



Hotel Booking System  
Hilton Garden-Inn Hotel

CSC 393 Mini Project  
University of Eswatini  
Nhlonipho Manikela 202102336

# HOTEL BOOKING SYSTEM

Hilton Garden-Inn Hotel

A computer-based hoteling booking system, moving from a paper based system for efficiency and more effectively system for both staff and customers

## **Part One: Software System Problem Identification**

System Overview: The hotel management booking system is designed to streamline the process of managing hotel reservations, room availability, customer information, billing, and additional services such as restaurant bookings and travel arrangements. The system aims to digitalize and automate these processes to improve efficiency and customer satisfaction.

Current system

### **ANALYSIS OF THE CURRENT SITUATION**

#### **HOW THE CURRENT SYSTEM WORKS.**

- ❖ When a customer calls for bookings, the receptionist fills in a form, filling in the customers personal details.
- ❖ When a customer comes for bookings, they are given a form to fill in their personal details.
- ❖ The form is stored in a file named after the customer's name.
- ❖ Every item or food the customer orders is added in their file printed as a till slip then after payments, the slips are stamped with a stamp written "PAID".

### **SHORTCOMINGS OF THE CURRENT SYSTEM**

- ❖ It becomes difficult to track every paperwork done thus some get misplaced.
- ❖ It's easy cover up any fraud by simply destroying one's paperwork, especially payments that have to be done.
- ❖ It is time consuming since everything has to be written down on paper.
- ❖ It consumes a lot of space since the files are stored in a file cabinet.
- ❖ It is expensive since stationery is consumed a lot.

#### **Processes:**

**Reservation Management:** Allows customers to book rooms online, check availability, and receive confirmation.

**Customer Management:** Maintains customer profiles, preferences, and history.

**Billing and Payments:** Automates invoicing and payment processing.

**Service Management:** Manages additional services like room service, spa bookings, and restaurant reservations.

Information was collected through interviews with staff members and customers.

## **Part Two: Planning**

In summary the current system requires everything to be recorded in paper for when a customer makes a booking and each form titled with the customer's name.

The customer details registered are:

Customer ID
Surname
First name
Phone number
Address
Post address
Total

Steps on the current system:

- ❖ When a customer calls for bookings, the receptionist fills in a form, filling in the customers personal details.
- ❖ When a customer comes for bookings, they are given a form to fill in their personal details.
- ❖ The form is stored in a file named after the customer's name.
- ❖ Every item or food the customer orders is added in their file printed as a till slip then after payments, the slips are stamped with a stamp written "PAID".

### **Proposed system:**

This system will contain input files which are:

1. Customer file (customer ID, surname, name, phone number, address, postal address, total)
2. Employee file (employee ID, surname, name, phone number, address, postal address)
3. Registration file (registration ID, first name, surname, address, postal address)
4. Payment file (payment ID, payment amount, payment date)
5. Room file (room ID, room details, room number)
6. Reservation file (customer ID, first name, surname, phone number, address, payment ID)

Output files:

- 1.Registration file (Customer name, Customer ID, Customer's Address, Customer's Phone number)
- 2.Customer file (customer ID, surname, name, phone number, address, postal address, total)
- 3.Payment file (payment ID, payment amount, payment date)

### **FILES**

- ❖ **Registration file** - This file keeps information of the customers.  
**Method of organization** of this file is **Sequential**.  
**Method of access**, a file record can only be read in chronological order. The file is read until the required record is located.
- ❖ **Customer file** - This file keeps information about the customers.  
**Method of organization** of this file is **Sequential**.  
**Method of access**, the key field which is the customer's name is entered into the computer.

- ❖ **Payment file** – This file keeps track of payments customers have to make.

**Method of organization** of this file is **index Sequential**.

### **Process specification**

#### a. Registration file

Purpose- To add/register new customers booking in the hotel

##### Data input

- ❖ Customer name
- ❖ Customer ID
- ❖ Customer's Address
- ❖ Customer's Phone number

##### Output

- ❖ Customer data output on screen

##### Files involved

Customer file is required.

#### b. Add new rooms

### **Core Concepts:**

i)**Change:** The project seeks to replace manual booking processes with an automated system to reduce errors and improve service speed.

ii)**Need:** There is a need for a centralized system to manage all hotel operations efficiently.

iii)**Solution:** Develop a comprehensive software solution that integrates all aspects of hotel management.

Iv)**Stakeholders:** Hotel management, staff, IT department, and customers.

v)**Value:** The project will enhance operational efficiency, improve customer experience, and increase revenue.

Context: The project will be influenced by factors such as existing IT Assumptions:

The hotel has a stable internet connection.

Staff are willing to adapt to new technology.

Customers are comfortable with online booking systems.

## **Part Three: Requirement Analysis**

This analysis will utilize interviews and questionnaires as primary techniques for gathering requirements. The goal is to ensure the system meets user needs efficiently and effectively.

