Software Requirements Specification

for

Saan Ga?: A Smart Tourism Recommender System Using Hybrid Filter in Nasugbu and Lian Batangas

**Version 1.0 approved**

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**Revision History**

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
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# Introduction

This project is used to promote hotels and resorts in Nasugbu and Lian Batangas. The system is designed to ease the promoting and recommending process of hotels and resorts. The main feature includes promoting hotels and resorts in Lian and Nasugbu Batangas, viewing all the hotels and resorts in Lian and Nasugbu Batangas, recommending based on the customers ratings. This project also has an IATF protocols that is implemented.

## Purpose

It can be used by the municipality of Lian and Nasugbu by promoting their Hotels and Resorts in the Local. This project is basically giving a recommendations about the desire hotels and resorts of the customers based on their information. This project may lessen the time and making contacts to other person where viruses are spreading. The system will show the lists of hotels and resorts in Lian and Nasugbu Batangas that will you to choose.

**Intended Audience and Reading Suggestions**

* **Developers –** For this helps them to understand the purpose of what we aim for by creating this system.
* **Users –** This can be helpful through their business and this information will show the overview of how the system flows and its functions.
* **Testers –** For this document will serve as a guide on what planning and materials is being used by creating the system. This will help them to know what the purpose of the system that we created is.

## Project Scope

The main goal of the web and mobile application is to maintain the records of customers like, customer’s ratings, locations and other information. Saan Ga? A Smart Tourism Recommender System Using Hybrid Filter in Nasugbu and Lian Batangas will be useful when it comes to promoting Hotels and Resorts and also to make an easy choice using web and mobile application. This software helps users to lessen the physical contact in choosing which hotel and resort to choose where in this pandemic there is a risk to get viruses in a crowded places.

## References

# Overall Description

## Product Perspective

*The 30% functionality of the system will represent the normal user interface of a normal e-commerce website, it consists of the top rated hotel and resort based on the user’s like and also the newly uploaded product or services of the followed business. It also contains the adding and saving product as well as viewing it on profile and also viewing of the business being followed by the user.*

## Product Features

***Priority Features:***

* ***Product/Services Pooling*** *- The system will pull the needed resources/data from the database in order for the user to see what they want to see.*
* ***Availability*** *- The system will be available to any type of business there is in Nasugbu.*
* ***Business Creation/Promotion*** *- As the main purpose of the system is to promote and help the local businesses in Nasugbu, creation and promotion of either small or large business is priority.*

***Basic Features:***

* ***On-Trend Self-Service*** *- The user can continuously monitor what businesses are on trend or what products/services are on trend.*

## User Classes and Characteristics

1. ***User Admin*** *- The one who will handle all the gathered data from all the users and make use of it in order to provide help to struggling businesses and promote the local product or business in Nasugbu and Lian.*
   1. *Creation of Account*
   2. *Viewing of Reports and Dashboards*
   3. *Viewing of the Analytics results*
   4. *Promote Local Businesses, Products, and Services.*

1. ***Anyone who visit the site.*** *- The one who will provide reviews and ratings of any hotel/resort and their products/services, and most importantly the one who will make use of it since it is not just about promoting business but also a recommender system.*
   1. *Creation of Account*
   2. *Promoting tourism, and accomodation*
   3. *Rating and Reviews*
   4. *Messaging through SMS/Messenger*
   5. *Searching Nearby Hotel/Resort*
   6. *Viewing Trends (Review Related)*

1. ***Resort Owners*** *- Resort owners in Nasugbu and Lian, who will use the system to further promote and help their business and make the community bigger by providing accommodation, products, and services.*
2. *Creation of Account*
3. *Promoting Business, Products, and Services*
4. *Rating and Reviews*
5. *Messaging*
6. *Viewing Trends (Hotel Statistics)*

## Operating Environment

* ***Playstore/Appstore*** *- The application will be uploaded in the play store or app store in order for the user to be able to download it.*

* ***Nasugbu Tourism Industry and Services Office*** *- The office will hold the main system which means they will be the admin that will monitor the gathered data, dashboards and analytics results in order to provide the necessary help and promotion of every business registered in the system.*
* ***Lian Tourism Department*** *- The office will also hold the main system which means they will be the admin that will monitor the gathered data, dashboards and analytics results in order to provide the necessary help and promotion of every business registered in the system.*

## Design and Implementation Constraints

CONSTRAINTS:

* Still not sure of what design template that we are going to use.
* Having trouble with the exact layouts that will be proper and can be resized depending on the size of the screen.

TECHNOLOGY USED/WILL BE USED AND WHY:

* **MySQL** - Will be used since it is an open-source database management system, and since it is the most familiar to the project team members and jumping to others will take time and may affect the schedule.
* **Laravel PHP Framework** - Will be used for the web part of the system. Just like MySQL it is what's most familiar to the developer.

* **Android Studio** - Android Studio is famous for android development and it will be much easier for the developer to find solutions and have some ideas if the community of the technology that we are using are big enough to get the proper information that we may or may not need.
* **Bootstrap** - This will be used for designing the web application and it is being used since it is common to people who are into web development.

