**HotelManagementSystem**

**ABSTRACT**

**The Hotel Management System is a console-based Java application designed to automate core hotel operations such as room booking, guest management, check-in/check-out, and billing. Developed using Java Core concepts, this project demonstrates the practical use of Object-Oriented Programming (OOP), the Java Collections Framework, and Exception Handling to simulate real-world hotel processes.**

**The application models real entities like Room, Guest, and Booking using encapsulation and inheritance. It uses ArrayList and HashMap collections to dynamically manage hotel rooms, bookings, and guest data. Robust custom exceptions are implemented to handle cases such as invalid guest IDs and room unavailability.**

**The system features a menu-driven interface and provides the following functionalities:**

* **Add and manage guest details**
* **Book available rooms with check-in/check-out dates**
* **Generate and view booking records**
* **Checkout and update room status**
* **Display real-time room availability**

HotelManagementSystem/

├── src/

│ ├── model/ → Guest.java, Room.java, Booking.java

│ ├── service/ → HotelService.java, BillingService.java

│ ├── exception/ → RoomNotAvailableException.java, GuestNotFoundException.java

│ ├── utils/ → InputHelper.java

│ └── Main.java → Main application logic