

Test Project

IT Software Solution for Business

Session 3

Submitted by: Independent Test Project Design Team

Introduction

Seoul Stay is the first and only platform that allows international travelers from around the world to rent the best homes, estates, or condominiums in Seoul.

In this session, the project designers are asking for a web application that would help accommodate the clients the ability to find the right place and reserve it for the period they need. You will be provided with the schematics and the initial required data in this document.

Because of time limitations, for the purpose of these competitions many functionalities have been limited and reservation is performed for the one night of 25/11/2022 in the area of Seocho-gu.

Contents

This Test Project proposal consists of the following documentation/files:

- | | |
|---------------------------|---|
| 1. WSC2022_TP09_S3_EN.pdf | (Session 3 instructions) |
| 2. PaymentAPI.pdf | (Documentation for the Payment Processing API) |
| 3. Session3-MySQL.sql | (SQL Script to create tables with data for MySQL) |
| 4. Session3-MsSQL.sql | (SQL Script to create tables with data for Microsoft SQL) |

Description of Project and Tasks

While developing the test project, please make sure the deliverables conform to the basic guidelines drawn out by the project designers:

- There should be consistency in using the provided style guide throughout development.
- All required software modules must have applicable and useful validation and error messages as expected by the industry.
- Offer a scrollbar if the number of records on a list or a table that do not fit in the form area comfortably. Hide scrollbars if all content can comfortably be displayed.
- The de-facto standard, ISO compliant date format is DD/MM/YYYY which will be used in this task where applicable.
- The use of valid and proper naming conventions is expected in all material submitted.
- When using colours to differentiate between rows or records, there needs to be visible clarification on the screen as to what they stand for.
- The wireframe diagrams provided as part of this document are only suggestions and the solution produced does not have to in any way, mirror what has been presented
- Time management is critical to the success of any project and so it is expected of all deliverables to be complete and operational upon delivery.
- The user interface of the current task needs to be imple/mented on the web platform and will only be accepted and tested on the Chrome browser provided. The user interface also needs to be designed and developed using the standard web frameworks listed in the IL.
- As an industry standard, the company infrastructure is based on a central database and the application should be designed to process all their data requests through a Web API. The company will provide all necessary specifications for you to model and deploy the data interface.

Instructions to the Competitor

3.1 Creating the database

Create a database by the name of "Session3" in your desired RDBMS Platform (MySQL or Microsoft SQL Server). This will be the main and only database you will use in this session.

