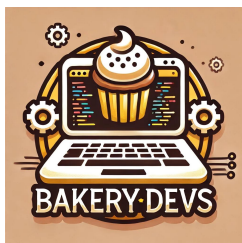

Software Requirements Specification

Proyect: Panes de la
Rumiñahui[Nombre del proyecto]
Review 01[99.99]

LOGO:



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Contenido

FICHA DEL DOCUMENTO	4
CONTENIDO	5
1 INTRODUCCIÓN	7
1.1 Propósito	7
1.2 Alcance	7
1.3 Personal involucrado	7
1.4 Definiciones, acrónimos y abreviaturas	8
1.5 Referencias	8
1.6 Resumen	8
2 DESCRIPCIÓN GENERAL	9
2.1 Perspectiva del producto	9
2.2 Funcionalidad del producto	9
2.3 Características de los usuarios	10
2.4 Restricciones	10
2.5 Suposiciones y dependencias	11
2.6 Evolución previsible del sistema	11
3 REQUISITOS ESPECÍFICOS	11
3.1 Requisitos comunes de los interfaces	12
3.1.1 Interfaces de usuario	13
3.1.2 Interfaces de hardware	14
3.1.3 Interfaces de software	14
3.1.4 Interfaces de comunicación	15
3.2 Requisitos funcionales	15
3.2.1 Requisito funcional 1	9
3.2.2 Requisito funcional 2	9
3.2.3 Requisito funcional 3	9
3.2.4 Requisito funcional n	9
3.3 Requisitos no funcionales	17
3.3.1 Requisitos de rendimiento	17



3.3.2	Seguridad	17
3.3.3	Fiabilidad	18
3.3.4	Disponibilidad	18
3.3.5	Mantenibilidad	18
3.3.6	Portabilidad	18
3.4	Otros requisitos	19
4	APÉNDICES	19



1 Introducción

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The present Software Requirements Specification (SRS) describes the necessary requirements for developing a website for a bakery. The purpose of this website is to provide users with a platform where they can view the product catalog and promotions, learn about the business's history, and find the bakery's location. This document will serve as a guide for the development team and set expectations for the system's implementation.

1.1 Propósito

[Inserte aquí el texto]

The objective of this SRS is to define the functional and non-functional requirements of the bakery's website. This system will provide a simple and intuitive user interface, enabling customers to browse the product catalog, explore current offers, learn about the bakery's history, and obtain the business's address and contact information.

1.2 Alcance

The bakery's website will include:

- A product catalog displaying images, descriptions, and prices of each product.
- An offers section to inform users about current promotions.
- Information about the business's history and background.
- The bakery's address and contact information, including its location on an interactive map.

This system is designed to be an information tool for both potential and current customers, enhancing the bakery's online visibility and making business information more accessible.

[Inserte aquí el texto]

1.3 Personal involucrado

Nombre	Kleber Chavez
Rol	[Inserte aquí el texto]
Categoría profesional	[Inserte aquí el texto]
Responsabilidades	[Inserte aquí el texto]
Información de contacto	0963366387 [Inserte aquí el texto]
Aprobación	[Inserte aquí el texto]

Nombre	Kevin Asmal [Inserte aquí el texto]
Rol	[Inserte aquí el texto]
Categoría profesional	[Inserte aquí el texto]
Responsabilidades	[Inserte aquí el texto]
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Aprobación	[Inserte aquí el texto]

Nombre	Diego Casignia [Inserte aquí el texto]
Rol	[Inserte aquí el texto]
Categoría profesional	[Inserte aquí el texto]



Responsabilidades	[Inserte aquí el texto]
Información de contacto	[Inserte aquí el texto]
Aprobación	[Inserte aquí el texto]

1.4 Definiciones, acrónimos y abreviaturas

- SRS: Software Requirements Specification.
- Product Catalog: Section of the website where available products for sale are displayed.
- Offers: Promotions or discounts applied to certain products during a specific period.
- User Interface (UI): The visual and functional design of the website with which users interact.[Inserte aquí el texto]

1.5 Referencias

Referencia	Título	Ruta	Fecha	Autor
[Ref.]	[Título]	[Ruta]	[Fecha]	[Autor]

1.6 Resumen

[Inserte aquí el texto]

This Software Requirements Specification (SRS) document is organized into three main sections:

Introduction: Provides an overview of the project, covering the purpose, scope, and personnel involved in the development of the website. Additionally, it includes definitions of key terms, acronyms, and abbreviations, as well as references to other relevant documents and a summary of the system's main points.

