Requirements Specification  
Hotel Booking and Management Platform

# Group Members

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| --- | --- | --- |
| Member name | Member surname | Index number |
| Nigar | Alkhasova | 54803 |
| Burak | Ozek | 55930 |
| Nurkyz | Bolotbekova | 56434 |
| Patrik | Strzelczyk | 53120 |

# Introduction

The purpose of this Requirements Specification document is to define the necessary requirements for the development of a Hotel Booking and Management Platform. The system is intended to streamline the booking process for customers while providing administrative tools for hotel staff. This document details the functional and non-functional requirements, outlines constraints, assumptions, and dependencies, and identifies the system's stakeholders. It aims to ensure alignment among all parties involved.

# Stakeholder Identification

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| **Stakeholder Name** | **Stakeholder Role** | **Stakeholder's Primary Need** |
| Customer | End-user | Easy and quick hotel room booking |
| Hotel Manager | Admin | Room availability, reporting, and customer details |
| Receptionist | Staff | Manage check-ins, check-outs, and room assignments |
| System Administrator | Technical Support | System maintenance and uptime |
| Developer | System Developer | Clear requirements for implementation |

# Functional Requirements

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| Requirement Statement | Priority | Justification |
| The system shall allow users to create an account. | High | Required for user authentication and access to bookings. |
| The system shall allow users to search hotels by city and date. | High | Core feature needed for users to find accommodations. |
| The system shall show available rooms with pricing details. | High | Enables informed decisions before booking. |
| The system shall allow users to make online bookings. | High | Main system function; critical for operation. |
| The system shall allow users to cancel bookings. | Medium | Adds flexibility and improves user trust. |
| The system shall allow hotel staff to update room availability. | High | Ensures data accuracy for users. |
| The system shall generate booking confirmation emails. | Medium | Confirms bookings but not essential for functionality. |
| The system shall allow administrators to view analytics reports. | Low | Useful for management, not required for core flow. |
| The system shall store customer booking history. | Medium | Supports user tracking and future re-booking. |
| The system shall provide a secure login for all users. | High | Vital for protecting user data and access control. |
| The system shall support password recovery. | Medium | Enhances user experience, reduces support load. |
| The system shall allow users to leave reviews. | Low | Improves user engagement but not required. |
| The system shall allow users to filter rooms by amenities. | Medium | Helps users find suitable rooms quickly. |
| The system shall display hotel photos. | Medium | Improves decision-making and user trust. |
| The system shall allow seasonal pricing. | Low | Business advantage, not essential to function. |
| The system shall support multiple payment methods. | High | Accommodates diverse user payment preferences. |
| The system shall show booking summary before confirmation. | High | Helps prevent user error before submission. |
| The system shall validate user input forms. | High | Prevents incorrect or harmful input; improves quality. |

# Non-Functional Requirements

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| **Non-Functional Requirement** | **Related to** |
| The system shall process room search requests within 2 seconds. | Performance |
| The system shall handle up to 1000 concurrent users. | Performance |
| The system shall ensure response time under 3 seconds. | Performance |
| The system shall encrypt user passwords. | Security |
| The system shall enforce HTTPS for all communications. | Security |
| The system shall prevent unauthorized data access. | Security |
| The interface shall be user-friendly and intuitive. | Usability |
| The booking process shall require no more than 3 steps. | Usability |
| The system shall use tooltips and guides for new users. | Usability |
| The system shall maintain 99.9% uptime. | Reliability |
| The system shall auto-restart in case of crash. | Reliability |
| The system shall maintain session consistency during load. | Reliability |

# Constraints

**Technical Constraints:**

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| - The system must be developed using Django (Python web framework). |
| - The database system must be PostgreSQL. |
| - Hosting must be on a Linux-based server. |

**Business Constraints:**

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| - The project must be completed within 3 months. |
| - Budget must not exceed $10,000. |
| - The system must comply with data protection regulations (e.g., GDPR). |

# Assumptions and Dependencies

Assumptions:

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| - Users have access to modern browsers and internet. |
| - Users are familiar with online booking systems. |
| - Hotel staff have basic IT knowledge. |

Dependencies:

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| - The system depends on third-party payment gateways. |
| - The system relies on SMS/email notification services. |
| - The system requires continuous hosting availability. |