Documentation of

SUPHOTEL

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Abstract

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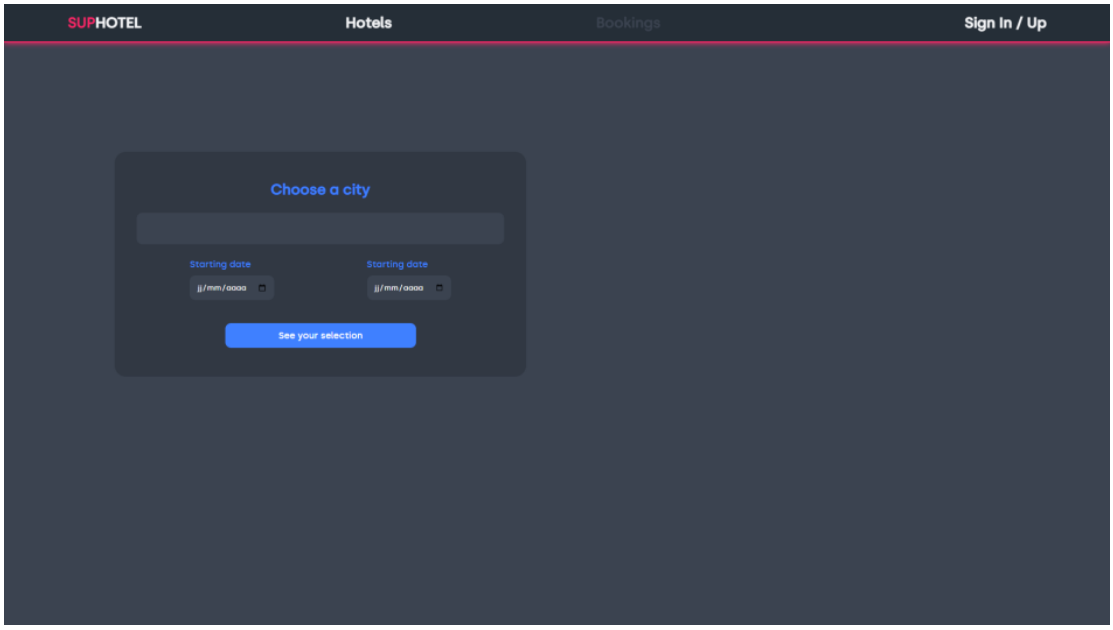
Abstract



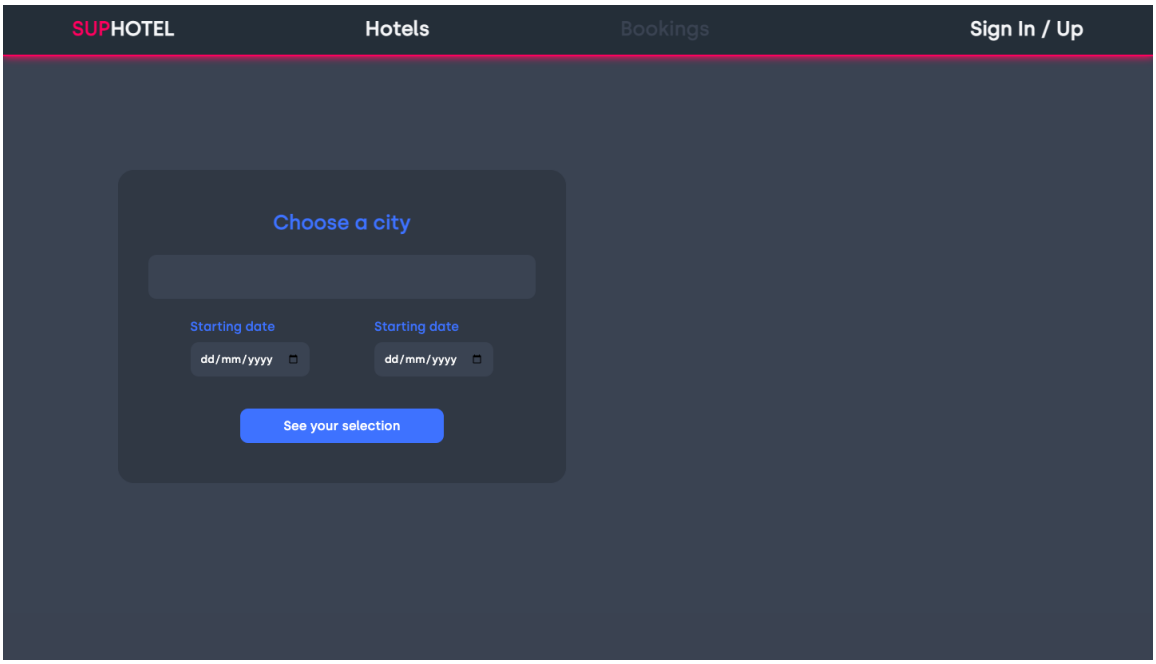
SUPHOTEL is a project implemented for Akkor Hotel, which is an imaginary hotel. It provides people all Over the world with an easy and fast way to book hotel rooms online.