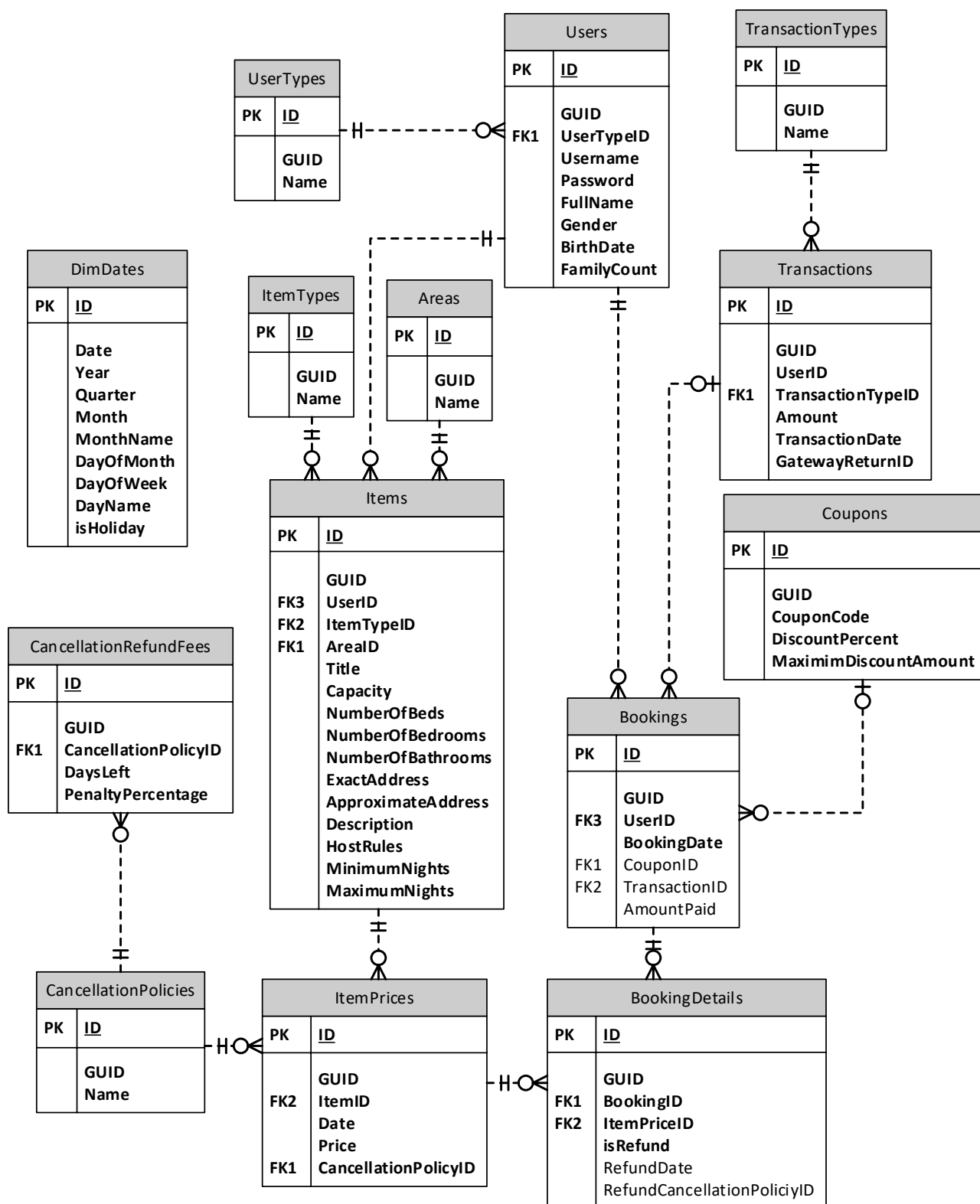
3.2 Importing database structure

Depending on your preferred RDBMS platform, a SQL scripts is made available. The said scripts consist of the database structure and data required to complete the required tasks. The data needs to be imported to the database created for this session named "Session3".












As instructed by the designers, the database structure provided for the purpose of this section cannot be altered. This applies to removal of tables, adding or deleting any fields on the tables or of change in their data types.

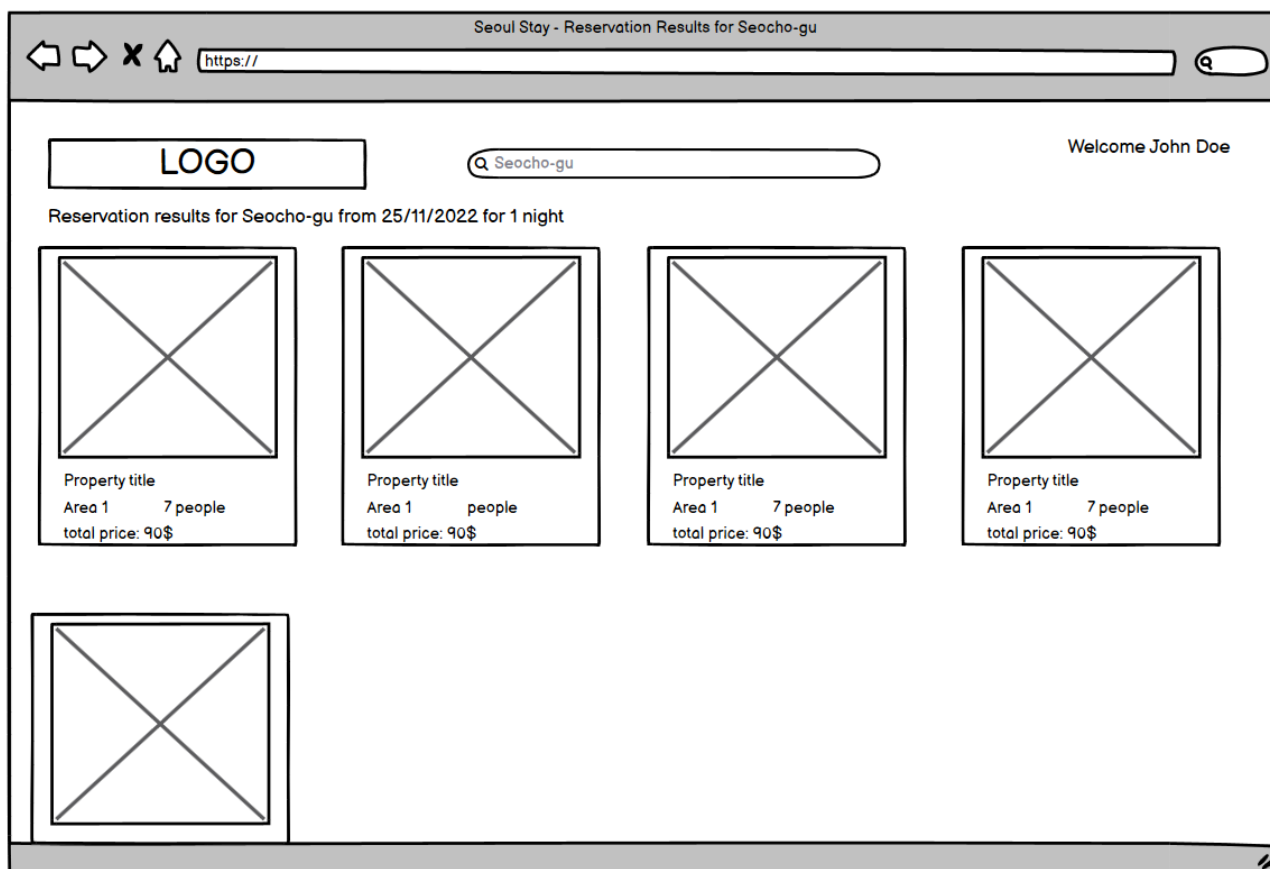
Before submitting your deliverables, please make sure that there have not been any changes made to the records in the database. In case you have changed any data for any reason, you are expected to restore the original dataset provided.