Overall Description: This section delves into the general context of the system, describing the product's perspective and its main functionality. It also analyzes user characteristics, constraints to consider, as well as project assumptions and dependencies. Finally, a section on the anticipated evolution of the system is included, outlining potential changes or improvements over time.

Specific Requirements: Details the website's requirements, including:

- **Interface Requirements:** Defines the specifications for user, hardware, software, and communication interfaces.
- **Functional Requirements:** Specifies the main functionalities of the system, listed in detailed sub-requirements.
- **Non-Functional Requirements:** Describes performance, security, reliability, availability, maintainability, and portability characteristics of the system.
- **Other Requirements:** Includes any additional requirements relevant to the development and operation of the system.

This document will serve as a comprehensive guide for the development team and stakeholders, ensuring that the project aligns with established objectives and meets expected functionality and quality requirements.



2 Descripción general

2.1 Perspectiva del producto

The bakery's website aims to provide an accessible and user-friendly online platform that allows users to view essential business information, such as the product catalog, special offers, the bakery's history, and its location. This platform will serve as an additional channel to strengthen the bakery's market presence and enhance customer experience by offering a quick and convenient way to learn about current products and promotions.

The system will be developed as a responsive web application, ensuring compatibility with both desktop and mobile devices. The platform's structure will include a main navigation menu, allowing users to easily access each section: Products, Offers, History, and Contact. Each section is designed to serve specific functions, such as product display, periodic updates of promotions, and interactive map integration for locating the bakery.

This product will be developed as an independent system, not relying on external systems, though it will integrate with third-party tools like Google Maps to display the business's address and potential links to social media to enhance customer engagement. The website is also designed for easy administration, enabling authorized bakery staff to update content effortlessly.

The product perspective focuses on creating an intuitive, practical, and visually appealing experience that invites customers to explore the bakery's products and offers, thus strengthening the relationship between the brand and its customers. [\[Inserte aquí el texto\]](#)

2.2 Funcionalidad del producto

The bakery's website is designed to offer several key functionalities that provide users with an interactive and useful experience. The main functionalities are as follows:

1. Product Catalog:

- Displays a list of products with images, descriptions, and prices.
- Allows users to filter products by categories (e.g., bread, cakes, cookies).
- Offers an expanded view of each product to see additional details, such as ingredients or consumption recommendations.

2. Offers Section:

- Displays current promotions and discounts.
- Includes details about the duration of each offer and applicable conditions.
- Allows users to view discounted products with direct access to their full description.

3. Bakery History:

- Provides information about the bakery's origins, mission, vision, and values.
- Displays a gallery of images illustrating the business's history and tradition.

4. Location and Contact:

- Includes the bakery's address and an interactive map integrated with Google Maps to help locate the business.
- Offers contact information such as phone number, email, and business hours.



- Allows users to send messages through a contact form for inquiries or requests.

5. Compatibility and Accessibility:

- Responsive design optimized for mobile devices, tablets, and computers.
- Intuitive and accessible interface, making it easy for users with different levels of technological experience to navigate.

