



UNIVERSITI TEKNOLOGI MARA

UiTM KEDAH, CAMPUS SUNGAI PETANI

SCHOOL OF INFORMATION SCIENCE

COLLEGE OF COMPUTING, INFORMATION AND MATHEMATICS.

DIPLOMA IN INFORMATICS LIBRARY

[CDIM144]

PROGRAMMING FOR LIBRARIES

[IML208]

INDIVIDUAL PROJECT

PREPARED BY:

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GROUP: KCDIM1443B

PREPARED FOR:

EN MOHD FIRDAUS BIN MOHD HELMI

SUBMISSION DATE: 18th DECEMBER 2024

INDIVIDUAL PROJECT

NUR HUMAIRA NISA BINTI ABDUL HALIM

2023478586

KCDIM144 3B

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ACKNOWLEDGEMENT

Bissmillahirrahmanirrahim,

First and foremost, a big thank you to Allah SWT, whom with His willing giving me the opportunity and strength to hand in my first assignment for this semester. I'm would like to say many Thank you to my respectful lecturer, En Mohd Firdaus bi Mohd Helmi n for his help, guidance, encouragement, and his level of patience. Without him guidance, I wouldn't have gone this far.

Furthermore, not to forget my backbone which is my families for being supportive throughout this semester. Thanks to my father, Abdul Halim Wahab and my mother Nur Zalilawati Binti Mohammed Latifi for helping me by giving some ideas and did some research for me.

Finally, a special thanks go to my friends also known as my classmate for their help and effort to make my assignment successfully completed without any sort of conflict or problem by giving tonnes of suggestions and ideas for fulfilling the assignments requirements.



.....
NAME: NUR HUMAIRA NISA BINTI ABDUL HALIM

STUDENT ID: 20203478586

CLASS: CDIM144 3B



STUDENT PLEDGE OF ACADEMIC INTEGRITY

As a student of Universiti Teknologi MARA (UiTM), it is my responsibility to act in accordance with UiTM's academic assessment and evaluation policy. I hereby pledge to act and uphold academic integrity and pursue scholarly activities in UiTM with honesty and responsible manner. I will not engage or tolerate acts of academic dishonesty, academic misconduct, or academic fraud including but not limited to:

a. Cheating: Using or attempt to use any unauthorized device, assistance, sources, practice, or materials while completing academic assessments. This include but not limited to copying from another, allowing others to copy, unauthorized collaboration on an assignment or open book tests, or engaging in any act or conduct that can be construed as cheating.

b. Plagiarism: Using or attempts to use the work of others (ideas, design, words, art, music, etc.) without acknowledging the source; using or purchasing materials prepared by another person or agency or engaging in other behaviour that a reasonable person would consider as plagiarism.

c. Fabrication: Falsifying data, information, or citations in any academic assessment and evaluation.

d. Deception: Providing false information with intend to deceive an instructor concerning any academic assessment and evaluation.

e. Furnishing false information: Providing false information or false representation to any UiTM official, instructor, or office.

With this pledge, I am fully aware that I am obliged to conduct myself with utmost honesty and integrity. I fully understand that a disciplinary action can be taken against me if I, in any manner, violate this pledge.

.....
Name: Nur Humaira Nisa Binti Abdul Halim

Student Id: 2023478586

Course Code: Im207

Programme Code: CDIM144

Faculty: School Of Information Science, College of Computing, Informatics and Mathematic

Project Name: Hotel room booking system

File name: maikimhotelbooking.py

Prompt Data:

- i. Select Room Type
- ii. Guest Name
- iii. Email
- iv. Contact Number
- v. Check-in Date
- vi. Check-out Date
- vii. Payment Method
- viii. Voucher Code
- ix. Delete Booking

Function:

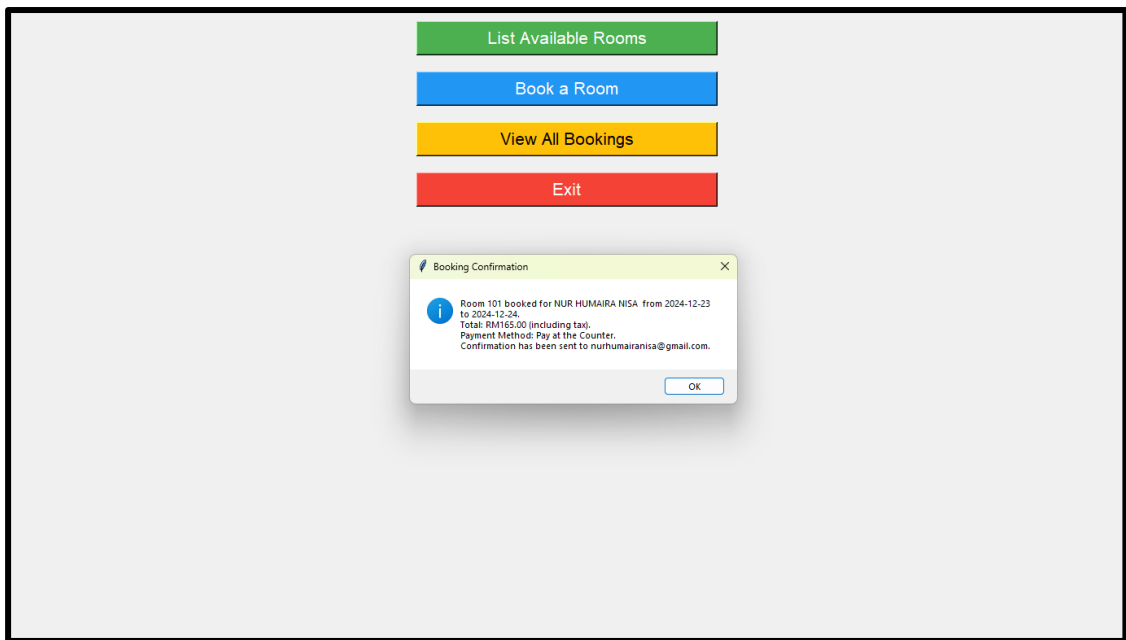
- i. Create data

The screenshot displays a web application interface. In the foreground, a modal window titled "Book a Room" is open. It contains the following fields and controls:

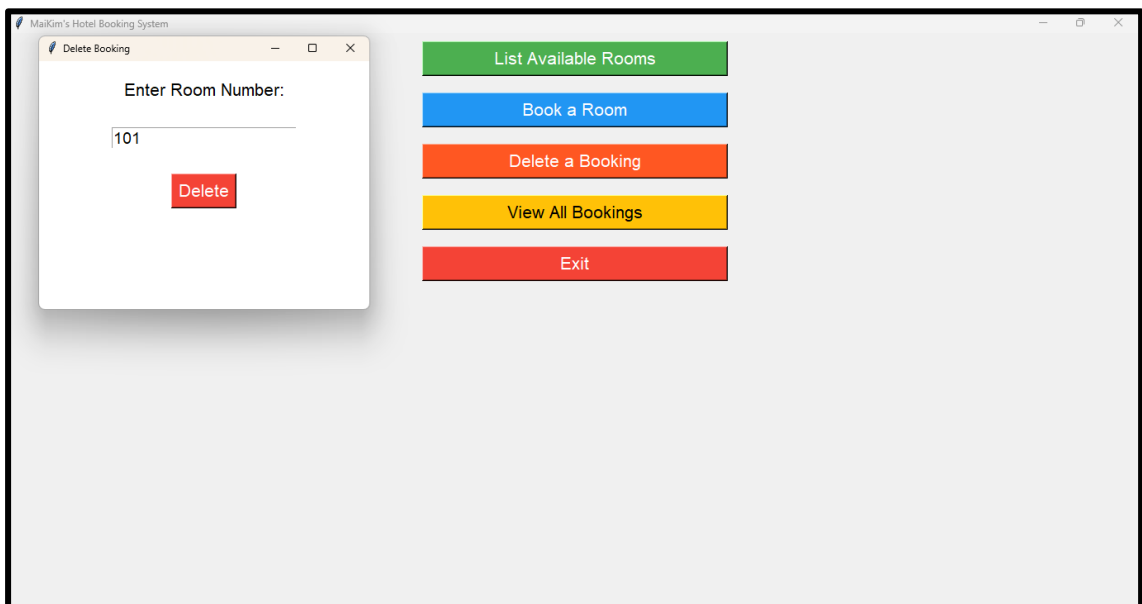
- Select Room:** A dropdown menu.
- Guest Name:** A text input field.
- Email:** A text input field.
- Contact Number:** A text input field.
- Check-in Date (YYYY-MM-DD):** A date input field.
- Check-out Date (YYYY-MM-DD):** A date input field.
- Next: Payment** A green button at the bottom of the modal.

