**Software Requirements**

**Specification**

**for**

**Barangay South Signal Village Web App**

**Version 1.0 approved**

**Prepared by:**

**Team Developmentality**

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# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Initial | 08/03/2023 |  | 0 |
|  |  |  |  |

# Introduction

## Purpose

This Software Requirements Specification document is intended to give a full and complete overview of the web application of Barangay South Signal Village, including its user interface, user stories, hardware and software interfaces, and system features. This Software Requirements Specification document details all the features upon which Barangay South Signal Village web app have currently decided with reference to the manner and importance of their implementation

## Document Conventions

Since the development team is responsible for the Software Requirements Specification document, no ambiguity arises from its usage. There is a clear distinction, but the use of the words between “client” and “resident”. The “client” is the customer of the barangay south signal village inquiring in their barangay. While the “resident” is the human being that lives in the barangay south signal village. This document is printed on A4 paper in Arial Italic font. Normal text is size 11 white, while section headings are size 18 bolded white with Times New Roman font. The subheadings are bolded size 14 with Times New Roman font.

## Intended Audience and Reading Suggestions

The document can be read from front to back for a complete understanding of the project, it is also written in sections and therefore can be read as such. For the overview of the document and project itself, see Overall Description (Section 2). For a detailed description of the web application, see System Feature (Section 4). For readers that are interested in the hardware and software interfaces and the user interface, they should see the External Interface Requirements (Section 3). The other characteristics that software must-have for the web application can be found in Other nonfunctional Requirements (Section 5). These characteristics include performance, security, software quality, and many more.

## Product Scope

The project's scope will be focused only on creating a web-based application and implementing the limited features provided by the client. The web-based application will be made up of Figma for wireframe, Hypertext Markup Language (HTML), and Cascading Style Sheets (CSS) for the UI / UX Design. The residents can use the web app using the internet and their cell phones, computers, and tablets to access their needs. The residents can quickly know the details, information, and other services that the barangay can accommodate based on the needs of the residents.

## 

# Overall Description

## Product Perspective

The Barangay South Signal Village Web-App is a web application aiming to replace the current system of barangay based on face-to-face paper transaction for document requests. The web-app will provide an option for the barangay residents to request documents online to reduce physical contact and encourage paperless transactions.

## Product Functions

The main functions of the web-application are listed below:

* Home screen
  + The residents can view the latest announcements from the barangay.
* Online Services
  + The residents can view the requirements need for the documents they will be requesting.
  + The residents can create an account to access the resident’s dashboard and request documents.
  + The residents can log-in using their account information that will redirect them to the resident’s dashboard to request documents online.
* Safety Section
  + The residents can view the different types of maps provided by the red cross within the barangay.
* Contact Us
  + The residents can view the different emergency hotlines provided by the barangay as well as view a live google map that will give directions to go to the barangay.
* About Us
  + The residents can view the information of the barangay such as History, Demography, Mission, Vision, Barangay Objectives, and Barangay Council.

## User Classes and Characteristics

|  |  |
| --- | --- |
| *Roles* | *Description* |
| *Resident* | * *This user is the primary visitor of the webapp.* * *He/she is the one who can access and avail themselves of the services offered by the web-app.* |
| *Administrator* | * *This user has the highest power over the web-app.* * *He/she assigns roles to barangay employees.*   *He/she manages the web-app.* |
| *Barangay Secretary* | * *This user handles and processes the requests and concerns created by the resident of barangay.* * *He/she verifies the requirements given by the residents of the barangay.* |
| *Barangay Captain* | *He/she views the report of the web-app.* |
| *Barangay Concern Manager* | * *He/she processes and manages the concerns created by the resident.* |
| *Barangay Request Manager* | * *He/she processes and manages the requests created by the resident.* |

## Operating Environment

In every part of the project, the team and the client work together to achieve the objectives of this project. The client is involved in planning the new system right from the start until the web app is handed to them by the team. During the planning and development stage, the client and the team agreed on which information needed to be disclosed about the barangay and which should be posted on the web app.

