A Real Time and Interactive Dashboard for Tourism Industry

**Software Requirement Specification**

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# 1. Document History

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| History | Status | Date | Viewable | Editable | Responsible |
| Project-Software Requirement Specification\_v1.docx  Create:  - Introduction  - Project Feature  - User Requirement Specification  - Specific Requirement  - System Requirement Specification  - Reference | Draft | 29 June 2019 | ZJY, LYW,  AJP | ZJY, LYW | ZJY, LYW |
| Project-Software Requirement Specification\_v2.docx  Modify:  User Requirement Specification  - Specific Requirement  - System Requirement Specification | Draft | 22  Aug  2019 | ZJY, LYW,  AJP | ZJY, LYW | ZJY, LYW |
| Project-Software Requirement Specification\_v3.docx  Modify:  User Requirement Specification  - Specific Requirement  - System Requirement Specification | Final | 07  Oct  2019 | ZJY, LYW,  AJP | ZJY, LYW | ZJY, LYW |

ZJY = Junyu Zhou

LYW = Yawei Li

AJP = Dr. Pree Thiengburanathum

# 2. Introduction

## 2.1 Purpose

The purpose of the software requirement specification (SRS) is to describe the functional and non-functional requirements of a real time and interactive dashboard in tourism industry. The requirements in the SRS are involved with the users to use the web-based application. The software requirement specification provides developers and users to understand each other in structure details. The application will be designed followed the SRS.

## 2.2 Project Overview

A Real Time and Interactive Dashboard for Tourism Industry is developed for the decision maker to view and manage the data easily and efficiently. Due to a large number of data, there are numerous work and extra things to do for doing statistics. A real time and interactive dashboard in tourism industry will provide the effective platform to decision maker to manage and statistics the massive data.

**2.2.1 Project Scope**

A Real Time and Interactive Dashboard for Tourism Industry is a web-based application. It is for decision maker to do the easy statistics of mess data in a real time way. For decision maker to manage and keep tracks all the data.

**2.2.2 Document Scope**

This document will include use case, use case description and software requirement of A real time and interactive dashboard in tourism industry. The scope of use case will cover the dashboard system and login/logout system.

Use case diagrams are usually referred to as behavior diagrams used to describe a set of actions (use cases) that some system or systems (subject) should or can perform in collaboration with one or more external users of the system (actors).

A software requirements specification (SRS) is a comprehensive description of the intended purpose and environment for software under development. The SRS fully describes what the software will do and how it will be expected to perform.

## 2.3 User Characteristics

This system provides visualization data for decision makers easily to do statistics. In addition, A real-time and interactive dashboard in tourism industry will provide more than one types of visualization for users (for example, heatmap, word cloud)), they will reduce the paper-based work and record all data in an understandable way.

In this application we have three actors following:

**2.3.1 The super admin**

The super admin can manage accounts and do all admin stuffs.

**2.3.2 The admin**

The admin can register accounts, login to dashboard and view data visualization summaries.

**2.3.3 The user**

The user can view and write comments.

## 2.4 Operation Environment

PyCharm

Visual Studio Code

MongoDB

Pusher

React

Flask

GitHub

Draw.io

## 2.5 Acronyms and Definitions

**2.5.1 Acronyms**

ZJY = Junyu Zhou

LYW = Yawei Li

AJP = Dr. Pree Thiengburanathum

UC = Use Case

URS = User Requirement Specification

SRS = System Requirement Specification  
AD = Activity Diagram

CD = Class Diagram

**2.5.2 Definitions**

|  |  |
| --- | --- |
| Name | Description |
| Use case | (1) A use case is a software and system engineering term that describes how a user uses a system to accomplish a particular goal. A use case acts as a software modeling technique that defines the features to be implemented and the resolution of any errors that may be encountered. [1] |
| Requirement | (1)A condition or capability needed by the user to solve a problem or achieve an objective for project.  (2) A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification, or other formally imposed document. [2] |
| Specification | Description of an activity or work product that serves as the basis or input for further activities or work product. A specification can comprise requirements to a Product and how they will be solved. [3] |
| User Interface | Visual part of computer application or operating system through which a user interacts with a computer or a software. It determines how commands are given to the computer or the program and how information is displayed on the screen. [4] |

# 3. Project Feature

[On progress Report I& progress Report II]

**Feature-1. Account authorization**

* Super admin could login to system.
* Super admin could view all accounts.
* Super admin could delete account.
* Super admin could add admin account.
* Super admin could accept or reject admin account register request.
* Admin could register account.
* Admin could login to dashboard.
* Admin could edit their account information.
* Admin could logout.

