A picture containing drawing

Description automatically generated

Sri Lanka Institute of Information Technology

Final Project Report

E-Commerce System using MERN Stack

Application Frameworks (SE3040)

Group members:

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**Overview**

Our ReactJS + NodeJS + Express + MongoDB application has the following architecture.

MongoDB Database

controller

router

service

router

components

http

axios

ReactJS

NodeJS + ExpressJS

* NodeJS Express exports REST APIs and interacts with MongoDB Database to transfer data between the client application and the database
* React client sends HTTP requests and retrieves HTTP responses using Axios, consumes data on the components.
* React router is used for navigating among pages.

**Technologies used**

**Backend**

* NodeJS
* Express

**Frontend**

* ReactJS
* react-router-dom
* Axios
* Bootstrap
* Ant design

MongoDB as the NoSQL database

**Assumptions**

* Initially, the discount of a product will be 0. If needed, the product can be updated by adding the discount later.

**Workload Division**

**Account Management**

* Registration
* Login
* Permissions
* Manager Account Creation
* User Account
* User Control Panel
* Admin Panel

**Product Management**

* Product CRUD
* Search
* Review CRUD

**Shopping Cart & Wish List**

* Shopping Cart CRUD
* Wish List CRUD

**Payment Management**

* Payment CRUD

**Sequence Diagrams**

**Account Management**

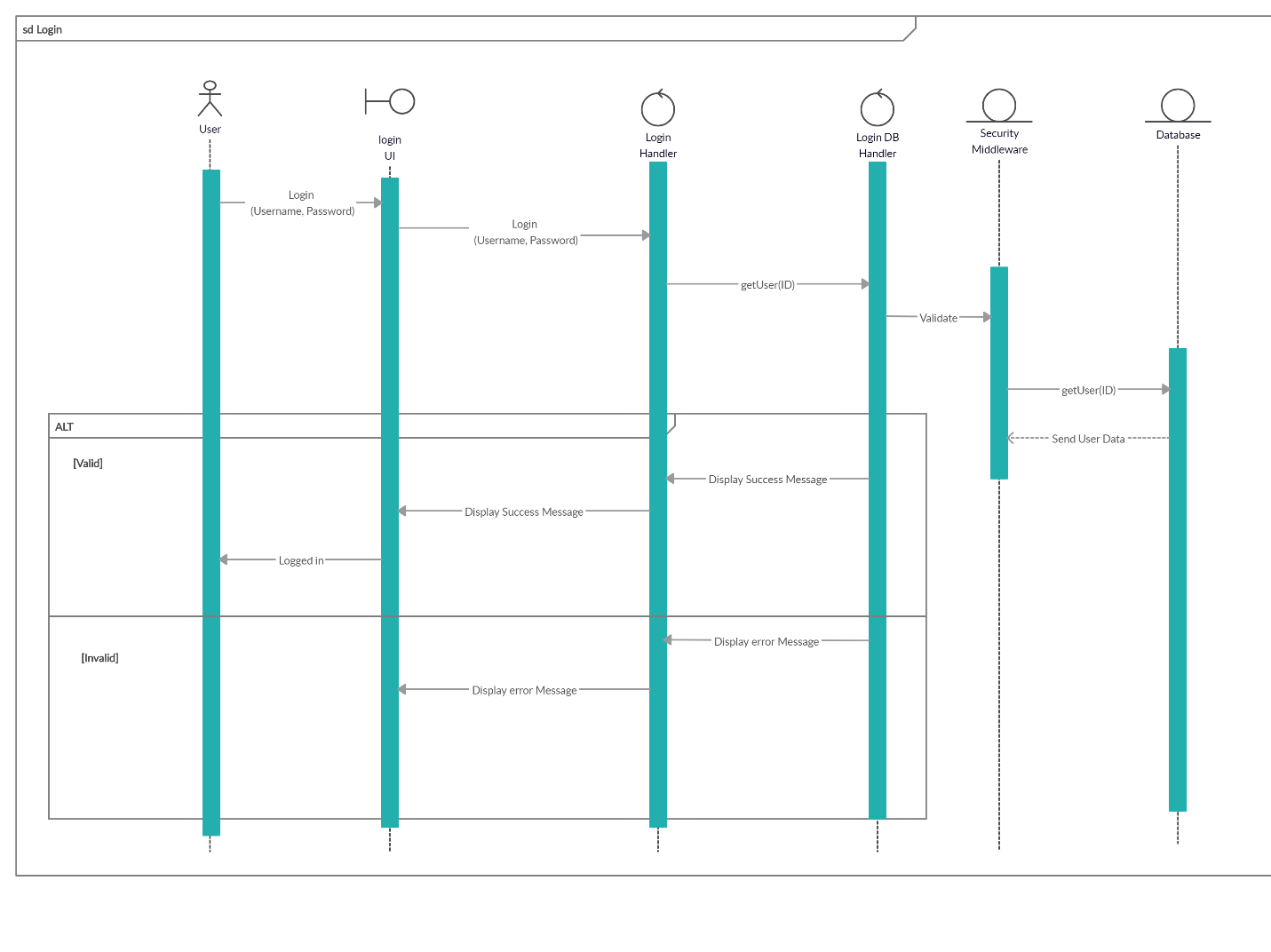
* ****Login

Figure : Login

* User Registration

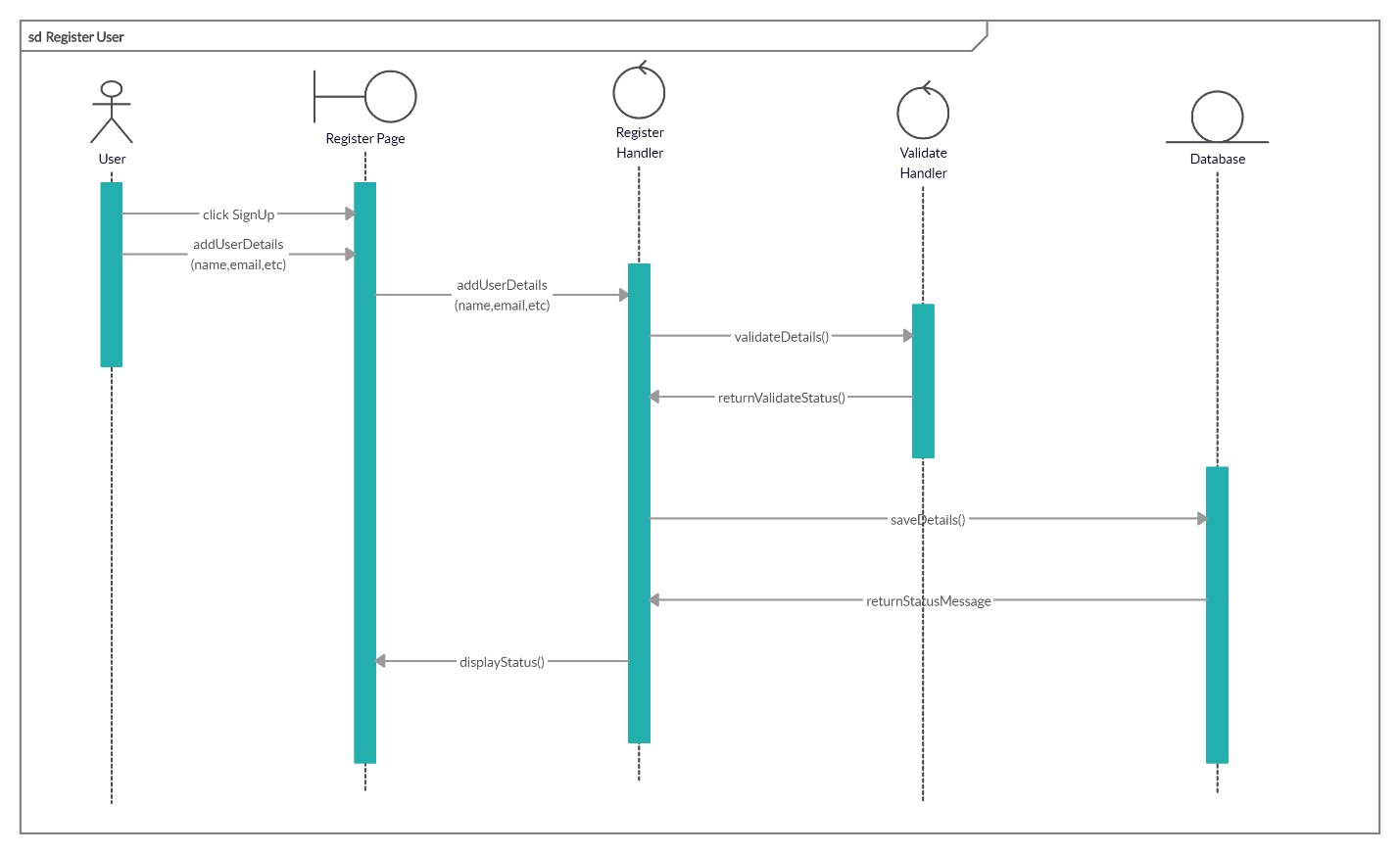
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Figure 2: Register