The client gives their whole support to the team in developing the web app because they believe that the web app will help their barangay as well as their constituents to be able to access the necessary information and make the process of requesting documents easier and faster. According to them, having a web app will help their constituent identify credible sources of information within their barangay.

Even though they will use the new system, they will still be practicing their current system which the client still has an option for face-to-face transactions. However, the database in face-to-face transactions needs to be inserted into a database using the proposed solution accordingly.

In terms of workforce, the Barangay Captain ensures that the workforce will be able to cater to the distinct roles in the web app because the Barangay Captain said that they have enough staff in the Department of Secretary and Administrator to work with the new system. According to the Barangay Captain, they are willing to undergo the necessary training for the new system and hired an IT staff that will ensure help them to maintain the web app.

## Design and Implementation Constraints

Listed below are the following design and implementation constraints that the barangay web application will encounter:

* Legality
  + Since the barangay is a local government unit, the barangay will first need to register the web-application and ensure that it meets the standards set by NTC.
* Budget
  + The barangay is a newly made barangay which means that it has a limited budget which may affect the implementation of the system.
* Manpower
  + Although the barangay has agreed to hire an I.T professional, they staff of the barangay will still need to undergo training in order to maximize security inside and outside the system.

## User Documentation

1. Project Charter - [Project Charter .docx](https://asiapacificcollege.sharepoint.com/:w:/s/MCSPROJMI201202/EakYnVDz40ZKjHs9V6OzZsoBf-7VAkMwR_rjumAgmWnJ7A?e=hWBmaA)
2. Vision and Scope Document - [Project Vision and Scope .docx](https://asiapacificcollege.sharepoint.com/:w:/s/MCSPROJMI201202/EXEm_CK_IPpLl79dzXPopuQB4dKHG2Zvf8e9U0gwHzapYQ?e=UusgTc)
3. Software Requirement Specification - [Software Requirement Specification.docx](https://asiapacificcollege.sharepoint.com/:w:/s/MCSPROJMI201202/EfqrUmgrO2lHmkXQ2ng5AnUBprepZBWgTjWW_F027RTztw?e=1O4g1t)
4. Statement of Work - [Statement of Work .docx](https://asiapacificcollege.sharepoint.com/:w:/s/MCSPROJMI201202/Ed5CUOCP-mRNszOWH4B3RnwBn_sh66fRHoNhlz4Djdv6KQ?e=Cljsvp)
5. Quality Plan - [Quality Management Plan.docx](https://asiapacificcollege.sharepoint.com/:w:/s/MCSPROJMI201202/Ee8Drgp-N-1IqnWzlXr4Lt8B983bD5STBeCNIhSG5NQDUw?e=dwKgnV)
6. Test Cases - [Test Case .xlsx](https://asiapacificcollege.sharepoint.com/:x:/s/MCSPROJMI201202/ERevJsTFzmNIsSxPR29y_iUBqqhgETFt9rt_5lLIoorPUg?e=RZMdtX)
7. Change Management Plan - [Change Management Plan .docx](https://asiapacificcollege.sharepoint.com/:w:/s/MCSPROJMI201202/EfPLal5Zg4BBj-k-grdIiF0BkFIzVqQdxpWRut9rg2LDzg?e=XcUoMy)
8. User Review - [User Project Review.docx](https://asiapacificcollege.sharepoint.com/:w:/s/MCSPROJMI201202/EQ2XVZsYiYNPlEHZcFkrDSYBwSOL3De0MF4tEucb6enQcQ?e=p3Hr1a)
9. Project Sway - [Project Sway.pdf](https://asiapacificcollege.sharepoint.com/:b:/s/MCSPROJMI201202/ETEZYREN_s5PorbQzHZQdZ8Bx2JA2slOpB4jge7_1ZL8Cw?e=p2moQw)
10. Project Teaser - [Project Teaser.mp4](https://asiapacificcollege.sharepoint.com/:v:/s/MCSPROJMI201202/EYjBkXTsseFCu__gOmIxjRoBneWohvl2HImDrYyIf3_Igw?e=Ys2Vfc)

## Assumptions and Dependencies

***Assumptions:***

1. The residents have access to the internet and the necessary devices to use the web application.
2. The barangay employees are trained in using the new web application.
3. The web application will be developed without any major technical issues or roadblocks.
4. *The web app will be deployed on a server with sufficient processing power, memory, and storage.*
5. The Philippine Red Cross will provide accurate and up-to-date Map Book information for the Safety Section.
6. The web application will be developed within the given timeline and budget.
7. The residents will trust the new system and will use it instead of the current manual process.
8. The email notification system will work without any issues.