**Feature-2. Admin views the summary of data visualization result**

* Admin could view all visualization data summaries which contain:

1. All the summary sparkline chart.

2. Positive comments rate line chart.

3. Word frequency bar chart.

4. Number of comments bar chart.

5. Types of comments stacked column chart.

**Feature-6. All users view comments.**

* All the website user could view the comments in the home page which contains:

1. Hotel list

2. Comments list.

**Feature-7. Admin writes comments.**

* Admin could write hotel comments.
* Comments will real time show at main page.

**Feature-8. Super admin views system log.**

* Super admin could view the system log (Time, type of log, creator, info).
* Super admin could view online user.
* Super admin could view number of users who are typing comments.

# 4. User Requirement Specification

## 4.1 User Requirement Analysis

In systems engineering and software engineering, requirements analysis encompasses those tasks that go into determining the needs or conditions to meet for a new or altered product or project, taking account of the possibly conflicting requirements of the various stakeholders, analyzing, documenting, validating and managing software or system requirements.

Requirements analysis is critical to the success or failure of a systems or software project. The requirements should be documented, actionable, measurable, testable, traceable, related to identified business needs or opportunities, and defined to a level of detail sufficient for system design.[5]

## 4.2 User Requirement Specification

[On Progress Report I&II: Feature-1 – Feature-2& Feature-6 – Feature-8]

**Feature-1. Account authorization**

URS-01: Super admin can login to system.

URS-02: Super admin can view all accounts or waiting list page.

URS-03: Super admin can edit account information.

URS-04: Super admin can delete account.

URS-05: Super admin can add admin account.

URS-06: Super admin can accept admin account register request.

URS-07: Super admin can reject admin account register request.

URS-08: Admin can register account.

URS-09: Admin can login to dashboard.

URS-10: Admin can edit account information.

URS-11: Admin can logout.

**Feature-2. Admin views the summary of data visualization result**

URS-12: Admin can view all the summary by using sparkline chart.

URS-13: Admin can view positive comments rate by using line chart.

URS-14: Admin can view word frequency by using bar chart.

URS-15: Admin can view number of comments by using bar chart.

URS-16: Admin can view types of comments stacked by using column chart.

**Feature-6. All users view comments.**

URS-17: All users can view hotel list in the homepage.

URS-18: All users can click to view a hotel page.

URS-19: All users can view all comments of a hotel.

**Feature-7. Admin writes comments.**

URS-20: Admin can write hotel comments.

**Feature-8. Super admin views system log.**

URS-21: Super admin can view the system log (Time, type of log, creator, info).

URS-22: Super admin can view online user.

URS-23: Super admin can view number of users who are typing comments.

# 5. Specific Requirement

## 5.1 Use Case Scenario

**5.1.1 Use Case Diagram of Feature 1**

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Figure 1: Use Case Diagram of Feature 1

**5.1.2 Use Case Diagram of Feature 2**

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Figure 2: Use Case Diagram of Feature 2

**5.1.3 Use Case Diagram of Feature 6**

图片包含 文字

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Figure 3: Use Case Diagram of Feature 6

**5.1.4 Use Case Diagram of Feature 7**

图片包含 屏幕截图

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Figure 4: Use Case Diagram of Feature 7

**5.1.4 Use Case Diagram of Feature 8**

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Figure 5: Use Case Diagram of Feature 8

## 5.2 Use Case Description and activity diagram

[Progress I]