These functionalities are designed to provide users with a simple and fast browsing experience, offering them all the necessary information about the bakery's products and services. The system will also allow periodic updates to the catalog and offers, ensuring that the information remains up to date for users.[Inserte aquí el texto]

2.3 Características de los usuarios

Website Client	People looking for information about products, promotions, and business details.
Formación	No specific training is required. The site is designed to be accessible to people with basic web browsing skills.[Inserte aquí el texto]
Habilidades	Ability to navigate the internet and use mobile devices or computers.[Inserte aquí el texto]
Actividades	Browse the product catalogue, check offers, access the bakery's location, and make inquiries or requests using the contact form.[Inserte aquí el texto]

Site Administrator	Authorized business personnel who will update content on the website, such as the product catalog and offers.
Formación	Basic training in computer science and web content management, sufficient to update information without the need for advanced programming knowledge.[Inserte aquí el texto]
Habilidades	Ability to manage updated web content and basic knowledge of capturing product photographs.[Inserte aquí el texto]
Actividades	Update product catalog, manage promotions, and keep contact information and bakery history up to date.[Inserte aquí el texto]

2.4 Restricciones

[Inserte aquí el texto]

Technological: The system must be based on standard web technologies (HTML, CSS, JavaScript) and be compatible with popular browsers. In addition, it must have integration with Google Maps to display the location.

Accessibility: The design must be responsive for desktop, tablet and mobile devices.

Standards: Comply with web accessibility standards (e.g. WCAG) to ensure that users with different ability levels can navigate the site.

Infrastructure: The system does not require specialized hardware, but must be able to be hosted on a server with performance characteristics suitable for the estimated website traffic.



2.5 Suposiciones y dependencias

[Inserte aquí el texto]

Availability of Google Maps: It is assumed that the Google Maps service will be available for the integration of the bakery's location on the site. If the service changes or becomes unavailable, alternatives will need to be evaluated.

Internet connectivity: Users will be able to access the site as long as they have an Internet connection, as the site is a web application that depends on being online.

User devices: It is assumed that users will access from devices compatible with the most common browsers (Chrome, Safari, Firefox, Edge) in their updated versions.

2.6 Evolución previsible del sistema

[Inserte aquí el texto]

Product Catalog Expansion: As the bakery introduces new products, the site can be expanded to include additional categories or more detailed descriptions.

Improvements to the promotions system: In the future, the system could include advanced functionalities to manage personalized promotions, such as discount coupons or loyalty programs.

Improvements to the promotions system: In the future, the system could include advanced functionalities to manage personalized promotions, such as discount coupons or loyalty programs.

Integration with social networks and messaging systems: To improve customer interaction, the site could be integrated with social networks or messaging applications, allowing content to be shared or notifications about new products and promotions to be received.

3 Requisitos específicos

N° Requirement	Requirement Name	Guy	Source of Requirement	Requirement Priority	Requirement Description
RF1	Visualization of History and Values		Interview	High	The system should allow users to visualize the history of the bakery, highlighting its legacy and tradition.
RF2	Team Visualization		Interview	Average	The system should display information about the work team, including the master baker and his assistants.
RF3	Product Catalog		Interview	High	The system must allow the display of a product catalogue organised into categories such as bread, cakes, biscuits, etc.
RF4	Product Details		Interview	High	The system should display details of each product, such as ingredients, possible allergies, calories and



					consumption recommendations.
RF5	Promotions and Discounts		Interview	High	The system should offer a section for promotions and discounts, updateable seasonally, to attract customers.
RF6	Social Media Integration		Interview	Average	The system should allow integration with social networks so that users can share content and leave reviews.
RF7	Online Store		Interview	Low	The system must have an online store that allows direct sales, generating a flow of customers to the store.

3.1 Requisitos comunes de los interfaces

Common Interface Requirements.

This section provides a detailed description of all inputs and outputs for the bakery website software system to ensure proper functionality and ease of user interaction.

1. User Inputs

Product Catalog Interaction:

Description: Users can browse the product catalog, apply filters, and view expanded product details.

Input Method: Mouse clicks or taps on product categories, filters, and product images.

Expected Format: Selection-based input; no specific format is required, but filter options will be predefined.

Offers Section Interaction:

Description: Users can click to view current promotions and access full details.

Input Method: Mouse clicks or taps on offers.

Expected Format: Selection-based input; predefined offer links.

Contact Form Submission:

Description: Users can submit inquiries or requests through a contact form.

