Project Report

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Programming Patterns (sect.2)

420-301-VA

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Salehi Dastjerdi, Niloufar

Hotel Management System

Final Project's Report

Introduction

The Hotel Management System is a small application that allows hotel staff (e.g.: receptionists) and guests to interact with the system from a graphical interface (GUI) and each have access to a separate window since they have different access levels.

Staff Window Features

-Login button to sign in as a client

-View all or only current clients

-View all or only available rooms

-View all bookings

-Book a room for a client

-Check out a client

-Search for client

-Search for room

-Update room

-Add room

-Add client

Client Window Features

-Login button to sign in as staff

-View available rooms

-Search rooms by room type

-Search by price range

-Book a room

Program Features & Screenshots

Client Window Features

Client Account — □ ✕

Welcome To The Hotel Manager App!   Langue/Language: English ▾

Staff Login

User ID

1

Password

•••••

Sign in

Client Account — □ ✕

Welcome To The Hotel Manager App!   Langue/Language: English ▾

No content in table

Room Type   Single ▾   Search By Room Type   View Available Rooms

                                 Sort By Price   View Bookings

ID

Booking Start: 🗓

Name   Book A Room

Room Number

Party Size

View available rooms

Room No.	Room Type	Price Per Night ($)	Available	Added Date
1	Single	123.0	True	2025-05-04
2	Big_Family	500.0	True	2025-05-04
3	Single	123.0	True	2025-05-04

Search rooms by room type

Room Type	Single ▼	Search By Room Type

Room No.	Room Type	Price Per Night ($)	Available	Added Date
1	Single	123.0	True	2025-05-04
3	Single	123.0	True	2025-05-04

If invalid room type was entered

Error ✕

ⓘ Une erreur s'est produite!

OK

Sort by price low to high

Sort By Price

Room No.	Room Type	Price Per Night ($)	Available	Added Date
1	Single	123.0	True	2025-05-04
3	Single	123.0	True	2025-05-04
2	Big_Family	500.0	True	2025-05-04

French language (switch while the app is running):

Compte du client

Bienvenue Au Programme De Gestion De l'Hotel!

Langue/Language: Français ▾

No. de Chambre	Type de Chambre	Prix Par Nuit($)	Disponibilité	Date D'Ajout
1	Simple	123.0	Vrai	2025-05-04
3	Simple	123.0	Vrai	2025-05-04
2	Grande_Famille	500.0	Vrai	2025-05-04

Type de Chambre: Simple ▾   Rechercher par type de chambre   Voir Toutes les Chambres

Trier par prix   Voir les réservations

Identifiant [ ]

Date de Réservation: [ ] 🗓

Votre Nom [ ]   Réserver une Chambre

No. de Chambre: [ ]

Taille du groupe [ ]

Staff window:

Add Room (another was added before):

Room No.	Room Type	Price Per Night ($)	Available	Added Date	
223	Queen	119.99	False	2025-05-04	
231	Double	98.25	True	2025-05-04	

Add another client:

Client ID:	
Client Name:	Mariam Salim
Client Contact:	514-234-4562
Client Party Size:	1
Is In Hotel:	False

Client ID	Name	Contact	Party Size	Is In Hotel
1	Mariam Salim	438-234-1244	2	True
2	Mariam Salim	514-234-4562	1	False

Search for a client:

Client ID:	2	Search For Client

Client ID	Name	Contact	Party Size	Is In Hotel	
2	Mariam Salim	514-234-4562	1	False	

Search for room:

Room No.	231	Search For Room

Room Num.	Room Type	Price Per Night ($)	Available	Added Date
231	Double	98.25	True	2025-05-04

Book a room:

Hotel Management System

Welcome To The Hotel Manager App!

Langue/Language: English

Client Login

Room No.	Room Type	Price Per Night ($)	Available	Added Date
223	Queen	119.99	False	2025-05-04
231	Double	98.25	True	2025-05-04

Client ID: 2 — Search For Client — View All Rooms

Client Name: — Delete Client — View Available Rooms

Client Contact: — Add Client — View Current Clients

Client Party Size: — View All Clients

Is In Hotel: True — View All Bookings

Booking Start: 5/3/2025 — Book A Room

Room No. 223 — Search For Room

Room Type: Double — Delete Room

Price Per Night: — Add Room

Availability: True — Update Room

Booking No.: — Check Out

Cannot book unavailable room, it's invalid.

Error

An error occurred, cannot book room. Make sure to enter valid data in the fields.