## 5.2.1 Account authorization

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-01 | | | |
| Use Case Name | Login to the administer system | | | |
| Actors | Super admin | | | |
| Description | Super admin can login to the administer system by inputting username and password | | | |
| Trigger | Super admin clicks “Login” button | | | |
| Preconditions | System connect with internet successful | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
| Username | String | - More than 6 digits.  - Must contain characters and not more than 12 digits.  - No special characters and space. | | Admin001 |
| Password | String | - Not less than 6 digits. | | Admin001 |
| Post conditions | Super admin login to dashboard successful. | | | |
| Normal Flows | User | | System | |
|  | 1. Super admin clicks login button. | |  | |
|  |  | | 2. System provides the login interface. | |
|  | 3. Super admin inputs username and password. | |  | |
|  |  | | 4. System checks input format. [E1] [E2] | |
|  |  | | 5.System validates that the username and password. [A1] | |
|  |  | | 6.System directs to system. | |
| Alternative Flow | A1: Username and password do not match.  1: Display: “The username or password is incorrect.”  2: System goes to 3rd step in normal flows. | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel.  E2: Input format error.  1: Display: “Format is incorrect.”  2: System goes to 3rd step in normal flows. | | | |
| Assumption | Decision maker must have an individual account. | | | |

## AD01: Login to the system

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Figure 6: Login to the system

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-02 | | | |
| Use Case Name | View all accounts | | | |
| Actors | Super admin | | | |
| Description | Super admin can view all accounts | | | |
| Trigger | Super admin clicks “all accounts” button | | | |
| Preconditions | Super admin must login into the system | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Super admin can view all accounts information. | | | |
| Normal Flows | User | | System | |
|  | 1. Super admin clicks all accounts button. | |  | |
|  |  | | 2. System displays all accounts information. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Super admin must have an individual account. | | | |

## AD02: View all accounts

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Figure 7: View all accounts

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-03 | | | |
| Use Case Name | Super admin edits account information | | | |
| Actors | Super admin | | | |
| Description | Super admin can edit account information | | | |
| Trigger | Super admin clicks “Edit” button | | | |
| Preconditions | Super admin must login into the system | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
| Username | String | - More than 6 digits.  - Must contain characters and not more than 12 digits.  - No special characters and space. | | Admin001 |
| Password | String | - Not less than 6 digits. | | Admin001 |
| Post conditions | Super admin can edit account information. | | | |
| Normal Flows | User | | System | |
|  | 1. Super admin clicks Edit button. | |  | |
|  |  | | 2. System provides edit information page. [E1] | |
|  | 3. Super admin inputs information. | |  | |
|  | 4. Super admin saves information. | |  | |
|  |  | | 5. System checks input format. [E2] | |
|  |  | | 6. System stores to database. | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel.  E2: Input format error.  1: Display: “Format is incorrect.”  2: System goes to 4th step in normal flows. | | | |
| Assumption | Super admin must have an individual account. | | | |

## AD03: Super admin edits account information

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描述已自动生成**

Figure 8: Super admin edits account information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-04 | | | |
| Use Case Name | Delete account | | | |
| Actors | Super admin | | | |
| Description | Super admin can delete account | | | |
| Trigger | Super admin clicks “Delete” button | | | |
| Preconditions | Super admin must login into the system | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Super admin can view all accounts information. | | | |
| Normal Flows | User | | System | |
|  | 1. Super admin clicks delete account button. | |  | |
|  | 2. Super admin selects account to delete. | |  | |
|  |  | | 3. System deletes account. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Super admin must have an individual account. | | | |

## AD04: Delete account

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Figure 9: Delete account

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-05 | | | |
| Use Case Name | Add admin account directly | | | |
| Actors | Super admin | | | |
| Description | Super admin can add admin account for admin directly | | | |
| Trigger | Super admin clicks “Add admin account” button | | | |
| Preconditions | System connect with internet successful | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
| Username | String | - More than 6 digits.  - Must contain characters and not more than 12 digits.  - No special characters and space. | | Admin001 |
| Password | String | - Not less than 6 digits. | | Admin001 |
| Post conditions | Super admin login to system successful. | | | |
| Normal Flows | User | | System | |
|  | 1. Super admin clicks “Add admin account” button. | |  | |
|  |  | | 2. System provides add account page. [E1] | |
|  | 3. Super admin inputs username and password. | |  | |
|  | 4. Super admin clicks save information. | |  | |
|  |  | | 5. System checks input format. [E2] [E3] | |
|  |  | | 6. System stores to database | |
|  |  | | 7. System displays: “Add account successful.” | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel.  E2: Input format error.  1: Display: “Format is incorrect.”  2: System goes to 4th step in normal flows.  E3: Account already exists in database.  1: Display: “The account already exists in database.”  2. System goes to 3rd step in normal flows. | | | |
| Assumption | Super admin must have an individual account. | | | |