In the background, a green button labeled "List Available Rooms" is visible at the top. To the right, there is a vertical sidebar with three colored buttons: blue, yellow, and red.

ii. Read data



iii. Delete existing data

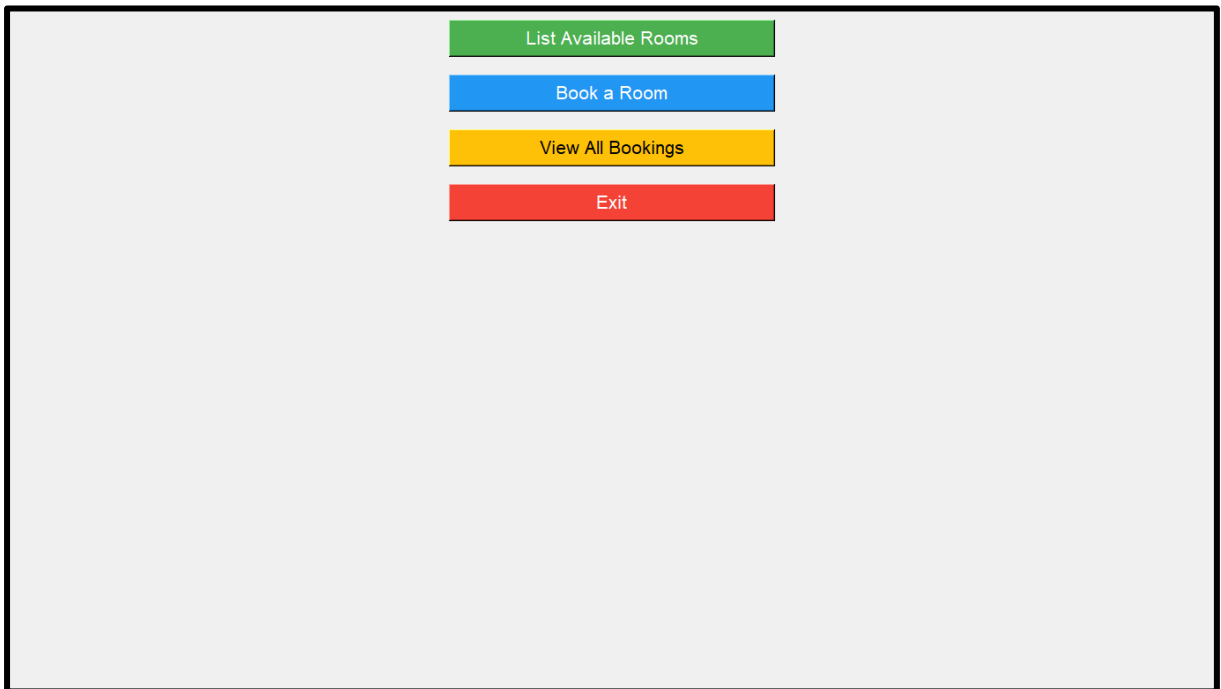
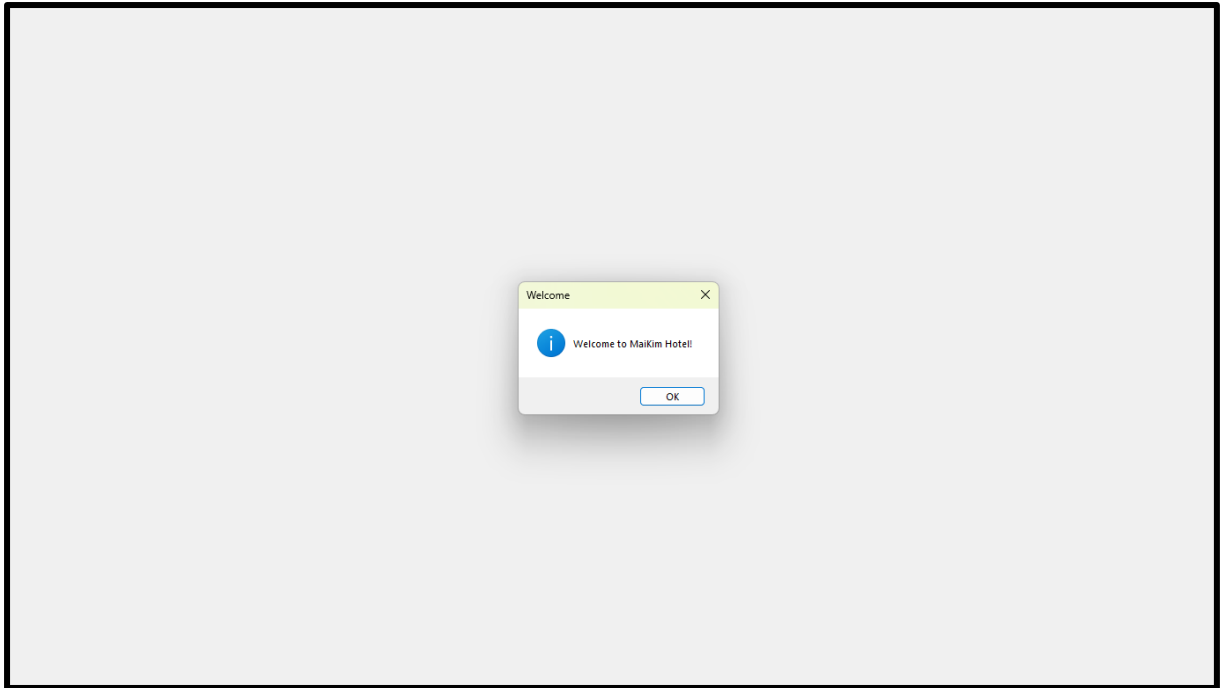