To help further perceive the thinking behind the structure of the database, the database designers provide an Entity-Relationship Diagram (ERD). The included diagram explains the conceptual and representational model of data used in the database.



Since this is the first time you are working with some of the dataset, the designers have chosen to provide a short description of some of the entities used in the database:

TYPE	TITLE	DESCRIPTION
 Table	Bookings	<i>Where reservation information for the listings is stored.</i>
 Table	BookingDetails	<i>Where information about the details of the reservation for each night is stored.</i>
 Field	isRefund	<i>Indicates whether the booking has been cancelled and refunded (true).</i>
 Table	CancellationPolicies	<i>Where information on cancellation policies is stored.</i>
 Table	CancellationRefundFees	<i>When the client chooses to cancel, information on the cancellation fees and deductions are stored here.</i>
 Table	ItemPrices	<i>Where information on pricing of each property or listing and their cancellation policies are stored.</i>
 Table	Coupons	<i>Where information on discount coupons and their specific rates are stored.</i>
 Table	DimDates	<i>Also called a date dimension is an essential table in a data model that allows us to analyze performance more effectively across different time periods.</i>
 Field	isHoliday	<i>Indicates whether the said date is a holiday or not.</i>
 Table	Transactions	<i>Where information on financial transactions for each reservation is stored.</i>
 Table	TransactionTypes	<i>Indicates whether the transaction is deposit or withdrawal.</i>



3.3 Create Reservation results page

This is the initial form when opening the webpage. Here is a brief description of the functionalities this form provides:

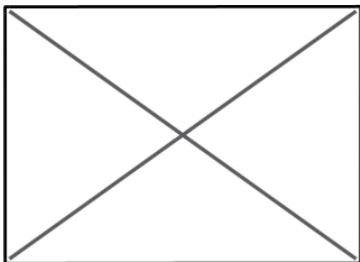
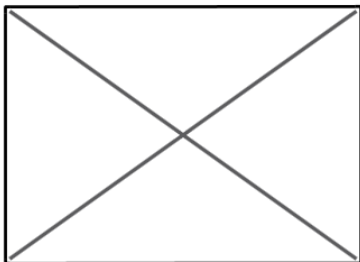
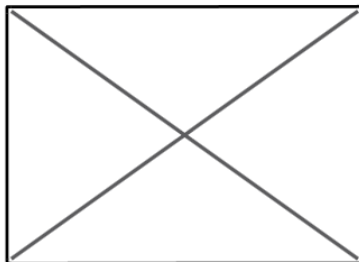
- For demonstrations purposes, user number 3 from the users table is selected as the person trying to make reservation and a welcome message should be shown with their full name.
- By default, search results for the suburb or area "Seocho-gu" for the night of "25/11/2022" is displayed to the client and the proper information is displayed on the page.
- Place the logo and the search box where appropriate on the screen.
- The search result list should have the following elements for each property or listing returned:
 - If the property has any pictures associated with it in the database, a random one should be selected and displayed. Otherwise, the file "default.jpg" can be used as a placeholder.
 - The property title or name should be displayed in bold for each property.
 - The area or suburb name of the property should be included in the list.
 - The capacity of each property should also be displayed to the client as part of the list.
 - The price for the selected period for each property needs to be made available.
 - Only available properties for the selected time period can be displayed as part of this list. This means that they need to have a price set and need not to have been booked previously.
- By clicking each of the shown results as in the list items described above, the client is directed to form 3.4 where then can see the details of the selected listing.

