

# Bubble Shop

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# **Capitolo 1**

# **Software Requirement Specification**

## **1.1 Introduction**

### **1.1.1 Aim of the document**

The intention of this document is to present clearly and comprehensively the structure of the *Bubble Shop* system, using some diagrams, and to provide a complete overview of the requirements and strategies necessary to develop the project.

### **1.1.2 Overview of the defined system**

The application under study is an e-commerce platform designed for retailers of swimming sports articles who wish to expand their customer base by leveraging the capabilities offered by internet technology. A customer can browse and select products of interest, adding them to the cart after choosing the desired size and quantity. In the cart, they can preview the total price of the items, modify the quantity, or remove unwanted products. Proceeding to the checkout process, the customer enters a shipping address or uses one already saved in the system. The final step of the purchasing procedure involves selecting a payment method between PayPal and credit card. For credit card payments, customers can use a card already saved in the system if available. Upon successful payment, an order summary is displayed.

The seller can view incoming orders and accept or reject them, for example, if there are discrepancies between the availability of items on the website and in the warehouse. Customers, upon logging in, are notified of the acceptance or rejection of their orders.

### **1.1.3 Hardware and software requirements**

This software can run on Windows, macOS and Linux. The basic hardware requirements are:

- Intel or AMD processor clocked at least 1.5 GHz;

- 4 GB RAM;
- 2 GB hard disk space.

The basic software requirements are:

- Java SDK SE 21 correctly installed;
- DBMS installed;
- JDBC driver corresponding to the DBMS you're using;
- You can also install a database management client to view and directly modify data in the database.

#### **1.1.4 Related systems, pros and cons**

There are some other systems related to Bubble Shop, including:

- *Amazon* is one of the world's largest companies in the e-commerce. The main advantage of Bubble Shop is that it supports payment through PayPal, which is highly secure and reliable, instead of the typical credit card payment method. The disadvantage of Bubble Shop is that Amazon allows for the storage of more than one delivery address or payment method;
- *eBay* is an online marketplace that connects buyers and sellers globally. The advantage of Bubble Shop resides in its specialization in the swimming sector, which means it can offer a wider and more specific selection of swimming-related products compared to eBay, which covers a wide range of product categories, thus promoting better inventory management and greater product availability. The disadvantage of Bubble Shop is that eBay allows customers to place an order and complete payment without necessarily having to create an account or log in.

## **1.2 User Stories**

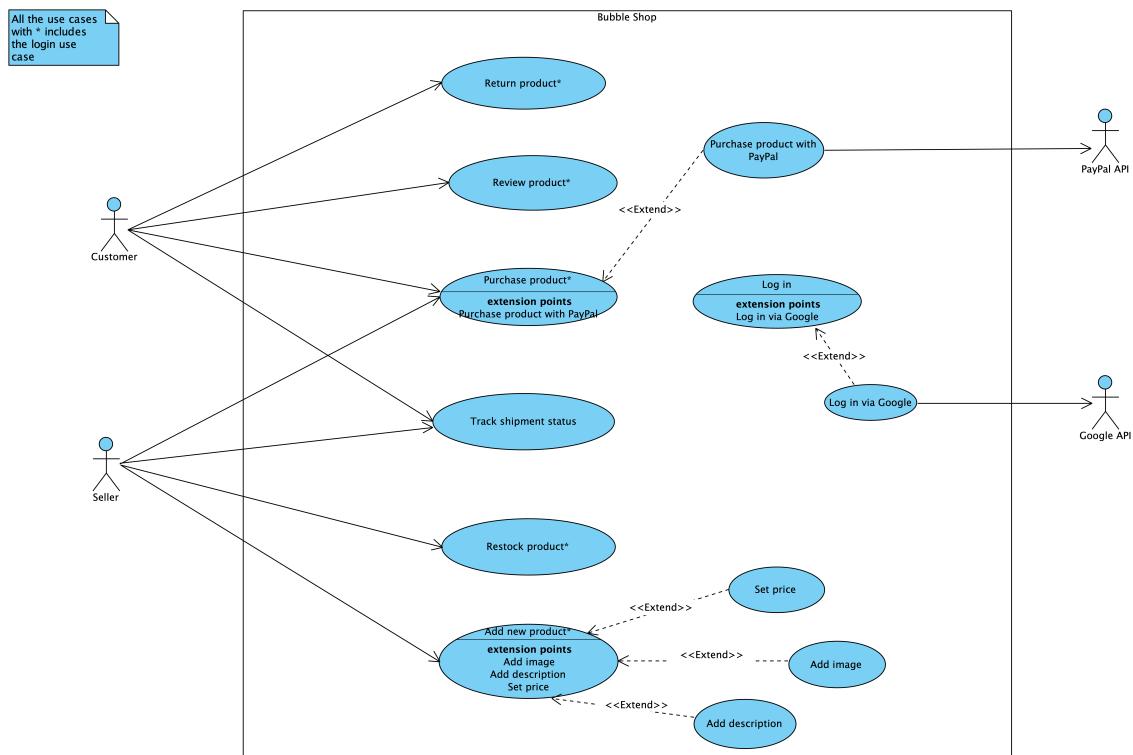
- As a customer, I want to purchase products from the shop, So that i can upgrade my kit to have better performance.
- As a seller, I want to be able to check the incoming orders, So that i can process them promptly.
- As a customer, I want to be able to track the shipment status of a purchased product, So that i can know when my order will be delivered.

