**Systems Analysis and Design**

**Phase 1 Use Case Narrative**

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This Use Case Narrative describes how a guest can use the booking system to make a reservation for a hotel room. The guest enters the country, hotel, and room information. The system displays available rooms and rates. To continue the payment, the guest should log in or register. If the guest is already logged in, the system directly passes to the payment stage. After receiving payment details, the system processes the payment with a third-party payment provider. If payment fails, no reservation is created.

When payment goes through, the system sends the reservation details to hotel management for them to approve or reject the reservation. If approved, the system sends a confirmation email. No reservation is created if rejected, and the guest is notified via email.

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| **Use Case Name:** | Make Reservation |
| **Goal Statement:** | This use case describes how the guest can use the system to make a reservation for a hotel room. Once the booking is made, a confirmation email will be sent to the guest. |
| **Primary Actor(s):** | Guest |
| **Other Participating Actor(s):** | Hotel Management, Third Party Payment Provider |
| **Pre-condition:** | The Guest has searched for countries, hotels, and room types for their desired stay. |
| **Post-condition:** | 1. Success: The guest has successfully made a reservation for the selected hotel and dates, payment has been processed, a confirmation email has been sent. 2. Other: No reservations have been made. |

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| **Flow of Events:** | |
| **Main Flow:** | |  |  |  | | --- | --- | --- | | **Actor** | **System** | **Alternate/Exceptional Flow** | | 1. Guest selects the desired hotel, room type, and dates | 1. System displays available rooms and rates. |  | | 1. Guest selects a room and initiates the reservation process. | 1. System prompts the guest to log in or register. | ALT1 | | 1. Guest logs in or registers an account. | 1. System displays the reservation details and payment options. |  | | 1. Guest selects a payment method (Credit Card or Apple Pay) | 1. System processes the payment with the Third Party Payment Provider. 2. System invokes the Review Reservation use case. 3. System confirms the reservation and sends a confirmation mail to the guest. | ALT2  EXC1 | |

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| **Alternate Flows:** | **ALT1 Guest is already logged in**  Occurs at Main Flow Step 4 when the guest is already logged in to the system.   |  |  | | --- | --- | | **Actor** | **System** | |  | A1-1: System skips the login/register step. | |  | Return to Main Flow Step 6. |   **ALT2 Reservation is rejected**  Occurs after Main Flow Step 9 when the Review Reservation use case results in the reservation being rejected.   |  |  | | --- | --- | | **Actor** | **System** | |  | A2-1: System notifies the guest via email that the reservation has been rejected. | |  | A2-2: System invokes the initiate refund use case | |  | Use Case Terminates | |
| **Exception Flows:** | **EXC1 Payment processing fails**  Occurs at Main Flow Step 8 when the payment processing with the Third Party Payment Provider fails.   |  |  | | --- | --- | | **Actor** | **System** | |  | E1-1: System displays error message | |  | Use Case Terminates | |

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| **Open Issues:** | 1. What happens if there are no rooms available for the desired dates? 2. What happens if the hotel management neither confirms nor rejects the reservation? 3. What happens if sending email fails? |