

System Requirement Specification

FARM BAZAAR

An Online Food Merchandise Store

SUBMITTED IN PARTIAL

FULLFILLMENT OF

DIPLOMA IN ADVANCED COOMPUTING (PG-DAC)



: PRESENTED BY :

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1. Introduction

1.1. Company Profile:

Foodies Unites is a restaurant company which provides delivery services all over the state. It delivers food to all type's customers, be it small scale like a single customer or large scale like a group of people enjoying the party

Existing System:

- Customers traditionally visit physical markets or grocery stores to purchase vegetables, grains, and fruits.
- Shopping in this manner requires time and manual effort, as customers need to physically browse through products, select items, and make payments.
- In remote areas, access to fresh produce might be limited, and customers may have to settle for whatever is available locally.
- There's often a lack of transparency regarding the source and quality of the produce, leading to uncertainty for consumers.
- The absence of a digital platform means customers miss out on the convenience of online ordering and payment methods.

Need for System:

- A digital platform like FarmBazaar is essential to modernize the process of purchasing vegetables, grains, and fruits.
- It addresses the need for convenience, enabling customers to browse and buy products from the comfort of their homes.
- With FarmBazaar, customers gain access to a wide variety of fresh produce sourced directly from farms, ensuring quality and authenticity.
- The platform eliminates the need for physical visits to markets or stores, saving customers time and effort.
- In regions with limited access to fresh produce, FarmBazaar bridges the gap by providing a reliable online marketplace.

- By offering detailed product descriptions, images, and customer reviews, FarmBazaar enhances transparency and helps customers make informed decisions.
- Additionally, the digital platform streamlines the ordering and payment process, reducing the dependency on manual labor and enhancing efficiency.

1.3. Scope of Work:

The scope of the FarmBazaar project encompasses the development of a comprehensive online marketplace for purchasing vegetables, grains, and fruits. The primary focus will be on establishing a robust system capable of facilitating seamless ordering and delivery processes to enhance customer satisfaction and operational efficiency.

1.4. Operating Environment:

Hardware/Software Interface:

This section lists the minimum hardware and software requirements needed to run the system efficiently.

Hardware Interface:

Processor: Intel Core i3 or equivalent

Storage: 100 MB of free hard-drive space

RAM: 4 GB or higher

Software Interface:

Operating System: Windows 10 or above, macOS, or Linux

Web Browser: Google Chrome, Mozilla Firefox, Safari, or Microsoft Edge

Drivers: Java Runtime Environment

Integrated Development Environment: Compatible with any modern IDE or text editor

Detailed Description of Technology Used:

Front-End:

- **React:** Utilized for building the user interface of the web application, providing a fast and interactive experience for customers.
- **HTML:** Employed for structuring the web pages and content.
- **CSS:** Utilized for styling and designing the presentation of web pages, ensuring adaptability across various devices.
- **JavaScript (JS):** Utilized for adding interactivity and dynamic features to the web pages.

Back-End:

- **Spring Boot:** Employed for developing robust and scalable backend services, facilitating easier setup, configuration, and deployment.
- **MySQL:** Utilized for storing and managing the information of admin, restaurant owners, and end-users (customers), ensuring data persistence and reliability.
- **Server: Apache Tomcat 8.5:** Utilized for hosting and deploying the web application, providing support for Servlet and JavaServer Pages (JSP) specifications.

2. Proposed System

2.1. Proposed System:

The "FarmBazaar" is designed to revolutionize the agricultural industry by providing a digital platform for farmers to connect directly with consumers. This system enables farmers to expand their reach and increase sales opportunities while reducing operational costs. Additionally, customers benefit from the convenience of browsing a diverse range of fresh produce and placing orders with ease.

2.1.1. Feasibility Study:

A feasibility study is conducted to assess the practicality and viability of a proposed project or system. It aims to objectively evaluate the strengths and weaknesses of the project in various aspects.

- **Technical Feasibility:** The proposed FarmBazaar Online Marketplace will utilize open-source technologies such as React for the frontend, Spring Boot for the backend, and MySQL for the database. These technologies are widely used and supported, ensuring technical feasibility. Additionally, the use of HTML, CSS, JavaScript, and Java Server Pages (JSP) for the development of the platform ensures compatibility with standard web technologies, further enhancing technical feasibility.
- **Economic Feasibility:** An analysis of the project's economic feasibility indicates favourable outcomes. By implementing the FarmBazaar platform, significant savings in working hours can be achieved for both farmers and customers. The automation of various processes, along with streamlined operations, will lead to increased efficiency and reduced labour costs. Furthermore, the project is expected to yield positive returns on investment, making it economically feasible.
- **Operational Feasibility:** The operational feasibility of the FarmBazaar platform is assessed by studying its usability and effectiveness in real-world scenarios. Feedback from users,

including farmers, customers, and platform administrators, will be crucial in evaluating operational feasibility. The intuitive user interface and streamlined processes are expected to receive positive feedback, as they save time and effort for all stakeholders involved. Thus, the FarmBazaar platform is deemed operationally feasible.