## AD05: Add admin account directly

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Figure 10: Add admin account directly

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-06 | | | |
| Use Case Name | Accept admin accept register request | | | |
| Actors | Super admin | | | |
| Description | Super admin can accept admin account register request | | | |
| Trigger | Super admin clicks Accept button | | | |
| Preconditions | Super admin must login into the system | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Super admin can accept admin account register request. | | | |
| Normal Flows | User | | System | |
|  | 1. Super admin clicks waiting list button. | |  | |
|  |  | | 2. System displays all waiting list accounts information. [E1] | |
|  | 3. Super admin clicks accept button. | |  | |
|  |  | | 4. System stores account into database. | |
|  |  | | 5. System returns result to admin. | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Super admin must have an individual account. | | | |

## AD06: Accept admin account register request

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Figure 11: Accept admin account register request

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-07 | | | |
| Use Case Name | Reject admin account register request | | | |
| Actors | Super admin | | | |
| Description | Super admin can reject admin account register request | | | |
| Trigger | Super admin clicks ‘Reject’ button | | | |
| Preconditions | Super admin must login into the system | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Super admin can reject admin account register request. | | | |
| Normal Flows | User | | System | |
|  | 1. Super admin clicks waiting list button. | |  | |
|  |  | | 2. System displays all waiting list accounts information. [E1] | |
|  | 3. Super admin clicks reject button. | |  | |
|  |  | | 4. System returns result to admin. | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Super admin must have an individual account. | | | |

## AD07: Reject admin account register request

图片包含 屏幕截图

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Figure 12: Reject admin account register request

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-08 | | | |
| Use Case Name | Register account | | | |
| Actors | Admin | | | |
| Description | Admin can register account | | | |
| Trigger | Admin clicks “Register” button | | | |
| Preconditions | System connect with internet successful | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
| Username | String | - More than 6 digits.  - Must contain characters and not more than 12 digits.  - No special characters and space. | | Admin001 |
| Password | String | - Not less than 6 digits. | | Admin001 |
| Post conditions | Admin can register account. | | | |
| Normal Flows | User | | System | |
|  | 1. Admin clicks Register button. | |  | |
|  |  | | 2. System provides register information page. [E1] | |
|  | 3. Admin inputs information. | |  | |
|  | 4. Admin saves information. | |  | |
|  |  | | 5. System checks input format. [E2] | |
|  |  | | 6. System sends account information to waiting list. | |
|  |  | | 7. System displays: “register information was recorded, please wait for the result.” | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel.  E2: Input format error.  1: Display: “Format is incorrect.”  2: System goes to 4th step in normal flows. | | | |
| Assumption | Super admin must have an individual account. | | | |

## AD08: Register account

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Figure 13: Register account

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-09 | | | |
| Use Case Name | Login to dashboard | | | |
| Actors | Admin | | | |
| Description | Admin can login to dashboard | | | |
| Trigger | Admin clicks “Login” button | | | |
| Preconditions | System connect with internet successful | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
| Username | String | - More than 6 digits.  - Must contain characters and not more than 12 digits.  - No special characters and space. | | Admin001 |
| Password | String | - Not less than 6 digits. | | Admin001 |
| Post conditions | Admin login to dashboard successful. | | | |
| Normal Flows | User | | System | |
|  | 1. Admin clicks login button. | |  | |
|  |  | | 2. System provides the login interface. | |
|  | 3. Admin inputs username and password. | |  | |
|  |  | | 4. System checks input format. [E1] [E2] | |
|  |  | | 5.System validates that the username and password. [A1] | |
|  |  | | 6.System directs to dashboard. | |
| Alternative Flow | A1: Username and password do not match.  1: Display: “The username or password is incorrect.”  2: System goes to 3rd step in normal flows. | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel.  E2: Input format error.  1: Display: “Format is incorrect.”  2: System goes to 3rd step in normal flows. | | | |
| Assumption | Decision maker must have an individual account. | | | |