* Manager CRUD

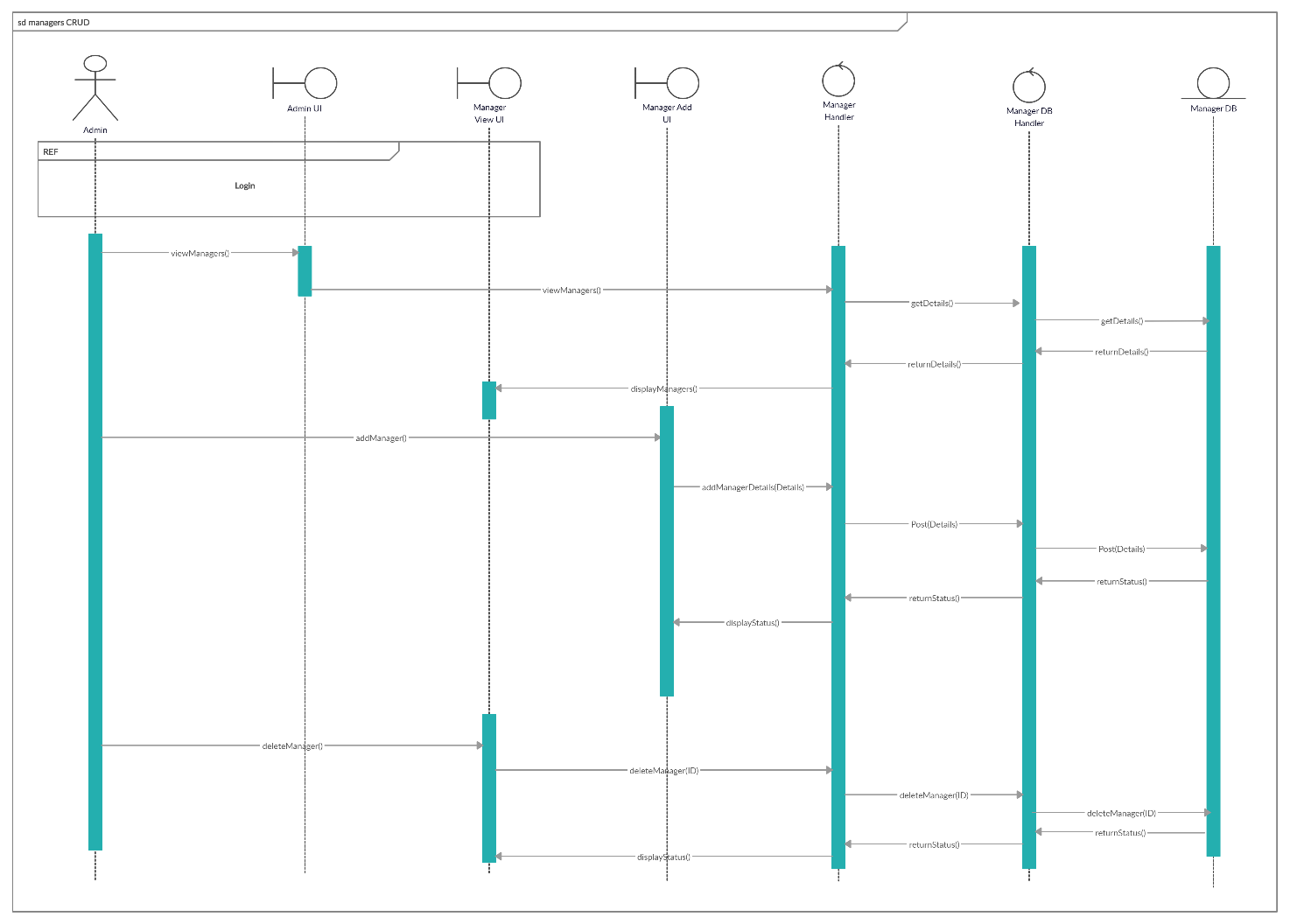


Figure 3: Manager CRUD

* View User

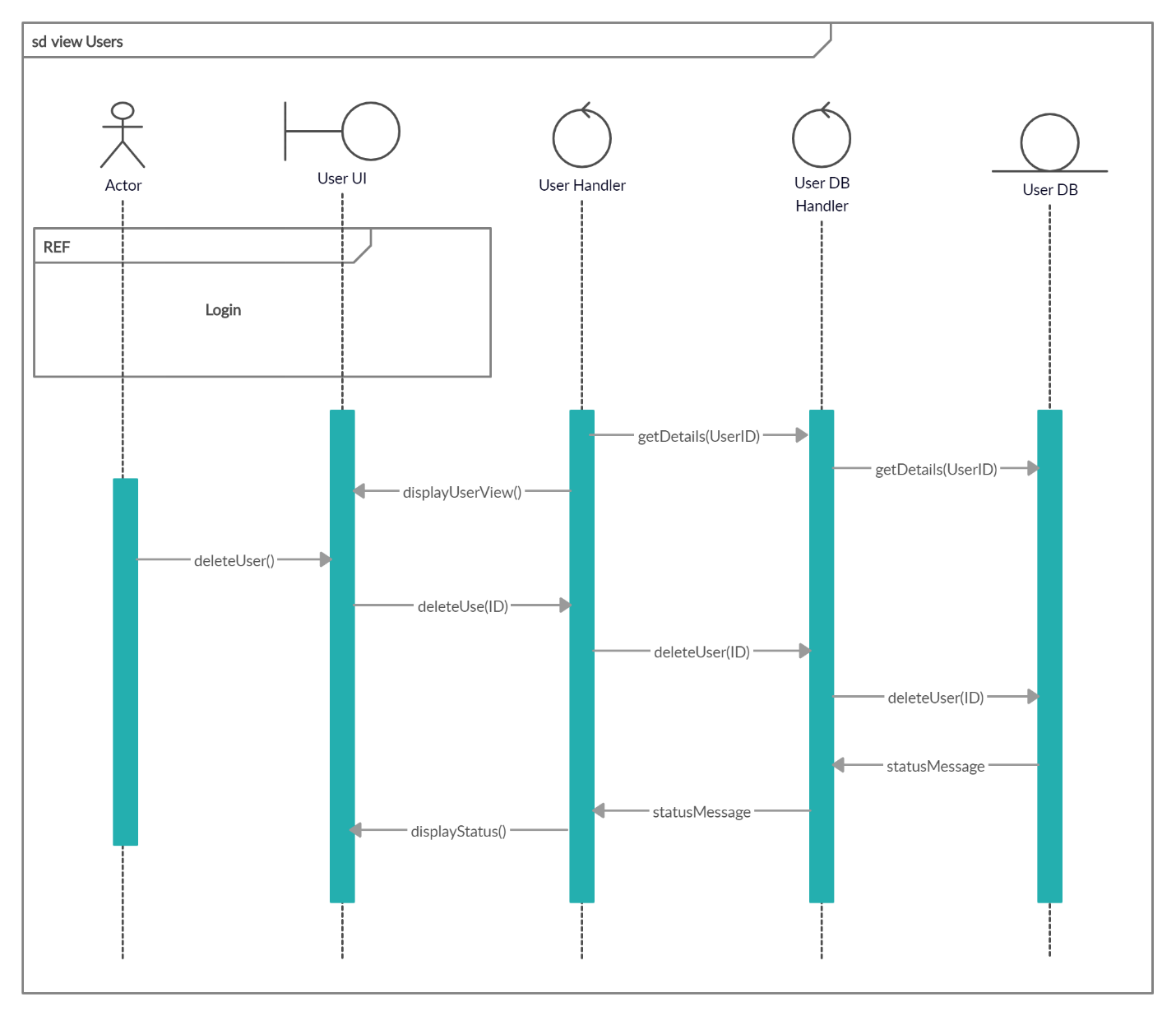
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Figure 