# INTERNSHIP PROJECT-6 DOCUMENT

# ON "HOTEL BOOKING SYSTEM (JAVA- GUI)"

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## INTRODUCTION:-

The Hotel Booking System is a desktop application designed to facilitate easy reservation of hotel rooms. It provides a user-friendly graphical interface allowing guests to select room types, enter their details, choose a booking date, and receive instant confirmation. The system streamlines hotel operations and enhances customer experience by automating booking management.

## SOFTWARE REQUIREMENTS:-

- **Programming Language**: Java (JDK 8 or higher)

- **IDE**: VS Code, IntelliJ IDEA, or any Java-compatible editor

- **GUI Toolkit:** Swing (Java Standard Library).

- **Operating System**: Platform-independent (Windows, Linux, Mac)

- **Other Requirements**: No external dependencies; runs from the command line

- **Storage:** Local file system for booking records (e.g., bookings.txt).

## DESIGN:-

The application uses a modern graphical layout:

- Main window with branded header and intuitive fields for all required booking information.

- Card-based input panel using GridBagLayout for improved alignment.

- Components include JComboBox for room type, date picker (JSpinner), and JTextFields for name and contact information.

- Immediate feedback with styled confirmation messages and color highlights.

## INPUT:-

## IMPLEMENTATION:-

- Built using Java Swing for the GUI.

- The main logic is encapsulated in the HotelBookingSystem class extending JFrame.

- Bookings are stored in a local file (bookings.txt) for persistence.

- The booking function validates inputs, handles file writing, and updates the interface with confirmation or error messages.

- Uses color and font enhancements for feedback.

## TESTING:-

- **Manual Testing:** Each component (room selection, date input, text fields) tested for function and validation.

- **Boundary Testing:** Validates empty fields, incorrect formats, and duplicate bookings.

- **Usability Testing:** Ensures users receive clear instructions and feedback at all steps.

- **Functional Testing:** Confirms successful saving of booking information and error handling for file issues.

## ADVANTAGES:-

- **Ease of use:** Intuitive interface streamlines guest booking process.

- **Automation:** Reduces manual errors and paperwork for hotel staff.

- **Flexibility:** Can be run on any major desktop OS with Java installed.

- **Feedback:** Provides immediate booking confirmation and error alerts.

- **Extendability:** Designed for future upgrades (e.g., database integration, reporting).

## CONCLUSION:-

The improved Hotel Booking System is a robust, easy-to-use solution for managing hotel room reservations. It simplifies booking for guests and administrators alike, delivering a modern user experience and reliable data handling. With strong input validation and a professional interface, the system is well-suited for real-world adoption in small to medium-sized hotels.

## REFERENCES:-

**Oracle Java Documentation:** https://docs.oracle.com/javase/

**Java Swing Tutorial:** https://docs.oracle.com/javase/tutorial/uiswing/

**JavaFile I/O Tutorial:** https://docs.oracle.com/javase/tutorial/essential/io/

"**Java GUI Programming**" articles (GeeksforGeeks, TutorialsPoint)