Software Requirements Specification

for

<Project>

Version 1.0 approved

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Table of Contents

Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

This SRS describes the functional and nonfunctional requirements for software release 1.0 of the The Toytailer's System. This document is intended to be used by the members of the project team who will implement and verify the correct functioning of the system. Unless otherwise noted, all requirements specified here are committed for release 1.0.

1.2 Document Conventions

No special typographical conventions are used in this SRS.

1.3 Project Scope

A. Business Objectives

BO-1: Increase 70% retailer's service within 3 months following initial release.
- Depend on feedback of customers

BO-2: Reduce 40% time-consuming managing products within 6 months following initial release.
BO-3: Increate average effective work time by 30-minutes per staff per day within 7 months following initial release.

b. Vision Statement

- For customers who want to order toys from toys' retailer online,the Toytailer's System is an Internet-based and smartphone-enabled application that will help customers order toys, process payments, receive online customer consultation, view and save information about favorite products without going to the store,track delivery progress of the ordered toys and register for member's card. Unlike the current telephone and manual ordering processes, customers who use the Toytailer's System will not have to go to the toy's retailer to buy toys, which will save them time and will increase the toy choices available to them.

- For retailers who want to sell toys online from retailer's stock, The Toytailer's System is an Internet-based and smartphone-enabled application that will help retailer manage products and customer's order easily, advertise new product, publish retailer's event, statistics and view sales figures. Unlike the telephone and manual selling process, retailer who use the Toytailer's System will not have to go to the storage to check for available product, send retailer's announcement through leaflets and can communicate with many customers at the time, which will save them time and will increase retailer's quality service.

c. Business Risks

RI-1: The deal between customers and retailer is fake reflecting retailer's hours of operation. (Probability = 0.3, Impact = 6).

RI-2: Too few customers using Toytailer's System (Probability = 0.2, Impact = 9).

RI-3: Deviation in the statistics of the number of products on the system compared to the reality (Probability = 0.2, Impact = 5).

2. Overall Description

2.1 Product Perspective

2.1.1 Background

Customers normally spend an average of 1-2 hours per shopping time finding and going to the retailer to select and purchase toys. In case that the favorite product which the customers want is out of stock, customers will waste more time on finding another retailer for that products. Towards the retailer, they will waste more money on leaflets' advertisement which is not only inefficient but also harmful to environment, and spend many hours for storage's checking.

2.1.2 Business Opportunity

Towards nowadays' market, there are many online transactions on the network such as Food Delivery, Book Delivery, etc. Those online selling systems, similar to our system, help customers reduce time-consuming. Furthermore, Toytailer's System support live-chat communication between retailer and customers, listing the most favorite products and quantities of products in stock for retailer to make a suitable business strategy of retailers, listing similar products base on those which customers have selected.

2.2 User Classes and Characteristics

Customer	A Customer is a user who wants to order products to be delivered from the retailers. There are about 400 potential Customers, of which 250 are expected to access the Toytailer's System an average of 5 times per week each. Customers will sometimes order multiple orders for group events or guests. An estimated 75 percent of orders will be placed using the corporate Intranet, with 40 percent of orders being placed from home or by smartphone or tablet apps.
Staff	The Toytailer's System employs about 10 Staff, who will receive orders from the Toytailer's System, prepare order, package them for delivery, and request delivery. Most of the Staff will need training for more than 1 months in the use of the hardware and software for the Toytailer's System.
Retailer's Owner	The Retailer's Owner is the one who manages Staffs, view statistics of retailer.

2.3 Operating Environment

OE-1: The Toytailer's System shall operate correctly with the following web browsers: Windows Internet Explorer versions 7, 8, and 9; Firefox versions 12 through 26; Google Chrome (all versions); and Apple Safari versions 4.0 through 8.0; Opera (all version);

OE-2: The Toytailer's System shall operate on a server running the current corporate-approved versions of Red Hat Linux and Apache HTTP Server.

OE-3: The Toytailer's System shall permit user access from the corporate Intranet, from a VPN Internet connection, and by Android, iOS, and Windows smartphones and tablets.

2.4 Design and Implementation Constraints

CO-1: The system is designed and built by Java/C# Language.

CO-2: The system shall use the current corporate standard Microsoft SQL Server database engine.

CO-3: All HTML code shall conform to the HTML 5.0 standard.

2.5 Assumptions and Dependencies

AS-1: The retailer is open for a whole day in which customers are expected to be on site.

DE-1: The operation of the Toytailer's System depends on changes being made in the Payroll System to accept payment requests for meals ordered with the Toytailer's System.

DE-2: The operation of the Toytailer's System depends on changes being made in the Retailer Inventory System to update the availability of products as Toytailer's System accepts orders.

