Software Requirements Specification

for

Online Bakery System

Version 1.0 approved

Prepared by Team

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1. Introduction

1.1 Purpose

The Online Bakery system is based on ordering and selling bakery items. It provides the customers online ordering facilities from their homes. The system provides a convenient interface for User Registration, look through various categories, Items Search, filter items based on price or category, and Payment. The system has both admin and customer views.

1.2 Document Conventions

The list of standards and typographical conventions used in this SRS document.

Main Section Titles Font: Times New Roman Size: 20

Subsection Titles Font: Times New Roman Size: 16

Text Subheadings Font: Times New Roman Size: 14

Other Text Explanations Font: Times New Roman Size: 13

1.3 Intended Audience and Reading Suggestions

This SRS document is intended for:

- **Administrators** should have basic Programming Skills and Visual Basics to execute tasks. The admin can have access to any user profile, while the user cannot access either the admin profile or any user profile.
- **Users** who need the necessary Programming Skills and Visual Basic to execute tasks and who want to learn what this project will do. Users can only use the resources offered by the Administrator.
- **Developers** who can see the strengths and weaknesses of the project and can quickly see how to add additional functionality for potential development.
- It is also intended for the evaluators, professors, IT professionals, and future researchers who may use it as a guideline.

This SRS document also contains some information about the product like system features, scope, assumptions and dependencies, and other information about the product. We suggest that the reader must read the document very well to understand clearly all the information including the goal of the system, advantages, and how the system works.

1.4 Product Scope

The Online Bakery System is developed by keeping in mind the features of an e-commerce site. The online bakery system software project acts as a central database containing various bakery products. It provides customers with online shopping facilities from their homes**.** This application will also help the owner of the cake shops to manage their sales activity with great ease. This project aims to computerize sales operations and payments made to customers.

The main modules of the system include:

- **User Registration:** Users can register on the system and get their online account on site.
- **User Login:** Users can log in to the system and check various bakery items.
- **Product Categories:** The bakery products are arranged and can be viewed in categories.
- **Add to cart:** Users can add new items to the cart.
- **Custom Cake:** The user may order a custom cake as per his needed flavor, size, and shape on site.
- **Dummy Credit Card Payment**: After the total bill is calculated users can pay via credit card online.
- **Email confirmation:** On successful payment, a thank you message is sent to the user.

1.5 References

- https://nevonprojects.com/online-bakery-shop-system/
- https://www.freeprojectz.com/project-source-code-database-download/bakery-shop-management-system-project
- https://www.irjet.net/archives/V8/i4/IRJET-V8I4940.pdf

2. Overall Description

2.1 Product Perspective

Online bakery system is a web-based software where the customers can order bakery items like cake, Candys, bread and buns, snack items, etc.., from anywhere. It is a user-friendly website that saves time and cost. Customers cannot miss their favorite items while ordering through this website because customers can filter their favorite times. It will also help customers to remember their special days.

2.2 Product Functions

- Users (admin or customer) can log in to the system whenever they want to perform any functions
- Admin will be able to change the list of items available and their quantity
- Admin can view the customer's order details
- Customers can update their profile anytime they want
- Customers will be notified prior through their emails if they marked any events (like birthdays, anniversaries, etc.)
- Customers can design their own bakery items
- Customers can filter the items based on categories and varieties
- Customers can give ratings and feedback

2.3 User Classes and Characteristics

- **Admin** – Admin has full access to the system. Admin has to keep on updating the information (like updating the available items, cost, etc..) and has to maintain the system.
- **Customer** –customers have to register in order to place the order. They can order the item whenever they want. Customers can filter and categorize the list of items and they can customize their bakery items.