OK

Change room No to 231, then book (another booking was there before):

Booking Num.	Client ID	Room No.	Start Date	End Date
1	1	223	2025-05-03	
2	2	231	2025-05-03	

Check out:

Booking No.:	1	Check Out

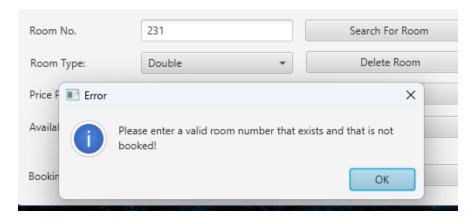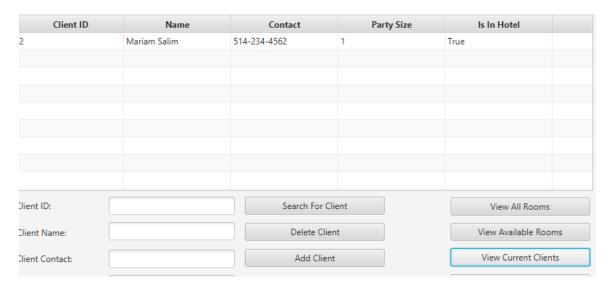| Booking Num.	Client ID	Room No.	Start Date	End Date	
1	1	223	2025-05-03	2025-05-03	
2	2	231	2025-05-03		

See the updated Is In Hotel after operations (a client checked out and one came in):

Client ID	Name	Contact	Party Size	Is In Hotel
1	Mariam Salim	438-234-1244	2	False
2	Mariam Salim	514-234-4562	1	True

Trying to delete a booked room:

Room No.	231	Search For Room
Room Type:	Double ▼	Delete Room

Price F Error ✕

ⓘ Please enter a valid room number that exists and that is not booked!

OK

View current clients in hotel:

Client ID	Name	Contact	Party Size	Is In Hotel	
2	Mariam Salim	514-234-4562	1	True	

Client ID:		Search For Client	View All Rooms
Client Name:		Delete Client	View Available Rooms
Client Contact:		Add Client	View Current Clients

View all clients:

Client ID	Name	Contact	Party Size	Is In Hotel	
1	Mariam Salim	438-234-1244	2	False	
2	Mariam Salim	514-234-4562	1	True	

Client ID: [   ]   Search For Client   View All Rooms

Client Name: [   ]   Delete Client   View Available Rooms

Client Contact: [   ]   Add Client   View Current Clients
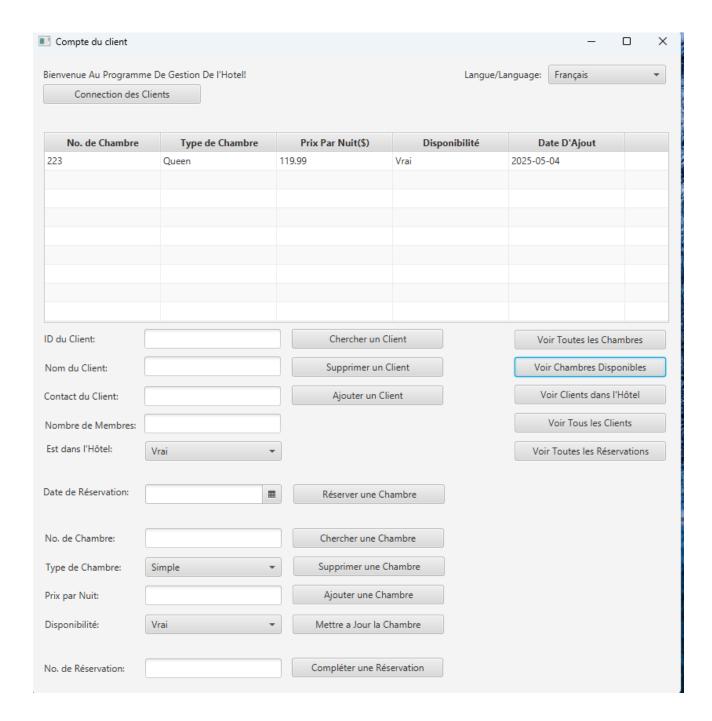
Client Party Size: [   ]   View All Clients

View all rooms:

Room No.	Room Type	Price Per Night ($)	Available	Added Date	
223	Queen	119.99	True	2025-05-04	
231	Double	98.25	False	2025-05-04	

Client ID: [   ]   Search For Client   View All Rooms

View available rooms:

Room No.	Room Type	Price Per Night ($)	Available	Added Date	
223	Queen	119.99	True	2025-05-04	