3. System Features

3.1. Major Features

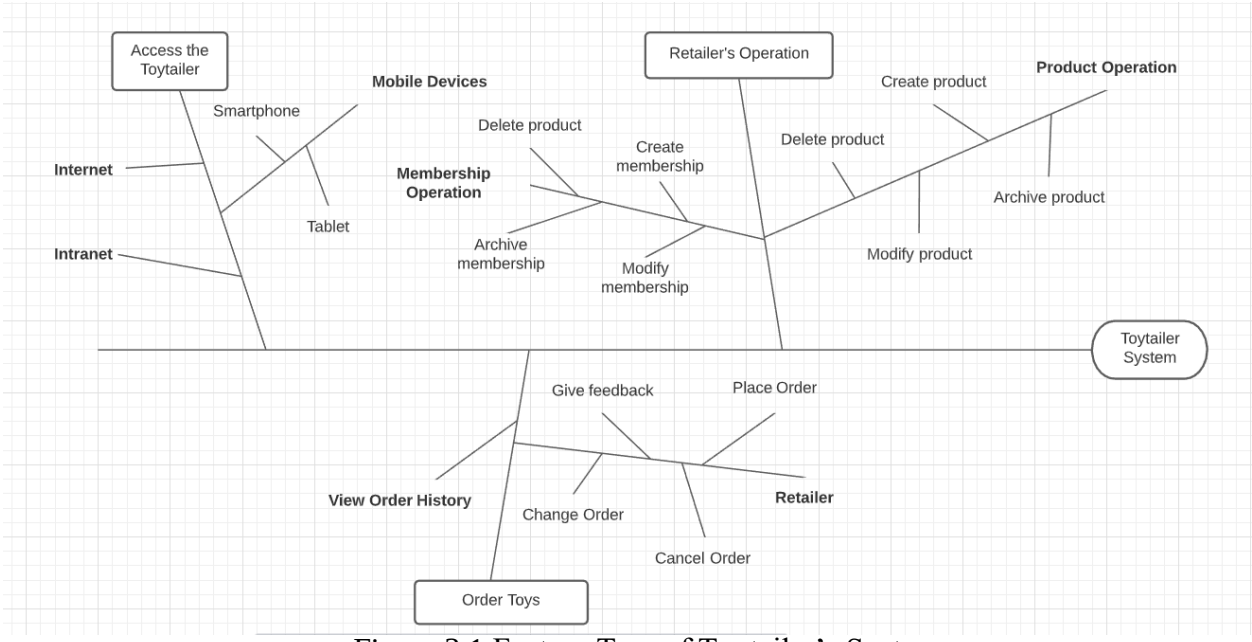

Figure 3.1 Feature Tree of Toytailer's System

FE-1: Order and pay for toys from retailer's list of products to be picked and delivered.

FE-2: Create, view, modify, delete and archive retailer's list of products.

FE-3: Provide system access through corporate intranet, smartphone, tablet, and outside Internet access by authorized staff.

FE-4: Create, view, modify, delete and archive retailer's list of membership.

3.2. Scope of Initial Release

FEATURE	RELEASE 1	RELEASE 2	RELEASE 3
FE-1: Order Toys	Orders can be paid for only by payroll deduction.	Implemented GPS tracking on orders in real-time.	Accept credit, debit card, e-wallet payments.
FE-2: Retailer's list of products	Implemented if time permit	Fully implemented	
FE-3: System access	Intranet and outside Internet access	iOS and Android and tablet apps	
FE-4: Membership	Not implemented	Implemented if time permit	Fully implemented