4: View User

**Product CRUD**

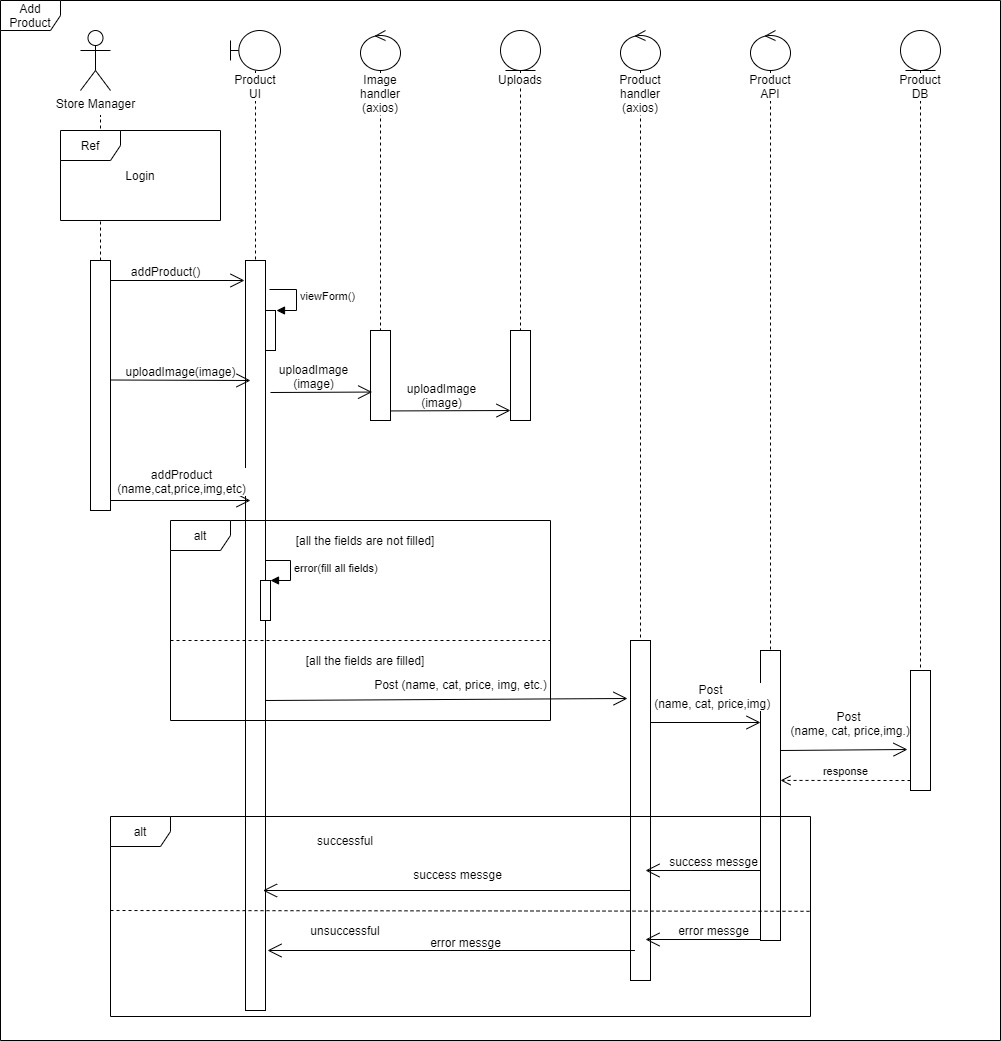
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Figure 6: Insert New Product