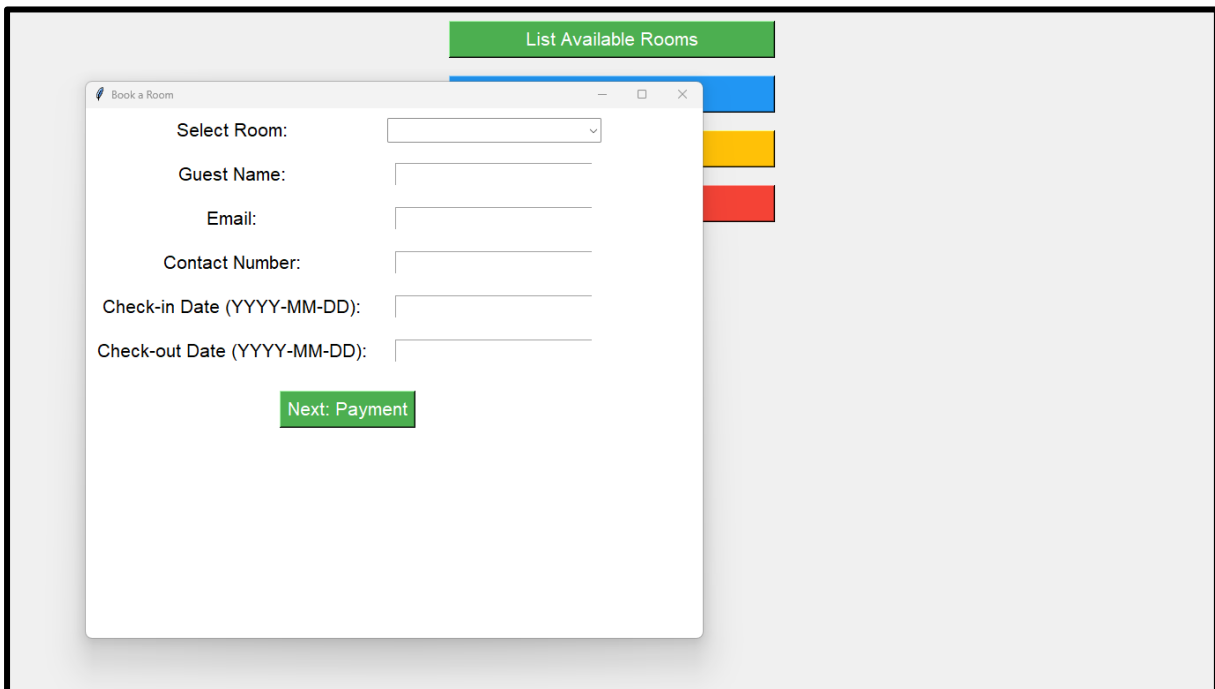
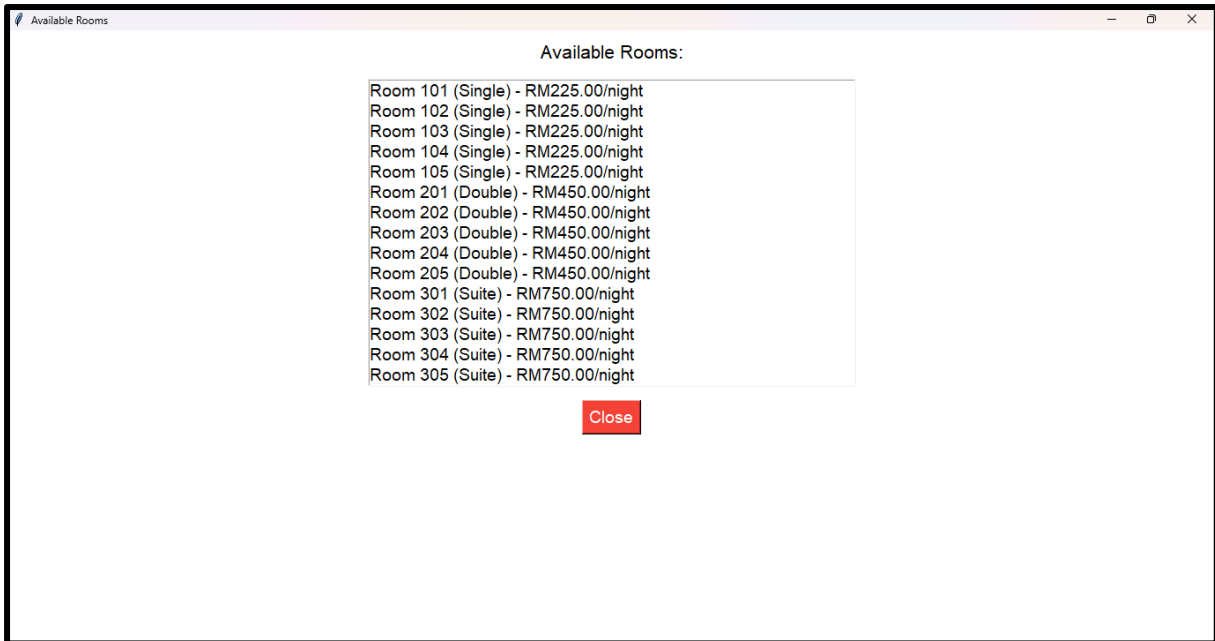
Conditional Statement: Yes