2.4 Operating Environment

Particulars	**Specifications**
Operating system	Windows 10
Processor	1GHz or High Processor
Hard disk	500 MB
RAM	512 MB

2.5 Design and Implementation Constraints

Online bakery system is running 24 hours a day. The information of all customers, items, and details must be available in the database that is accessed by the website. Software must be user-friendly and display the appropriate error message. Every customer must have a unique username and password. Customers must give a valid location to deliver the orders. It is mandatory to fill all the text boxes and it contains sufficient data. Data redundancy and the use of special/blank characters must be avoided.

2.6 User Documentation

Customers can get help from the user manual to use the system efficiently. The user manual also has a video that explains how the system works.

2.7 Assumptions and Dependencies

- The user must have a good internet connection to use the system
- The user has to login into the system in order to use any functions
- Only admin has full access to the website
- Customers must register only through the valid details
- Users can give feedback by experiencing the system

3. External Interface Requirements

The online bakery system provides a Flexible interface and it is user-friendly.

3.1 User Interfaces

- Login
- Registration
- View orders
- Customization of orders
- Filter items based on categories and varieties
- Select orders
- Payment option
- Place order
- Auto Generation of report
- Analyzing and suggesting items based on rating or feedback

  This system allows the user to reach the administrator anytime for getting the help they need.

3.2 Hardware Interfaces

- 1GHz or High processor
- 512 MB RAM & 500 MB Hard Disk

3.3 Software Interfaces

- Operating system - Windows 10.
- Front end -HTML,CSS
- Back end- Node js

3.4 Communications Interfaces

- Create applications to communicate with JDK, JRE, and operating systems.
- The response time for the occurrence of change will be more than 4 seconds in the database.
- The response time for accessing the database will be no more than 5 seconds.

4. System Features

4.1 Registration:

4.1.1 Description and priority:

The registration feature of the online bakery system allows external users to register a new user account. Registration is of **high priority** because only when a user is registered, He/She may be able to log in and place the order.

4.1.2 Stimulus and response

The external user will be asked to register only when he/she doesn't have an account. Once the external user registers, he can make use of the account at any time to access the website.

4.1.3 Functional requirements:

REQ 1: The external user needs to click the sign-up option to register.

REQ 2: The system provides the external user with the registration form with username, email id and the user should create a password for his account.

REQ 3: The user has to fill in the correct details in the form and submit it.
REQ 4: If all the details are entered correctly and if it is valid, An account will be created for the user to access the website.

Exceptions:

- Occurs when the user inputs an invalid entry or misses any entry into the form.
- Occurs if the user account already exists.

4.2 Login:

4.2.1 Description and priority:

The login feature of the online bakery system allows external users to log in to his/her account. This has equal priority to registration because only if the user is registered and logged in, he will be able to access the website and place the order.

4.2.2 Stimulus and response:

The user will be asked to log in only when he/she has an account. Once the external user logged in, he can make use of the account at any time to access the website.

4.2.3 Functional requirements:

REQ 1: The external user needs to click the **Login** option to log in.

REQ 2: The system provides the user with the login form with the email id and the password created during the registration process.

REQ 3: The user has to fill in the correct details in the form.

REQ 4: If all the details are entered correctly and if it is valid, The user will be able to access the website.

Exceptions:

- Occurs when the user inputs an invalid mail id or password.
- Occurs if the user account does not exist.

4.3 Managing the system:

4.3.1 Description and priority:

The admin manages the whole online bakery system. He can view the bakery items, manage items. Also, The admin can view the user's order details.

4.3.2 Stimulus and response:

The admin can view the bakery items, add a new item if needed, and delete it if it is out of stock. Also, The admin can view the user's order details.

4.3.3 Functional requirements:

REQ 1: Add item - The system shall have a feature for the admin to add items and their details such as the name of the item, short description, price, etc.

REQ 2: Remove item - The system shall have a feature for the admin to remove items once they move out of stock.

REQ 3: User and order information – The admin has the option to view the list of registered users. He can also view the orders made by the users.

