Hotel Reservation System Project Documentation

This document describes a simple application designed to help manage hotel room bookings. It provides an easy way for users to enter their personal information, see what rooms are available, book a room, and review their reservations.

Technologies Used

- **Programming Language:** Visual Basic .NET (a language for creating Windows applications).
- **Development Tools:** Microsoft Visual Studio (the software used to build the application).
- **User Interface:** Standard Windows screens and controls (like buttons, text boxes, and lists).
- **Data Storage:** Information is temporarily stored within the application while it's running.

What the Project Does (Functionality)

The Hotel Reservation System is divided into several sections, each handling a different part of the booking process:

1. Main Welcome Screen

This is the very first screen you see when you open the application.
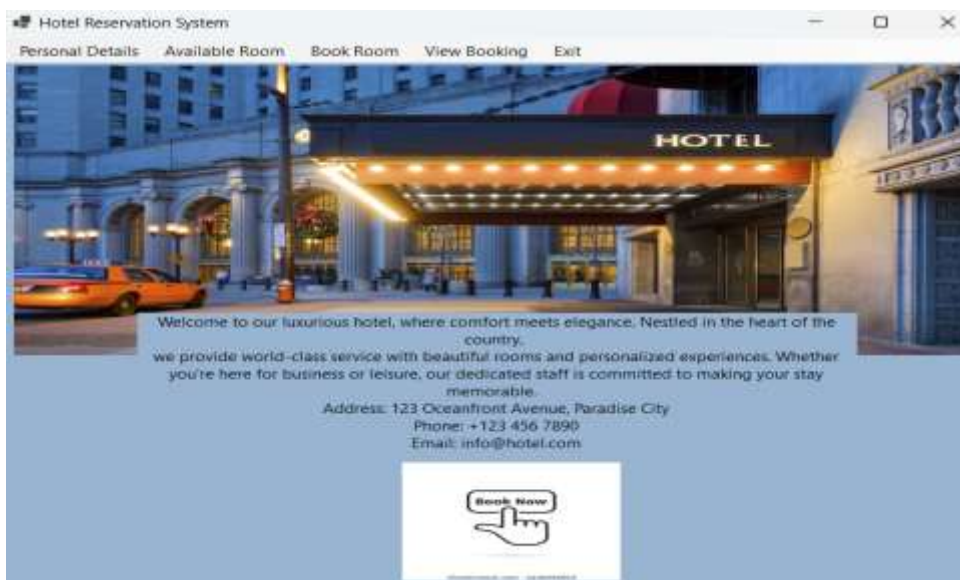
- **What it does:**
  - It serves as the main menu, guiding you to all other parts of the system.
  - You can easily go to sections for entering personal details, checking room availability, booking a room, or viewing existing bookings.
  - There's also an option to close the application.

2. Guest Personal Details

This section is where guests provide their information.

- **What it does:**
  - It asks for your full name, phone number, email address, and payment details.
  - The system checks to make sure you've filled in all the necessary information, like a valid email address.
  - Once you submit, your details are saved temporarily for your booking.
  - You can also clear the form if you want to start over.
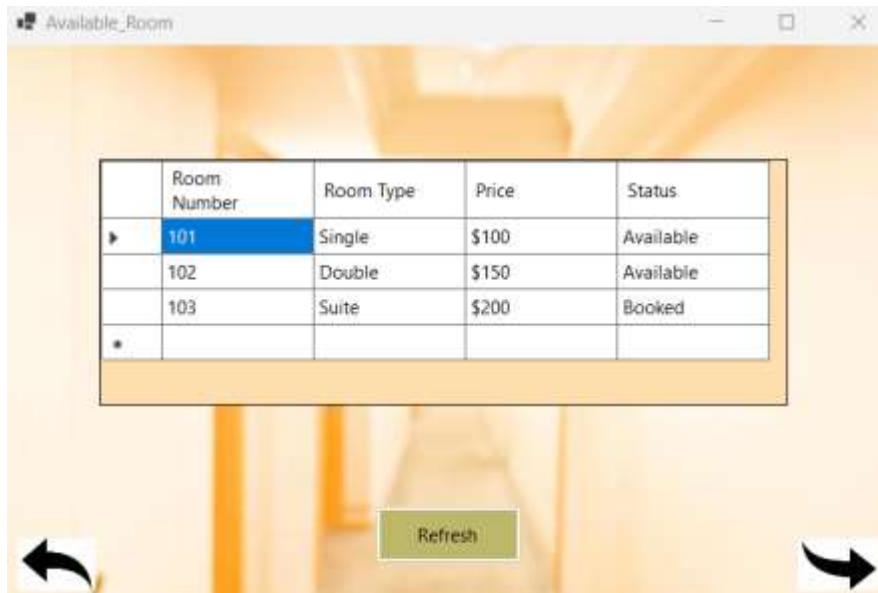
3. Available Rooms Display