3.3. Use Case

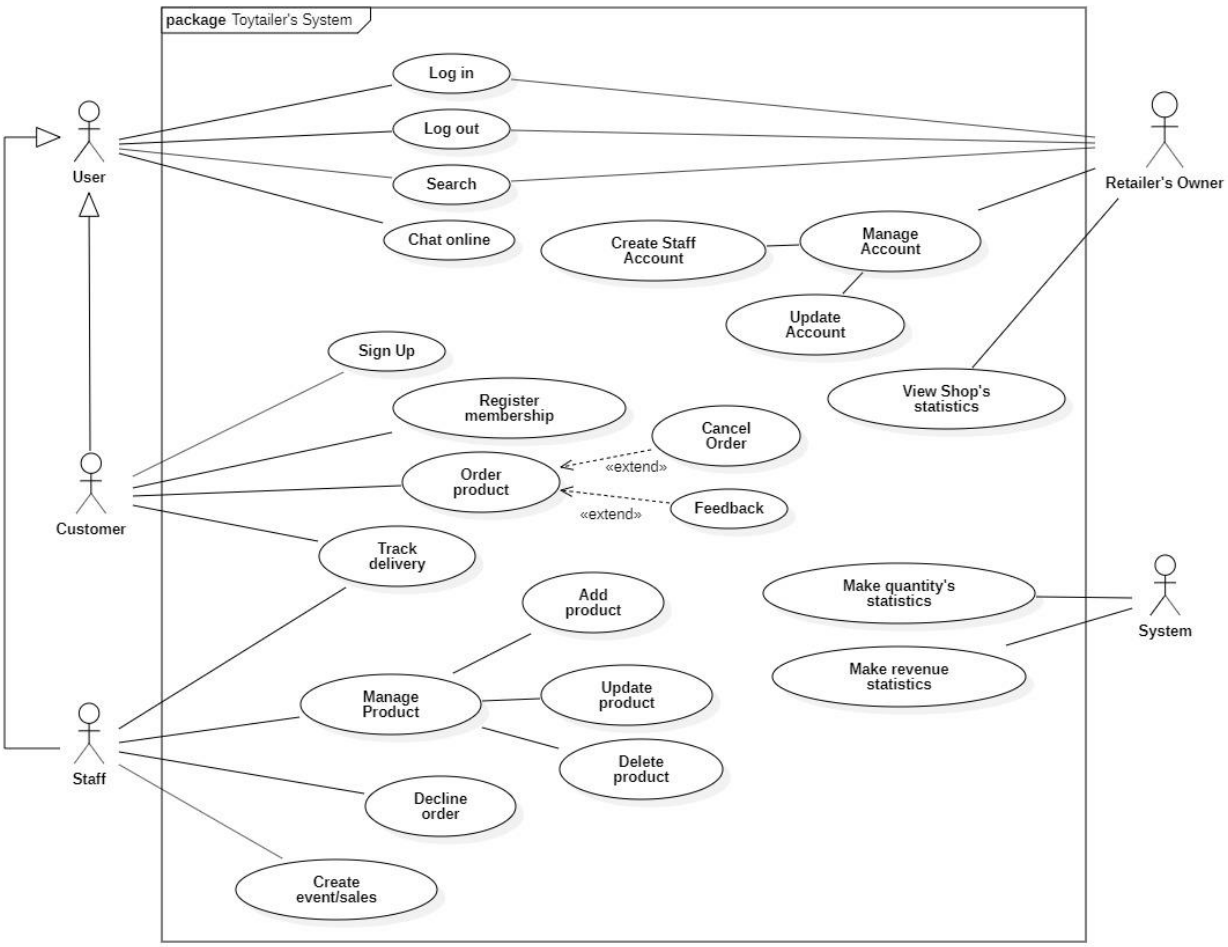

Figure 3.3 Toytailer's System's Usecase Diagram

3.4. Use Case Detail

UC ID and Name:	TS-01 Register Membership		
Created By:	Lam Hau Huong	Date Created:	9/10/2020
Primary Actor:	Customer	Secondary Actors:	
Trigger:	User has chosen to register membership		
Description:	User registers for upgrading to membership account		
Preconditions:	User has logged into system		
Post-conditions:	User's account is upgraded to membership account		
Normal Flow:	System displays register membership page User inputs his/her information User checks on confirmation check box (Addition: Alternative flow 1.) User clicks "Register" button (Addition: Alternative flow 2.)		

	System shows successful message System change account's status to membership System displays account information page
Alternative Flows:	1. User doesn't check on confirmation check box 1.1. System asks user to tick on confirmation check box 1.2. Return to step 3 in normal flow 2. User clicks Cancel 2.1 System returns to account information page
Exceptions:	E01: Retailer doesn't provide membership account anymore
Priority:	2
Frequency of Use:	
Business Rules:	BR-1: Retailer is providing membership BR-2: Customer must be given some promotion if they're membership
Other Information:	
Assumptions:	

UC ID and Name:	TS-02 Track delivery		
Created By:	Lam Hau Huong	Date Created:	11/10/2020
Primary Actor:	Customer, Staff	Secondary Actors:	
Trigger:	User has chosen to track delivery		
Description:	User want to view delivery's tracking process		
Preconditions:	1. User has logged into system		
Post-conditions:	1. Delivery's tracking process show on user's screen		
Normal Flow:	1. User clicks "Tracking delivery" 2. System gets information about delivery 3. System show delivery process on user's screen (Addition: Alternative flow 1.)		
Alternative Flows:	1. Delivery has been done 1.1. System only show order's information		
Exceptions:	E01: Delivery has been canceled in the middle		
Priority:	3		
Frequency of Use:			
Business Rules:	BR-1: Delivery must be done in 10 days BR-2: Delivery must be paid when it's arrived or through e-wallet while ordering		
Other Information:			
Assumptions:			