Requirement Gathering Techniques:

### **1.Interviews:**

**Purpose:** to gather an in-depth insights from stakeholders through direct interaction and understand the needs and challenges faced by hotel staff and management.

Participants:

- Hotel managers,
- front desk staff
- Frequent guests
- IT personnel.
- Marketing team members
- Travel agents

Sample Questions:

1.For hotel managers:

- What are the key features you believe are essential the booking system?
- How do you currently manage bookings, and what are the challenges do you usually face?
- What reporting capabilities do you need from the system?

2.For front desk staff:

- What common issues do you encounter when processing bookings?
- How do you handle customer inquiries about reservations?
- What additional features would make your job easier?

3.For frequent guests:

- What feature do you value the most when booking a hotel?
- How do you prefer to receive confirmation and updates about your booking?
- What improvements would you suggest for the booking process?

4.For travel agents:

- What information do you need to efficiently book hotels for clients?
- How do you prefer to interact with the hotel booking system?
- What features would enhance your ability to serve your clients?

## **2.Questionnaires:**

**Purpose:** to collect quantitative data from larger audience, allowing for statistical analysis of the user preference and needs and gather feedback from customers about their booking experience.

### **Participants:**

- Hotel guests
- Staff
- Corporate planners
- Event planners

### **Sample Questions:**

#### **1.Demographic information:**

- How often do you book hotels in a year? (options: 1-3,4-6,7+)
- What is your primary purpose for booking hotels? (options: business, leisure, events)

#### **2.Booking preference:**

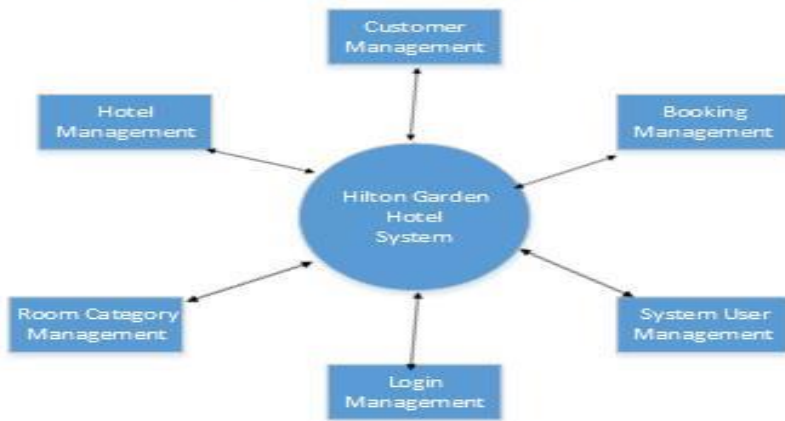
- Which of the following features do you consider most important when booking hotels?  
(Options: Price, Location, Amenities, Reviews)
- How do you prefer to make your bookings? (Options: Website, Mobile App, Phone)

#### **3.Satisfaction and feedback:**

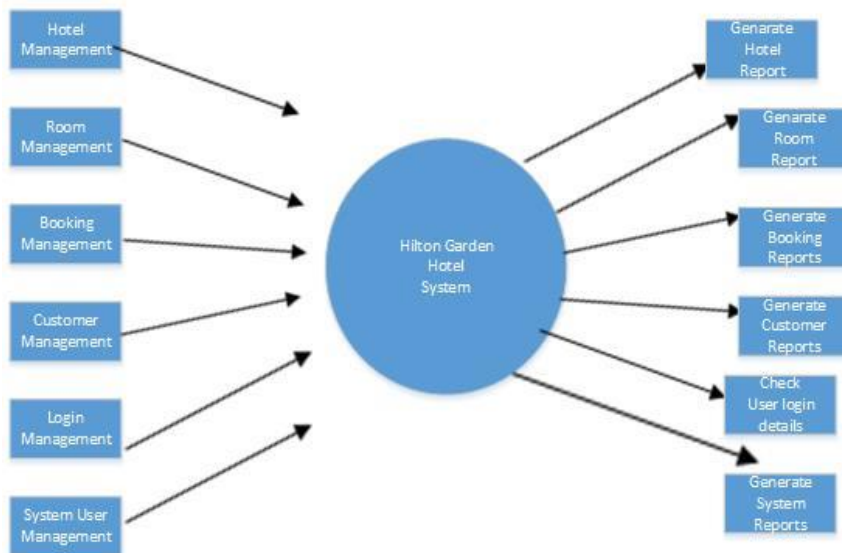
- On a scale of 1-5, how satisfied are you with the last hotel booking experience?
- What improvements would you like to see in the hotel booking systems? (Open-ended)