4.4 Placing the order:

4.4.1 Description and priority:

This feature of the online Bakery system allows customers to order the items they need. This is also of **high priority** because it is the **main objective** of the system.

4.4.2 Stimulus and response:

The customer will be asked to log in to the system to place an order. Once the customer logins, he can select the items he/she wants.

4.4.3 Functional requirements:

REQ 1: Login -Customer should have logged in for placing the order.

REQ 2: Filter and select the items - The system shall have a filter function so that the customer can view items category-wise and select according to their wish and add them to their wishlist. If the user selects a particular item, he/she will be able to view the description of that item.

REQ 3: Wishlist – The customer will also have an option to view their wishlist before placing the order. They can check once again and click confirm to place the order.

REQ 4: Customize orders- Customers can customize the items based on their preferences. They can modify the item design according to their needs at the time of placing the order.

4.5 Payment:

4.5.1 Description and priority:

This feature of the online Bakery system allows customers to pay for their orders.

4.5.2 Stimulus and response:

After confirming the order, the customer will be directed to the payment page.

4.5.3 Functional requirements:

REQ 1: The customer should enter all the card details asked in the form (i.e) card name, card number, CVV.

REQ 2: After successful payment, The customer will be notified by receiving a mail regarding order and payment details and delivery details.After payment,

Exceptions:

- Occurs when the customer inputs an invalid card detail.
- Occurs if there is any technical error in payment.

4.6 Give Feedback:

4.6.1 Description and priority:

This feature of the online Bakery system allows customers to give their feedback about a particular product.

4.6.2 Stimulus and response:

The customer can give their feedback.

4.6.3 Functional requirements:

REQ 1: The user can give feedback by just clicking that particular item available.

REQ 2: Based on the feedback given by the user, best-selling items will be suggested to the user based on analysis.

4.7 Logout:

4.7.1 Description and priority:

This feature of the online Bakery system allows customers to log out of his/her account.

4.7.2 Stimulus and response:

The user will not be able to access the website after clicking the logout option. He will have to log in again to access. This has no priority because it is the user's own wish to log out.

4.7.3 Functional requirements:

The user can log out by just clicking the logout option available.

5.Other Nonfunctional Requirements

5.1 Performance Requirements

- The system must be interactive, responsive and the interface should be robust and error-free.
- The delay and latency is subject to the stability of the user's internet connection and yet the system should show the same level of responsiveness even at the least considerable connection speed. Under normal conditions, the delay should not exceed 3 seconds.
- The system should be able to handle at least 1500 users at an instance and be able to manage traffic effectively.
- The whole system must use the least resources in terms of storage in databases and other means. The database must be normalized so as to eradicate redundant and other garbage data.

5.2 Safety Requirements

- Differential backups are to be taken frequently in case of catastrophic failure of the system or a natural disaster.

- Database sharding is necessary to prevent any loss of data.

5.3 Security Requirements

- All the databases are to be protected by a firewall.
- Access privileges and permission for the system data can be modified by the system administrator only.
- All connections to the server by the customers are to be encrypted and secure such that no data is modified or compromised between the channels.
- A user shall not provide any data that executes commands intending to manipulate the database.
- Appropriate mechanisms are to be enforced to prevent unauthorized traffic into the server from causing the whole system to malfunction.
- Periodical audit of log data to be performed.

5.4 Software Quality Attributes

Availability:

The system is hosted to the world wide web making it usable for anyone across the globe but the usability is subject to bakeries that are registered in a particular location. Live orders can be provided with respect to the operational hours and offtime orders can also be placed for a particular date.

The system shall have a constant power backup for 99.9% availability with T3 internet access provided by the Internet Service Provider.

Reliability:

The system is powered by DDoS data theft protection ensuring the user a safe and sound experience. All the databases are replicated to offsite storage locations.

Correctness:

The system shall provide definite information about the items that are available and the "Out of Stock" signal gets reflected at full tilt in order to prevent the user from placing an empty order. The user's order quantity shall also not exceed the available quantity during the course of order placement.