UC ID and Name:	TS-03 Manage Product		
Created By:	Lam Hau Huong	Date Created:	11/10/2020
Primary Actor:	Staff	Secondary Actors:	
Trigger:	User has chosen to manage product		
Description:	User want to manage product of retailer		
Preconditions:	1. User has logged into system		
Post-conditions:	1. Product is added to system / deleted from system / updated		

Normal Flow:	1. User clicks Manage product. (Additional Alternative flow 1. /2. /3.)
Alternative Flows:	1. User clicks "Add product" 1.1 User inputs information 1.2 User checks confirmation box 1.3 User clicks "Create" 1.4 New product is added to system 1.5 System shows successful message 1.6 System returns to product page 2. User clicks "Delete product" 2.1 System asks user to confirm action 2.2 User clicks "Confirm" 2.3 System removes product 2.4 System shows successful message 2.5 System returns to product page 3. User clicks "Update product" 3.1 User inputs information 3.2 User checks confirmation box 3.3 User clicks "Update" 3.4 System updates product information 3.5 System shows successful message 3.6 System returns to product page
Exceptions:	E01: Product has been deleted while it's being updated E02: Product has been deleted but still show on product screen
Priority:	5
Frequency of Use:	
Business Rules:	BR-1: Product must be in system while being updated or deleted BR-2: Which product is updated will notified "Product [xxx] has been updated" to staff and admin
Other Information:	
Assumptions:	

UC ID and Name:	TS-04 Decline Order		
Created By:	Lam Hau Huong	Date Created:	11/10/2020
Primary Actor:	Staff	Secondary Actors:	
Trigger:	User has chosen to decline order		
Description:	User want to decline order from customer		
Preconditions:	1. User has logged into system		
Post-conditions:	1. Order is declined		
Normal Flow:	1. User clicks on "Requested Order" 2. User clicks "Decline" 3. System asks user to confirm action 4. User clicks "Confirm" (Addition: Alternative flow 1.) 5. System removes order from Requested Order 6. System notifies to customer that their order is declined 7. System shows successful message 8. System returns to main page		
Alternative Flows:	1. User clicks "Cancel" 1.1 System returns to product page.		
Exceptions:	E01: Customer cancels order before user declines order		

Priority:	4
Frequency of Use:	
Business Rules:	BR-1: Order must be waiting for being accepted while staff decline order BR-2: Customer must be notified "Order is declined" if order is declined
Other Information:	
Assumptions:	

UC ID and Name:	TS-05 Create event/sales		
Created By:	Lam Hau Huong	Date Created:	11/10/2020
Primary Actor:	Staff	Secondary Actors:	
Trigger:	User has chosen to create event/sales		
Description:	User want to create promotion event for customers		
Preconditions:	1. User has logged into system		
Post-conditions:	1. System shows Event information on banner of main page		
Normal Flow:	1. User clicks "Create Event" 2. User inputs information 3. User checks on confirmation box (Addition: Alternative flow 1) 4. User clicks "Create" 5. System shows successful message 6. System returns to main page 7. System shows Event Information on main page		
Alternative Flows:	1. User doesn't check on confirmation box 1.1 System asks user to confirm before create new event 1.2 Returns to Normal flow 3.		
Exceptions:	E01: Ending date of event is before current date. E02: Customer is ordering while event is being created.		
Priority:	4		
Frequency of Use:			
Business Rules:	BR-1: Date Start of event must after current day in real-time and Date End of event must be greater than Date Start. BR-2: After event is created, all customers who have account will be notified "There is an event [xxx] start from [dd/MM/yyyy] to [dd/MM/yyyy]" via email.		
Other Information:			
Assumptions:			

UC ID and Name:	TS-06 Make quantity statistics		
Created By:	Lam Hau Huong	Date Created:	11/10/2020
Primary Actor:	System	Secondary Actors:	
Trigger:	There's some change on quantity of products		
Description:	System automatically make quantity statistics		
Preconditions:	1. System must be connected to internet continuously		
Post-conditions:	1. Quantities of products statistics is counted automatically		
Normal Flow:	1. Customer orders product. 2. System automatically reduces product's quantities		

	3. Staff adds new product. 4. System automatically make new statistics of that product 5. Staff updates/deletes product. 6. System automatically reduces or increases product's quantities base on action
Alternative Flows:	
Exceptions:	E01: System is disconnected from Internet
Priority:	5
Frequency of Use:	
Business Rules:	BR-1: System will generate a excel file of quantity statistics and send to staff after one day. BR-2: System will track user's buying quantities to increase membership of that user for promotion in next order BR-3: Statistics must be ordered by date / product for better view.
Other Information:	
Assumptions:	