A close up of a map

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Figure 7: Retrieve Products

A close up of a logo

Description automatically generated

Figure 8: Search Products

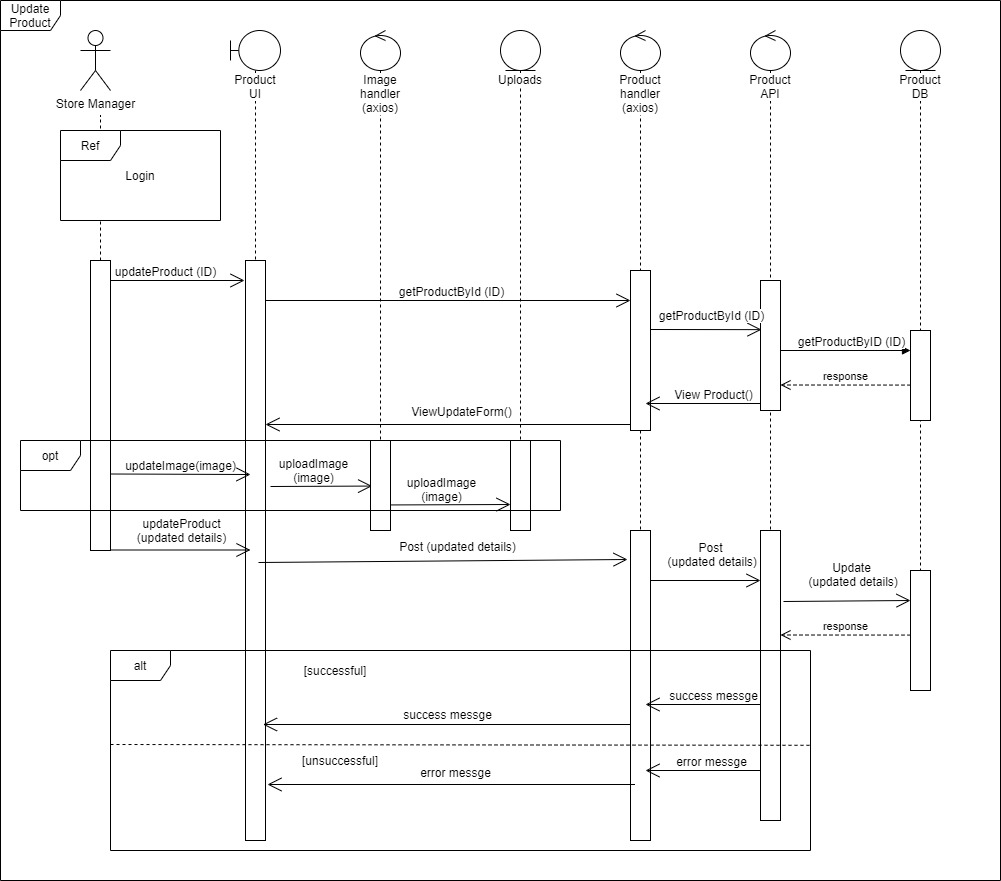


Figure 9: Update Product

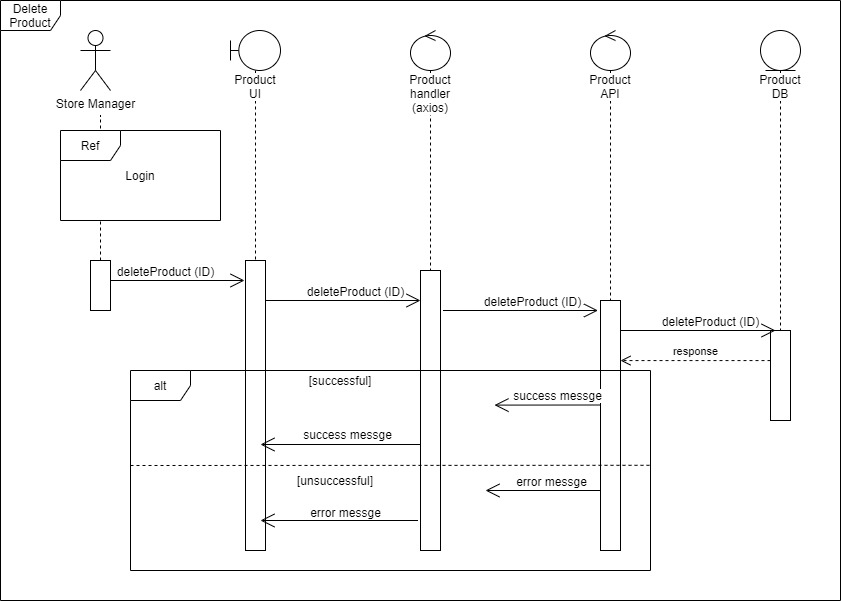


Figure 10: Delete Product

**Insert Categories**

**A close up of a map

Description automatically generated**

Figure 11: Insert Categories

* Review CRUD

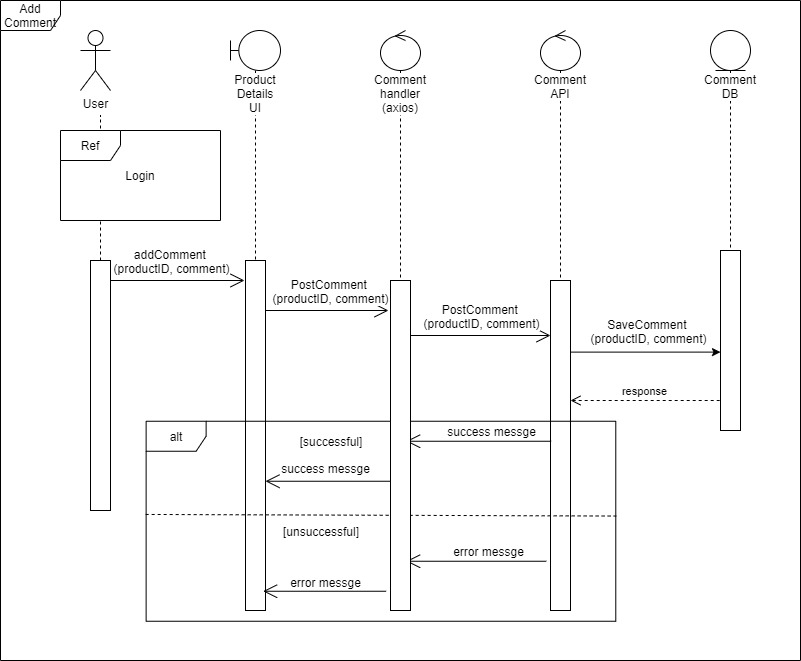


Figure 12: Add Comments

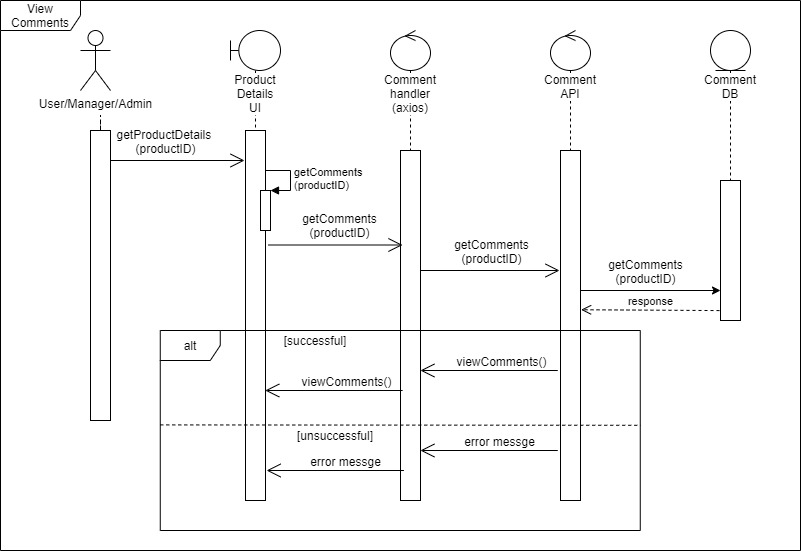
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Figure 13 : View Comments