If, else

```
162     if rooms:
163         for room in rooms:
164             room_list.insert(
165                 tk.END,
166                 f"Room {room['room']} ({room['type']}) - RM{room['price']:.2f}/night",
167             )
168     else:
169         room_list.insert(tk.END, "No rooms available.")
```

GUI: Yes





List Available Rooms

Book a Room

Select Room: 101 (Single) v

Guest Name: NUR HUMAIRA NISA

Email: nurhumairanisa@gmail.com

Contact Number: 0169229715

Check-in Date (YYYY-MM-DD): 2024-12-23

Check-out Date (YYYY-MM-DD): 2024-12-24

Next: Payment

List Available Rooms

Book a Room

View All Bookings

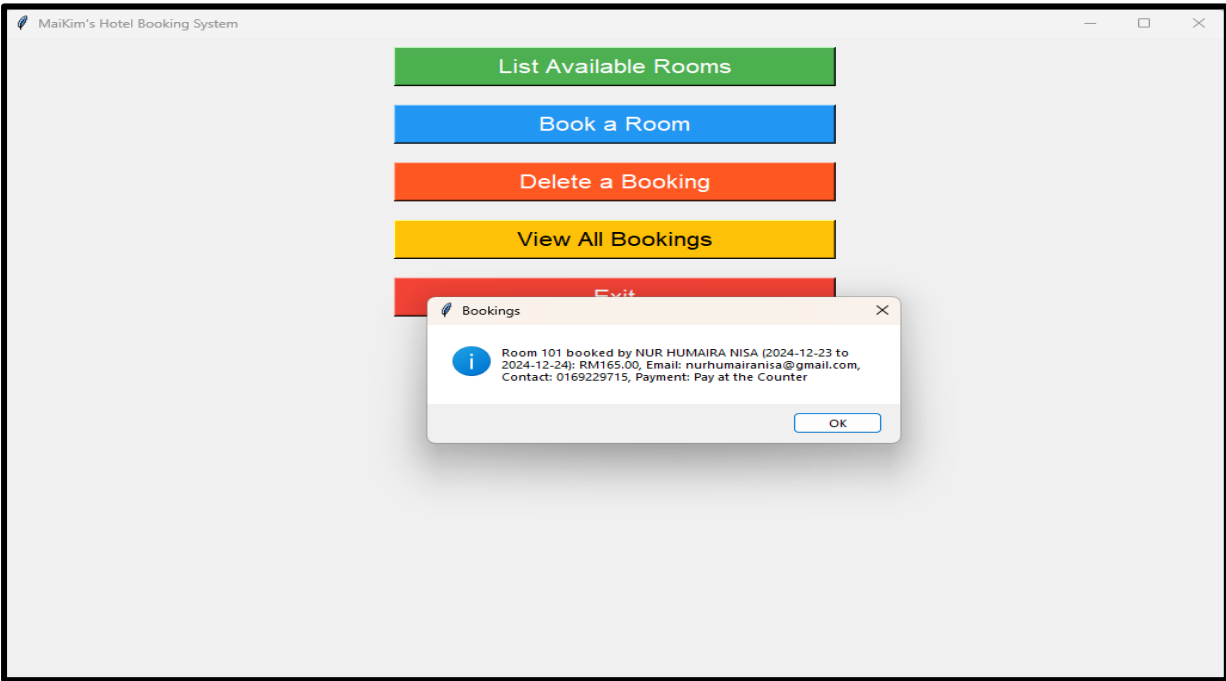
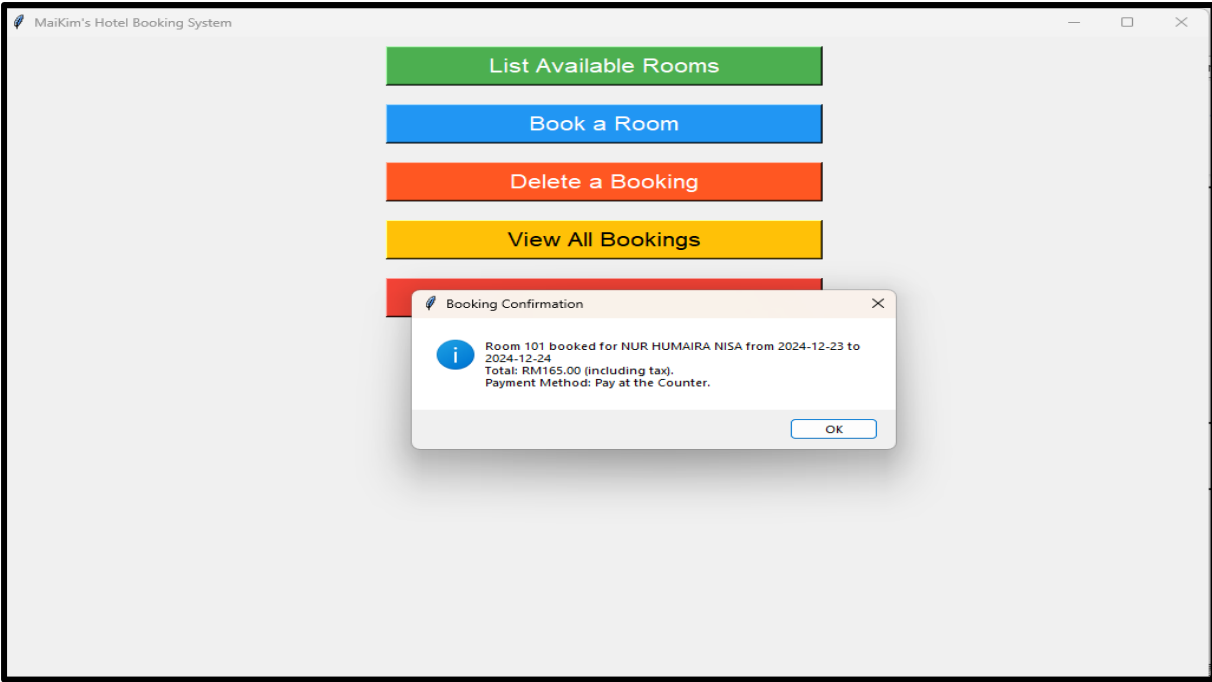
Exit