Input Method: Text input fields (name, email, message) and a submit button.

Expected Format:

Name: Text (50 characters max)

Email: Email format (example@example.com)

Message: Text area (500 characters max)

Location and Map Interaction:

Description: Users can interact with an embedded map to view the bakery's location and directions.

Input Method: Mouse clicks or taps to zoom, scroll, or access map navigation.

Expected Format: Map manipulation; no specific data format required from users.

2. Administrator Inputs

Product Catalog Management:

Description: Authorized administrators can add, edit, or remove products.

Input Method: Text inputs for product name, description, category selection, image upload, and price.

Expected Format:



Product Name: Text (100 characters max)
Description: Text (300 characters max)
Category: Dropdown selection (predefined categories)
Price: Numeric format (e.g., 10.99)
Image: File upload (JPEG or PNG)
Offers Management:
Description: Administrators can create, modify, or delete promotions.
Input Method: Text input for offer name, description, applicable products, and date range.

Expected Format:
Offer Name: Text (50 characters max)
Description: Text (200 characters max)
Applicable Products: Selection of products
Date Range: Date picker (start and end dates)
Contact Information Management:
Description: Administrators can update contact information such as phone number, email, and business hours.
Input Method: Text inputs and a save button.

Expected Format:
Phone Number: Numeric format with optional separators (e.g., 123-456-7890)
Email: Email format
Business Hours: Text (50 characters max)

3. System Outputs

Product Catalog Display:
Description: Displays a list of products with images, descriptions, prices, and category filters.
Output Method: Dynamic content display on the Products page.
Output Format: HTML elements styled with CSS, displaying product images, text descriptions, and prices.
Offers Display:
Description: Shows current promotions with offer details.
Output Method: Dynamic content display on the Offers page.
Output Format: HTML elements with promotion descriptions, dates, and applicable product links.
Contact Confirmation:
Description: Confirmation message displayed after a contact form submission.
Output Method: On-screen message or popup notification.
Output Format: HTML text displaying "Thank you for your message, we will get back to you soon!"

Location Display:
Description: Interactive map displaying the bakery's location.
Output Method: Embedded Google Map on the Contact page.
Output Format: Google Maps iframe displaying an interactive map with the bakery's location pin.

Administrative Feedback:
Description: Confirmation messages for actions like adding, editing, or deleting products and offers.
Output Method: Popups or on-screen messages.
Output Format: HTML text, e.g., "Product added successfully" or "Offer updated."

3.1.1 Interfaces de usuario

[Inserte aquí el texto]

Style and Appearance: Defines colors, fonts, and the overall style that the interface should have, according to client specifications.



Screen Design: Describes user screens, layout, and interactive elements (buttons, forms, menus).

User Experience: Explains how users should navigate, ease of use, and accessibility to ensure a smooth and efficient interaction.

3.1.2 Interfaces de hardware

The bakery website system will be designed to operate on common hardware infrastructures without the need for specialized devices. The basic requirements include:

Hosting Server:

The bakery website system will be designed to operate on common hardware infrastructures without the need for specialized devices. The basic requirements include:

Hosting Server:

Capability to host web applications.

Adequate performance to handle expected traffic.

Support for standard technologies such as HTML, CSS, and JavaScript.

User Device Compatibility:

Accessible on desktop computers, laptops, tablets, and mobile devices.

Compatible with popular browsers (Chrome, Safari, Firefox, Edge) in recent versions.

Integration with Third-Party Services:

Ability to connect with Google Maps for map display.

Optional: Infrastructure for potential future integrations with social networks or messaging systems.

[\[Inserte aquí el texto\]](#)

3.1.3 Interfaces de software

The bakery website system will integrate with external software products to enhance functionality and improve user experience.

Google Maps API is a mapping service provided by Google that enables embedding interactive maps in web applications.

Purpose of the Interface:

The interface with Google Maps allows the website to display the bakery's location, helping users find directions to the bakery and see nearby landmarks.