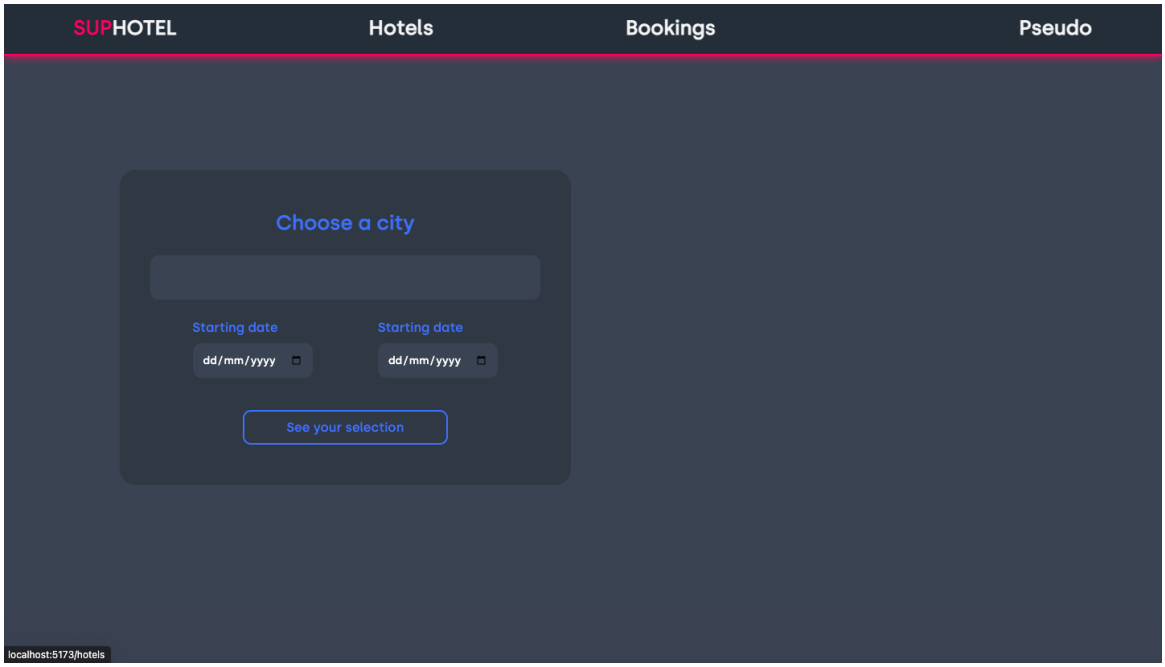
The interface of SUPHOTEL is Web pages that can be accessed with a Web site browser. The system is implemented in SVELTE and HTML (Hyper Text Markup Language). Users can perform room booking activities at Akkor Hotel anytime and anywhere by accessing it via the Internet.

The SUPHOTEL is an easy-to-use application. Everyone who knows how to use a Web browser can easily carry out booking, change the booking details, cancel the booking, change the personal profile, view the booking history, or view the hotel information by following its simple and clear GUI (Graphical user interface) design.

Pages

- **Home**


SUPHOTEL
Hotels
Bookings
Sign In / Up
Choose a city
Starting date
dd/mm/yyyy
Starting date
dd/mm/yyyy
See your selection


SUPHOTEL
Hotels
Bookings
Pseudo
Choose a city
Starting date
dd/mm/yyyy
Starting date
dd/mm/yyyy
See your selection
localhost:5173/hotels

Above figure 1 and 2 show the home page of the “SUPHOTEL” web based system. This interface contains Hotels, Check in and out, Sign In, Sign Up, Booking, and Pseudo. Although in this interface Pseudo is shown as a navigation bar that has a view profile and logout icon, it will appear after Login of customers or staff. Although “SUPHOTEL” can be accessed with a mobile phone. So, it will be more convenient for customers to book directly using their smartphone.