UC ID and Name:	TS-07 Make revenue statistics		
Created By:	Lam Hau Huong	Date Created:	11/10/2020
Primary Actor:	System	Secondary Actors:	
Trigger:	Orders are done		
Description:	System automatically make revenue statistics for retailer		
Preconditions:	1. System must be connected to electricity continuously		
Postconditions:	1. Revenue statistics is updated after orders are done		
Normal Flow:	1. Customer orders products 2. Customer confirms "Delivery received" (Addition: Alternative flow 1.) 3. System added orders to "Successful Order" 4. System makes revenue statistics base on total of all "Successful Order".		
Alternative Flows:	1. Shipper confirms "Delivery completed" 1.1 Returns to Normal flow 3.		
Exceptions:	E01: System isn't supplied power/electricity		
Priority:	5		
Frequency of Use:			
Business Rules:	BR-1: System will generate an excel file of revenue statistics and send to staff after one day. BR-2: System only makes revenue statistics if order is set to "Successful Order" status. BR-3: Statistics must be ordered by date / product for better view.		
Other Information:			
Assumptions:			

UC ID and Name:	TS-08 Order toys		
Created By:	Nguyen Thi Kim Hang-SE140651	Date Created:	09/10/2020
Primary Actor:	Customer	Secondary Actors:	
Trigger:	Customer has chosen to order toys.		
Description:	This use case allows customer to order toys.		

Preconditions:	1. User must connect to Internet 2. User must login into as the Customer
Post-conditions:	1. User receives order's information
Normal Flow:	1. System shows list toys for the customer 2. User chooses the toy and quantity 3. User clicks to "Choose" button 4. System adds toy to shopping cart 5. User clicks to view shopping cart (see 1.1) 6. User clicks to "Order" button 7. System requires information from user: + Address: free text input,required,length 5-100 + Phone: free text input,required,length 8-15,number + Payment: drop down list,required 8. User inputs information (see 1.0.E1) 9. User click to confirm button 10. System asks user to confirm their information 11. User confirms "Yes" 12. System stores order's information 13. Systems shows order's information to user
Alternative Flows:	1.1 Order multiple toys 1.User requests to order another toy 2.Return to step 1 of normal flow
Exceptions:	1.0.E1 Customer don't input required information 1. System shows error message to ask user input missing required fields.
Priority:	High
Frequency of Use:	
Business Rules:	BR-1: When customer order is success, order's status changes "Delivery". BR-2: When customer receives toy successfully, order's status changes "Completed" BR-3: List toy load from database from tblToy which quantity > 0 BR-4: Delivery time windows are 3 days (except Sunday) BR-5: Deliveries must be completed between 8:00 A.M. and 17:00 P.M. local time BR-6: System offers any toys that are similar to user's buying toys after user submits order
Other Information:	
Assumptions:	

UC ID and Name:	TS-09 Cancel order		
Created By:	Nguyen Thi Kim Hang-SE140651	Date Created:	11/10/2020
Primary Actor:	Customer	Secondary Actors:	
Trigger:	Customer has chosen to delete order.		
Description:	This use case allows customer to delete order.		

Preconditions:	1.User must connect to Internet 2.User must login into as the Customer 3.User must order toy success
Post-conditions:	User's order has been deleted.
Normal Flow:	1. User clicks button "My Order" 2. System shows information about user's order 3. User clicks button "Cancel Order" 4. System shows notification "Do you really want to delete this order?" 5. User clicks button "Yes" 6. System displays new view require user input some information: -Reason to cancel this order,required: can be optional selected from these values: +User orders wrong toy +Delivery time is too long +Other reason: free text input,required 7. User inputs information (see 1.0.E1) 8. User clicks to button "Submit" 9. System shows notification "Delete success"
Alternative Flows:	
Exceptions:	1.0.E1 Customer don't input required information 1. System shows error message to ask user input missing required fields.
Priority:	Normal
Frequency of Use:	
Business Rules:	BR-1: When user cancels order, system removes that order from "Requested order" beside retailer's screen. BR-2: Products selected after being deleted still stays in the Shopping Cart if user cancels Order. BR-3: Product is only removed from Shopping Cart if user clicks "Remove" of that product in "Shopping Cart" screen. BR-4:Order's status changes to "Delete"
Other Information:	
Assumptions:	

UC ID and Name:	TS-10 Feedback		
Created By:	Nguyen Thi Kim Hang-SE140651	Date Created:	11/10/2020
Primary Actor:	Customer	Secondary Actors:	
Trigger:	Customer has chosen to feedback.		
Description:	This use case allows customer to feedback.		
Preconditions:	1.User must connect to Internet 2.User must login into as the Customer 3.User must order toy success		
Post-conditions:	1. Save feedback information		