## 1.3 Functional Requirements

- The system shall display the incoming orders to the seller.
- The system shall allow the customer to save one delivery address.
- The system shall process payment within 1 minute.

## 1.4 Use Cases

### 1.4.1 Overview Diagram



### 1.4.2 Internal Steps

**Name:** Purchase product.

1. The customer searches for a product.
2. The system provides a list of products.
3. The customer adds a product to the shopping cart.
4. The system checks if the user is logged in.

5. The system adds the selected product to the customer's shopping cart.
6. The customer fills out the checkout form.
7. The system verifies if the checkout is valid and then generates a new order.
8. The customer chooses the payment method and pays the order.
9. The system processes the transaction and then displays the payment summary.

**Extensions:**

- 4a. *Customer not logged in:* The system shows an error message and redirect the customer to the login form.
- 5a. *Customer selects too many units of the same product:* The system shows an error message specifying the max number of units per customer. Turn back to 1.
- 9a. *Payment method rejected:* The system shows an error message and redirect the customer to the payment form. After two attempts the system terminates the use case.

## Capitolo 2

# Storyboards

Bubble Shop

Customer Service      Login      Logout      Cart (3)

< Kickboard

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26.90€ / Color: SILVER

One size    -    1    +

Add to cart

---

**Product description**

Stunning kickboard for extra comfort, safety and style in the pool.

- Perfect for working on the lower body
- The grip holes allow for different hand positions
- Smooth contours for maximum comfort and safety

---

**Product reviews**

**Mark**  
★★★☆☆

It has been instrumental in training my legs and arms in a targeted manner, delivering tangible results in my water performance.

**Alex**  
★★★★☆

Its elongated shape and ergonomic design allow for a variety of exercises to enhance endurance and technique. The board floats perfectly, enabling a focus on different parts of the body during training.

## &lt; Shopping cart

	<b>Cobra ultra swipe mirror</b> 74.90€/unit	74.90€
	<input type="button" value="1"/> + Remove	

	<b>Freeflow Pullbuoy II</b> 21.90€/unit	43.80€
	<input type="button" value="2"/> + Remove	

	<b>Elite Hand 2</b> 24.90€/unit	24.90€
	<input type="button" value="1"/> + Remove	

<b>Temporary amount to pay</b>	
Subtotal	90.95€
Tax (22%)	25.65€
Total	116.60€
<input style="background-color: blue; color: white; padding: 5px 10px; border-radius: 5px; width: 100%;" type="button" value="Continue to checkout"/>	

## &lt; Accessories

	<b>Cobra ultra swipe mirror</b> 74.90€ Swipe technology - Hydrodynamic design	<input type="button" value="Select"/>
---	---	---------------------------------------

	<b>Elite Hand 2</b> 24.90€ Upper body workout	<input type="button" value="Select"/>
---	---	---------------------------------------

	<b>Freeflow Pullbuoy II</b> 21.90€ Light - Hydrodynamic design - Trunk stabilization	<input type="button" value="Select"/>
---	--	---------------------------------------

	<b>Acquaforce black &amp; gold</b> 62.90€ Race - Hydrodynamic performance	<input type="button" value="Select"/>
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## Login

Welcome back!

Email

Password

Forgot your password?