- **Sign Up**

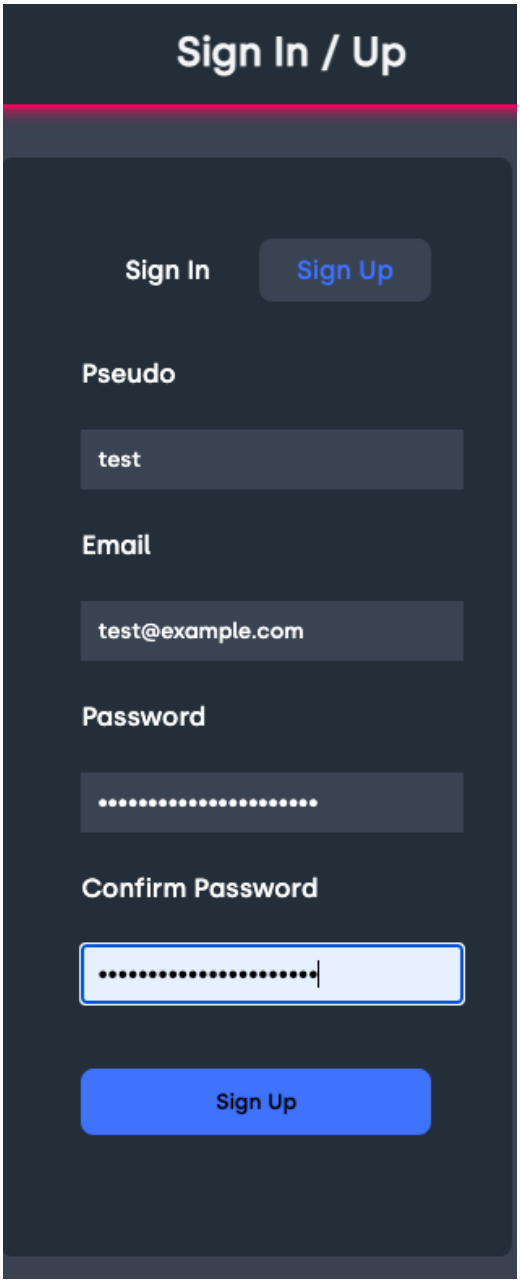
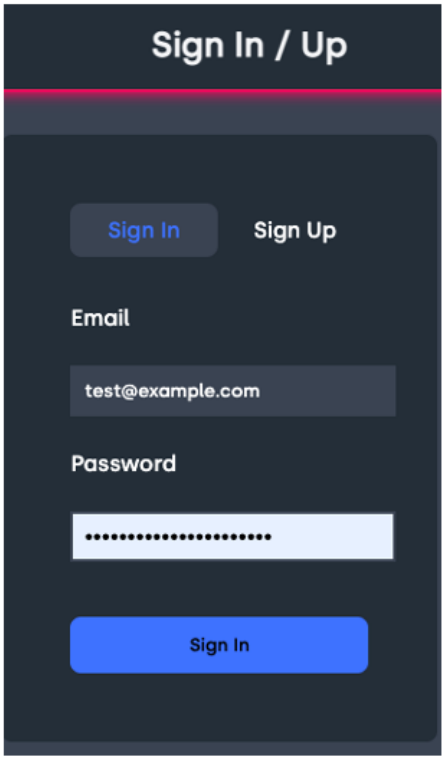


Figure 3 shows the Sign Up page for customers. From here customers can register to the system by providing their necessary details (Pseudo, Email, Password and Confirm Password).

- **Sign In**



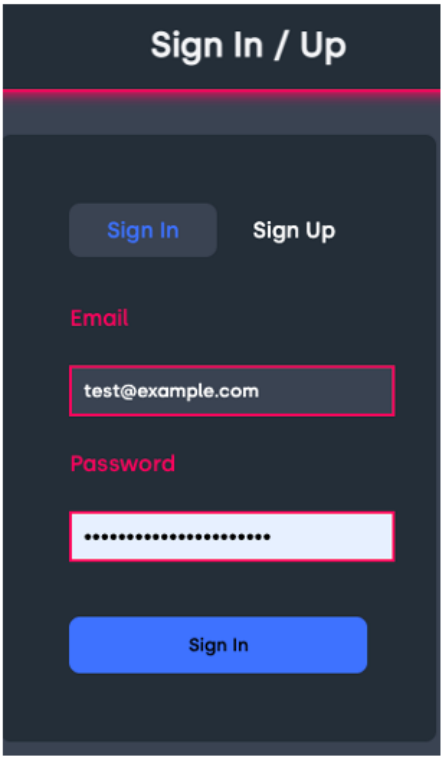


Figure 4 is showing the interface of system Sign In. We create this Log In interface as a general for both customers and staff. Although it shows that there is no security level maintenance for staff Sign In, but the Sign In form is directly connected with the database. So, whenever anyone wants to key in the Email and Password, it will read the data from the database for matching purposes.

If a customer wrote an incorrect Email or Password, it will be shown with red color.