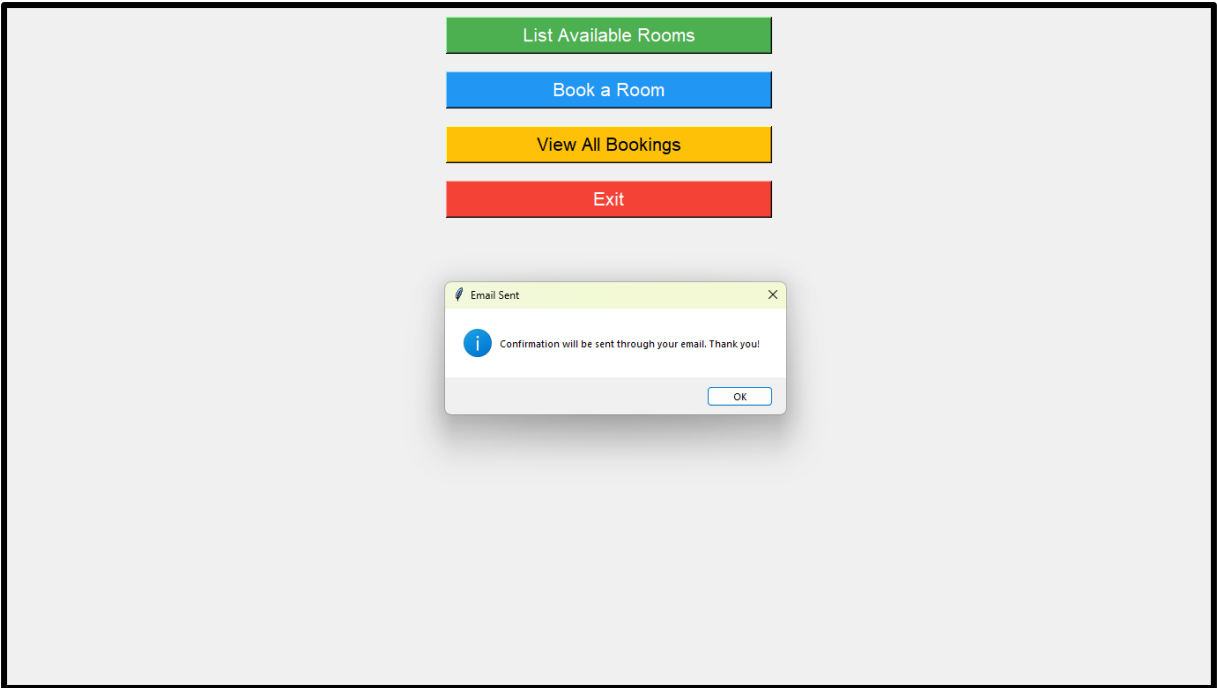
Payment Method

Select Payment Method: Pay at the Counter v

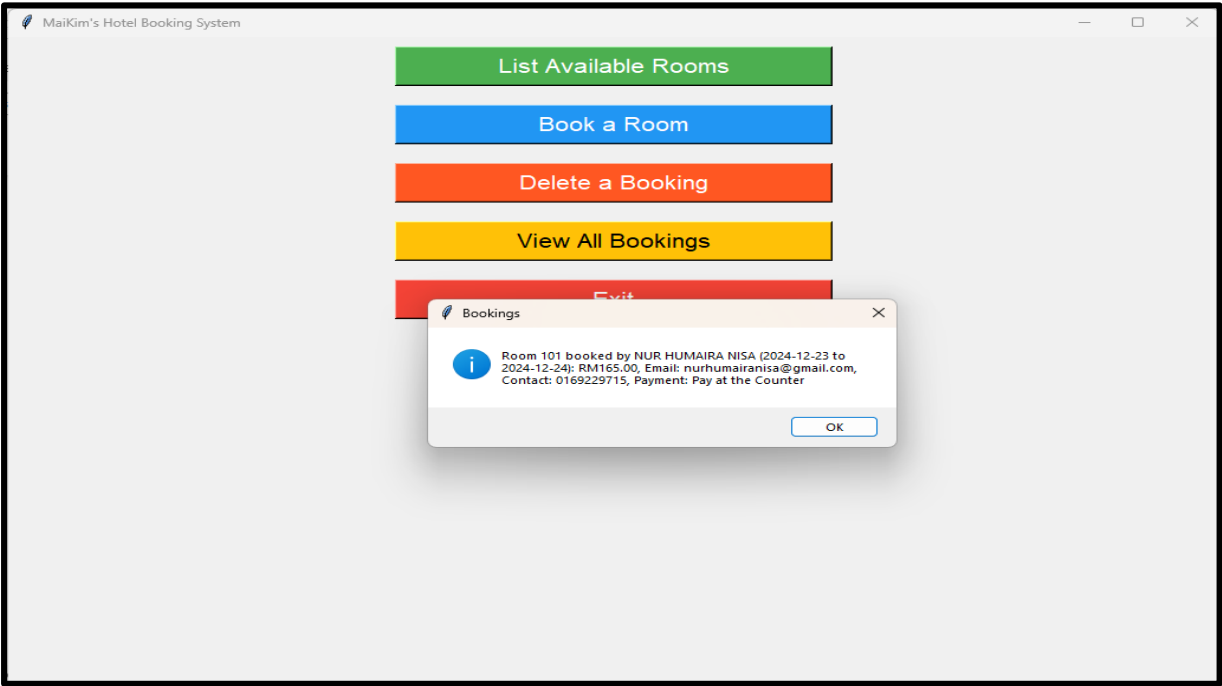
Enter Voucher Code (if any): cuticutimalaysia24