Client ID: [   ]   Search For Client   View All Rooms

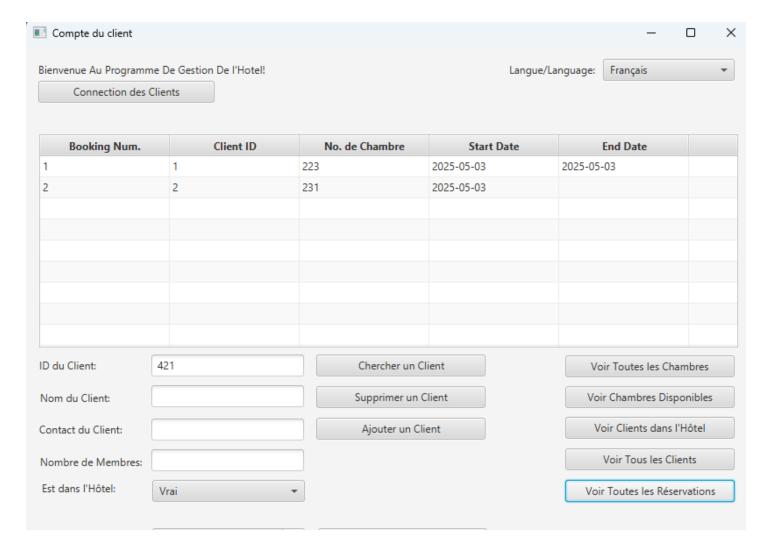Client Name: [   ]   Delete Client   View Available Rooms

French language (switch while the app is running):

Compte du client   — ☐ ✕

Bienvenue Au Programme De Gestion De l'Hotel!   Langue/Language: | Français ▾ |

| Connection des Clients |

No. de Chambre	Type de Chambre	Prix Par Nuit($)	Disponibilité	Date D'Ajout	
223	Queen	119.99	Vrai	2025-05-04	

ID du Client: [   ] | Chercher un Client | | Voir Toutes les Chambres |

Nom du Client: [   ] | Supprimer un Client | | Voir Chambres Disponibles |

Contact du Client: [   ] | Ajouter un Client | | Voir Clients dans l'Hôtel |

Nombre de Membres: [   ] | Voir Tous les Clients |

Est dans l'Hôtel: | Vrai ▾ | | Voir Toutes les Réservations |

Date de Réservation: [   ] ▦ | Réserver une Chambre |

No. de Chambre: [   ] | Chercher une Chambre |

Type de Chambre: | Simple ▾ | | Supprimer une Chambre |

Prix par Nuit: [   ] | Ajouter une Chambre |

Disponibilité: | Vrai ▾ | | Mettre a Jour la Chambre |

No. de Réservation: [   ] | Compléter une Réservation |

Client ID	Nom	Contact	Membres Inclus	Est Dans l'Hôtel
1	Mariam Salim	438-234-1244	2	Faux
2	Mariam Salim	514-234-4562	1	Vrai
3	Clara Myre	abc@gmail.com	3	Vrai

ID du Client:	421	Chercher un Client	Voir Toutes les Cha
Nom du Client:		Supprimer un Client	Voir Chambres Disp
Contact du Client:		Ajouter un Client	Voir Clients dans l'
Nombre de Membres:			Voir Tous les Clie

Cannot book queen room(2 people) for a party of 3:

Compte du client   — ☐ ✕

Bienvenue Au Programme De Gestion De l'Hotel!   Langue/Language: Français ▼

Connection des Clients

No. de Chambre	Type de Chambre	Prix Par Nuit($)	Disponibilité	Date D'Ajout	
223	Queen	119.99	Vrai	2025-05-04	
231	Double	98.25	Faux	2025-05-04	

ID du Client:	421	Chercher un Client	Voir Toutes les Chambres
Nom du Client:		Supprimer un Client	Voir Chambres Disponibles
Contact du Client:			Hôtel
Nombre de Membres:			nts
Est dans l'Hôtel:	Vrai ▼		vations

Error ✕

ⓘ Une erreur s'est produite, ne peut pas réserver de chambre.
Assurez-vous d'entrer des données valides dans les champs.

OK

Date de Réservation:	5/4/2025 🖩	Réserver une Chambre
No. de Chambre:	223	Chercher une Chambre
Type de Chambre:	Simple ▼	Supprimer une Chambre
Prix par Nuit:		Ajouter une Chambre
Disponibilité:	Vrai ▼	Mettre a Jour la Chambre
No. de Réservation:		Compléter une Réservation

Challenges

We faced many challenges along the way. Making a jar file that connected with the database was an issue for us, but we managed to fix it. We also had some difficulties using GitHub to merge our work, since it was our first time needing to do this. Of course, coding the whole project and learning new things along the way was also a challenge, since we have many other assignments, finals and projects at the same time. Also, since we did not completely understand how to start from the beginning, we made a first version of the project that was inefficient for a database, so we restarted. Similarly, there were things that we understood along the way that required us to change many things in our project, such as the language translation. However, all in all, this project was an excellent learning experience!

Learning Outcomes

We got to learn many concepts related to JavaFX, including its different types of controls and layouts. The different database methods using java. The interaction with I18N Java classes, Resource Bundle and Locale classes. The most important things we learned is translation, GUI with javaFX and connection to the database. Now, we can make important projects with this knowledge.