	2. Send feedback to retailer's owner
Normal Flow:	1. System shows notification "Successful receipt" 2. System shows view for user to feedback -Rate toy -Other: free text input 3. User inputs information (see 1.1) 4. User clicks to button "Submit" 5. System sends feedback to retailer's owner 6. System shows notification "Thank you for your purchase"
Alternative Flows:	1.1 User doesn't want to feedback 1. User clicks to button "Exit" 2. Return to step 6 of normal flow
Exceptions:	
Priority:	Normal
Frequency of Use:	
Business Rules:	BR-1: User can give feedback on that product only if they've bought that product recently. BR-2: User feedback must be validated that it doesn't contain any words, which violated traditional customs (bad words / insulting words). BR-3: After user submit feedback, retailer must be notified about that feedback
Other Information:	
Assumptions:	

UC ID and Name:	TS-11 Sign Up		
Created By:	Nguyen Thi Kim Hang-SE140651	Date Created:	11/10/2020
Primary Actor:	Customer	Secondary Actors:	
Trigger:	Customer has chosen to sign up.		
Description:	This use case allows customer to sign up.		
Preconditions:	User must connect to Internet		
Post-conditions:	User has a registered account and can log in to the system.		
Normal Flow:	1. User clicks "Sign up" button 2. System shows view with input fields: + Phone number: phone input, required, length 10 + Password: free text input, required, length 5-100 + Re-type password: must match Password + Full name: free text input, required, length 1-100 + Address: : free text input, length 0-100 + Birthdate: date input 3. User inputs information (see 1.0.E1,1.0.E2) 4. User clicks button "Submit" (see 1.1.E1) 5. System shows notification success		
Alternative Flows:			
Exceptions:	1.0.E1 Customer don't input required information		

	1.System shows error message to ask user input missing required fields. 1.0.E2 Customer inputs wrong format 1.System shows error message to ask user input right format. 1.1.E1 Customer inputs phone number existence 1.System shows error message to ask user input again phone number.
Priority:	Normal
Frequency of Use:	
Business Rules:	BR-1: User's account will use to store their order, count their order to give them promotion and allow user to feedback on product after buying that product. BR-2: Account's status will be "New".
Other Information:	
Assumptions:	

UC ID and Name:	TS-12 Search		
Created By:	Nguyen Thi Kim Hang-SE140651	Date Created:	11/10/2020
Primary Actor:	User	Secondary Actors:	
Trigger:	User has chosen to search.		
Description:	This use case allows user to search.		
Preconditions:	User must connect to Internet		
Post-conditions:	System shows list toys depends on what user search		
Normal Flow:	1. User inputs what they want to search (see 1.1) 2. Users clicks to button "Search" (see 1.0.E.1) 3. System shows list toys and information of the toy : + Name + Price + Status (Active or Out of stock)		
Alternative Flows:	1.1 User search depends on Category 1. Users click to Category they want to search 2. Return to step 2 of normal flow		
Exceptions:	1.0.E1 User input blank text 1.System will not respond		
Priority:	Normal		
Frequency of Use:			
Business Rules:	BR-1: List toy load from database from tblToy which quantity > 0 BR-2:When customer search blank content, nothing will happen.		
Other Information:			
Assumptions:			

UC ID and Name:	TS-13 Manage account		
Created By:	Nguyen Thi Kim Hang-SE140651	Date Created:	11/10/2020
Primary Actor:	Retailer's owner	Secondary Actors:	

Trigger:	Retailer's owner can manage account
Description:	This use case allows retailer's owner can manage account.
Preconditions:	1.Retailer's owner must connect to Internet 2.Role must be admin
Post-conditions:	Retailer's owner manage account: 1. Add staff's account 2. Update account's information 3. Delete account
Normal Flow:	1. Retailer's owner clicks to "Manage account" button 2. System shows list action Retailer's owner can do -Add staff's account -Update account 3.Click to "Add staff's account" (see 1.1, 1.2) 4. System shows view with input fields: + Phone number: phone input, required, length 10 + Password: free text input, required, length 5-100 + Re-type password: must match Password + Full name: free text input, required, length 1-10 + Birthdate: date input 5.Retailer's owner input information (see 1.0.E1,1.0.E2) 6.Retailer's owner click button "Submit" (see 1.1.E1) 7.System stores account in database with role "Staff" and send notification success
Alternative Flows:	1.1 Click to "Update account" 1. System shows list account of staff and customer 2. Retailer's owner chooses account want to update information 3. System shows information about this account (except phone number and password) 4. Retailer's owner input information wants to update (except phone number and password) 5. Retailer's owner clicks button "Update" 6. System updates information and,show notification success and send notification to account which Retailer's owner updates
Exceptions:	1.0.E1 Retailer's owner don't input required information 1.System shows error message to ask user input missing required fields. 1.0.E2 Retailer's owner inputs wrong format 1.System shows error message to ask user input right format. 1.1.E1 Retailer's owner inputs phone number existence 1.System shows error message to ask user input again phone number.
Priority:	Normal
Frequency of Use:	
Business Rules:	BR-1: The owner of the account that is updated must be notified via email / phone which information is updated.