- **Booking**

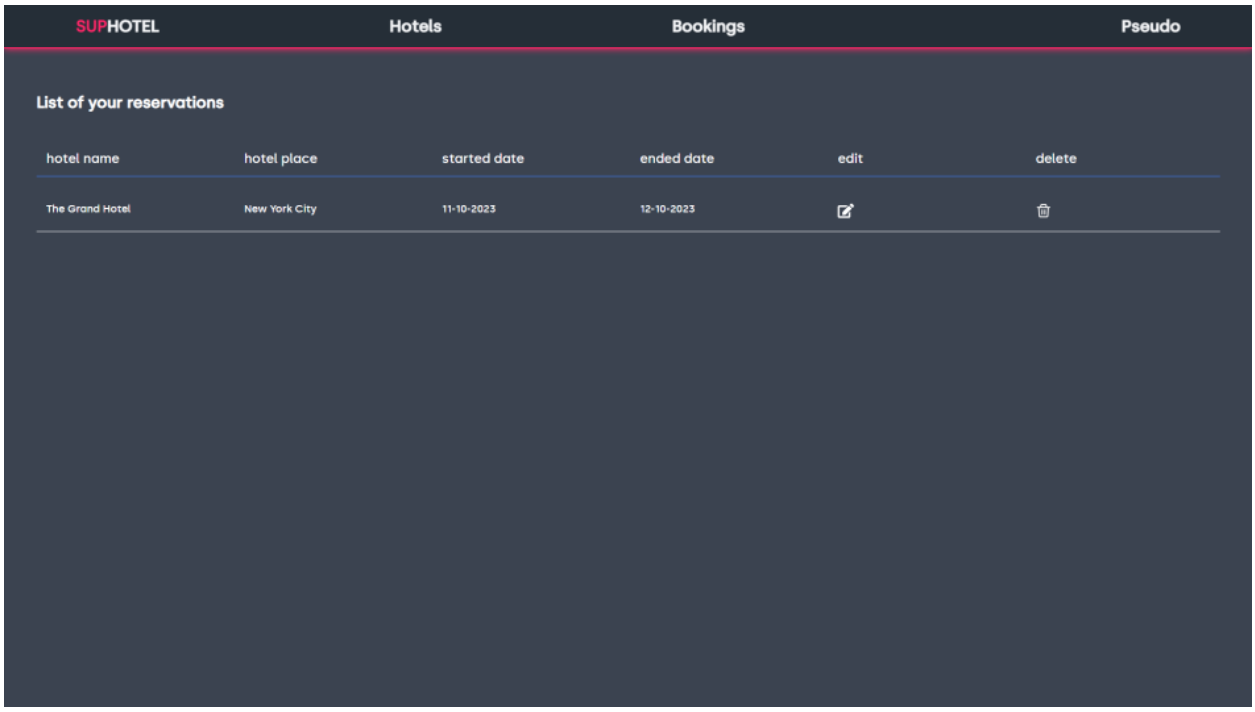


Figure 5 shows the customers Booking Confirmation generated by the system automatically after successful reservation along with the payment