an efficient and user-friendly platform that allows customers to purchase a wide variety of plants and greenery products online. The system will provide a seamless experience for users to browse through different plant categories, place orders, and have the products delivered to their doorstep. This project seeks to promote sustainable living, encourage greenery adoption, and contribute to environmental conservation by connecting individuals with nature through the easy accessibility of plants.

- **User Registration and Authentication:** Implement a secure user registration and login system for customers and administrators, allowing users to create accounts and log in to manage their orders and preferences.
- **Product Catalog:** Create a comprehensive catalog with detailed plant information, including names, descriptions, care instructions, images, and pricing.
- **Search:** Create a robust search functionality that enables users to find specific plants based on their names, characteristics, or care requirements.
- **Shopping Cart and Order Management:** Create a user-friendly shopping cart system enabling easy item addition, removal, total cost viewing, quantity modification, and order management.
- **Responsive Design:** Ensure the platform is accessible and responsive across various devices, including desktops, tablets, and mobile phones.
- **Data Security and Privacy:** Implement robust security measures to protect user data, including SSL encryption, secure storage of sensitive information, and adherence to privacy regulations.



## **1.2 Vision, Mission, Objective**

### **1.2.1 Vision**

Our vision at Greenery is to cultivate a world where the beauty and benefits of plants are effortlessly accessible to everyone. We aspire to be the leading plant ordering application, empowering individuals to enrich their lives with nature's wonders, fostering a greener planet, and inspiring a lifelong love for gardening. At Greenery, vision is to create a trans-formative and immersive digital platform that connects plant enthusiasts with the beauty and serenity of nature. We aspire to be the leading plant ordering application, revolutionizing the way people discover, acquire, and cultivate plants, fostering a deeper appreciation for green living and sustainable practices.

### **1.2.2 Mission**

At Greenery, our mission is to provide a seamless and inspiring platform for plant enthusiasts to explore, order, and care for a diverse range of plants, fostering a deeper connection with nature while promoting sustainable and eco-friendly gardening practices. Through our user-centric approach, innovative technology, and dedication to environmental responsibility, we aim to be the go-to destination for individuals seeking to bring the beauty and benefits of greenery into their lives.

Key Elements of the Mission:

- Our app simplifies plant ordering, making the entire journey effortless and enjoyable for customers.
- Greenery offers valuable plant care resources, tips, and educational content to deepen connections with plants and gardening.
- Explore a diverse plant variety, catering to tastes and preferences, showcasing classic favorites and rare finds for user excitement.

### 1.2.3 Objective

Greenery aims to provide a user-friendly platform for plant ordering, offering a diverse plant selection, high-quality products, and education resources to cater to customers' tastes and preferences. The platform partners with reputable nurseries and suppliers to ensure every product meets stringent quality standards. Greenery also provides valuable plant care resources, gardening tips, and educational content to help customers nurture and care for their plants effectively. Greenery promotes environmental sustainability by promoting sustainable gardening practices and eco-friendly product options. Efficient order fulfillment is crucial, and Greenery works with efficient logistics partners to ensure prompt and accurate delivery. Customer support excellence is also a top priority, with a focus on responsiveness, addressing concerns, and providing solutions that exceed expectations. Greenery fosters a thriving community of plant enthusiasts through forums, social media, and events, fostering a space for users to share their passion and exchange knowledge. Continuous innovation is essential for Greenery to stay at the forefront of technology and adapt to changing user needs. The platform aims to expand its reach beyond geographical boundaries, contributing to the global green movement. Greenery's business growth and sustainability are also key objectives. The company aims to achieve sustainable growth and profitability by establishing long-term partnerships, optimizing operations, and making strategic decisions to ensure the app's success and longevity. By fulfilling these objectives, Greenery aims to become the preferred destination for plant enthusiasts, promoting a greener, more connected world.

## 2 Overview

### 2.1 Introduction of the team member with task and designation

Name	ID	Intake & Section	Task	Designation
Md. Nafees Ashker	19202103403	44 & 06	Developing the Software	Full-Stack Developer
Prionto Arefin Prio	19202103405	44 & 06	Analyzing the Data sets	Data Analyst
Md. Mamun Miah	19202103422	44 & 06	Testing the Software	Software Tester
Mushfiq Alam Sami	19202103420	44 & 06	Analyzing the Software Business	Business Analyst
Md. Shahin Alam	19202103340	44 & 06	Writing the Contents	Content Writer

Figure 2.1: Team member role and designation

**Identification of Designations:** The full-stack developer has done the overall development of our project, the data analyst has done the database work, the software tester has done the verification and validation of the software, the business analyst has planned how to keep the software running very well in the market, and the content writer has taken notes according to customer feedback and delivered it to the developer for modification.