Flexibility:

The software shall be generous in making last-minute changes after the payment within a 5-minute threshold and processing a follow-up payment or refund to the customer. The customer can also place an order cancellation with a 100% refund of the amount paid.

Maintainability:

The system shall be easy to maintain such that while making changes to any part of the website, the other pages remain functional making maintainability seamless. Multiple automated scripts are enforced to reinstate the database for maintenance accordingly and also to restore the database from a power outage.

Operability:

The system will continue to function without a restart of the database once the load level is back within the designed range. The system shall also provide sufficient transaction logging during the course of restoration of backed up transactions in the case of media failure.

Recoverability:

If the database is crashed in the middle of processing data, the system shall provide mechanisms to back out the processes and transactions of the partially processed data.

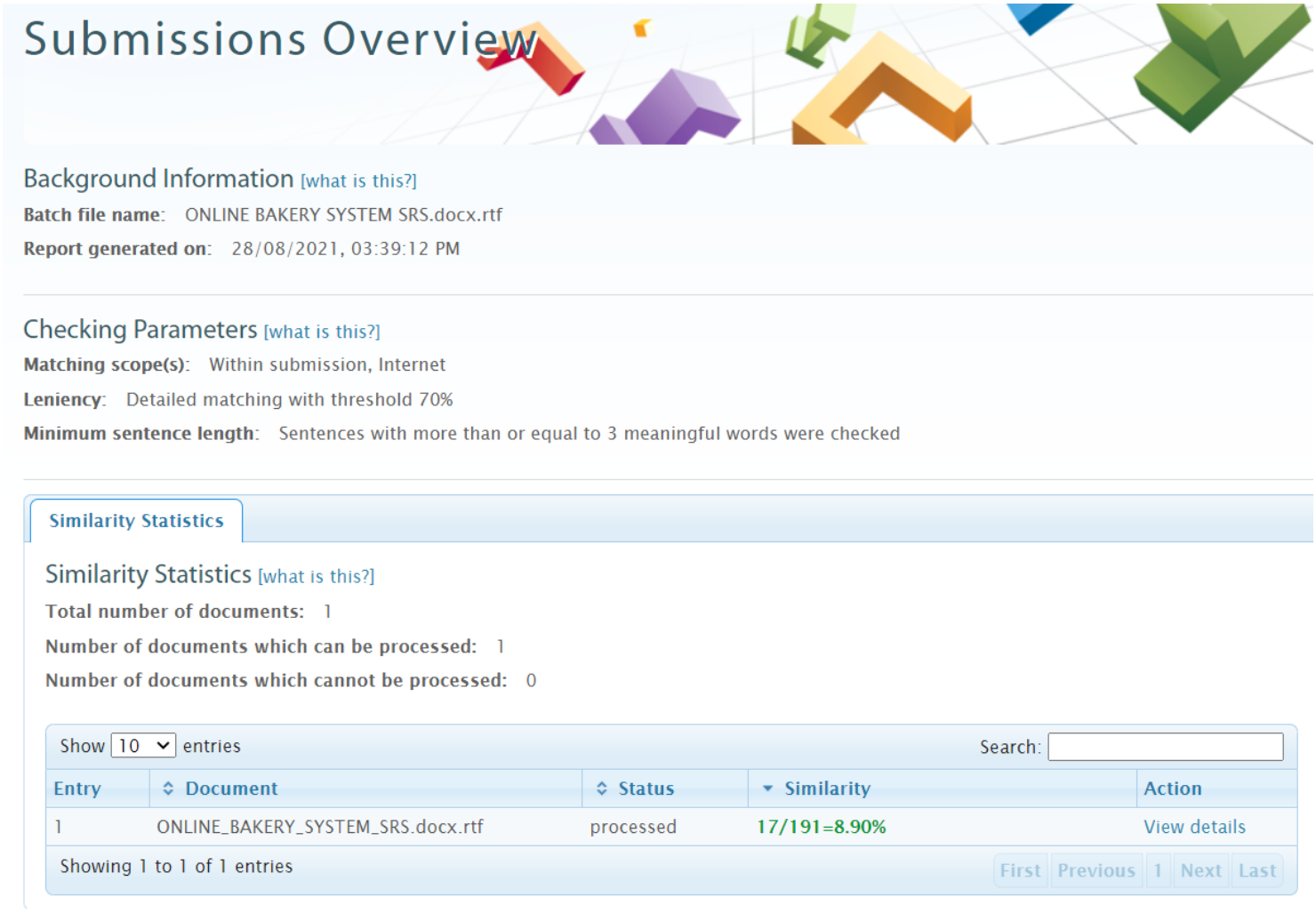
5.5 Business Rules

- All users are required to verify their identity by submission of any government validated ID proof.
- A user shall not possess more than one account.

Appendix A: Glossary

1. **IT**-Information Technology
2. **RAM**-Random access memory
3. **MB**-MegaByte
4. **GHz**-GigaHertz
5. **HTML**-HyperText Markup Language
6. **CSS**-Cascading Style Sheets
7. **JDK**-Java Development Kit
8. **JRE**-Java Runtime Environment
9. **CVV**-Card Verification Value
10. **DDoS**-Distributed Denial of Service

Plagiarism Report:



Submissions Overview

Background Information [what is this?]

Batch file name: ONLINE BAKERY SYSTEM SRS.docx.rtf

Report generated on: 28/08/2021, 03:39:12 PM