details. Customers can also edit the booking if they want to change the date or cancel the hotel.

- **View profile**

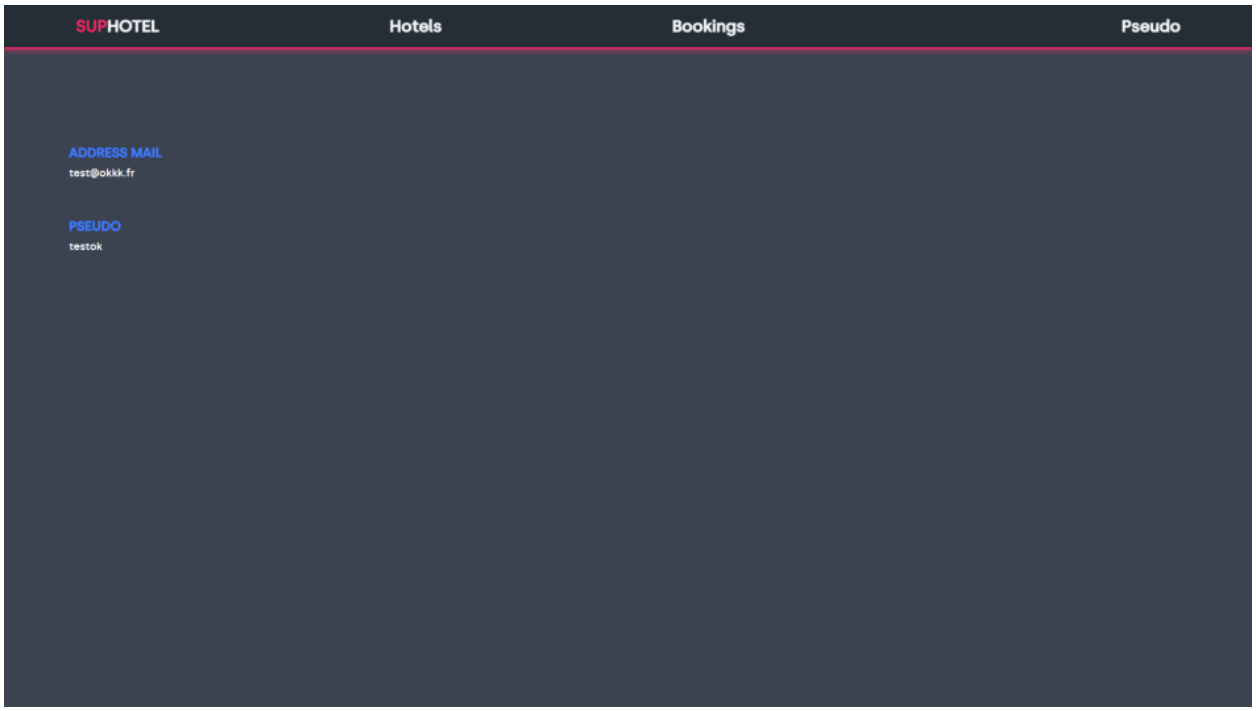
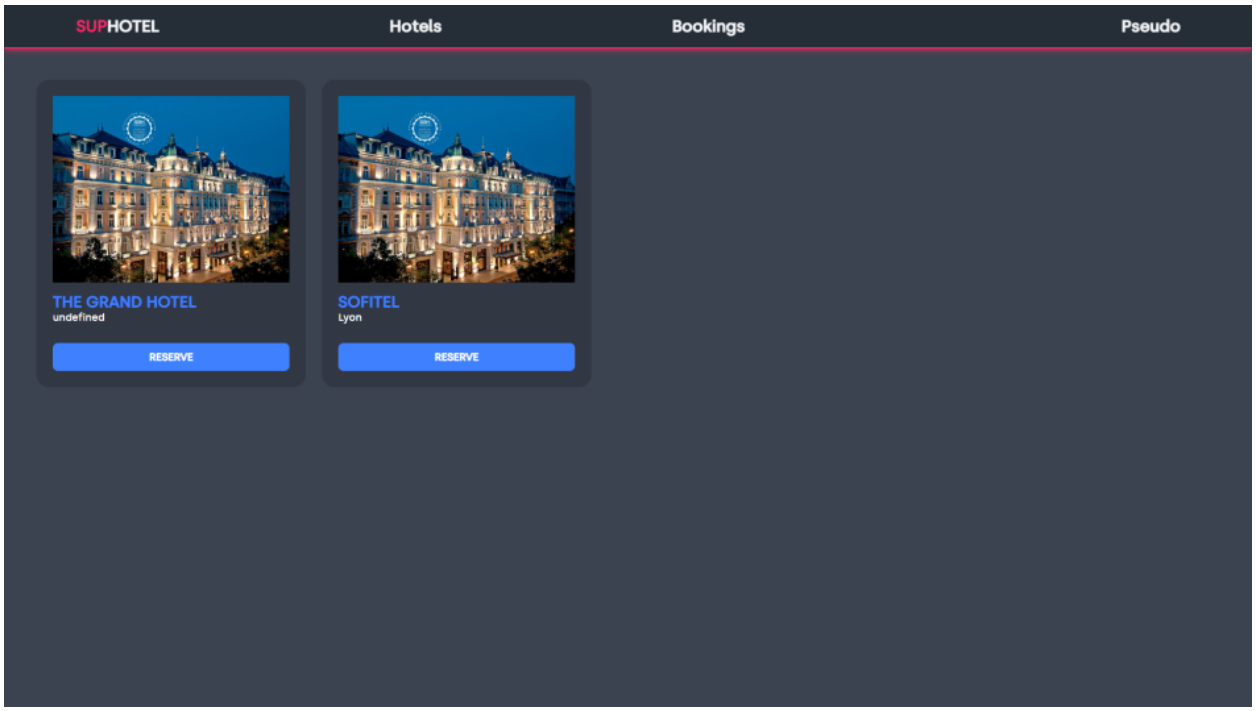