In conclusion, the feasibility study indicates that the FarmBazaar Online Marketplace project is technically, economically, and operationally feasible. It holds the potential to deliver significant benefits by providing a convenient and efficient platform for buying and selling fresh produce.

2.2. Objectives of the System:

Workforce Optimization: The system aims to minimize the number of employees required behind the counter, thereby optimizing workforce allocation and reducing labour expenses for the business.

Cost Reduction: By automating various processes and minimizing reliance on manual labour, the system will contribute to reducing overall labour costs, leading to improved financial efficiency for the organization.

Error Reduction: Leveraging machine-based processing, the system significantly reduces the likelihood of human errors, thereby enhancing accuracy and reliability in order processing and transaction management.

Enhanced Efficiency: The system's streamlined processes and fast execution capabilities contribute to reducing queues at the counter, ensuring prompt service delivery and maximizing throughput. Additionally, the optimal design of screens ensures efficient handling of customer transactions, further enhancing operational efficiency.

2.3. User Requirements:

Web-Based Application: The FarmBazaar Online Marketplace is a web-based platform accessible through internet browsers.

- **Browser Compatibility:** The system must be accessible using Internet Explorer (IE) version 10.0 and above. It should also be compatible with Mozilla Firefox version 31 and above.

Additionally, the system should support Google Chrome for browsing.

- **User Knowledge:** Users accessing the system should have basic knowledge of how to navigate and use web-based applications. Familiarity with common browsing functions such as searching, clicking, and filling out forms is required.
- **Accessibility:** The system should be accessible from any device with an internet connection, including desktop computers, laptops, tablets, and smartphones. Accessibility features should be implemented to ensure usability for users with disabilities, adhering to accessibility standards such as WCAG (Web Content Accessibility Guidelines).
- **Security:** The system must incorporate robust security measures to protect user data and transactions. Secure communication protocols (HTTPS) should be implemented to encrypt data transmission over the internet. User authentication mechanisms, such as username and password, should be in place to ensure authorized access to the system.
- **Performance:** The system should be designed to handle multiple concurrent users without significant degradation in performance. Response times for loading pages and processing user requests should be optimized to provide a seamless user experience.
- **Compatibility:** Compatibility testing should be conducted to ensure the system functions correctly across different operating systems and device types. Compatibility with various screen sizes and resolutions should be ensured for a consistent user experience across devices.
- **Usability:** The user interface should be intuitive and user-friendly, allowing users to easily navigate the system and perform tasks efficiently.

2. Tasks for Iterative Phases/Development Cycle

- **Concept:** Define the concept of the FarmBazaar Online Marketplace project, outlining its objectives, scope, and key features. Prioritize project requirements and determine the initial roadmap for development.
- **Inception:** Discuss and finalize the initial requirements for the project, including features, functionalities, and technical specifications. Identify suitable technologies and frameworks to be used for frontend, backend, and database development. Plan the timeline and milestones for the project, including iterations and release cycles.
- **Iteration/Construction:** Start the development process based on the iteration requirements defined in the project backlog. Implement frontend components using React framework, ensuring responsiveness and user interactivity. Develop backend services using Spring Boot framework, integrating with the MySQL database for data storage and retrieval. Conduct regular sprint meetings to review progress, address challenges, and gather feedback for iterative improvements. Continuously refine and enhance the system based on user feedback and evolving requirements.
- **Release:** Perform quality assurance testing to ensure the stability, functionality, and usability of the web application. Conduct thorough testing of all features and functionalities, including unit testing, integration testing, and user acceptance testing. Address any identified issues or bugs and make necessary adjustments to ensure a smooth and error-free user experience. Prepare for the deployment of the web application into the production environment, ensuring proper configuration and readiness for launch.

- **Production:** Launch the FarmBazaar Online Marketplace into the production environment following successful testing and approval. Monitor the performance and stability of the system in the production environment, addressing any issues or concerns promptly. Provide ongoing support and maintenance for the software, including bug fixes, updates, and enhancements as needed. Gather user feedback and data analytics to inform future iterations and improvements to the platform.
- **Retirement:** Evaluate the lifecycle of the software and determine when it is no longer needed or relevant. Plan for the retirement of the software, including data migration, system decommissioning, and communication with stakeholders. Document lessons learned and insights gained from the project to inform future software development initiatives. Ensure a smooth transition and closure of the project in alignment with organizational goals and objectives.