## Part Four: System Design

Hilton Garden Hotel Management  
DFD (Level 0)  
Context Diagram

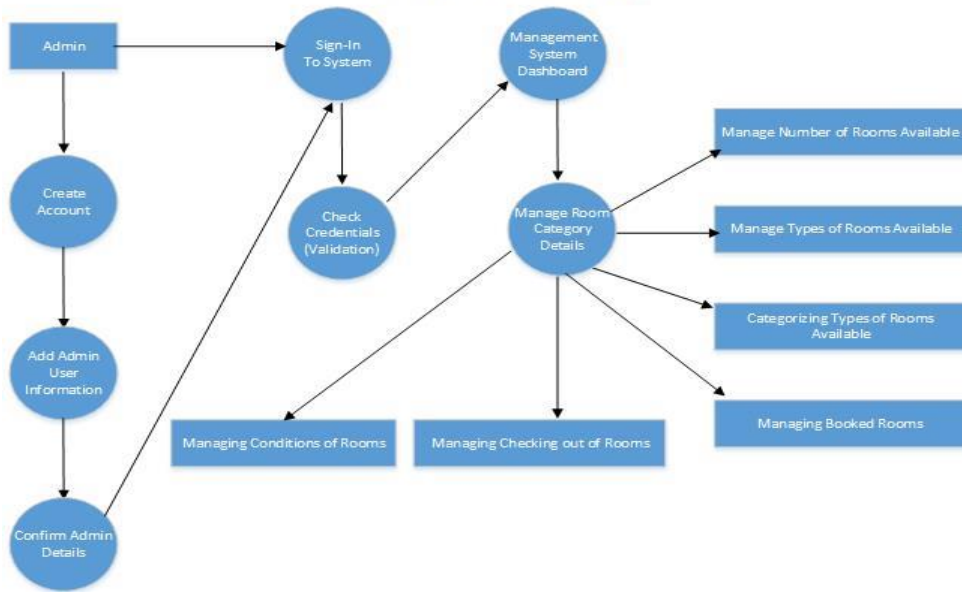


Hilton Garden Hotel Management  
DFD (Level 1)

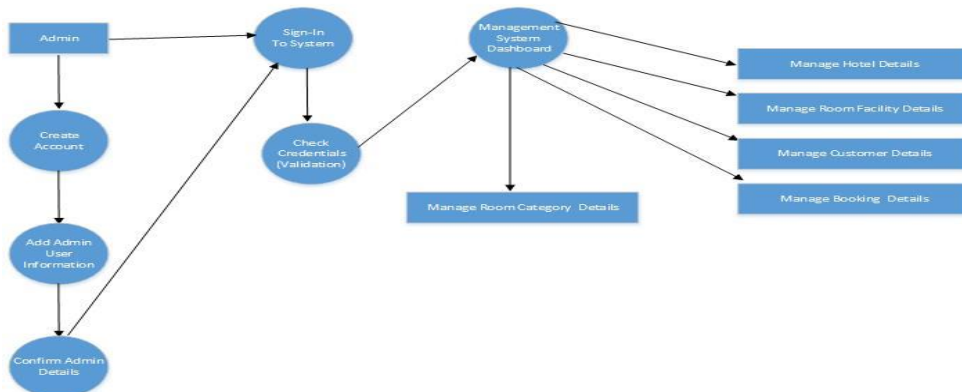


## Hilton Garden Hotel Management DFD (Level 2)

### Managing Room Category Details



## Hilton Garden Hotel Management DFD (Level 2) Admin





# Data Dictionary for Hilton Garden DFDs (Level 2)

## Admin & Managing Rooms (Hotel Management)

### Hilton Garden DFDs (Level 2) Admin

#### Data Element Definitions

Data Element	Description
Admin Credentials	User credentials for accessing the admin module, including username and password.
Admin User Information	Personal details of an admin user, including name, contact information, and role.
Hotel Details	Information about the hotel, such as name, address, contact information, and number of rooms.
Room Facility Details	Details of amenities and facilities available in hotel rooms, such as air conditioning, Wi-Fi, minibar, etc.
Customer Details	Personal details of a hotel customer, including name, address, contact information, and preferences.
Room Category Details	Details of different room categories available in the hotel, such as standard, deluxe, suite, etc., along with their associated amenities and pricing.
Booking Details	Data related to a hotel reservation, such as booking date, check-in/check-out dates, room type, number of guests, and payment details.

#### Data Flow Descriptions

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### Hilton Garden DFDs (Level 2) Managing Rooms

#### Data Flow Descriptions

<b>Data Flow</b>	<b>Description</b>
Room Category Details	Details of different room categories available in the hotel, such as standard, deluxe, suite, etc., along with their associated amenities and pricing.
Number of Rooms Available	The total number of rooms available in a specific room category.
Types of Rooms Available	The different types of rooms within a specific room category (e.g., single, double, family).
Categorizing Types of Rooms Available	The process of classifying and grouping rooms based on their type and amenities.
Managing Booked Rooms	The process of tracking and managing booked rooms, including assigning rooms to guests and updating availability.
Managing Conditions of Rooms	The process of maintaining and monitoring the condition of hotel rooms, including housekeeping tasks and maintenance requirements.
Managing Checking out of Rooms	The process of handling guest check-out procedures, including finalizing payments and updating room availability.

Export to Sheets

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