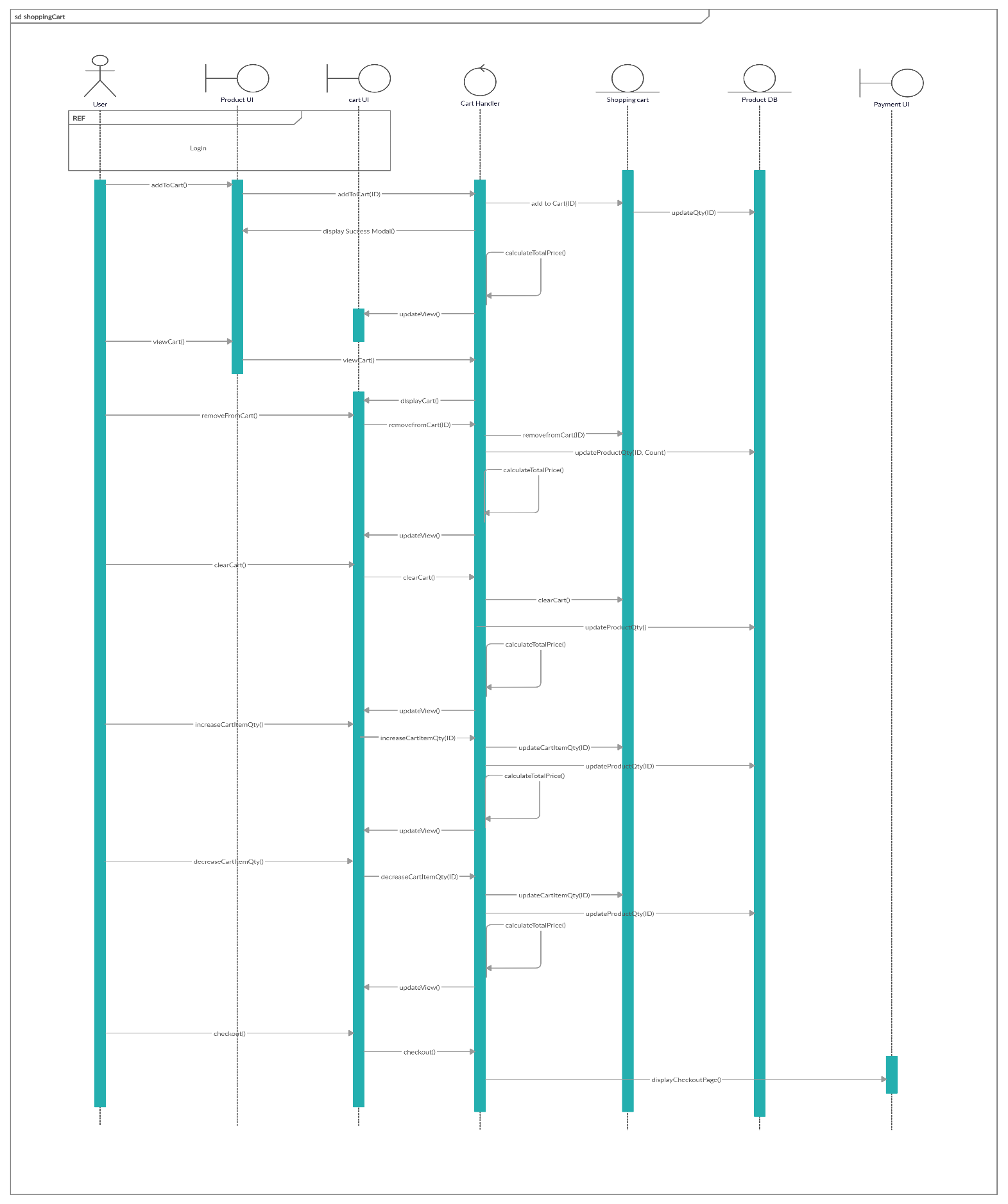
**Shopping Cart**

Figure 4: Cart CRUD