***Dependencies:***

1. The team will use LARAVEL, an open-source PHP web framework for developing web applications.
2. The team will use MYSQL as their database for the web application.
3. The Barangay South Signal Village will provide accurate information for the About Us section.
4. The Philippine Red Cross will provide the Map Book information for the Safety Section.
5. The residents have access to the internet and the necessary devices to use the web application.
6. The web application will be hosted on a reliable and secure server.
7. The web application will have access to a reliable and fast internet connection.
8. The web application will use Google Maps API to embed the map in the Contacts section.
9. The email and SMS notification system will have access to a reliable and fast internet connection.

# External Interface Requirements

## User Interfaces

The user interface for the web-app will be designed to meet the needs of five main software components: Contacts, Online Services, About Us, Safety Sections. The interface will follow the style of Barangay South Signal Village to ensure a consistent look and feel. The Contacts page will feature an embedded map to enable easy viewing of the barangay and its surrounding areas. Additionally, the page will provide emergency hotlines for quick access to important numbers. The Online Services page will have registration, login, and request tracking functionality. The standard buttons and functions will include a navigation menu and a "Contacts" button.

For the user interface design, there are no specific screen layout constraints or keyboard shortcuts required, and there are no specific messaging requirements. Error message display standards will ensure clear messaging for incorrect login credentials and a mandatory data form for registration. The developer will use Bootstrap for UI to achieve a modern and responsive design that is optimized for various screen sizes and devices. Furthermore, Sweet Alerts will be utilized to show message alerts to provide an intuitive and pleasant user experience. The user interface design will be documented in a separate user interface specification, which will provide a comprehensive overview of the user interface and its design components.

## Hardware Interfaces

* Hardware components may include web and database servers and end-user devices.
* Physical characteristics may include connector or cable size, shape, and port configuration.
* Supported device types include modern web browsers.
* Data and control interactions may involve data transfer, display of information, and processing of user input.
* Communication protocols used may include MySQL and HTTPS.
* Compatibility is likely with any device's specifications.

## Software Interfaces

* The web-app is built using Laravel framework.
* The web-app will interface with MySQL database for storing and retrieving resident information, requests, and concerns.
* The web-app can run on any up-to-date operating system such as Windows 10 or 11.
* The data items or messages coming into the system and going out include resident information, requests and concerns.
* The web-app serves as an online administrative division providing services to residents.
* There are no specific implementation constraints identified.
* The data will be shared only to authorized administrators and barangay employees who handle the accounts.

## Communications Interfaces

* The communication functions required by the product include email, contact information, document electronic form (upon request), and web browser.
* The communication standard that will be used is HTTP.
* A document electronic form is an example of pertinent message formatting.
* There are no specific protocols required for network server communications.
* HTTP is the communication standard that will be used.
* Communication security is addressed by encrypting passwords on the database, and high password requirements.
* The required data transfer rates and synchronization mechanisms are not specified, but the product should ensure that any updated information is quickly and accurately updated in the database and any other places where that information is stored or displayed.

# System Features

In this section, the team will outline the system features of the Barangay South Signal Village Web App. These features are the major services provided by their client, Barangay South Signal Village, and are designed to ensure that the platform is efficient and user-friendly.