	BR-2: If staff's account is created, system notifies to that staff via their email / phone. BR-3: : If staff's account is created with,account's role will be "Staff".
Other Information:	
Assumptions:	

UC ID and Name:	TS-14 View shop's statistics		
Created By:	Nguyen Thi Kim Hang-SE140651	Date Created:	11/10/2020
Primary Actor:	Retailer's owner	Secondary Actors:	
Trigger:	Retailer's owner can view shop's statistics		
Description:	This use case allows retailer's owner can view shop's statistics.		
Preconditions:	1.Retailer's owner must connect to Internet 2.Role must be admin		
Post-conditions:	Retailer's owner view shop's statistics		
Normal Flow:	1. Retailer's owner clicks to "Statistics" 2. Systems shows sales chart		
Alternative Flows:			
Exceptions:			
Priority:	Normal		
Frequency of Use:			
Business Rules:	BR-1: System saves last accessed time to statistics for later user knows. BR-2: System notifies to all user whose role is admin that statistics are being accessed.		
Other Information:			
Assumptions:			

4. Data Requirements

4.1 Logical Data Model

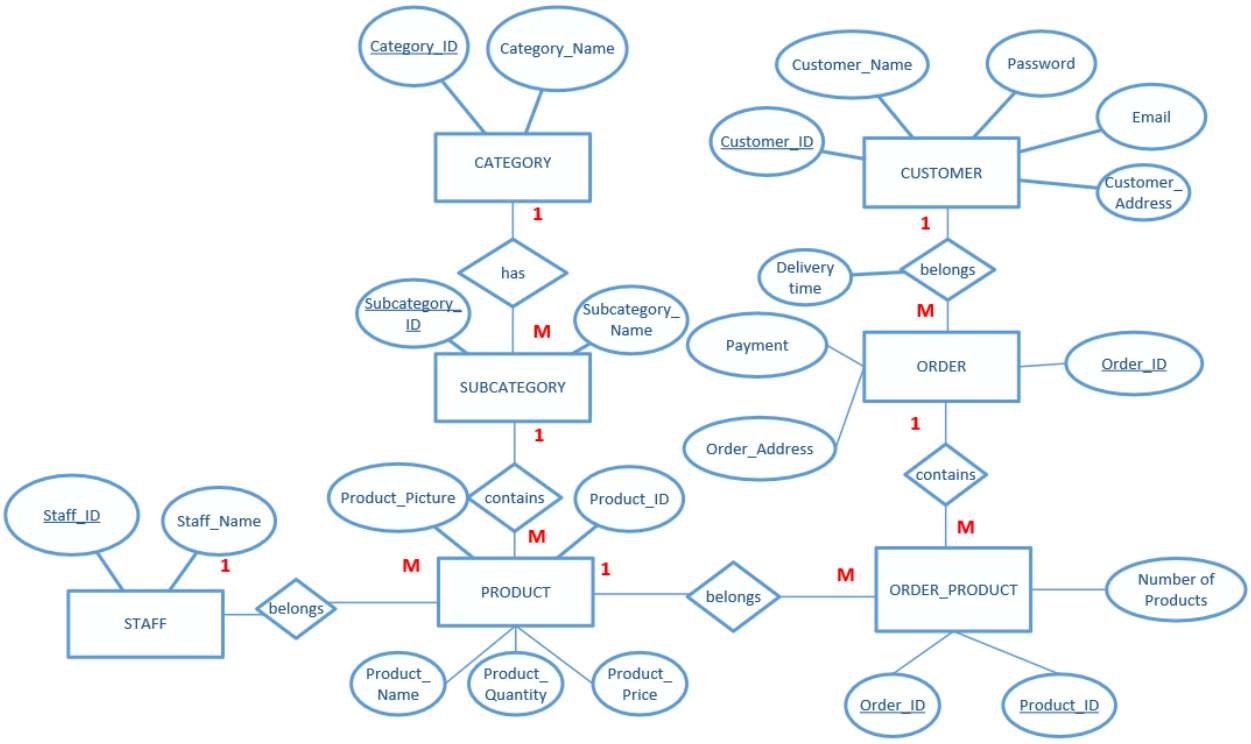

Figure 4.1 Data Model for Toytailer's System's System

4.2 Data Dictionary

Data Element	Description	Composition or Data type	Length	Value
Staff	Details about a staff of retailers	- Staff ID - Staff Name		
Staff ID	Unique ID that retailers assigns to each staff	Integer	7	Initial Value is 1
Staff Name	Name of the staff of retailers	Alphabetic	50	