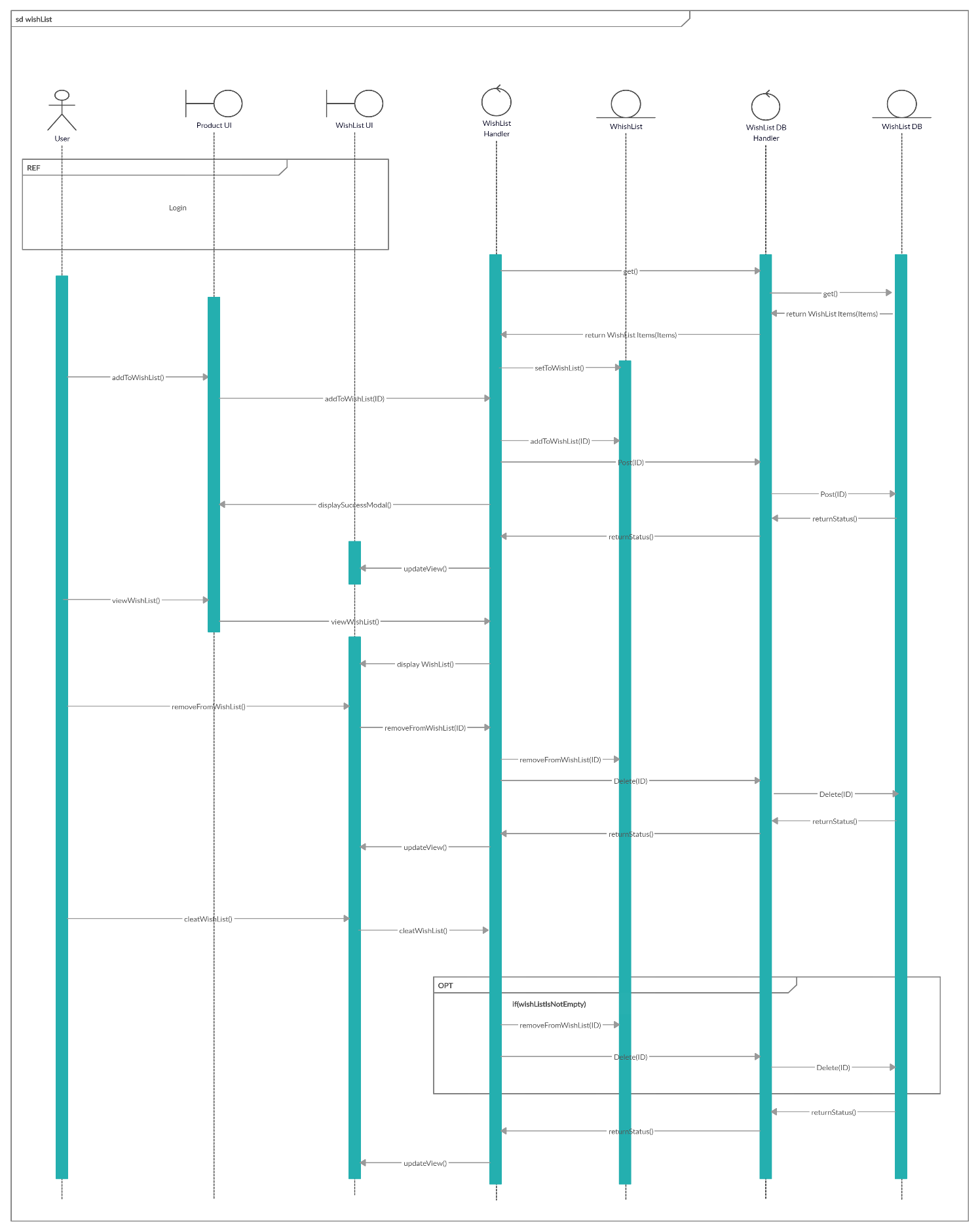
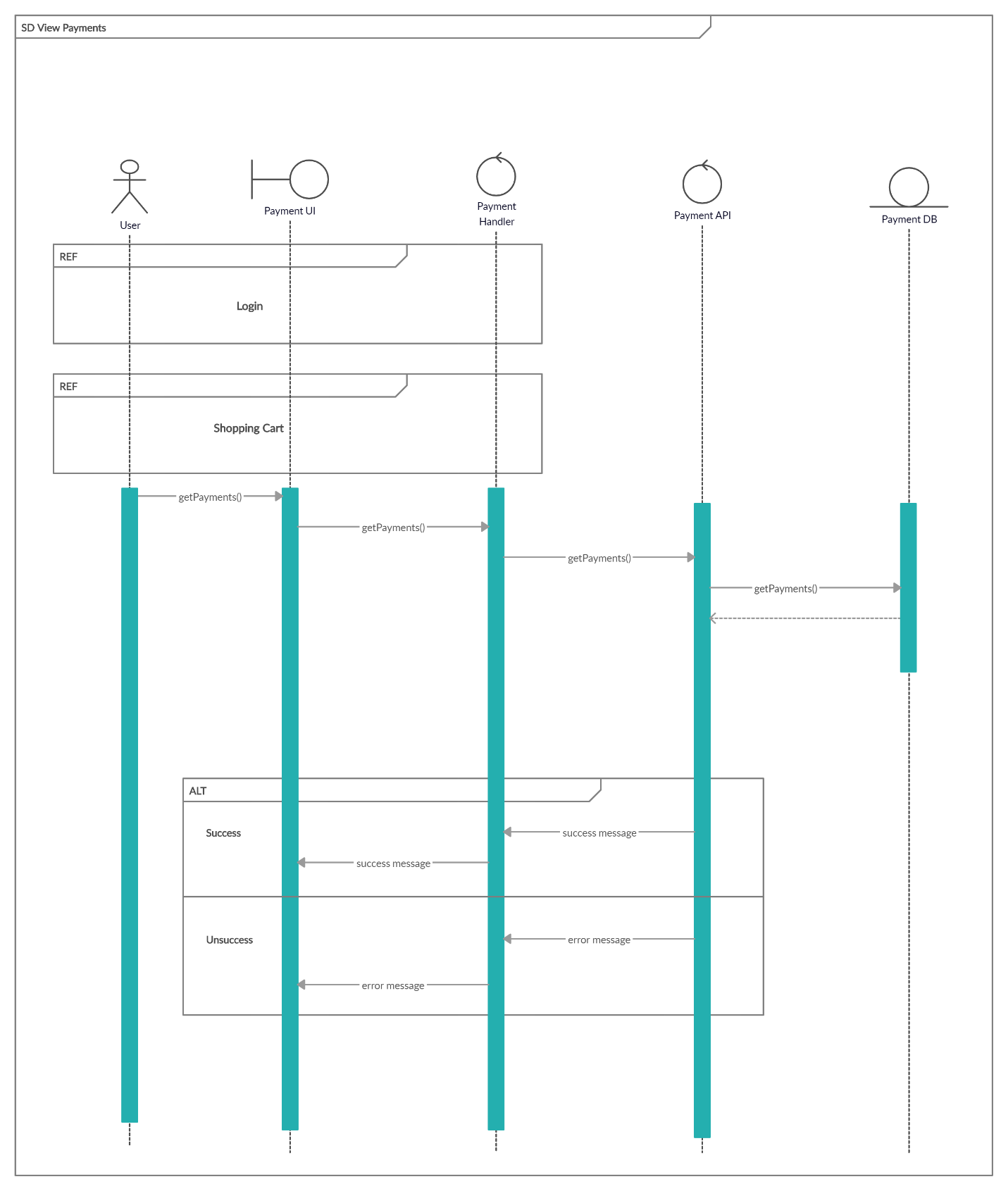
**Wish List**