## Resident Dashboard and Online Transactions (Requests and Concerns)

### **Description and Priority**

The Barangay South Signal Village Web App provides registered residents with a resident dashboard that offers various system features to access barangay services conveniently and efficiently. One of the features is the online request, which allows residents to request barangay documents without having to visit the barangay hall. Once the request is submitted, the system will email to notify the resident of the request status, along with a tracking key to monitor the progress. Another feature is submitting a concern, which enables registered residents to inquire and report any problems or incidents within the barangay's vicinity. Through this feature, residents can conveniently notify barangay officials of any issues that need attention. Additionally, residents can track the status of their requests and concerns through the Track a Request feature by entering the assigned tracking key provided by the system. Lastly, registered residents can view all their transactions with the barangay through the Transaction History feature, which provides an overview of their previous requests and concerns submitted through the web app. Overall, these system features aim to make accessing barangay services more convenient and efficient for registered residents.

### **Stimulus/Response Sequences**

1. Online Request

|  |  |
| --- | --- |
| Stimulus | Response |
| 1. Resident logs in to the web app. | 1. System displays a list of available barangay documents. |
| 2. Resident chooses kind of document requests. | 2. System displays the form to be fill up by the resident. |
| 3. Resident fills out the necessary information. | 3. System will verify the submitted form then email the confirmation and provide the tracking key to display. |

1. Submitting Concerns

|  |  |
| --- | --- |
| Stimulus | Response |
| 1. Resident logs in to the web app and click submit concern. | 1. System displays the form to be fill up by the resident. |
| 2. Resident chooses kind of document requests. | 2. System displays the form to be fill up by the resident. |
| 3. Resident fills out the necessary information. | 3. System will verify the submitted form then email the confirmation and provide the tracking key to display. |

1. Tracking Requests/Transactions

|  |  |
| --- | --- |
| Stimulus | Response |
| 1. Resident logs in to the web app and click the track requests/concerns tab. | 1. System displays all the resident's previous transactions with the barangay, including requests and concerns submitted through the web app. |
| 2. Resident click specific transaction. | 2. System displays the information of the clicked transaction. |

### **Functional Requirements**

### ***REQ-1: Online Request (Release 2)***

* *The system must provide a form for residents to fill out with the required information for the requested document.*
* *The system must generate a unique tracking key for each request submitted.*
* *The system must send a notification to the resident via email with the assigned tracking key.*
* *The system must validate the information submitted and provide an error message if any required information is missing or invalid.*
* *The system must store the request information and track its progress until completion.*

### ***REQ-2: Submitting a Concern (Release 3)***

### *The system must provide a form for residents to fill out with the details of the concern or issue.*

### *The system must acknowledge the submission of the concern and provide an estimated timeframe for resolution.*

### *The system must forward the concern to the appropriate barangay official for review and resolution.*

### *The system must validate the information submitted and provide an error message if any required information is missing or invalid.*

### *The system must store the concerned information and track its progress until resolution.*

### ***REQ-3: Tracking Requests/Transactions (Release 2)***

### *The system must provide a field for residents to enter the tracking key provided for their request.*

### *The system must retrieve the request information and display the current status to the resident. The system must display a list of all previous transactions associated with the resident's account.*

### *The system must provide a filter or search function to allow the resident to find specific transactions.*

### The system must provide an error message if the tracking key entered is invalid or does not exist in the system.

## Barangay Employee Dashboard (Processing Concerns, Processing Requests, Manage Accounts, and Generated Reports)

### **Description and Priority**

The web application will implement different roles for the barangay side, including the Barangay Secretary, Web-App Administrator, and the Barangay Captain, each with their own dashboard and set of tasks and functions. The Barangay Secretary will be responsible for processing online requests and concerns submitted by residents, while the Web-App Administrator will manage the barangay employee and resident accounts in the web application. The Barangay Captain will generate analytics reports to monitor the performance of the barangay and make informed decisions. Additionally, the Web-App Administrator will manage the web applications.