## AD09: Login to dashboard

图片包含 文字, 地图

描述已自动生成

Figure 14: Login to dashboard

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-10 | | | |
| Use Case Name | Admin edits account information | | | |
| Actors | Admin | | | |
| Description | Admin can edit account information | | | |
| Trigger | Admin clicks “Edit” button | | | |
| Preconditions | Admin must login into system | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
| Username | String | - More than 6 digits.  - Must contain characters and not more than 12 digits.  - No special characters and space. | | Admin001 |
| Password | String | - Not less than 6 digits. | | Admin001 |
| Post conditions | Admin can edit account information. | | | |
| Normal Flows | User | | System | |
|  | 1. Admin clicks Edit button. | |  | |
|  |  | | 2. System provides edit information page. [E1] | |
|  | 3. Admin inputs information. | |  | |
|  | 4. Admin saves information. | |  | |
|  |  | | 5. System checks input format. [E2] | |
|  |  | | 6. System stores to database. | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel.  E2: Input format error.  1: Display: “Format is incorrect.”  2: System goes to 4th step in normal flows. | | | |
| Assumption | Admin must have an individual account. | | | |

## AD10: Admin edits account information

**图片包含 文字, 地图

描述已自动生成**

Figure 15: Admin edits account information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-11 | | | |
| Use Case Name | Log out | | | |
| Actors | Admin | | | |
| Description | Admin can log out from dashboard | | | |
| Trigger | Admin clicks “Logout” button | | | |
| Preconditions | Admin must login into dashboard | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Admin log out from system. | | | |
| Normal Flows | User | | System | |
|  | 1. Admin clicks Log out button. | |  | |
|  |  | | 2. System log out from dashboard. | |
| Alternative Flow |  | | | |
| Exception |  | | | |
| Assumption | Super admin must have an individual account. | | | |

## AD11: Log out from dashboard

图片包含 屏幕截图

描述已自动生成

Figure 16: Log out from dashboard

## 5.2.2 Admin views the summary of data visualization result

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-12 | | | |
| Use Case Name | View summary sparkline chart | | | |
| Actors | Admin | | | |
| Description | Admin can view summary sparkline chart | | | |
| Trigger | Admin click view dashboard button | | | |
| Preconditions | Admin login to dashboard | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Admin can view summary sparkline chart | | | |
| Normal Flows | User | | System | |
|  |  | | 1. System displays a summary sparkline chart. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Admin must have an individual account. | | | |

## AD12: View summary sparkline chart

图片包含 文字, 地图

描述已自动生成

Figure 17: View summary sparkline chart

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-13 | | | |
| Use Case Name | View positive comments rate line chart | | | |
| Actors | Admin | | | |
| Description | Admin can view positive comments rate line chart | | | |
| Trigger | Admin click view dashboard button | | | |
| Preconditions | Admin login to dashboard | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Admin can view positive comments rate line chart | | | |
| Normal Flows | User | | System | |
|  |  | | 1. System displays a positive comments rate line chart. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Admin must have an individual account. | | | |

## AD13: View positive comments rate line chart

图片包含 文字, 地图

描述已自动生成

Figure 18: View positive comments rate line chart

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-14 | | | |
| Use Case Name | View word frequency bar chart | | | |
| Actors | Admin | | | |
| Description | Admin can view word frequency bar chart | | | |
| Trigger | Admin click view dashboard button | | | |
| Preconditions | Admin login to dashboard | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Admin can view word frequency bar chart | | | |
| Normal Flows | User | | System | |
|  |  | | 1. System displays a word frequency bar chart. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Admin must have an individual account. | | | |

## AD14: View word frequency bar chart

图片包含 文字, 地图

描述已自动生成

Figure 19: View word frequency bar chart

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-15 | | | |
| Use Case Name | View number of comments bar chart | | | |
| Actors | Admin | | | |
| Description | Admin can view number of comments bar chart | | | |
| Trigger | Admin click view dashboard button | | | |
| Preconditions | Admin login to dashboard | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Admin can view number of comments bar chart | | | |
| Normal Flows | User | | System | |
|  |  | | 1. System displays a number of comments bar chart. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Admin must have an individual account. | | | |