The integration will utilize the Google Maps JavaScript API, which provides location coordinates in JSON format. The website will include a map element where the Google Maps API is embedded.

Social Media Links (Optional Future Integration)

Description of Software Product Used:

Links to social media platforms like Facebook, Instagram, and Twitter can be embedded to enhance customer engagement.

Purpose of the Interface:



This interface would allow users to follow, share, or connect with the bakery on social media platforms directly from the website, keeping them informed about new products, offers, and events.

Interface Definition: Content and Format:

The integration would use social media platform URLs formatted as clickable icons or buttons. The links would open in a new tab, directing users to the bakery's social media profiles. The interface would be limited to HTML hyperlink elements linking to these URLs.

[Inserte aquí el texto]

3.1.4 Interfaces de comunicación.

The bakery website system requires specific communication interfaces to enable interaction with external services. Below are the communication requirements and protocols:

Google Maps API Integration

Communication Requirements:

The website communicates with Google Maps API to retrieve map data and location coordinates for displaying the bakery's address. This interaction requires an internet connection and API requests from the website to the Google Maps server.

Communication Requirements:

If the website includes links to social media, users may click these links to access social platforms. This would involve redirecting the user to external URLs associated with each social media platform.

Communication Protocols:

HTTPS will be used for secure redirection to external social media sites. No direct API communication is required, as the website will only provide links to open in new browser tabs.[Inserte aquí el texto]

Requisitos funcionales.

The bakery website's functional requirements outline the primary actions it must perform when processing input, managing data, and generating output. Each requirement includes input validation, operation sequence, error handling, parameter definitions, output generation, and data storage specifications.

Functional Requirement 1: Product Catalog Management

Description: Manage and display the product catalog with categories, descriptions, and prices.

Actions and Sequence of Operations:

Validate input fields (e.g., name, category, price) when a new product is added or updated.

Store valid product data in the database.

Display the updated catalog on the Products page.

Input Validation:

Name: Text, up to 100 characters.

Price: Numeric, greater than zero.

Category: Must match predefined categories (e.g., Bread, Cakes, Cookies).

Error Handling:

Invalid Input: Display error message if fields are empty or incorrectly formatted.

Database Error: If saving fails, display a "Database error, please try again" message.



Output Generation:

Catalog listing displayed as HTML, with product names, images, prices, and categories.

Data Storage:

Product Information: Name (text), Price (decimal), Category (string), Image (file path), Description (text).

Functional Requirement 2: Offers Management

Description: Display and manage promotional offers, including applicable products and timeframes.

Actions and Sequence of Operations:

Validate input fields for offer creation (name, description, date range).

Store offers in the database.

Display the updated offers list on the Offers page.

Input Validation:

Offer Name: Text, up to 50 characters.

Date Range: Start and end dates must be in a valid date format, with the start date not exceeding the end date.

Error Handling:

Invalid Input: Display error message if fields are empty or dates are incorrect.

Database Error: If saving fails, display a "Database error, please try again" message.

Output Generation:

HTML section displaying active offers, including offer name, details, and valid dates.

Data Storage:

Offers Data: Name (text), Description (text), Start Date (date), End Date (date).

Functional Requirement 3: Contact Form Processing

Description: Allow users to submit inquiries or messages through the contact form.

Actions and Sequence of Operations:

Validate user inputs (name, email, message).

Store messages in the database and/or send an email notification to the bakery's contact.

Display a confirmation message to the user.

Input Validation:

Name: Text, up to 50 characters.

Email: Must be in a valid email format.

Message: Text, up to 500 characters.

Error Handling:

Invalid Input: Highlight missing or incorrect fields.

Communication Error: If the email fails, store the message in the database for later review.

Output Generation:

Confirmation message: "Thank you for reaching out! We'll get back to you shortly."

Data Storage:

Messages: Name (text), Email (email), Message (text).

Functional Requirement 4: Location Display

Description: Display an interactive map with the bakery's location.

Actions and Sequence of Operations:

Load Google Maps using an API request.