### **Stimulus/Response Sequences**

1. Processing Requests

|  |  |
| --- | --- |
| Stimulus | Response |
| 1. Barangay Secretary logs in to the web app and click process requests. | 1. System displays all lists of submitted requests. |
| 2. Barangay Secretary click the specific request to process. | 2. System change the status of the request to **“PROCESSING”** and displays the form filled up by the resident including the president’s personal information, history of his transactions, and the attached file. |
| 3. Barangay Secretary chose if denied or approved and put the message. | 3. System will change the status to either **“DENIED”** or **“READY FOR PAYMENT”** and send email verification to the resident’s email address with the message inputted by the Barangay Secretary. |
| 4. Barangay Secretary click the request that is **“READY FOR PAYMENT”** to process. | 4. System will display the form filled up by the resident including the president’s personal information, history of his transactions, and the attached file. System redirects to the list of the processing requests. |
| 5. Barangay Secretary click the if the request is **“DENIED”** or **“DONE”**. | 5. System will change the status to **“DENIED”** or **“DONE”,** and send email confirmation to the resident. If the request is **“DONE”**, the pdf will be attached in the email. |

1. Processing Concerns

|  |  |
| --- | --- |
| Stimulus | Response |
| 1. Barangay Secretary logs in to the web app and click process concerns. | 1. System displays all lists of submitted concerns. |
| 2. Barangay Secretary click the specific concern to process. | 2. System change the status of the concern to **“PROCESSING”** and displays the form filled up by the resident including the president’s personal information, history of his submitted concerns, and the attached file. |
| 3. Barangay Secretary chose if denied, update or close the concern and put the message. | 3. System will change the status to either **“DENIED”** or **“DONE”** and send email verification to the resident’s email address with the message inputted by the Barangay Secretary. |

1. Manage Employee Account

|  |  |
| --- | --- |
| Stimulus | Response |
| 1. Barangay Administrator logs in to the web app and click the manage employee account. | 1. System displays all the employee’s accounts. |
| 2. Barangay Administrator click view button to view the information of the employee. | 2. System displays the information of the clicked employee. |
| 3. Barangay Administrator click to edit or deactivate the account. | 3. System will either edit or deactivate the account as what the Barangay Administrator will click. |

1. View Generated Report

|  |  |
| --- | --- |
| Stimulus | Response |
| 1. Barangay Captain logs in to the web app. | 1. System displays all the available generated report. |
| 2. Barangay Administrator click the specific report to see. | 2. System displays the information of the clicked category. |

### **Functional Requirements**

### ***REQ-5: Processing Requests (Release 2)***

* The system shall display all the lists of submitted requests when the Barangay Secretary logs in to the web app and clicks on "Process Requests".
* The system shall change the status of the request to **"PROCESSING"** and display the form filled up by the resident, including the resident’s personal information, transaction history, and the attached file, when the Barangay Secretary clicks on the specific request to process.
* The system shall change the status to either **"DENIED"** or **"READY FOR PAYMENT"** and send an email verification to the resident's email address, along with the message inputted by the Barangay Secretary when the Barangay Secretary chooses to approve or deny the request.
* The system shall display the form filled up by the resident, including the president’s personal information, transaction history, and the attached file when the Barangay Secretary clicks on the request that is **"READY FOR PAYMENT"** to process. The system shall redirect to the list of processing requests.
* The system shall change the status to either **"DENIED"** or **"DONE"** and send an email confirmation to the resident, along with the message inputted by the Barangay Secretary when the Barangay Secretary clicks on the request that is either "DENIED" or **"DONE".** If the request **is "DONE",** the system shall attach the PDF in the email.

### ***REQ-6: Processing Concerns (Release 2)***

* The system shall display all the lists of submitted concerns when the Barangay Secretary logs in to the web app and clicks on "Process Concerns".
* The system shall change the status of the concern to **"PROCESSING"** and display the form filled up by the resident, including the resident's personal information, submitted concern history, and the attached file when the Barangay Secretary clicks on the specific concern to process.
* The system shall change the status to either **"DENIED"** or **"DONE"** and send an email verification to the resident's email address, along with the message inputted by the Barangay Secretary when the Barangay Secretary chooses to deny or close the concern.

### ***REQ-7: Concerns (Release 2)***

* The system shall display all the employees’ accounts when the Barangay Administrator logs in to the web app and clicks on "Manage Employee Account".
* The system shall display the information of the clicked employee when the Barangay Administrator clicks on the "View" button to view the employee's information.
* The system shall either edit or deactivate the employee's account as what the Barangay Administrator will click.