Figure 5: Wish List CRUD

**Payment Management**

 Figure 6: View Payment

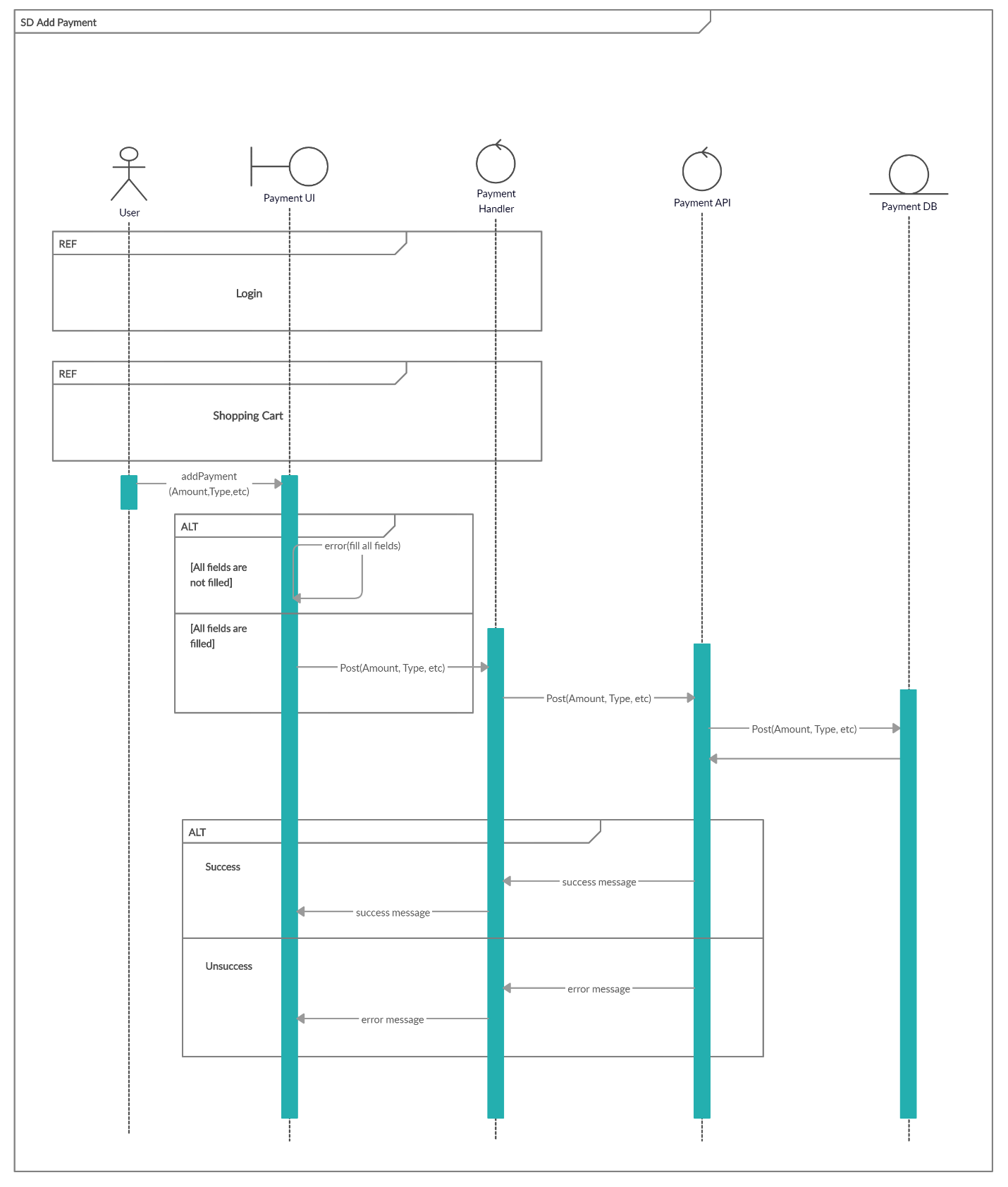


Figure 17: Add Payment

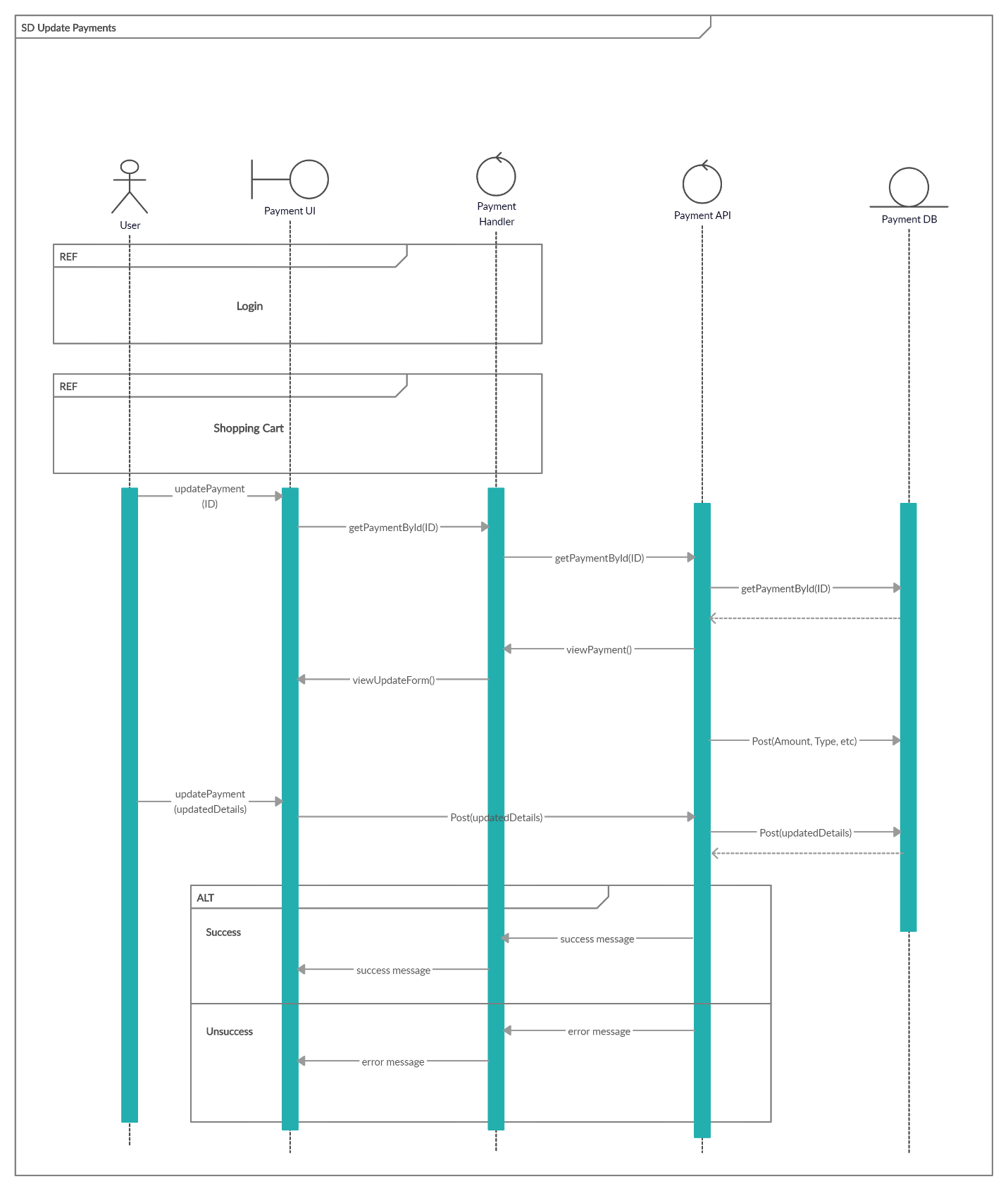