Figure 6 shows a user profile, their mail and pseudo after clicking the view profile.

- **Hotels**



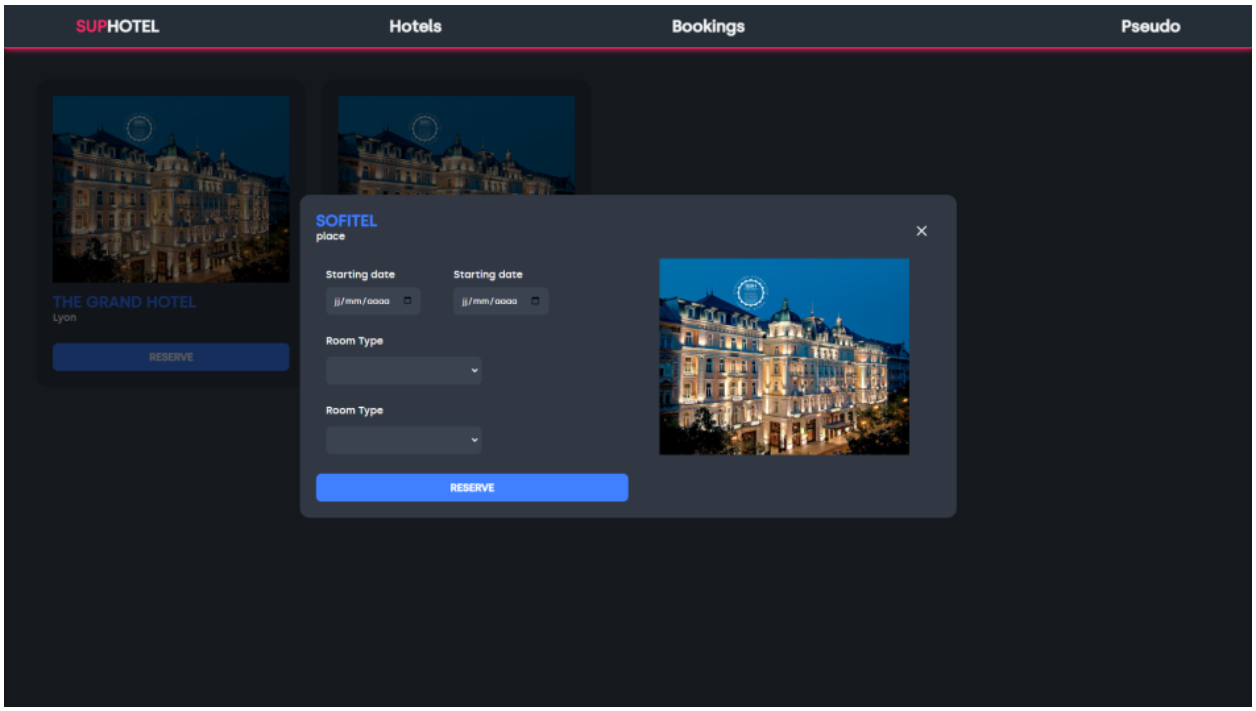


Figure 7 and 8 showing the interface of hotels, apartments, availability according to customers chosen dates. This interface will appear after customers select their destinations,

dates, check in & check out from the Home Page. After clicking the “See your selection” button, the system will display this web page to the customers. From here, customers can filter the page by selecting the room type, and numbers of rooms. After choosing the hotels they can click on the Reserve button for booking. Besides, if they want to change the date, check in and check out, they just need to click on the Booking button to appear on the booking page.

Introduction

- **Purpose of SUPHOTEL**

SUPHOTEL is a Web-based application that provides a user-friendly and simple interface to let users easily book hotel rooms and perform booking activities via the Internet. The records are shared with not only Web users but also with administrators to the site.
The project uses a regular Web browser with HTML (Hyper Text Markup Language) as the basic interface language. Users can perform booking activities via the Internet browser. The administrations also can view all users' files and maintain the Web site on it. The Web pages are written in SVELTE. All the data is stored in a Postman

SUPHOTEL is a very easy-to-use Web-based application. Everyone who knows how to use a Web browser can book rooms on a specific date and finish the basic payment process online. Users will receive a confirmed email including basic booking details after finishing all steps in reservation.

- **The Scope and Limitations of SUPHOTEL**

1. Users can register at SupHotel and then they can view or modify the personal profile.
2. Users can book a room on any specific date.
3. Administrators can change the quantity and price on all types of rooms.
4. Administrators can change any specific booking details.
5. Administrators can modify the details of static pages including room information, description information, name information, booking details, local travel and shipping guide, and privacy policy after login.

- **Significance of SUPHOTEL**

Internet technology has been a significant achievement and we can get any information we need via surfing on the Web browser at any time or anywhere where computers and the

Internet are available. The SUPHOTEL offers a simulated environment to let users perform what they could do in the real world via its simple and user-friendly interface. SUPHOTEL meets most functions and efficiency of a real Web-based application of the real-life case and offers the extension of future development for more completed capabilities.

- **Definition of Terms**

This section defines terms and abbreviations used in the SUPHOTEL project document.

Svelte - Svelte is a web development framework that allows developers to build fast and efficient user interfaces for web applications.

JavaScript - JavaScript is a programming language that is primarily used to create interactive and dynamic web content.

