Sri Lanka Institute of Information Technology

Project report

MLB_CSNE.01_02

Hotel Reservation System for Special Events

Information Systems and Data Modeling IT1090

B.Sc. (Hons) in Information Technology

Information Systems and Data Modeling
IT1090

Group Assignment 02

Title: (Hotel Reservation System for Special Events.)

Batch Number: Y1. S2. WD. CSNE.01	Group Number: MLB_CSNE.01_02

Declaration:

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1. Introduction

A Hotel Reservation System for Special Events helps hotels manage room bookings during high-demand periods like weddings or conferences. It shows real-time room availability, allowing guests to book quickly and easily. The system also adjusts room prices based on demand, helping hotels maximize revenue by increasing prices during peak times or offering discounts during slower periods. It supports group bookings, making it easier for large parties to reserve multiple rooms and manage reservations. Special packages, such as event tickets or meal options, can also be offered to guests, adding value to their stay.

The system integrates with other hotel management tools, ensuring smooth coordination across departments like housekeeping and catering. It sends automatic reminders and confirmations to guests, improving communication and reducing the risk of booking errors. While the system helps prevent overbooking, it must be carefully managed to avoid technical glitches or conflicts with existing software. Overall, a Hotel Reservation System for Special Events improves operational efficiency, enhances the guest experience, and increases hotel profitability by streamlining the booking process during busy times.

2. Hypothetical Scenario

In a physical hotel reservation system for a wedding, the entire process begins with the couple visiting the hotel to discuss their needs. Upon arriving at the hotel, they meet with the Manager or events coordinator to tour the facilities, including potential venues like the ballroom or banquet hall. The couple selects their preferred hall for the reception, which is manually logged by the hotel staff in a physical booking ledger, ensuring that no other event can be booked for that date.

After finalizing the event space, the couple discusses room blocks for their guests. The Reception desk assigns a specific set of rooms for the wedding party and guests, noting down the Customer Name, Event Date, and the number of rooms needed in a manual reservation book. Special requests, such as proximity to the event hall or specific amenities like late check-outs, are also recorded by hand.

For the Catering side, the couple meets with the hotel's chef or catering manager. They choose from pre-set menu options, and any custom requests are handwritten into the hotel's catering log. The catering team records the number of guests, menu selections, and any dietary restrictions, ensuring all details are properly noted for the event.

Once all arrangements are made, the Payment process is completed in person. The couple provides a deposit, and the receptionist writes a receipt by hand, marking the payment in the hotel's physical ledger. As the wedding date approaches, the hotel staff manages all details through physical checklists, ensuring a seamless event without relying on any digital systems.

3. Requirements Analysis Document

3.1 Main Requirements

❖ Functional Requirements

1. In-Customer/Phone-Based Booking

- Reception Desk or Call Center: The system should support reservations made by phone or in person at the hotel’s reception.
- Staff should have a reservation logbook or a physical calendar to record bookings for special events.
- Staff should ask guests for event details, dates, and preferences, and record this information manually.

2. Event Information Display

- The hotel should have physical flyers or brochures with details of upcoming special events, available at the front desk or in common areas.
- Staff should verbally inform guests of any ongoing or upcoming special events, hall availability, and special packages.
- An event board can display details about the events and hall rates for walk-in guests.

3. Hall Availability and Pricing

- A manual inventory system (e.g., a reservation board or notebook) should track hall availability for specific event dates.
- Special pricing for event-related stays should be listed in printed rate sheets and updated regularly by staff.
- Staff should be able to quickly look up available hall and prices for specific event dates based on physical records.

4. Reservation Creation

- Staff should gather guest details (e.g., name, contact information, event date) and record these manually in a guest reservation book.
- Guests should be able to choose a hall based on availability, and staff should provide room options based on the event requirements.
- Paper reservation forms should be completed by guests, capturing their booking details (e.g., check-in date, check-out date, event details).

5. Reservation Confirmation

- Staff should provide a written confirmation slip or a printed receipt for reservations made in person.
- For phone reservations, confirmation can be sent via postal mail or text/phone call confirmation.

6. Payment Processing

- Guests can pay for their reservation in cash or via card (manual POS system).
- Receipts for payment should be provided physically (handwritten or printed).
- Partial payments or deposits should be recorded in the hotel's ledger or payment tracking system.

7. Booking Modification and Cancellation

- Guests should be able to modify or cancel their bookings by visiting or calling the hotel.
- Staff should record modifications (e.g., change of dates, hall type) in the reservation logbook.
- A cancellation policy should be explained verbally, with any penalties noted in the reservation system.

8. Check-In and Check-Out

- During check-in, guests will need to present their reservation confirmation or provide their booking details to staff.
- The front desk should use manual check-in forms to record guest arrival and verify room assignment.
- During check-out, guests should sign a check-out form, and any outstanding payments should be settled manually.

❖ Non – Functional Requirements

- Reliability: Ensure accurate and consistent manual booking and hall availability updates to prevent errors.
- Availability: Reservation services must be available during hotel operating hours for in-person or phone bookings.
- Usability: Easy-to-understand, consistent forms and processes for both staff and guests.
- Performance: Staff must quickly retrieve and update bookings, even during peak periods.
- Security: Safeguard guest information and payment records with physical protections and restricted access.
- Scalability: Ability to handle increased reservations during special events by adding staff or materials.
- Flexibility: Easily manage last-minute changes, cancellations, or modifications.
- Maintainability: Well-organized and easy-to-update logs and records.
- Auditability: Clear paper trails for bookings and payments for manual auditing.
- Resilience: Backup records and secure storage for protection against physical loss or damage.