Login

————— Or ————

 Login with Google

Don't have an account? [Signup now](#)

## Payment

Amount to pay

**121.60€**



————— Or pay with card ————

Card Number

Expiration

CVV

First name

Last name

Billing zip code

Pay 121.60€

## Home page

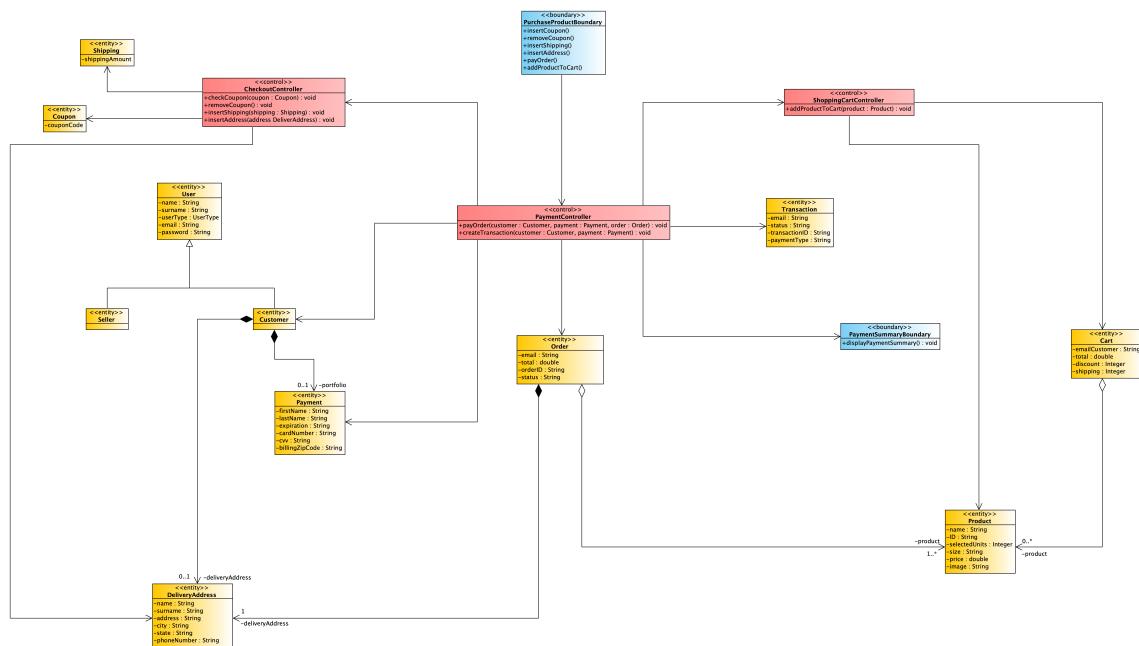