Seoul Stay - Property Details for "property title"

LOGO

Welcome John Doe

Details of "Property title" at Seocho-gu

Capacity: 2 Bedrooms: 1 Beds: 1 Bathrooms: 1


Description


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Host rules

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Available Amenities:

 WIFI

 TV - DVD

 Bathroom

Check-in: dd/mm/yyyy
Check-out: dd/mm/yyyy
Reserve for ppl

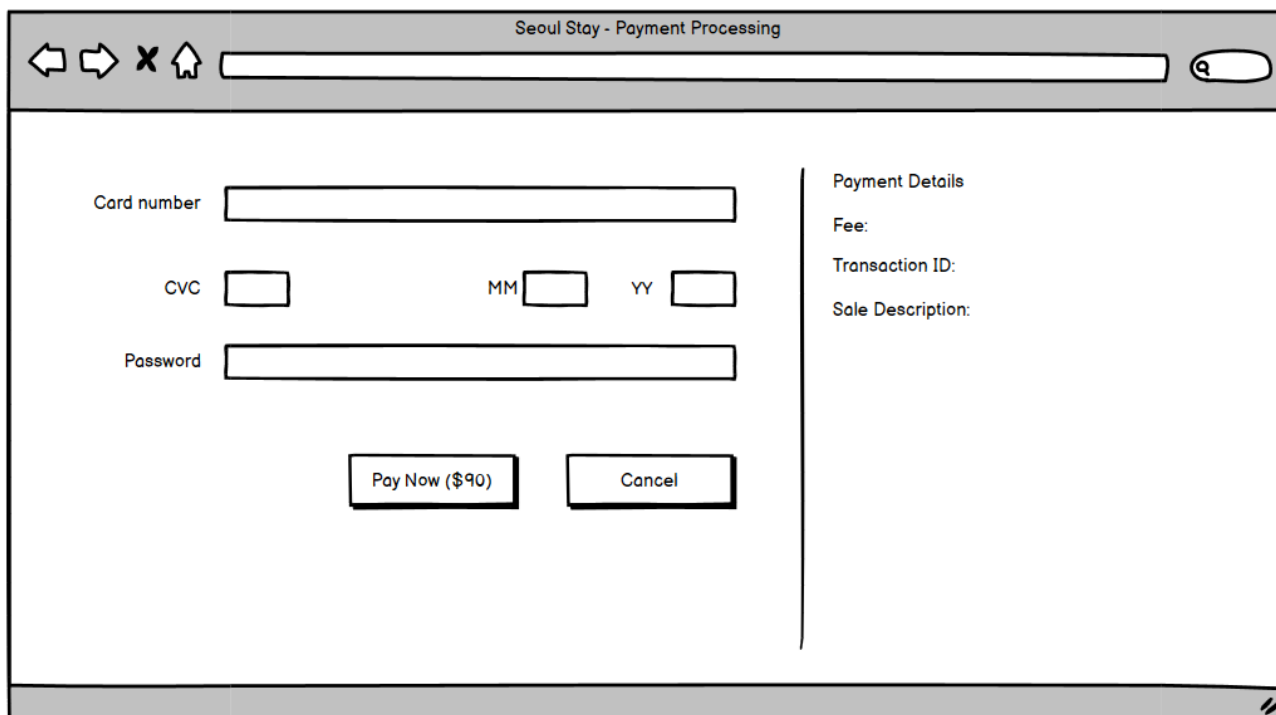
Payable Amount: 90 USD

Reserve now

3.4 Property details page

This page helps the client view all the details of a property or listing and review the pricing based on their preferred dates then proceed to reserve them. In this section you will find a short description of the functionalities this page provides:

- For demonstrations purposes, user number 3 from the users table is selected as the person trying to make reservation and a welcome message should be shown with their full name.
- Place the logo and the search box where appropriate on the screen.
- The title of the property and the area or suburb they reside in should be placed at the top of the page with a sizing that emboldens and emphasizes its importance.
- In case there are pictures of the property in the database, place them with a minimum of 5 pixels space between them. The maximum size of the displayed pictures should not be more than 290 pixels in width and 210 pixels in height and cannot be skewed or distorted.
- Details of the listing including the capacity, number of bedrooms, beds, and bathrooms, the description and the rules defined by the owner / manager as well as available amenities should also be displayed in the page.
- The client can then review the check-in and check-out dates and also the total amount for the reservation and proceed to set the number of people they will want to reserve for. This value needs to be checked to be less than the capacity the property can accommodate.
- Place a button where the client may use to finalize their reservation captioned "Reserve now". This will direct them to the payment page documented on section 3.5.

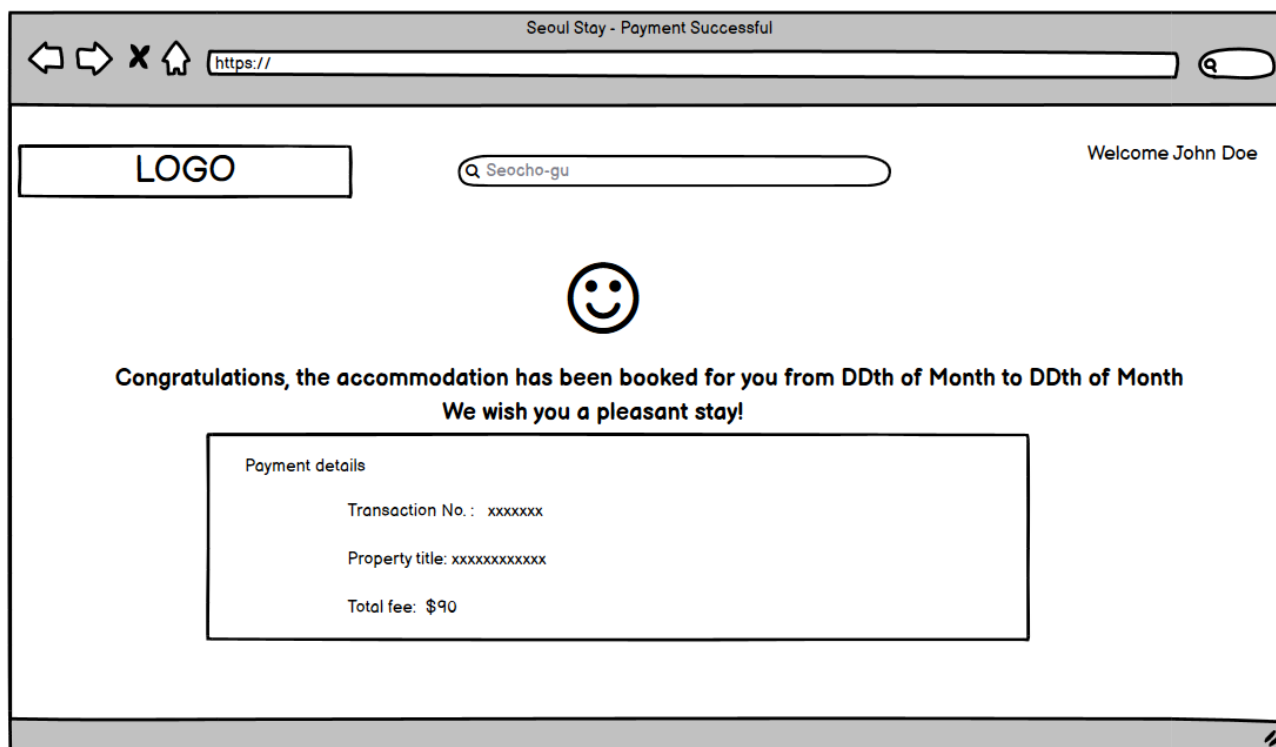


3.5 Payment processing page

The client can use this page to pay for their reservation. This page needs to interact with an external api as documented on "PaymentAPI.pdf".