### ***REQ-8: View Generated Report (Release 3)***

* The system shall display all the available generated reports when the Barangay Captain logs in to the web app.
* The system shall display the information of the clicked category when the Barangay Administrator clicks on the specific report to see.

# Other Nonfunctional Requirements

Non-functional requirements are the characteristics that software must-have for the web application to work well. These characteristics include performance, safety, security, software quality, and business rules.

* 1. **Performance Requirements**

The web application's response time ranges between 500 milliseconds and 1 second depending on the action of the user in the web application. Note that the load time of the page is impacted by the server response time for every request or action the web page makes. The web application is also highly available. Which means that the users can access the website without experiencing down time or interruptions.

* 1. **Safety Requirements**

The web application provides appropriate user manual and documentation to ensure that the users and clients are aware of any of the following: safety-related features, limitations, and risk. It can also stop any of the services present if there is an emergency that are potentially dangerous processes or operations.

* 1. **Security Requirements**

The Barangay South Signal Village web application provides the resident with enough high-level security. making sure it has authentication protocols and API integration. For their own safety residents of the web application can also manage their profile, for example changing emails, password, and mobile number. In terms of database, the passwords are integrated with the Hash to protect the confidentiality and integrity of user passwords, making it difficult for attackers to decipher or access them in their raw form.

* 1. **Software Quality Attributes**

The web application is easy to use and navigate since it is targeted for the residents of Barangay South Signal Village. Some of the website's page provides two languages: Tagalog and English, which would accommodate residents who are not familiar in one of those languages. Another thing to note is the web application can run on multiple platforms or operating systems the only thing needed is internet.

* 1. **Business Rules**

The web application has access control, ensuring that only authorized users can access certain features or data. An example of this are administrators, secretary, and captain. Another one of the business rules present in the web application is compliance requirements present. These are the Privacy Data Notice, Terms & Conditions, Age requirements, and other regulations.

# Other Requirements

1. **Database Requirements:**
   * The web app shall have a database to store user information, such as personal details and login credentials.
   * The database shall store information about barangay officials and employees, such as their names, positions, and contact information.
   * The web app shall store information about community events and announcements.
   * The database shall support efficient retrieval and management of information.
2. **Internationalization Requirements:**
   * The web app shall support multiple languages, including English and the local language, to cater to users with different language preferences.
   * The web app shall adhere to internationalization best practices to ensure that the app can be used by users from different cultural backgrounds.
3. **Legal Requirements:**
   * The web app shall comply with applicable laws and regulations, such as data protection and privacy laws, to ensure that user data is handled responsibly and in compliance with legal requirements.
   * The web app shall display legal disclaimers and terms of use to inform users of their rights and responsibilities when using the app.
4. **Reuse Objectives:**
   * The web app shall be designed with modularity in mind to facilitate future expansion and modification of the app.
   * The web app shall utilize existing software libraries and frameworks where appropriate to reduce development time.
5. **Security Requirements:**
   * The web app shall utilize appropriate security measures, such as secure authentication and authorization mechanisms, to prevent unauthorized access to user data.
6. **Performance Requirements:**
   * The web app shall be designed to be responsive and efficient, with fast loading times and minimal downtime.
   * The web app shall be able to handle high levels of traffic and user requests without slowing down or crashing.
7. **Accessibility Requirements:**
   * The web app shall adhere to accessibility best practices, such as providing alternative text for images and using proper HTML markup.