# Capitolo 3

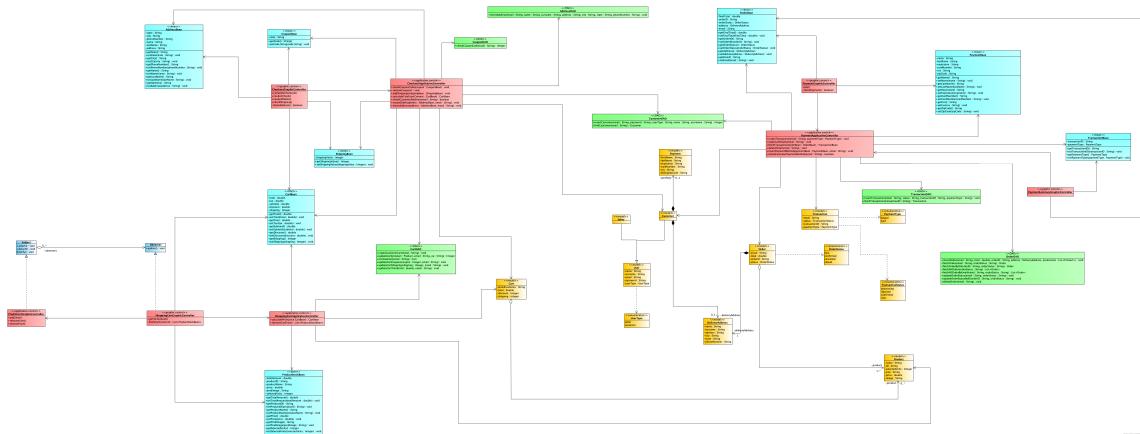
## Design

### 3.1 Class Diagram

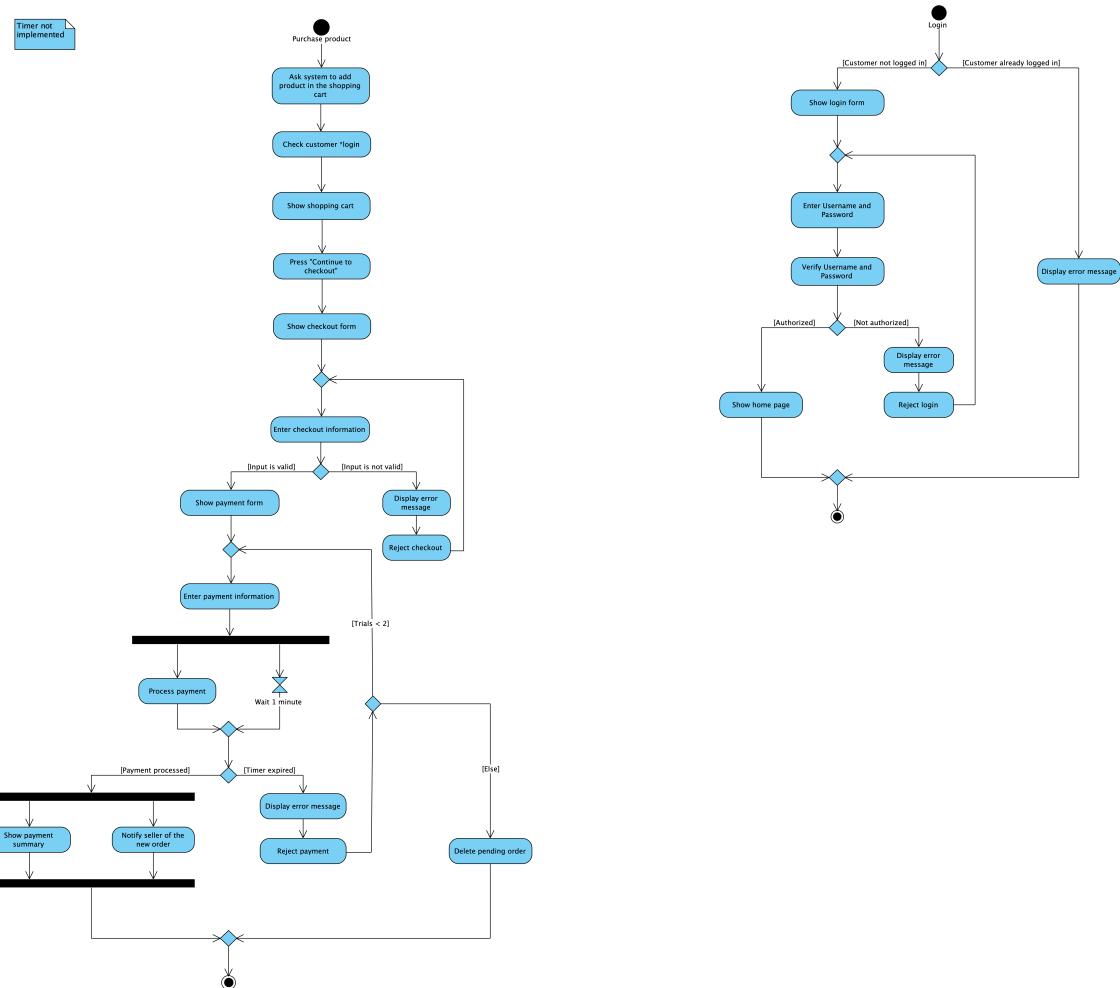
#### 3.1.1 VOPC



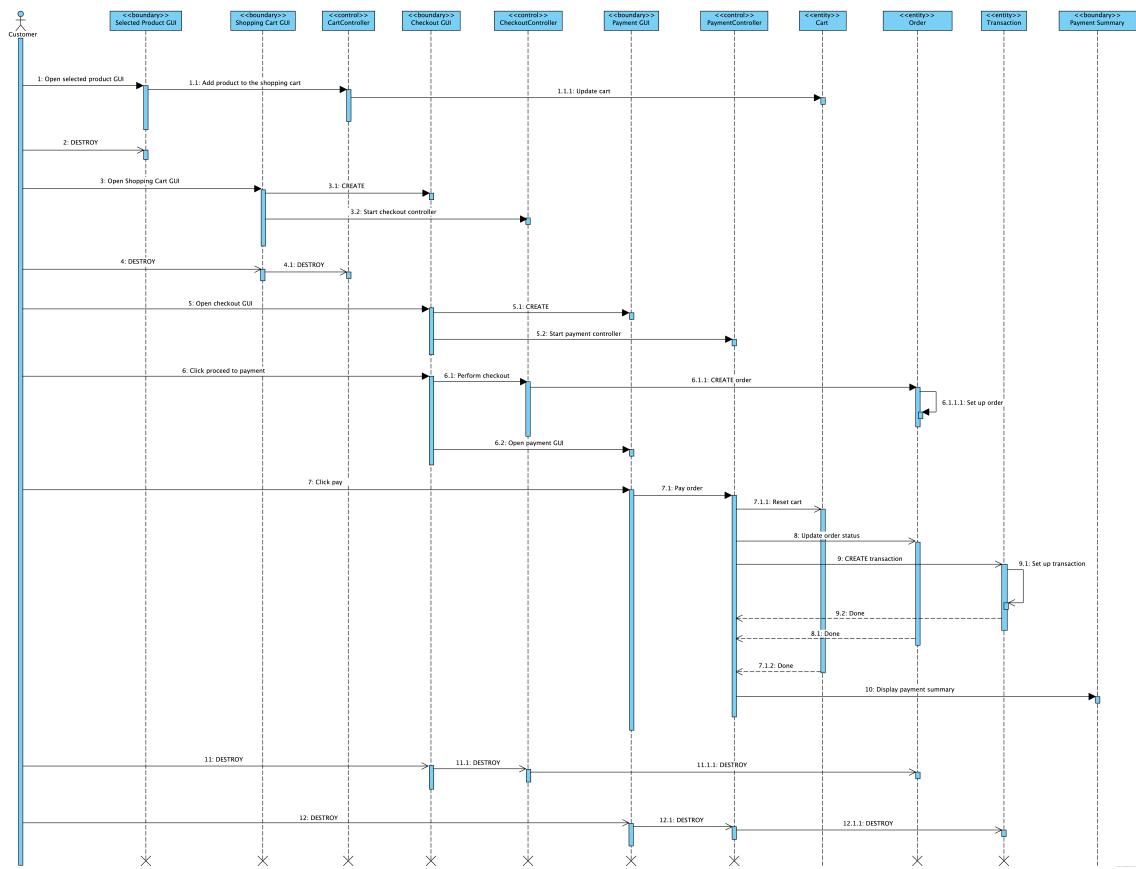
### 3.1.2 Design-Level diagram



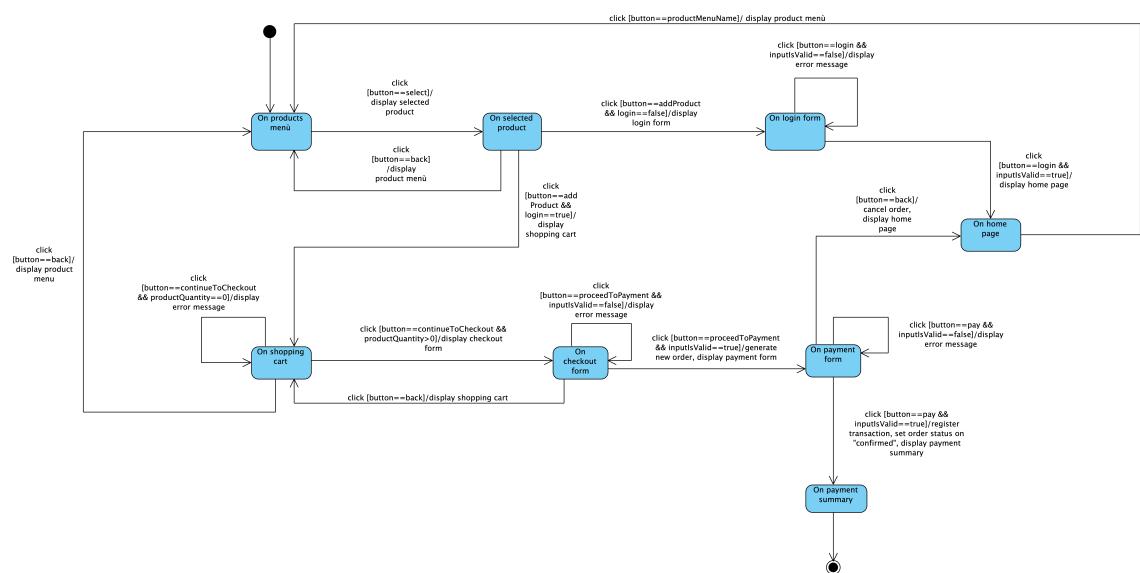
### 3.2 Activity Diagram



### 3.3 Sequence Diagram



### 3.4 State Diagram



*Note:* It is possible to check the correct behavior of this project at the following link [https://sonarcloud.io/summary/overall?id=Andrea041\\_ISPW\\_Progetto](https://sonarcloud.io/summary/overall?id=Andrea041_ISPW_Progetto).