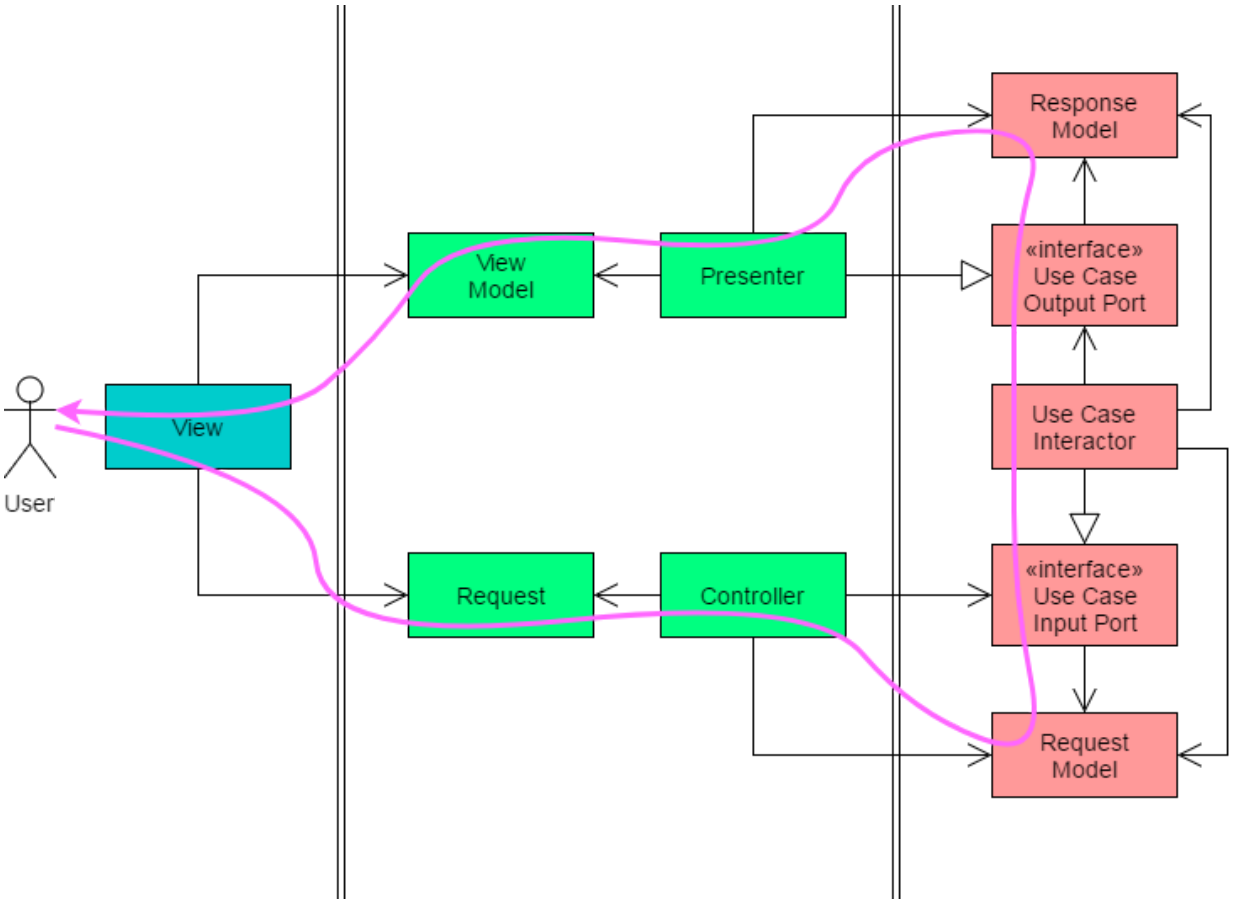
Postman - Postman is a popular API development tool that allows developers to create, test, and document APIs (Application Programming Interfaces). It's a software application that runs on a desktop or in the cloud, and it provides a user-friendly interface for making requests to APIs and examining the responses. With Postman, developers can easily create and send requests to an API endpoint, set headers and parameters, and view the response data in a variety of formats. It's particularly useful for testing and debugging APIs during development, and it can also be used to generate API documentation for other developers to use. Overall, Postman is a powerful tool for simplifying the process of developing, testing, and documenting APIs.

Vite - Vite is a modern build tool and development server for web applications that aims to improve the developer experience. It's a tool that allows developers to build and serve their web applications quickly, by leveraging modern web development features such as native ES modules and fast builds. Vite provides an efficient and fast development experience, by using a development server that can hot-reload changes as you make them. Vite also provides a fast and optimized build process, by taking advantage of features like tree-shaking, module concatenation, and dynamic imports. This makes it a popular choice for building modern web applications, particularly those built with frameworks like React, Vue.js, and Svelte. Overall, Vite is a tool that can help developers improve their productivity and build high-performance web applications with ease.

SUPHOTEL System

- Software Interfaces

I will briefly introduce the architecture of my project. The SUPHOTEL implements a Web system that provides an environment for users to book hotel rooms online.



Following the purple arrow we can see the control flow of a user interacting with a system:

1. The user interacts with the view.
2. The view creates a request (object) which is passed to the controller.
3. The controller converts the request into a request model and passes it to the use case interactor through its input port.
4. The use case interactor processes the request model and creates a response model which is passed through the output port to the presenter.

5. The presenter converts the response model to a view model which is then passed to the view.
6. The user sees the result of their interaction in the view.

But there is more to be explored. We see two vertical boundaries separating the picture into three sections:

- The left (blue) section where the frameworks live (HTML/JavaScript view)
- The middle (green) section where the adapters live (controllers and presenters)
- The right (red) section where the business logic (use case interactors) live

The controller and the presenter are located in the middle of this picture and they appear as a bridge between the user's world (the view) and the business logic's world (interactors).

Software Requirements Specification

- **Introduction**

The purpose of SUPHOTEL Project is to provide people with the convenience to book hotel rooms online. Users can book rooms, modify booking details and view the hotel Website. They can do these through the user-friendly Web pages with a regular Web browser.

- **Overall Description**

Product Perspective

SUPHOTEL is a Web-based application. Its interfaces are implemented on regular Web browsers connected via the Internet.

The hardware interface requirement is that it must run on the existing Web servers. The software interface requirement is that it must support current versions of Web browsers (Internet Explorer, Safari, Mozilla Firefox, etc.). The communications interface requires support for Hyper-Text Transfer Protocol by Secure Socket Layer (SSL). It is the well-known HTTPS.