Checking Parameters [what is this?]

Matching scope(s): Within submission, Internet

Leniency: Detailed matching with threshold 70%

Minimum sentence length: Sentences with more than or equal to 3 meaningful words were checked

Similarity Statistics

Similarity Statistics [what is this?]

Total number of documents: 1

Number of documents which can be processed: 1

Number of documents which cannot be processed: 0

Show 10 entries Search:

Entry	Document	Status	Similarity	Action
1	ONLINE_BAKERY_SYSTEM_SRS.docx.rtf	processed	17/191=8.90%	View details

Showing 1 to 1 of 1 entries First Previous 1 Next Last

VeriGuide - Originality Report
Individual Report

Background Information

File Name:	ONLINE_BAKERY_SYSTEM_SRS.docx.rtf
Report Generated On:	28/08/2021, 03:39:12 PM

Similarity Statistics Overview

17 out of 191 sentences = 8.9%

Similar Sentence(s) Found By VeriGuide:

Similar Sentence(s) Filtered by 17 out of 191 sentences = 8.90% User:

Sentence(s) Selected By User To 0 Export:

Similarity Statistics for Each Source

Entry	Source	From	Similarity
1	https://nevonprojects.com/online-bakery-shopsystem/	Internet	7 / 191 = 3.66%
2	https://www.coursehero.com/file/42539969/Jo b-Finding-System-SR-Ass1doc/	Internet	4 / 191 = 2.09%
3	https://www.irjet.net/archives/V8/i4/IRJETV8I4940.pdf	Internet	3 / 191 = 1.57%
4	https://www.freeprojectz.com/project-sourcecode-database-download/bakery-shopmanagement-system-project	Internet	2 / 191 = 1.05%
5	https://docs.moodle.org/311/en/Managing_aut hentication	Internet	1 / 191 = 0.52%
6	https://evetproject.eu/wp-content/uploads/2019/03/SRS_Evet_4.0.pdf	Internet	1 / 191 = 0.52%
7	https://nvlpubs.nist.gov/nistpubs/ams/NIST.AM S.300-2.pdf	Internet	1 / 191 = 0.52%
8	https://www.perforce.com/blog/alm/how-writesoftware-requirements-specification-srsdocument	Internet	1 / 191 = 0.52%