Confirm Payment





Result: Screenshot



Strength:

1. User-Friendliness

- Simple and Easy Navigation: The “List Available Rooms”, “Book a Room”, and “View All Bookings” buttons let you navigate with ease.
- Drop-down Menus: Choosing a room and paying with drop-down menus increases usability and lowers errors.

2. Interactive Experience

- Dynamic Room Availability: The user experience is improved by allowing users to examine real-time hotel availability along with pricing.
- Input Validation: When necessary, fields are not filled out or are not valid, the system provides feedback and error warnings.

3. Comprehensive Booking Workflow

- Various Fields: The interface gathers all required information (guest name, email, contact number, check-in, and check-out dates) in one place.
- Payment Integration: The payment widget provides flexibility by allowing "Pay at the Counter" or "Card Payment" options.

4. Customization and Flexibility

- Seasonal Pricing: Without requiring human updates, automatic price adjustments for busy times of the year improve functionality.
- Voucher System: Include the discount coupon (“cuticutimalaysia24”) encourage users and raises guest satisfaction.

5. Informative Confirmation

- Email Confirmation: The system notifies users of their reservation information and guarantees that they will receive an email confirming their reservation.

6. Scalable Design

- Full-Screen Mode: The design optimizes use across a range of displays and devices.
- Future Proofing: Logic and widgets make it simple to add other room classifications or payment options in the future.

7. Error Handling and Feedback

- Error Messages: To minimize annoyance and guarantee seamless functionality, notify users of problems (missing data or improper date format).
- Real-Time Updates: Shows when rooms are unavailable or verifies successful reservations.

8. Professional Aesthetic

- The interface looks polished and inviting thanks to the colour palette and layout.
- Consistent labels, typefaces, and styles enhance reading and usefulness.

9. End-to-End Functionality

- The system is covering every step, from choosing a room to confirming the reservation and making the payment.

Kaizen

1. Voucher Feature

- **Issue:** No implementation of vouchers for discounts.
- **Improvement:** Add a voucher input field in the payment widget and validate it against a list of available vouchers.
- Example: Apply a discount if the user enters cuticutimalaysia24.

2. User Feedback

- **Issue:** Users may not be aware of errors (e.g., no available rooms) until a later stage.
- **Improvement:** Enhance user feedback:
- Disable the "Book a Room" button when no rooms are available.

3. Scalability

- **Issue:** The room data is hard-coded and cannot scale easily.
- **Improvement:**
- Use an external data source like a JSON file or database to manage rooms and bookings.
- Dynamically load room availability from this source during runtime.

4. Error Handling

- **Issue:** Errors are managed primarily using message box, which might interrupt the user experience.
- **Improvement:** Add better error handling.
- Use try-except blocks more effectively.
-

5. Extending Payment Options

- **Issue:** Limited payment options.
- **Improvement:** Add support for popular payment methods (e.g., credit cards, e-wallets) with proper UI validation.

6. Room Search Feature

- **Issue:** Users cannot search for specific room types or price ranges.
- **Improvement:** The “List Available Rooms” features can be improved with filters, for instance, let customers look for “Single “rooms for less than 200.

7. Performance Optimization

- **Issue:** The system might be slow with many bookings.
- **Improvement:**
- Optimize the search logic for rooms and bookings by employing caching or indexing. If there are too many reservations, use pagination to see them.

8. Localization

- **Issue:** The system only supports English.
- **Improvement:** Include support for Malay or other languages in the localization.

9. Documentation

- **Issue:** There is no comments or documentation in the code.
- **Improvement:**
- To clarify the purpose of functions and classes, add docstrings.
- Write a handbook or user manual for the system.

FLOWCHART