Figure 8: Update Payment

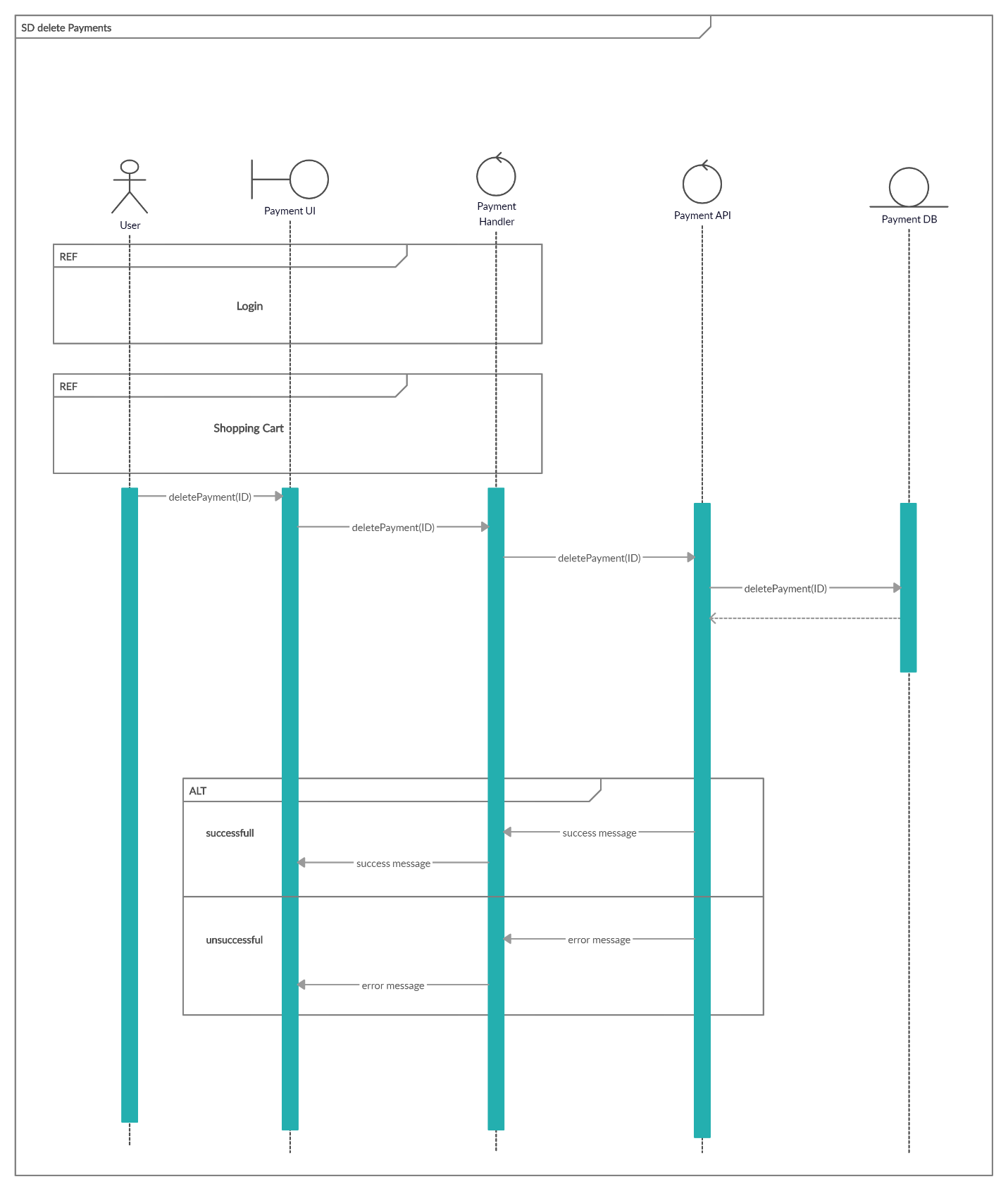


Figure 9: Delete Payment

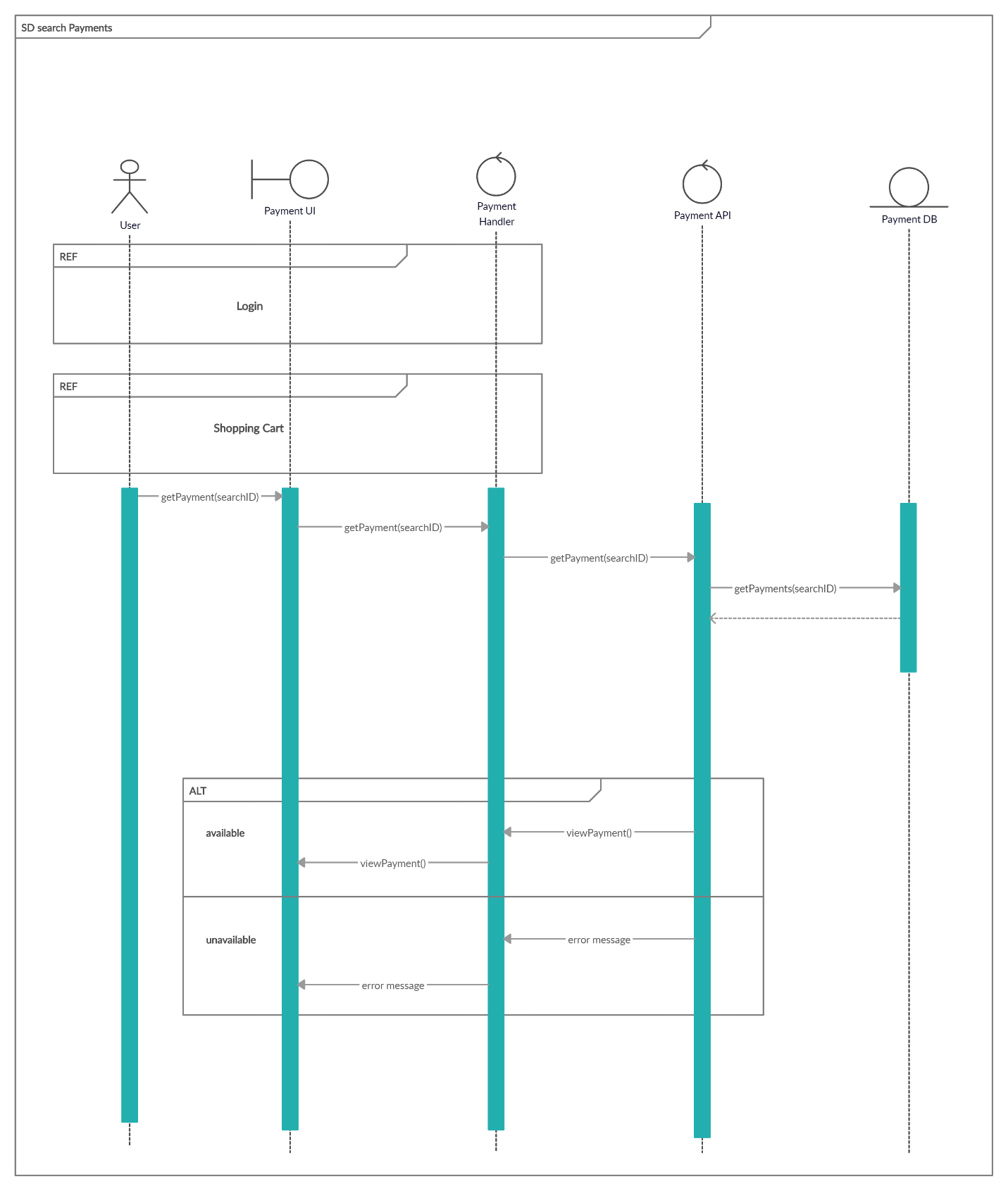


Figure 20: Search payment