## Assumptions and Dependencies

* *The system will only work if it’s connected to the internet.*
* *One of the features of the system is searching for a nearby hotel/resort based on the location given by the user, so it will not work without a map or google map.*
* *Uploading images of a hotel/resort environment and services requires camera and gallery access.*

# System Features

*This section provides a detailed explanation of the system features of the system that will be developed.*

## Product/Services Pooling

3.1.1 Description and Priority

*The system will pull the needed resources/data from the database in order for the user to see what they want to see. Everything that is being shown on the user interface will be provided by this feature, but most importantly it will be used for showing the related products/services and business based on the user inputs on their profile.*

3.1.2 Stimulus/Response Sequences

*The services and business that are not being shown on the “Recommended For You” page of the home page of the system are due to the profile specification of the user and it will not show any kind that are not related to what the user wanted to see.*

3.1.3 Functional Requirements

REQ-1: User Input of what they wanted to see on their homepage.

REQ-2: Necessary details of information in order to provide what part will be shown, like on searching and many more.

## Availability

3.2.1 Description and Priority

*The system will be available to any type of hotel/resrt there is in Nasugbu and Lian. Available access to locals as long as they have an internet connection. Available use of the application to order something, promote hotel/resort/products/services, messaging, viewing and many more.*

3.2.2 Stimulus/Response Sequences

*The system will provide a message of errors when met like: “Error : Connection Timeout”, “This Hotel/Resort is under COVID-19 Facility” and many more.*

3.2.3 Functional Requirements

REQ-1: Internet Connection

REQ-2: Smart Phone

REQ-3: Personal Computer/Laptop

## Business Creation/Promotion

3.3.1 Description and Priority

*As the main purpose of the system is to promote and help the local hotel/resort in Nasugbu and Lian. It is the most basic part of the system where the user can create an account whether it is as a local or business owner or even the admin.*

3.3.2 Stimulus/Response Sequences

*The system can and will provide some error messages when met, especially when it comes to the input of necessary information and data in order to make an account.*

3.3.3 Functional Requirements

REQ-1: User input, personal information, business information, etc.

REQ-2: Database Connection

REQ-3: Other applications dependencies

## On-Trend Self-Service

3.4.1 Description and Priority

*The user can continuously monitor what hotel/resorts are on trend or what rates/services are on trend. It is most used to track what types of hotel/resort and their services the user wants in order to provide a much more accurate related hotel/resort and services to be shown on the user's homepage.*

3.4.2 Stimulus/Response Sequences

*(Not yet encountered, and not yet included on the expectation of what the output looks like on this feature.)*

3.4.3 Functional Requirements

REQ-1: Cluster Analysis (in order to show the similarities of what the user wants and what is on trend on that category)

# External Interface Requirements

## User Interfaces

Smart Tourism Recommender System represents an innovative shift in the field of RSs. providing the needs of the user in terms of knowledge and information. It offers an online recommender of hotel/resort in Nasugbu and Lian Batangas that can be delivered anytime and anywhere through the wide range of recommender system.

## Hardware Interfaces

The hardware requirement at the user is really simple and the website can be run on the hardware that can run basic simple browser, although the hardware should be good enough during peak times for the web servers.

## Software Interfaces

## The application should support all major web browsers that will make it convenient for the user to access our system with ease. The database services will be used to a great extent and hence it will be quietly efficient designed.

## Communications Interfaces

# The SAAN GA recommender system shall use the http protocol for communication over the internet and for the intranet communication will be through TCP/IP protocol suite.

# Other Nonfunctional Requirements

## Performance Requirements

*The application is expected to be effective to perform and reach the satisfaction level on the features, specifically in terms of:*

1. *Generating recommendations*
2. *Viewing of Hotels and Resorts*
3. *Searching and filtering of hotels and resorts*
4. *Feedback generation*

*And also to meet the level of acceptability of the application in terms of:*

1. *Functional Suitability*
2. *Performance Efficiency*
3. *Usability; and*
4. *Reliability*

## Safety Requirements

*The application will be integrated with the guide of ISO/IEC 25010 which the safety and confidentiality of user’s data matters. This will ensure that the data given by the users are accessible only to those authorized to have access. The application will only request for data needed like customer’s name, location and budget, contact information and this will be displayed and will be shared only to the user of the application to build the connection between customer and business owners*

## Security Requirements

*Under the implementation of ISO/IEC 25010. The security will be ensured to the users, which protects the information and data so that all users have the degree of data access that is appropriate based on the type and level of authorization. The system will ensure the accountability and authenticity to which the identity of a subject can be proved to be unique.*

## Software Quality Attributes

# Other Requirements

*<Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>*

**Appendix A: Glossary**

**Customer** - a person or organization that buys goods or services from a store or business.

**Environment** - the surroundings or conditions in which a person, animal, or plant lives or operates.

**Feature** - a distinctive attribute or aspect of something.

**Framework** - an essential supporting structure of a building, vehicle, or object.

**Homepage** - the introductory page of a website, typically serving as a table of contents for the site.

**Interaction** - communication or direct involvement with someone or something.

**Local** - belonging or relating to a particular area or neighborhood, typically exclusively so.

**Online** - controlled by or connected to another computer or to a network.

**Platform** - a raised level surface on which people or things can stand.

**Scope** - the extent of the area or subject matter that something deals with or to which it is relevant.

**Software** - the programs and other operating information used by a computer.

**Virus** - an infective agent that typically consists of a nucleic acid molecule in a protein coat, is too small to be seen by light microscopy, and is able to multiply only within the living cells of a host.

**Appendix B: Analysis Models**

**Entity Relationship Diagram**