# Appendix A: Glossary

1. **About Us** - A software component that provides information about the Barangay South Signal Village.
2. **Barangay** - A local government unit in the Philippines consisting of a group of people who govern a certain area.
3. **Bootstrap** - A front-end development framework used to create modern and responsive web interfaces.
4. **Cascading Style Sheets (CSS)-** A style sheet language used to describe the visual style and formatting of a web page or application.
5. **Client:** The customer of Barangay South Signal Village inquiring in their barangay.
6. **Communications Interfaces** - The interfaces between the software system and communication functions, such as email, contact information, and web browsers.
7. **Contacts** - A Barangay South Signal Village Web App component that provides contact information and emergency hotlines for quick access to important numbers.
8. **Data synchronization** - The process of ensuring that the data in two or more systems or devices is the same.
9. **Data transfer** - The process of transferring data from one device or system to another.
10. **Embedded map** - A map that is displayed within a web page.
11. **External Interface Requirements** - The functional and performance requirements of a software system that needs to interact with other systems or devices.
12. **Figma**: A web-based interface design tool used to create wireframes and user interfaces.
13. **Hardware interfaces-** The connections between a software application and the hardware components of a computer system.
14. **HTTP** - Hypertext Transfer Protocol, a protocol used to transfer data over the internet.
15. **HTTPS** - Hypertext Transfer Protocol Secure, a protocol used to encrypt and secure data transmission over the internet.
16. **Hypertext Markup Language (HTML):** The standard markup language used to create web pages and applications.
17. **Laravel framework** - A PHP framework used for web development.
18. **MySQL** - A popular open-source relational database management system.
19. **Online Services** - A Barangay South Signal Village Web App component that provides registration, login, and request tracking functionality.
20. **Operating environment** - The environment in which a software application will be used, including hardware and software components, as well as the user community.
21. **Other nonfunctional requirements-** The characteristics that software must-have for the web application, such as performance, security, and software quality.
22. **Paperless transactions -** Transactions that are conducted without the use of paper or physical documents.
23. **Product scope** -The range of features and functions that will be included in the software application.
24. **Requests and Concerns** - The system features that enable registered residents to request barangay documents and report any problems or incidents within the barangay's vicinity.
25. **Resident Dashboard** - A Barangay South Signal Village Web App component that provides a user interface for registered residents to access barangay services conveniently and efficiently.
26. **Resident** - Person that lives in the Barangay South Signal Village.
27. **Safety Sections** - A Barangay South Signal Village Web App component that provides safety information about the barangay.
28. **Software Interfaces** - The interfaces between the different software components of a software system.
29. **Software Requirements Specification document -** A detailed document that outlines the features and requirements of a software application.
30. **Sweet Alerts** - A JavaScript library used to create message alerts in a web app.
31. **System Features** - The major services provided by a software system.
32. **Tracking key** - A unique identifier provided to the resident to monitor the progress of their requests and concerns.
33. **Transaction History** - A Barangay South Signal Village Web App component that provides an overview of all previous requests and concerns submitted through the web app.
34. **User class -** A group of users with similar characteristics and roles within a software application.
35. **User Interfaces** - The interfaces through which users interact with a software system.
36. **User stories** - Descriptions of how a user will interact with a software application to achieve a particular goal.
37. **Web app** - A program designed to run in a web browser, which can be accessed over the internet.

# Appendix B: Analysis Models

* **Use case diagram:** A visual representation of the actors (users) and use cases (actions or processes) in a system or application.
* **Activity diagram:** A visual representation of the flow of activities or tasks in a system or process.
* **Sequence diagram:** A visual representation of the interactions between objects or components in a system or process.
* **Class diagram:** A visual representation of the classes (or objects) in a system and their relationships to each other.
* **Entity-relationship diagram:** A visual representation of the relationships between entities (or objects) in a system or database.
* **Context flow diagram:** A high-level visual representation of the system and its external entities.
* **Object diagram:** A visual representation of objects and their relationships to each other in a system or process.
* **State-machine diagram:** A visual representation of the states and transitions of a system or process.
* **Use case package diagram:** A visual representation of the use case packages and their relationships to each other in a system or process.
* **Component diagram:** A visual representation of the components in a system and their relationships to each other.
* **Deployment diagram:** A visual representation of the physical deployment of components in a system.
* **MVC model:** A software design pattern that separates the Model (data), View (user interface), and Controller (logic) components of a system.
* **SDLC methodology:** A structured approach to software development, typically consisting of phases such as planning, analysis, design, implementation, testing, and maintenance