This screen shows you which rooms are free to book.
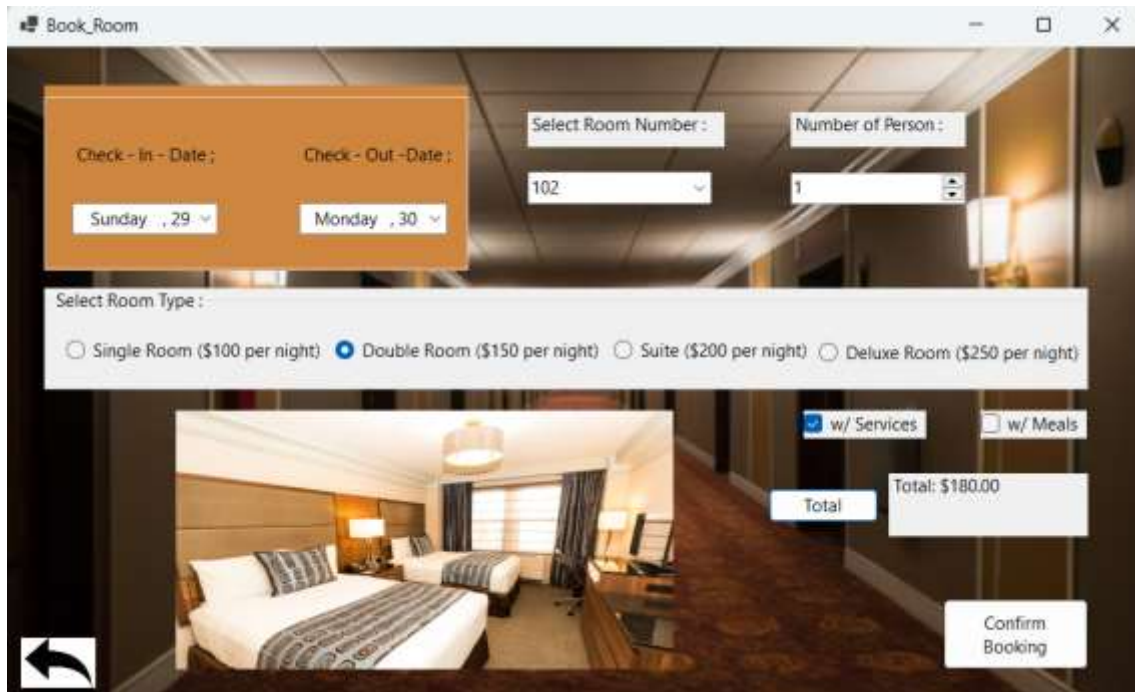
- **What it does:**
  - It displays a list, like a table, showing each room's number, what kind of room it is (e.g., Single, Double), its price, and whether it's currently available or already booked.
  - You can refresh the list to see the most up-to-date availability.
  - *(Note: For this project, the room information is just an example; in a real hotel system, it would come from a live database.)*

4. Room Booking Form

This is where you actually make a reservation.