## 3 Data analysis

### 3.1 Data gathering technique

- **Literature Review:** Start by conducting a thorough literature review. This involves reading books, research papers, articles, and other written sources relevant to our report's topic. It provides a foundation for our understanding and allows us to cite credible sources in our report.
- **Surveys:** Design and conduct surveys to collect data directly from respondents. Surveys can be administered in person, via email, or using online survey platforms. This technique allows you to gather quantitative data and get insights from a specific target audience.
- **Case Studies:** Analyze real-life case studies related to our app's subject. Case studies provide detailed information about specific instances or situations and can offer valuable insights into real-world scenarios.
- **Data Analysis:** If your report involves numerical data, consider analyzing existing datasets relevant to your topic. You can use statistical tools to interpret and present the data in a meaningful way.

### 3.2 Input Design

Creating a data input design involves designing a user-friendly and efficient interface for users to input data into a system or application. Whether you're designing a web form, a mobile app interface, or any other data input mechanism, the following steps can help you create an effective data input design:

- Understand requirements thoroughly, both functional and non-functional.

- Conceptualize the architecture by thinking about components and implications.
- Divide the architecture into manageable slices for Agile development.
- Create prototypes to validate and refine the design iteratively.
- Identify and quantify non-functional requirements to shape the system's characteristics.

### **3.3 Output design**

Creating an effective output design involves presenting information in a clear, organized, and meaningful way to the users of a system or application. Consider the following steps to create a well-designed output:

- Understand the specific needs and requirements of the users who will be consuming the output.
- Organize the information in a logical and structured manner.
- Maintain consistency in formatting, font styles, colors, and other design elements throughout the output.
- Users should be able to understand the significance of the information.
- Use feedback to refine and improve the design.

### 3.4 Data Organization

Data organization is the process of structuring and arranging data in a systematic and meaningful way to facilitate efficient data management, storage, retrieval, and analysis. Proper data organization is crucial for maintaining data integrity, improving data accessibility, and supporting data-driven decision-making. Here are some key aspects and best practices for data organization:

- **Data Models:** Choose an appropriate data model that aligns with the nature of your data and the requirements of your applications. Common data models include relational (tables with rows and columns), hierarchical, network, and document-based (NoSQL) models.
- **Data Normalization:** In relational databases, consider normalizing the data to eliminate redundancy and improve data integrity. This involves breaking down data into separate tables to minimize data duplication.
- **Data Indexing:** Implement proper indexing on frequently used fields to speed up data retrieval operations. Indexing allows for quicker searches and can significantly improve the performance of large databases.
- **Data Categorization:** Organize and categorize data based on common characteristics or attributes. This can simplify data retrieval and make it easier to manage large datasets.
- **Data Storage:** Choose appropriate data storage methods, such as databases, data warehouses, or data lakes, based on the volume, variety, and velocity of your data.
- **Folder and File Structures:** For file-based data organization, create a logical folder and file structure to store and manage data files efficiently. Use descriptive folder names and file names to improve data discoverability.
- **Version Control:** Implement version control mechanisms for important data files and documents to track changes, facilitate collaboration, and avoid data loss.

- Backup and Recovery: Establish robust backup and recovery procedures to protect against data loss due to system failures, human errors, or cybersecurity incidents.

