

2.2 User Characteristics

The online pastry management system will cater to various users involved in pastry operations and management. The user characteristics can be categorized as follows:

1. Pastry Owners and Managers:
 - Access the system to manage overall bakery operations efficiently
 - Utilize features and functionalities across multiple modules to monitor and control business processes
 - Track inventory levels, stock management, and generate reports on usage and waste
 - Record sales transactions, generate receipts, and track sales by product, customer, or date
 - Create and edit recipes, store ingredient lists, and calculate ingredient costs and yields
 - Manage staff schedules, record attendance and time off, process payroll, and conduct performance evaluations
 - Access financial reports, monitor expenses and revenues, manage budgets, and handle accounts payable and receivable
 - Create and manage customer accounts, implement loyalty programs and discounts, and collect and respond to customer feedback and reviews
2. Staff and Employees:
 - Use the system for recording attendance, managing schedules, and checking work-related information
 - Access relevant modules based on their roles and responsibilities within the bakery
3. Customers:
 - Interact with the system indirectly through features like loyalty programs, discounts, and feedback submission
 - Provide feedback and reviews, which can be accessed and responded to by bakery owners and managers
 - It is important to note that the specific user characteristics and access privileges within the system may vary depending on the roles and permissions assigned by the bakery owners and managers.

2.3 Assumptions:

In developing the online pastry management system, certain assumptions are made based on the information provided:

1) Technological Assumptions:

- It is assumed that the target pastries have access to the necessary technological infrastructure, such as computers, internet connectivity, and compatible devices (smartphones, tablets, etc.).
- The assumption is made that the pastries have the technical proficiency to use and navigate the online pastry management system effectively, or they are willing to invest in training their staff accordingly.

2) Data Security and Privacy Assumptions:

- It is assumed that appropriate security measures will be implemented to protect sensitive data, such as customer information, financial records, and employee data.
- The assumption is made that the pastry owners and managers understand the importance of data security and privacy and will adhere to best practices in safeguarding confidential information.

3) Integration Assumptions:

- It is assumed that the online pastry management system may need to integrate with existing systems, such as accounting software or payment gateways, to streamline operations.
- The assumption is made that the necessary integration interfaces and protocols are available or can be developed to ensure smooth communication between the online pastry management system and other relevant systems.

4) User Adoption Assumptions:

- It is assumed that the users, including pastry owners, managers, staff, and customers, will embrace and adopt the online pastry management system as a tool to enhance their bakery operations.
- The assumption is made that sufficient training, support, and documentation will be provided to facilitate user understanding and acceptance of the system.

5) Customization Assumptions:

- It is assumed that the online pastry management system will offer customizable features and modules to cater to the specific needs of each bakery.
- The assumption is made that the system will be flexible enough to accommodate variations in workflows, recipes, pricing structures, and other bakery-specific requirements.

These assumptions serve as a basis for planning and development, but it is important to validate them during the implementation process and make adjustments as necessary to align with the unique circumstances of each bakery.

2.4 Constraints:

In the development and implementation of the online pastry management system, certain constraints may be present. These constraints can impact the design, functionality, and deployment of the system. Some common constraints to consider include:

1. Budgetary Constraints:

- The availability of financial resources may impose limitations on the scope of development, customization, and ongoing maintenance of the online pastry management system.
- Budget constraints may impact the selection of technologies, the level of system scalability, and the extent of features and functionalities that can be included.

2. Time Constraints:

- Project timelines and deadlines may impose restrictions on the development and deployment of the system.
- Time constraints may impact the ability to conduct comprehensive testing, implement all desired features, or accommodate changes or modifications requested during the development process.

3. Resource Constraints:

- Availability of skilled development resources, such as developers, designers, and project managers, may be limited, potentially impacting the speed and quality of system development.
- Limited hardware resources or infrastructure may impact system performance, scalability, or availability.

4. Compatibility Constraints:

- The online pastry management system may need to be compatible with existing hardware, software, or systems already in use by the bakery.
- Compatibility constraints may require additional efforts for integration, data migration, or customization to ensure seamless operations.

5. Regulatory Constraints:

- Compliance with industry-specific regulations and standards, such as data protection laws or financial regulations, may impose constraints on system design and functionality.
- Regulatory constraints may require additional security measures, data handling procedures, or reporting capabilities to ensure compliance.

6. User Skill and Adoption Constraints:

- The proficiency level and familiarity of bakery owners, managers, and staff with technology may impose limitations on the complexity and usability of the system.
- User skill and adoption constraints may require intuitive interfaces, user-friendly documentation, and training programs to facilitate system understanding and usage.

7. Scalability Constraints:

- The system should be designed and implemented in a way that allows for future scalability and growth of the bakery.
- Scalability constraints may require consideration of factors such as increasing data volumes, expanding customer base, or adding new bakery locations.

It is important to identify and address these constraints during the planning and development phases to ensure the successful implementation and utilization of the online pastry management system within the given limitations.

2.5 Dependencies:

In the development and implementation of the online pastry management system, there may be dependencies on various factors and components. These dependencies can impact the timeline, functionality, and success of the system. Some common dependencies to consider include:

1) Technology Dependencies:

- The online pastry management system may rely on specific technologies, frameworks, or programming languages for its development and functionality.
- Dependencies on technology may include compatibility with certain operating systems, databases, web servers, or other software components.

2) Data Dependencies:

- The system may depend on accurate and up-to-date data to perform its functions effectively.
- Data dependencies may include integration with external data sources, synchronization with inventory or sales data, or data input and management by bakery staff.

3) Integration Dependencies:

- The online pastry management system may need to integrate with other existing systems or third-party applications used by the bakery.
- Integration dependencies may include payment gateways, online ordering platforms, accounting software, or customer relationship management (CRM) systems.

4) External Service Dependencies:

- The system may depend on external services or APIs (Application Programming Interfaces) to provide specific functionality or data.
- External service dependencies may include geolocation services, email delivery services, SMS gateways, or cloud storage services.

5) Resource Dependencies:

- The development and implementation of the system may require the availability of specific resources, such as hardware, software licenses, development tools, or testing environments.
- Resource dependencies may impact the progress and quality of the system development, as well as ongoing maintenance and support.

6) Stakeholder Dependencies:

- The system may have dependencies on stakeholders, such as bakery owners, managers, or staff, who need to provide input, feedback, or approvals during the development process.
- Stakeholder dependencies may influence the system's design, functionality, and usability based on their specific requirements and preferences.

7) Regulatory or Legal Dependencies:

- The system's development and implementation may be subject to regulatory or legal requirements, such as data privacy laws, consumer protection regulations, or industry-specific guidelines.
- Compliance with regulatory or legal dependencies may require additional development efforts, security measures, or documentation.

Identifying and managing these dependencies is crucial to ensure a smooth development and implementation process for the online pastry management system. Proper coordination, communication, and planning are necessary to address these dependencies and ensure that the system functions effectively and meets the desired objectives.