- **What it does:**
  - You can choose a specific room number, pick your check-in and check-out dates, and specify how many people will be staying.
  - You can select the type of room you prefer (Single, Double, Suite, or Deluxe), and as you choose, a picture of that room type appears.
  - Options for adding meals or other services are available.
  - The system automatically calculates the total cost of your stay based on your choices and the number of nights.
  - Once you confirm, your booking details are saved, and you get a confirmation message.

5. View Bookings Screen

This section lets you look at and manage all the bookings that have been made.
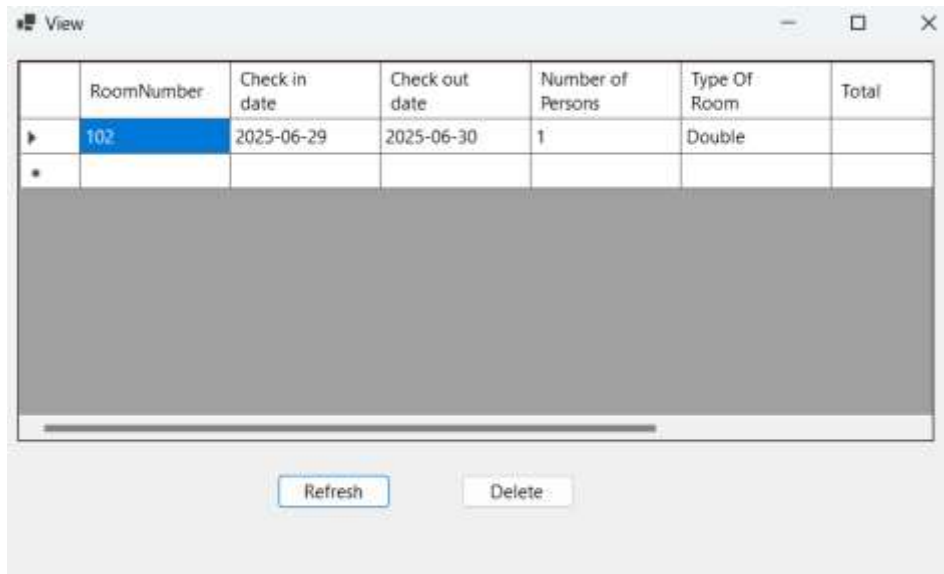
- **What it does:**
  - It shows a list of all confirmed reservations, including details like the room type, room number, and check-in/check-out dates.
  - You can refresh the list to see any new bookings.
  - If needed, you can also select a booking from the list and delete it.

How Data is Handled (Temporary Storage)

This application stores all the information (guest details, booking records) *only while the application is open*.

- **What it means:**
  - When you enter details or make a booking, the information is held in the computer's memory.
  - If you close the application, all the data from that session is cleared.
  - **This project does not connect to an external database (like a server that saves data permanently).** It uses a temporary, built-in way to hold data. For a real-world system, this would be updated to use a persistent database to ensure all bookings are saved indefinitely.

How the Project Was Built

1. **Starting Point:** The project began by setting up a new application in Microsoft Visual Studio.
2. **Screen Design:** Each part of the application (every screen or "form") was designed visually, adding the necessary buttons, text fields, lists, and other elements you see.
3. **Data Management:** A special part of the application was created to manage how guest and booking information is stored temporarily while the program is running.
4. **Making it Interactive:** The application responds to your actions (like clicking a button or selecting an option) by performing specific tasks, such as saving information or showing a different screen.
5. **Information Flow:** When you enter data, it's checked and then stored in the application's temporary memory. When you need to view data, it's pulled from this temporary storage and displayed.
6. **Moving Between Screens:** The application lets you navigate easily from one screen to another by opening new sections and sometimes hiding the previous one.
7. **Images:** Pictures of different room types are included within the application itself, so they can be displayed when you're booking a room.

This project showcases fundamental skills in creating desktop software, including designing user interfaces, making the application respond to users, checking inputs, and managing information temporarily.