## 4 Implementation

### 4.1 GANTT Chart

The gantt chart of our project shown below here:-

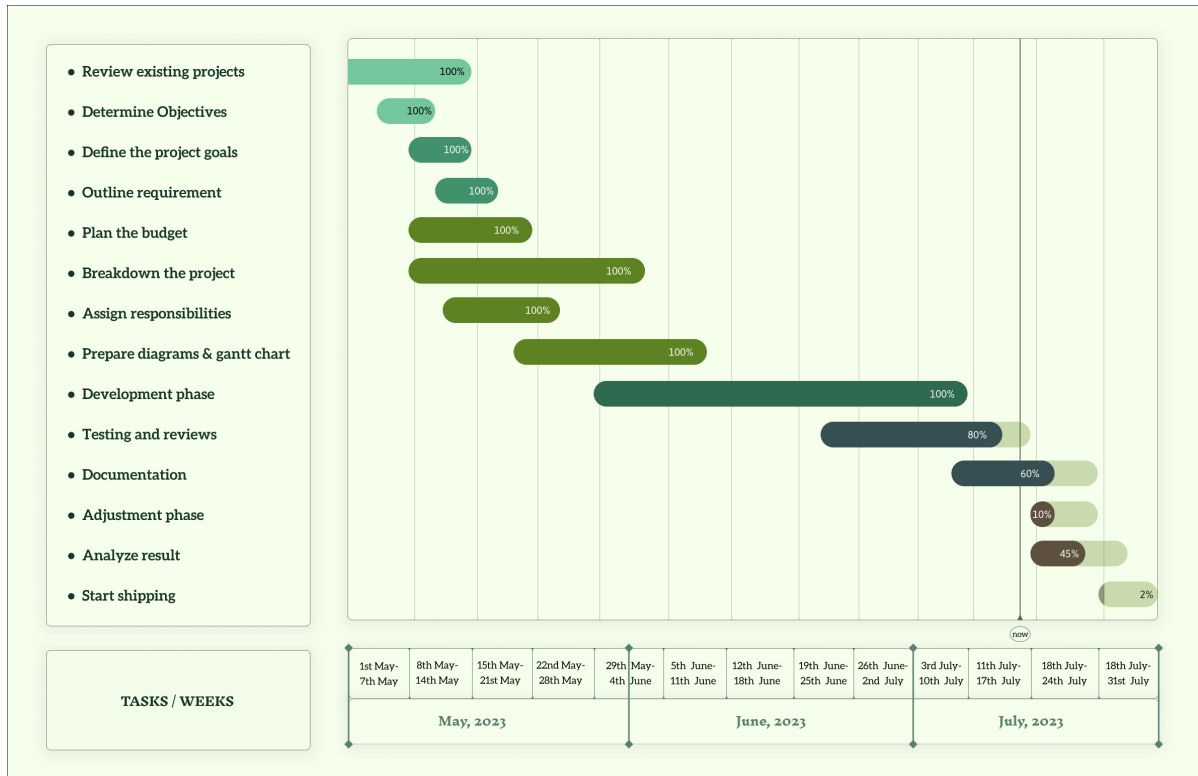


Figure 4.2: GANTT Chart

### 4.2 Evaluation

Software evaluation determines a software application or system's quality, usability, and effectiveness. It is an important step in the software development process because it determines whether the software meets the required standards and specifications and is fit for its intended purpose.

- Performance effectiveness: Create account, sign up, log in, Make order, search plants, and Make online payments, all required tasks are working properly. Our platform for plant ordering, offers a diverse plant selection, high-quality products, and education resources to cater to customer's desires. The home page's interface is user-friendly and It has a lot of adequate user capacity.



- **Performance efficiency:** Quickly the app responds to user interactions and commands. A responsive app provides a smooth and seamless user experience with minimal loading times. Under different network conditions, such as 3G, 4G, or Wi-Fi. It should adapt to varying network speeds and maintain functionality. Consider the performance of the app's backend servers and databases. Slow server response times can impact the overall app performance.
- **Ease of use:** Assess the overall UI design. Look for a clean and visually appealing interface that uses consistent design elements such as buttons, icons, and fonts. Avoid clutter and ensure that essential functions are easily accessible. The app handles errors or invalid inputs. Clear error messages should guide users on how to resolve issues without confusion.
- **Flexibility:** Assess whether the app offers customization options to users. This could include personalized product recommendations, customizable search filters, or the ability to save favorite plants or sellers. the app can handle increased user traffic and growing product catalogs. The app can handle increased user traffic and growing product catalogs. A flexible app should be able to scale its infrastructure and resources to accommodate more users and products without significant performance issues.
- **Quality of documentation:** The app provides user guides or manuals that explain how to use the app's features and functionalities. User guides should be clear, well-organized, and easy to understand, even for non-technical users. For developers, check if the app's source code is well-documented. Comments and inline explanations should make the codebase easy to understand and maintain.
- **Manufacturer support:** Assess the availability and responsiveness of customer support channels, such as email, phone, or live chat. A prompt and helpful customer service team can address user inquiries, concerns, and issues efficiently. The manufacturer provides comprehensive help documentation or knowledge base. This self-service resource should offer solutions to common problems and guide users in using the app effectively.