## AD15: View number of comments bar chart

**图片包含 文字, 地图

描述已自动生成**

Figure 20: View number of comments bar chart

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-16 | | | |
| Use Case Name | View types of comments stacked column chart | | | |
| Actors | Admin | | | |
| Description | Admin can view types of comments stacked column chart | | | |
| Trigger | Admin click view dashboard button | | | |
| Preconditions | Admin login to dashboard | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Admin can view types of comments stacked column chart | | | |
| Normal Flows | User | | System | |
|  |  | | 1. System displays types of comments stacked column chart. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Admin must have an individual account. | | | |

## AD16: View types of comments stacked column chart

图片包含 文字, 地图

描述已自动生成

Figure 21: View types of comments stacked column chart

## [Progress II]

## 5.2.3 All users view comments.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-17 | | | |
| Use Case Name | View the hotel list | | | |
| Actors | Users | | | |
| Description | Users can view the hotel list in the homepage. | | | |
| Trigger | Users access homepage | | | |
| Preconditions | Users must connect to internet | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Users can view the hotel list in the homepage. | | | |
| Normal Flows | User | | System | |
|  |  | | 1. System displays hotel list. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Website user must open website page. | | | |

## AD17: View the hotel list

图片包含 文字, 地图

描述已自动生成

Figure 22: View the hotel list

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-18 | | | |
| Use Case Name | Click to view a hotel page. | | | |
| Actors | Users | | | |
| Description | Users can click to view a hotel page. | | | |
| Trigger | Users click a hotel. | | | |
| Preconditions | Users must connect to internet | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Users can access the hotel page. | | | |
| Normal Flows | User | | System | |
|  | 1. User clicks a hotel. | |  | |
|  |  | | 2. System redirects to hotel page. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: Refresh and back to homepage. | | | |
| Assumption | Website user must open website page. | | | |

## AD18: Click to view a hotel page.

图片包含 屏幕截图

描述已自动生成

Figure 23: Click to view a hotel page.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-19 | | | |
| Use Case Name | View all comments | | | |
| Actors | Users | | | |
| Description | Users can view all comments of a hotel. | | | |
| Trigger | Users access a hotel page | | | |
| Preconditions | Users must select a hotel to view | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Users can view all comments of a hotel | | | |
| Normal Flows | User | | System | |
|  |  | | 1. System displays the comments list. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: Refresh and back to homepage. | | | |
| Assumption | Users must open website page. | | | |

## AD19: View all comments

图片包含 屏幕截图

描述已自动生成

Figure 24: View all comments

## 5.2.4 Admin writes comments

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-20 | | | |
| Use Case Name | Write hotel comments | | | |
| Actors | Admin | | | |
| Description | Admin can write hotel comments. | | | |
| Trigger | Admin types comments and clicks “submit” button. | | | |
| Preconditions | Admin login to system. | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
| Comments | String | - More than 1 character.  - Not more than 120 characters. | | Good place |
| Post conditions | Admin can write hotel comments. | | | |
| Normal Flows | User | | System | |
|  |  | | 1. System displays the view comment page. | |
|  | 2. Admin clicks write comments. [A1] | |  | |
|  |  | | 3. system displays the page for inputting. | |
|  | 4. Admin inputs comments. | |  | |
|  | 5. Admin clicks submit button. [E1] | |  | |
|  |  | |  | |
| Alternative Flow | A1: User didn’t login to system.  1: Display: “You must login before typing” | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Website user must open website page. | | | |

## AD20: Write hotel comments

图片包含 文字, 地图

描述已自动生成

Figure 25: Write hotel comments

## 5.2.5 Super admin views system log.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-21 | | | |
| Use Case Name | View system log (Time, type of log, creator, info) | | | |
| Actors | Super admin | | | |
| Description | Super admin can view system log (Time, type of log, creator, info) | | | |
| Trigger | Super admin clicks system log button | | | |
| Preconditions | Super admin login to system. | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Super admin can view system log information. | | | |
| Normal Flows | User | | System | |
|  | 1. Super admin clicks system log button. | |  | |
|  |  | | 2. System displays log information. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Super admin must understand English. | | | |

## AD21: View system log (Time, type of log, creator, info)

## 图片包含 文字, 地图 描述已自动生成

Figure 26: View system log (Time, type of log, creator, info)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-22 | | | |
| Use Case Name | View online user | | | |
| Actors | Super admin | | | |
| Description | Super admin can view online user | | | |
| Trigger | Super admin clicks system log button | | | |
| Preconditions | Super admin login to system. | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Super admin can view online user | | | |
| Normal Flows | User | | System | |
|  | 1. Super admin clicks all accounts button. | |  | |
|  |  | | 2. System displays online user. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Super admin must open website. | | | |

## AD22: View online user

图片包含 文字, 地图

描述已自动生成

Figure 27: View online user

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case ID | UC-23 | | | |
| Use Case Name | View number of users who are typing | | | |
| Actors | Super admin | | | |
| Description | Super admin can view number of users who are typing comments | | | |
| Trigger | Super admin clicks system log button | | | |
| Preconditions | Super admin login to system. | | | |
| Use Case Input Specification | | | | |
| Input | type | Constraint | | Example |
|  |  |  | |  |
| Post conditions | Super admin can view number of users who are typing comments | | | |
| Normal Flows | User | | System | |
|  | 1. Super admin clicks all accounts button. | |  | |
|  |  | | 2. System displays number of users who are typing comments. [E1] | |
| Alternative Flow |  | | | |
| Exception | E1: Cannot connect to database.  1: Display: “Cannot connect to database.”  2: System provides a button to refresh/cancel. | | | |
| Assumption | Super admin must open website. | | | |

## AD23: View number of users who are typing

图片包含 文字, 地图

描述已自动生成

Figure 28: View number of users who are typing

# 6.System Requirements Specification

## 6.1 Requirements Specification

**6.1.1 Use Case: Login to the administer system**

SRS-01: The system provides the admin login page.

SRS-02: The system provides the register column.

SRS-03: The system provides the login column.

SRS-04: The system provides the username textbox.

SRS-05: The system provides the password textbox.

SRS-06: The system provides the login button.

SRS-07: The system provides the cancel button.

SRS-08: The system checks input format.

SRS-09: The system validates that the username and password.

SRS-10: The system directs to admin system.

**6.1.2 Use Case: View all accounts**

SRS-11: The system provides the all accounts information**.**

SRS-12: The system provides the accounts status column.

**6.1.3 Use Case:** **Super admin edits account information**

SRS-13: The system provides edit information page.

SRS-08: The system checks input format.

SRS-14: The system stores account to database.

**6.1.4 Use Case:** **Delete account**

SRS-11: The system provides the all accounts information**.**

SRS-15: The system deletes account.

**6.1.5 Use Case:** **Add admin account**

SRS-16: The System provides add account page.

SRS-08: The system checks input format.

SRS-14: The system stores account to database.

SRS-17: The system displays: “Add account successful.”

**6.1.6 Use Case:** **Accept admin account register request**

SRS-18: The system displays all waiting list accounts information.

SRS-14: The system stores account to database.

SRS-19: The system returns result to admin.

**6.1.7 Use Case:** **Reject admin account register request**

SRS-18: The system displays all waiting list accounts information.

SRS-19: The system returns result to admin.

**6.1.8 Use Case:** **Register account**

SRS-20: The system provides register information page.

SRS-03: The system provides the login column.

SRS-21: The system provides the admin login column.

SRS-04: The system provides the username textbox.

SRS-05: The system provides the password textbox.

SRS-06: The system provides the login button.

SRS-07: The system provides the cancel button.

SRS-08: The system checks input format.

SRS-22: The system sends account information to waiting list.

SRS-23: The system displays: “register information was recorded, please wait for the result.”

**6.1.9 Use Case:** **Login to dashboard**

SRS-24: The system provides the login page.

SRS-02: The system provides the register column.

SRS-21: The system provides the admin login column.

SRS-04: The system provides the username textbox.

SRS-05: The system provides the password textbox.

SRS-06: The system provides the login button.

SRS-07: The system provides the cancel button.

SRS-08: The system checks input format.

SRS-09: The system validates that the username and password.

SRS-03: The system validates that the username and password.

SRS-25: The system directs to dashboard.

**6.1.10 Use Case: Admin edits account information**

SRS-26: The system provides edit information page.

SRS-27: The system provides Change Username button.

SRS-28: The system provides Change Password button.

SRS-04: The system provides the username textbox.

SRS-29: The system provides the New Username textbox.

SRS-30: The system provides the Confirm button.

SRS-07: The system provides the Cancel button.

SRS-08: The system checks input format.

SRS-14: The system stores account to database.

SRS-31: The system provides the Back button.

**6.1.11 Use Case: Log out**

SRS-32: The system logs out from dashboard.

**6.1.12 Use Case: View all the summary by using sparkline chart**

SRS-33: The system provides the summary page.

SRS-34: The system displays a summary sparkline chart.

SRS-35: The system provides the Word-Cloud column.

SRS-36: The system provides the Heatmap column.

SRS-31: The system provides the Back button.

**6.1.13 Use Case: View positive comments rate by using line chart**

SRS-33: The system provides the summary page.

SRS-37: The system displays a positive comments rate line chart.

SRS-35: The system provides the Word-Cloud column.

SRS-36: The system provides the Heatmap column.

SRS-31: The system provides the Back button.

**6.1.14 Use Case: View word frequency by using bar chart**

SRS-33: The system provides the summary page.

SRS-38: The system displays a word frequency bar chart.

SRS-35: The system provides the Word-Cloud column.

SRS-36: The system provides the Heatmap column.

SRS-31: The system provides the Back button.

**6.1.15 Use Case: View number of comments by using bar chart**

SRS-33: The system provides the summary page.

SRS-39: The system displays a number of comments bar chart.

SRS-35: The system provides the Word-Cloud column.

SRS-36: The system provides the Heatmap column.

SRS-31: The system provides the Back button.

**6.1.16 Use Case:** **View types of comments by using stacked column chart**

SRS-33: The system provides the summary page.

SRS-40: The system displays types of comments stacked column chart.

SRS-35: The system provides the Word-Cloud column.

SRS-36: The system provides the Heatmap column.

SRS-31: The system provides the Back button.

**6.1.17 Use Case:** **All users view comments**

SRS-41: The system displays hotel list.

SRS-42: The system redirects to hotel page.

SRS-43: The system displays the comments list.

SRS-44: The system provides the Clear button.

SRS-45: The system provides the Submit button.

SRS-46: The system provides the Show More button.

SRS-47: The system provides the Show Less button.

**6.1.18 Use Case: Write hotel comments**

SRS-48: The system displays the view comment page.

SRS-44: The system provides the Clear button.

SRS-45: The system provides the Submit button.

SRS-49: The system provides the Back to Home button.

SRS-50: The system provides the Logout button.

SRS-51: The system displays the hotel name box.

SRS-52: The system displays Hello user box.

SRS-53: The system provides the write comments textbox.

SRS-54: The system provides the textbox to show comments details.

SRS-46: The system provides the Show More button.

SRS-47: The system provides the Show Less button.

**6.1.19 Use Case: Super admin views system log.**

SRS-55: The system provides the System Logs textbox.

SRS-56: The system provides the Search textbox.

SRS-57: The system displays online user.

SRS-58: The system displays number of users who are typing comments.

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# 8. Reference

[1] Use case. Use case [online] Available at: https://www.techopedia.com/definition/25813/use-case [Accessed 18 July 2019].

[2] Requirement. Requirement [online] Available at: https://en.wikipedia.org/wiki/Software\_requirements [Accessed 18 July 2019].

[3] Specification [online] Available at: https://en.wikipedia.org/wiki/Specification\_(technical\_standard) [Accessed 18 July 2019].

[4] User Interface [online] Available at: http://www.businessdictionary.com/definition/user-interface.html [Accessed 18 July 2019].

[5] Requirements analysis[online] Available at:

https://en.wikipedia.org/wiki/Requirements\_analysis#cite\_note-2 [Accessed 18 July 2019].