Display the bakery's address as a pin on the map.

Parameters:

Google Maps API Key (provided by the bakery).

Error Handling:

API Connection Failure: Display a static message: "Map currently unavailable, please try again later."



Output Generation:

Interactive map in an iframe, showing the bakery location.

Functional Requirement 5: Responsive Layout and Compatibility

Description: Ensure the website adapts to various screen sizes and device types.

Actions and Sequence of Operations:

Detect screen size and adjust the layout.

Display all website elements in a readable format on desktop, tablet, and mobile.

Error Handling:

None required as this is a front-end adaptation.

Output Generation:

Responsive HTML/CSS structure adapting to viewport size.

3.2 Requisitos no funcionales

3.2.1 Requisitos de rendimiento

[Inserte aquí el texto]

The system must support a maximum of 500 users connected simultaneously during peak hours, ensuring smooth operation without noticeable slowdowns.

The average response time for critical operations (e.g., database queries, transaction processing) should not exceed 1 second for 95% of operations. Non-critical operations must complete within 5 seconds under normal conditions.

The system should handle a minimum of 50 transactions per second (TPS) during peak loads and up to 70 TPS during stress testing scenarios.

Each server in the architecture must support at least 50 active terminals with balanced load distribution, ensuring scalability across multiple servers.

For batch processing tasks, the system must complete operations such as report generation or data synchronization within 30 seconds for datasets of up to 10,000 records.

3.2.2 Seguridad

- 1) All sensitive data transmitted between the client and server must use secure protocols such as HTTPS with TLS 1.3 or higher to prevent interception by unauthorized entities.
- 2) The system will employ AES-256 encryption for stored data, particularly for critical fields such as user credentials, financial records, and personal information.
- 3) A comprehensive activity logging mechanism will record system events, including user login/logout, data modifications, and errors, with timestamps for auditing purposes.
- 4) Role-based access control (RBAC) will be implemented to restrict access to specific functionalities based on user roles (e.g., admin, regular user, guest).
- 5) Communication between internal modules will follow strict authentication and authorization protocols, ensuring that only trusted components can interact with each other.
- 6) Regular penetration tests will be conducted every quarter to identify and address vulnerabilities in the system.



- 7) The system will incorporate a data integrity verification mechanism using cryptographic hashes (e.g., SHA-256) to prevent accidental or malicious data tampering.
- 8) A multi-factor authentication (MFA) mechanism will be required for users accessing sensitive or administrative features.

[Inserte aquí el texto]

3.2.3 Fiabilidad

The system must ensure an MTBF (Mean Time Between Failures) of at least 1,000 hours, minimizing disruptions caused by technical issues.

A maximum of 1 critical incident per month will be permitted in the production environment. A critical incident is defined as an issue that disrupts more than 50% of users or compromises system security.

The system will employ a failover mechanism to ensure uninterrupted service in case of server failure. Critical functions must automatically switch to backup servers within 5 seconds of detecting a failure.

A comprehensive backup system will be implemented, with incremental backups performed daily and full backups conducted weekly.

[Inserte aquí el texto]

3.2.4 Disponibilidad

The system will maintain an availability of 99.9% during operational hours, which translates to a maximum downtime of 8.76 hours per year.

Scheduled maintenance will be carried out during predefined non-working hours, with prior notification to users at least 24 hours in advance.

High-availability architecture, including database replication and load-balanced servers, will be used to minimize downtime and ensure service continuity.

[Inserte aquí el texto]

3.2.5 Mantenibilidad

Maintenance tasks, including system updates and bug fixes, must be documented and performed every 15 days. Emergency patches for critical issues should be deployed within 24 hours of detection.

The system will generate automated reports detailing user activity, system performance, and error logs weekly and monthly. These reports will be accessible to system administrators.

Maintenance responsibilities will be divided into two categories:

Preventive Maintenance: Conducted bi-weekly to identify potential issues before they occur.

Corrective Maintenance: Addressing bugs or system failures as they arise.