Product	Details about a product of retailers	- Product ID - Product Name - Product Quantity - Product Price - Product Image		
Product ID	Unique ID that retailers assigns to each Product	Integer	7	Initial Value is 1
Product Name	Name of the product	Alphabetic	50	
Product Quantity	Quantity of the product	Integer	7	Initial Value is 1
Product Price	Price of the product	Money		
Product Image	Image of the product	Alphabetic	50	Value ends with ".jpg" or ".png"
Order Product	Details of product that customer orders	- Order ID - Product ID - Number of products		
Number of Products	Quantity of products that customer orders	Integer	7	Default is 1; Maximum = Product quantity
Order	Details of the order	- Order ID - Order Address - Payment		
Order ID	Unique ID that systems assign to each Order	Integer	7	Initial value is 1
Order Address	Address that order will be delivered to	Alphabetic	50	hyphens and commas permitted
Payment	Information about a payment Toytailer's System accepted for an order	- Payment amount - Payment method - Transaction number		

Payment amount	Total price of an order	Money		
Payment method	How the customer is paying for an order	Alphabetic	20	payroll deduction, cash, credit card, debit card
Transaction number	Unique sequence number that Toytailer's System assigns to each payment transaction	Integer	12	
Category	Details of category of products	- Category ID - Category Name		
Category ID	Unique ID that Toytailer's System assign to each Category	Integer	7	Initial Value is 1
Category Name	Name of the category	Alphabetic	50	
Sub Category	Details of sub category of category	- Sub Category ID - Sub Category Name		
Sub Category ID	Unique ID that Toytailer's System assign to each Sub Category	Integer	7	Initial Value is 1
Sub Category Name	Name of the sub category	Alphabetic	50	
Customer	Details of customer of retailers	Customer ID Customer Name Password Email Customer Address		
Customer ID	Unique ID that Toytailer's System assigns to each Customer	Integer	7	Initial Value is 1
Customer Name	Name of the customer	Alphabetic	50	

Password	Must be encrypted by SHA-256	String	100	
Email	Email of the customer	String	100	A string with an extension of an email (@gmail.com, @fpt.edu.vn, …)
Customer Address	Address of the customer	String	50	hyphens and commas permitted
Delivery Time	Time of the order completed	Time	hh:mm	Local time; hh = 0-23 inclusive; mm = 00, 15, 30 or 45

5. External Interface Requirements

5.1 User Interfaces

UI-1: The system shall provide a help link from each displayed webpage to explain how to use that page.

UI-2: The webpages shall permit complete navigation and food item selection by using the keyboard alone, in addition to using mouse and keyboard combinations.

5.2 Software Interfaces

SI-1: E-Wallet System
The Toytailer's System shall communicate with the E-Wallet System through a programmatic interface for the following operations:

- SI-1.1: To allow customer to pay order online.
- SI-1.2: To reverse all or part of a previous charge because the product was not delivered per the confirmed delivery instructions.

5.3 Hardware Interfaces

No hardware interfaces have been identified.

5.4 Communications Interfaces

CI-1: The Toytailer's System shall send an email or text message (based on user account settings) to the Customer to confirm acceptance of an order, price, and delivery instructions.
CI-2: The Toytailer's System shall send an email or text message (based on user account settings) to the Customer to report any problems with the order or delivery.

6. Quality Attributes

6.1 Usability

USE-1: The Toytailer's System shall allow a Customer to retrieve the previous order with a single interaction.

USE-2: 90% of new users shall be able to successfully order a product without errors on their first try.

6.2 Performance

PER-1: The system shall accommodate a total of 400 users and a maximum of 100 concurrent users during the peak usage time window of 9:00 A.M. to 10:00 A.M. local time, with an estimated average session duration of 8 minutes.

PER-2: 95% of webpages generated by the Toytailer's System shall download completely within 4 seconds from the time the user requests the page over a 20Mbps or faster Internet connection.

PER-3: The system shall display confirmation messages to users within an average of 3 seconds and a maximum of 6 seconds after the user submits information to the system.

6.3 Security

SEC-1: All network transactions that involve financial information or personally identifiable information shall be encrypted.

SEC-2: Only authorized Staff shall be permitted to work with products.

SEC-3: The system shall permit Customer to view only orders that they placed.

6.4 Safety

SAF-1: The user shall be able to see whether this product/toy is suitable for which age of user.

6.5 [Others as relevant]

AVL-1: The Toytailer's System shall be available at least 98% of the time between 5:00 A.M. and midnight local time and at least 90% of the time between midnight and 5:00 A.M. local time, excluding scheduled maintenance windows.