Using the API, the client will need to go through these three steps:

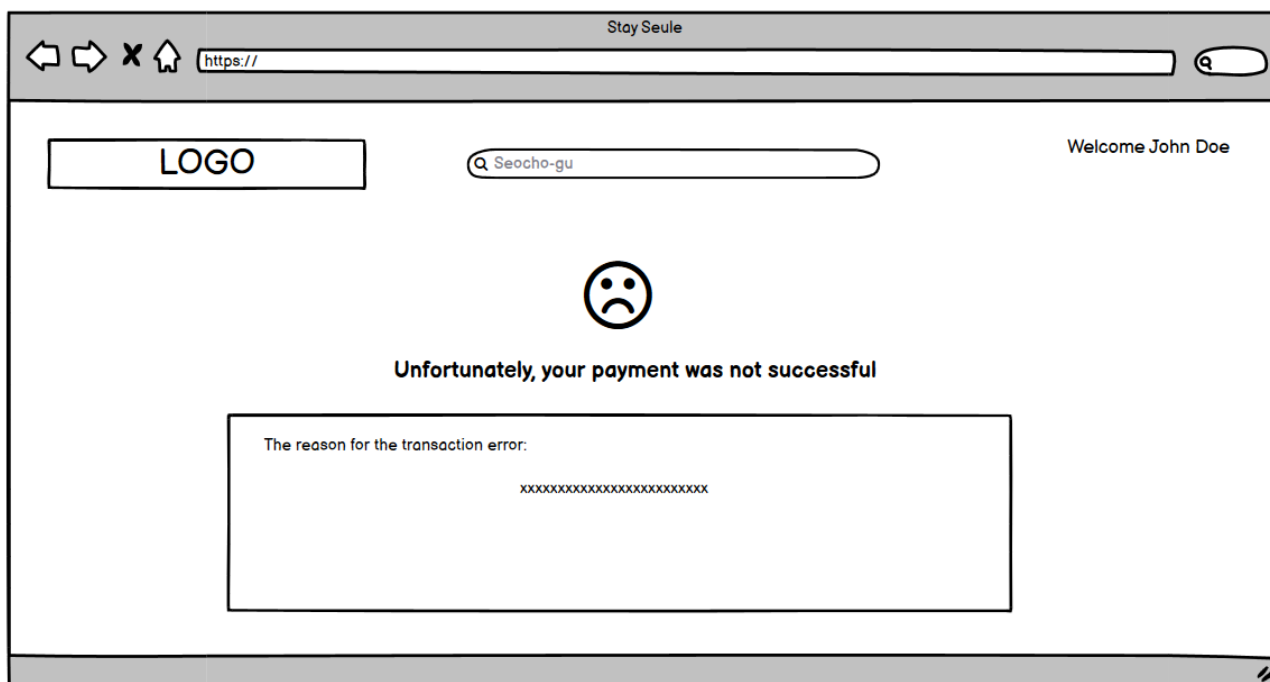
5. Request a token from the API.
6. Send the token along with the details and description of the order to the API.
7. Once the API checks and completes processing the payment, they will send the client back to the Seoul Stay website with the results of the payment.
8. In case the API determines that the payment has been successful, the website needs to then verify the payment with the API and shows the appropriate page as described in section 3.6 of this document.
9. In case the payment was unsuccessful the results are displayed to the client on a page detailed on section 3.6 of this document.



3.6 Successful payment page

When the payment goes through successfully, the reservation is marked as completed on the database and this page with the details of the booking is displayed to the client. The following is a short description of the contents of this page:

- For demonstrations purposes, user number 3 from the users table is selected as the person trying to make reservation and a welcome message should be shown with their full name.
- Place the logo and the search box where appropriate on the screen.
- Place an icon on the page that indicates that the payment has gone through successfully.
- The title of the page which says "Congratulations, the accommodation has been booked for you from DDth of Month to DDth of Month. We wish you a nice stay!" should be placed at the top of the page with a sizing that emboldens and emphasizes its importance. "DDth of Month" should be replaced with the double-digit day and 3 letter month name of the check-in and check-out dates for the reservation.
- Provide the payment details for the reservation including the transaction number, property title and the total fees paid.



3.6 Unsuccessful payment page

When the payment does not go through, the reservation is marked as cancelled on the database and this page with the following contents is shown to the client:

- For demonstrations purposes, user number 3 from the users table is selected as the person trying to make reservation and a welcome message should be shown with their full name.
- Place the logo and the search box where appropriate on the screen.
- Place an icon on the page that indicates that the payment has failed.
- The title of the page which says “Unfortunately your payment was unsuccessful” should be placed at the top of the page with a sizing that emboldens and emphasizes its importance.
- The reason for the failure of transaction should be displayed to the client. Please use the documentation provided for the API where needed.