Product Functions

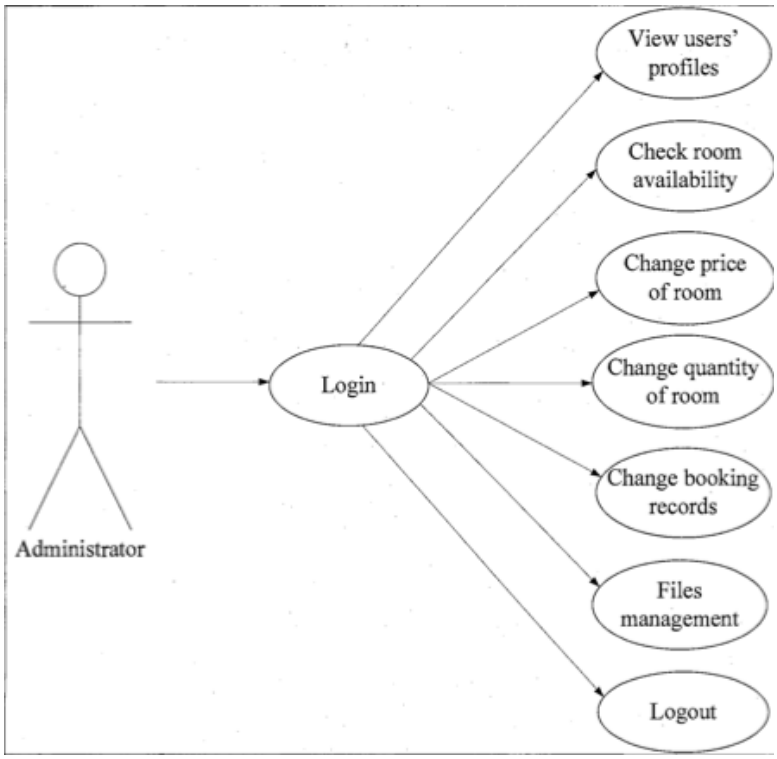


Figure 1. SUPHOTEL Use Case Diagram (Admin)

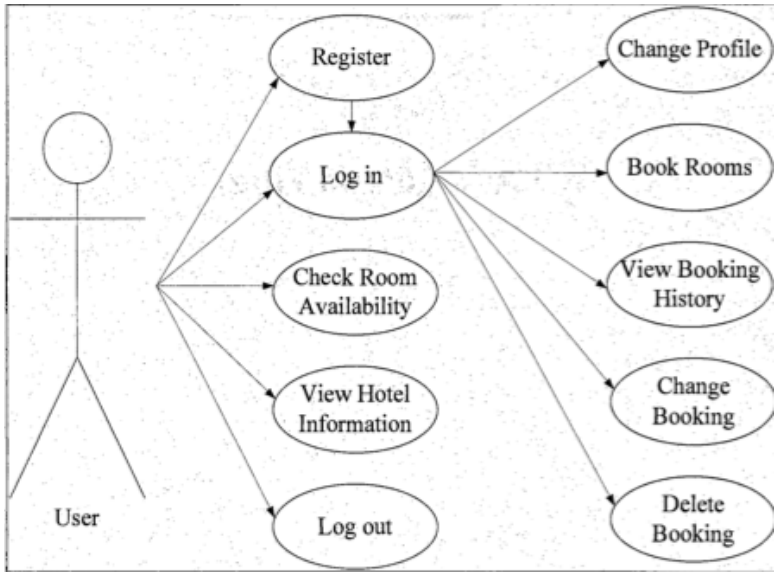


Figure 2. SUPHOTEL Use Case Diagram (User)

Problems

During this project, we encountered some problems.

First, the problem of the framework, not all people who work on it, don't know the sveltekit framework. A learning phase was needed to work correctly on the frontend part.

Next, we had trouble properly connecting the frontend with the backend. The routes from the API weren't clearly explained about what we need to pass in parameters to write correct requests.

About technical problems, the management of the connection token was hard, we needed a trick to manage this but the method used is really not clean and it causes some problems on the web application.

Finally the timing to deliver the project was really short, the web app needed a lot of functionalities and we could not create all of the functionalities.

Conclusion and future directions

- **Conclusion**

SUPHOTEL provides an environment for users to book hotel rooms, perform booking activities, and manage personal accounts at SupHotel with a Web browser. To implement the system, the developer has used JavaScript, HTML, and Svelte. All dynamic contents are handled by Svelte. Persistent data is saved in Postman.

SUPHOTEL is a user-friendly and easy-to-use system of a Web-based application. Everyone who knows how to use a Web browser can register and then login to book a room, change booking details, cancel booking, and view personal profiles online. It is easy and fast to make a reservation.

- **Future Enhancements**

The possible improvements that can be made for SUPHOTEL include:

We can make the graphical user interface friendlier and more functional in the next development. SUPHOTEL aims to provide a user-friendly interface and more functions for real world hotels. But there is still some room for improvements. For example, we can change the settings and functions of some options in the Web pages to make them more professional and artistic.

We can also use more pop-up windows so that users can choose the value from them directly. This applies to "arrival date" and "departure date" options. In this way the users can avoid many possible mistakes caused by inappropriate input.

In future improvements, SUPHOTEL can offer more services such as car rental, flight ticket purchase, and the vacation package advising. These services have been offered already on some real world online booking systems. More hotels will add these services on their online systems. In this way, people can make all their requests at once no matter they are business trip arrangement, shopping, travel, or vacation.