The codebase must adhere to modular design principles, making it easier to isolate and update specific components without affecting the rest of the system.

User manuals and developer documentation will be updated with each major release to reflect changes in functionality.

[Inserte aquí el texto]

3.2.6 Portabilidad

1. The software must be compatible with Windows, Linux, and MacOS environments, allowing flexibility in deployment.
2. At least 90% of the codebase should be platform-independent, ensuring minimal effort in migrating the software to different environments.
3. Development will use cross-platform technologies such as Java, Python, or Node.js to enhance portability and reduce dependency on specific operating systems.
4. The software must support standard SQL databases such as MySQL, PostgreSQL, and Oracle, enabling deployment across different database management systems.



5. The system must use an open-source compiler or platform where possible, ensuring broader compatibility and reduced dependency on proprietary tools.

3.3 Otros requisitos

Cultural and Political Requirements:

The system must provide a multi-language interface, with initial support for English and Spanish, to cater to diverse user bases.

The design must follow accessibility guidelines such as WCAG 2.1, ensuring usability for people with disabilities.

Legal Requirements:

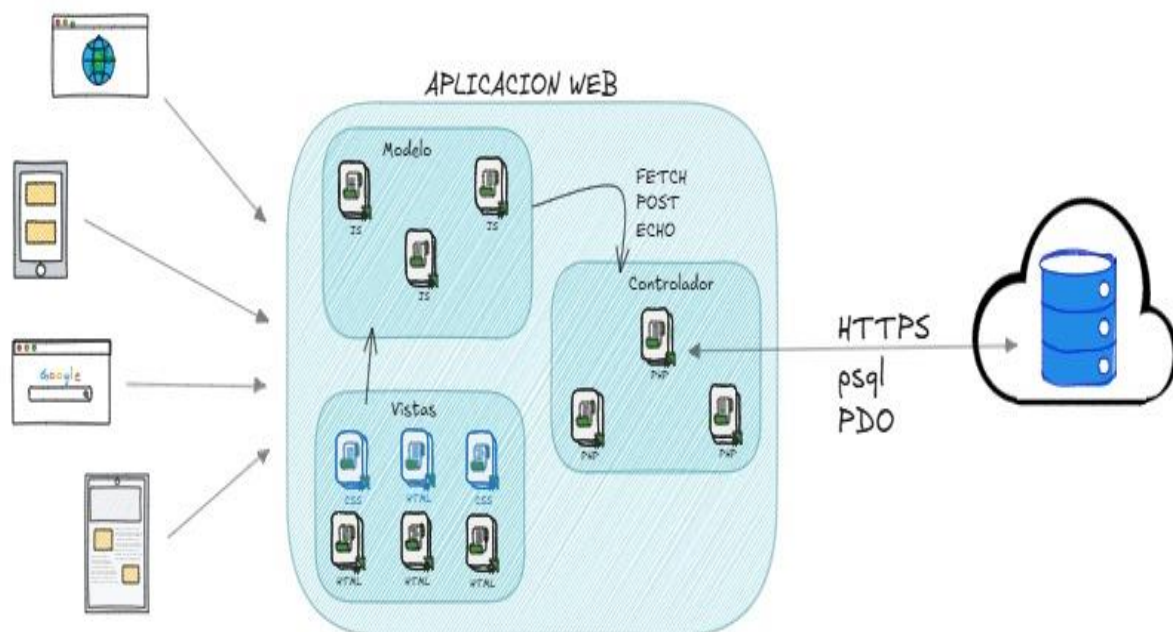
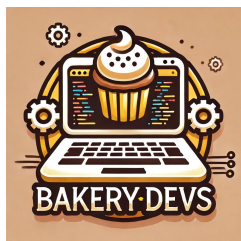
The system must comply with data protection regulations such as the General Data Protection Regulation (GDPR) for European users.

All stored and transmitted data must adhere to local and international laws regarding information privacy and security.

Contracts and agreements must include clauses ensuring compliance with relevant laws in the deployment region.

4 Apéndices

- The architecture





Diagrams:

