Shopee

Supplementary Specification

Version <1.0>

Revision History

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Supplementary Specification

# Introduction

## Purpose

The purpose of this Supplementary Specification is to provide additional information and define requirements of the e-commerce system Shopee. This information may include additional technical specifications, quality control requirements, or other specific requirements that are not covered in the general specifications. This document is used for all stakeholders related to the system.

## Scope

This document contains the requirements of the Shopee ecommerce platform. This is the document used as the foundation for other documents in the analysis and design process.

This system provides users with an online buying and selling platform through Shopee. In it, sellers can sell products on their sales page, update store information, and customers can view product information, learn about products and sellers, make purchases, or product reviews, etc.

This specification defines the functional requirements and non-functional requirements of the system including usability, reliability, performance, supportability and other attributes.

## Definitions, Acronyms, and Abbreviations

Admin: short for administrator, who is a privileged user who is responsible for managing user accounts, and managing resources.

Guests: users who use the platform but did not log in to the application.

## References

Shopee Platform, https://shopee.vn/.

Software Architecture Document, version 1.0

## Overview

The supplementary specification document includes sections such as Functionality, Usability, Reliability, Performance, Supportability, Design Constraints, Online User Documentation and Help System Requirements, Purchased Components, Interfaces, Licensing Requirements, Legal, Copyright, and Other Notices, and Applicable Standards.

# Functionality

## Admin

* The admin will update information and status of user’s orders for both customers and sellers.
* The admin will manage which account is blocked and which can be unblocked.
* The admin will send notifications for customers and sellers about orders.
* The admin must authorize the account.
* The admin will confirm return or refund for customers.
* The admin must check the seller's product before uploading that on the platform publicly.

## Customers

* The customers must log in to use other functionalities.
* The customers can change their password.
* The customers can update their personal information such as name, date of birth, address, phone number, payment methods.
* The customers can search products or sellers.
* The customers can click on the product to view product.
* The customers can get Shopee coins daily by clicking on “Get Coin” button or giving feedback after purchasing products.
* The customers can add products into their online shopping cart maximum 99 products.
* The customers can make an offer to the seller.
* The customers can chat with other customers or sellers.
* The customers can make payment to purchase products.
* The customers can request return or refund from sellers.
* The customers can keep track of their orders after making payment.
* The customers can give feedback and rate for the product which they have purchased.
* The customers can use Help Center to find out information that they want to know.

## 2.3 Sellers

* The sellers must log in.
* The sellers can change their passwords.
* The sellers can update their information.
* The sellers can chat with customers.
* The sellers can upload products to sell.
* The sellers can have the authority to confirm the customer’s orders.
* The sellers can use Help Center to find out information that they want to know.

## 2.4 Guests

* The guests can register a new account.
* The guests can view products.
* The guests can search products or sellers.
* The guests can use Help Center to find out information that they want to know.

# Usability

## Training time

* Normal Users: The Shopee platform should have a user-friendly interface that allows normal users to become proficient approximately 80% in basic operations within one hour of exploration or usage.
* Power Users: Power users, who may need to perform more advanced or complex tasks, should be able to achieve proficiency within two to three hours of focused training.

## 3.2 Task Time

All processes should be streamlined to allow users to complete this maximum five minutes.

## 3.3 Customization

* Application should adhere to established GUI standards, such as Microsoft's or other widely accepted guidelines. This includes consistent use of icons, buttons, and navigation patterns to ensure a familiar and intuitive user experience.
* In showing products, it must have at least 2 ways to show for the users to know what it is. It can use many methods to describe: picture, video, detail description.

# Reliability

## Availability

Shopee should strive for at least 99.9% availability during peak hours and 99.5% availability during non-peak hours.The platform should be available 24/7 to accommodate users across different time zones.

## 4.2 Mean Time Between Failures (MTBF)

System should have an MTBF of at least 5,000 hours, meaning the system is expected to operate without failure for this duration on average.

## 4.3 Mean Time To Repair (MTTR)

The system should have an MTTR of no more than 2 hours, indicating that in the event of a failure

## 4.4 Accuracy

All financial transactions and inventory updates should be recorded with a precision of at least two decimal places to ensure accurate financial tracking.

## 4.5 Bugs or defect rate

All financial transactions and inventory updates should be recorded with a precision of at least two decimal places to ensure accurate financial tracking.

# Performance

## Response time for a transaction

The average response time for transactional operations (e.g., product search, adding items to the cart) should not exceed 2 seconds under normal load conditions.

Additionally, the maximum allowable time for any transaction should not exceed 5 seconds to prevent user frustration.

## 5.2 Throughput

System should support a minimum throughput of 100 transactions per second during peak usage times. This includes scenarios like simultaneous user logins, searches, and purchases.

## 5.3 Capacity

The system should be designed to accommodate at least 1 million active users simultaneously without a significant impact on performance.

## 5.4 Degradation modes

The system should gracefully degrade its performance rather than fail outright.Degraded modes may include temporarily disabling non-essential features, such as recommendation algorithms, while ensuring core functionalities like order processing remain intact.

## 5.5 Resource use

The system should be optimized to use memory efficiently, with a maximum allowable memory usage of 80%, not exceeding 90% of its disk storage, and a network latency not exceeding 50 milliseconds for internal communication and 200 milliseconds for external API calls.

# Supportability

## Coding standards

Clear and consistent naming conventions in codes should be followed for variables, functions, classes, and other code elements. This improves code readability and maintainability.

## Maintenance access

Access should be restricted to authorized personnel. Implement role-based access controls to ensure security and accountability.

## Maintenance utilities

Implement robust backup and recovery mechanisms to protect critical data and ensure that the system can be quickly restored in case of failures. Also system can use third-party libraries, code analysis tools and develop suite of automated tests

# Design Constraints

## Software languages

All code must adhere to a standardized coding style, such as following the guidelines of a specific programming language (e.g., Java, Python) or an industry-recognized coding standard (e.g., Google's Java Style Guide). The front-end may be required to use AngularJS to follow MVC pattern.

## 7.2 Developmental tools

The use of certain development tools may be mandated. For instance, Shopee developers may be required to use a particular integrated development environment (IDE), version control system, or continuous integration tool.

# Online User Documentation and Help System Requirements

- Online administration support and help centers will be available.

# Purchased Components

NA.

# Interfaces

## User Interfaces

The Shopee E-commerce System will be accessed via a mobile-based interface.

Any unexpected system operation will be reported to the user via an error web page with information about the source of the issue. If a specific reason cannot be identified, a generic error message will be shown.

The mobile interface's design will adhere to common screen resolutions of 480×800, 640×1136, 720×1280, 750×1334, 1080×1920, and 1440×2560 (mobile devices).

## Hardware Interfaces

The system will only communicate with the web server and database server that is given. The operating system and any other supporting software systems will handle any further system contact directly.

## Software Interfaces

The system will communicate with Microsoft SQL Server to interact with the database.

To serve HTML information to clients, the system will use Microsoft IIS Express Web Server.

## Communications Interfaces

The ASP.NET Core framework will have systems for interacting with the web server through HTTP and HTTPS.

# Licensing Requirements

NA.

# Legal, Copyright, and Other Notices

The disclaimers, terms, and conditions for using the Shopee E-commerce platform are as follows. By using Shopee, you agree to be bound by the disclaimers, terms, and conditions outlined below.

The product will be released as open-source under the GNU GPL (GNU General Public License). According to the GPL, anybody may copy and distribute verbatim copies of this license agreement, but modifying it is not authorized.

Because the software will be produced utilizing Microsoft products, it must adhere to the Microsoft Software License. Any component of the program may not be distributed unless earnings are produced on behalf of Synergy. All copyright, trademark, and patent warnings provided in the software must be noticed.

# Applicable Standards

* All documentation should meet IEEE and RUP standards.
* ASP.NET Core 3.0 and web standards.