3.2. Data Requirements

1. Hotel

- H_ID
- H_name
- City
- Street

2. Reception

- R_ID
- Hall_availability
- Hall_ID
- Contact_information

3. Hall

- Hall_ID
- H_ID
- Capacity
- Hall_Type
- Floor_No
- Building

4. Customer

- CT_ID
- NIC
- Address
- Age
- Phone_no

5. **Payment**

- Pay_ID
- CT_ID
- C_ID
- Pay_Amount
- Pay_method

6. **Manager**

- M_ID
- M_Department
- Contact_information
- R_ID
- Last_name
- First_name

7.Catering

- CT_ID
- CT_name
- CT_cost
- Number_of_guest
- Menu_Type

8. Inventory

- I_Description
- I_ID
- I_Name
- I_Category

9.Meterial

- M_Type
- M_Brand
- I_ID
- M_Quantity
- M_Code

10.Supplier

- SU_ID
- SU_Name
- SU_Address
- SU_Status
- M_Code
- SU_contact_no

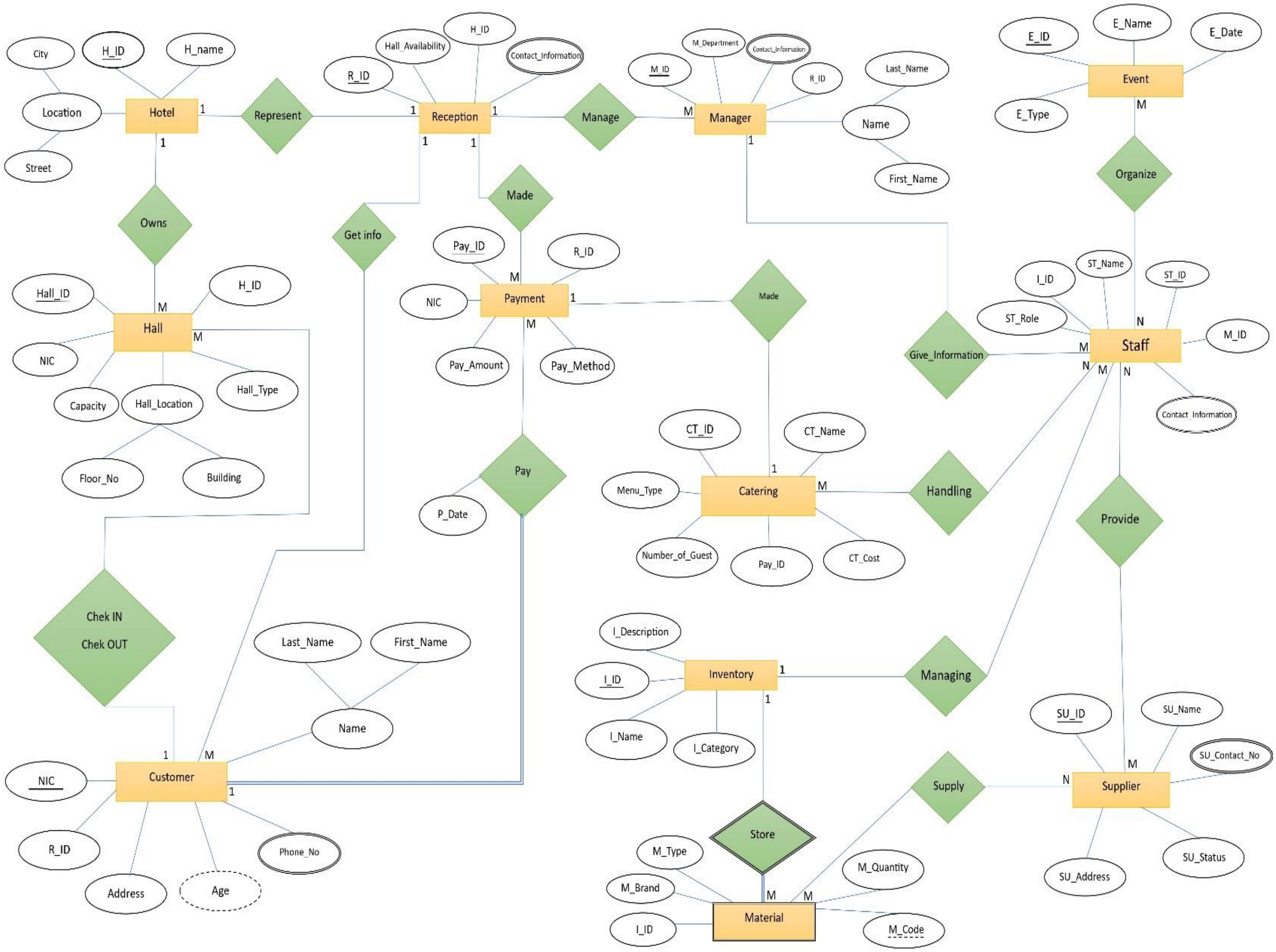
11.Staff

- ST_Role
- I_ID
- ST_Name
- ST_ID
- E_ID
- Contact_information
- SU_ID

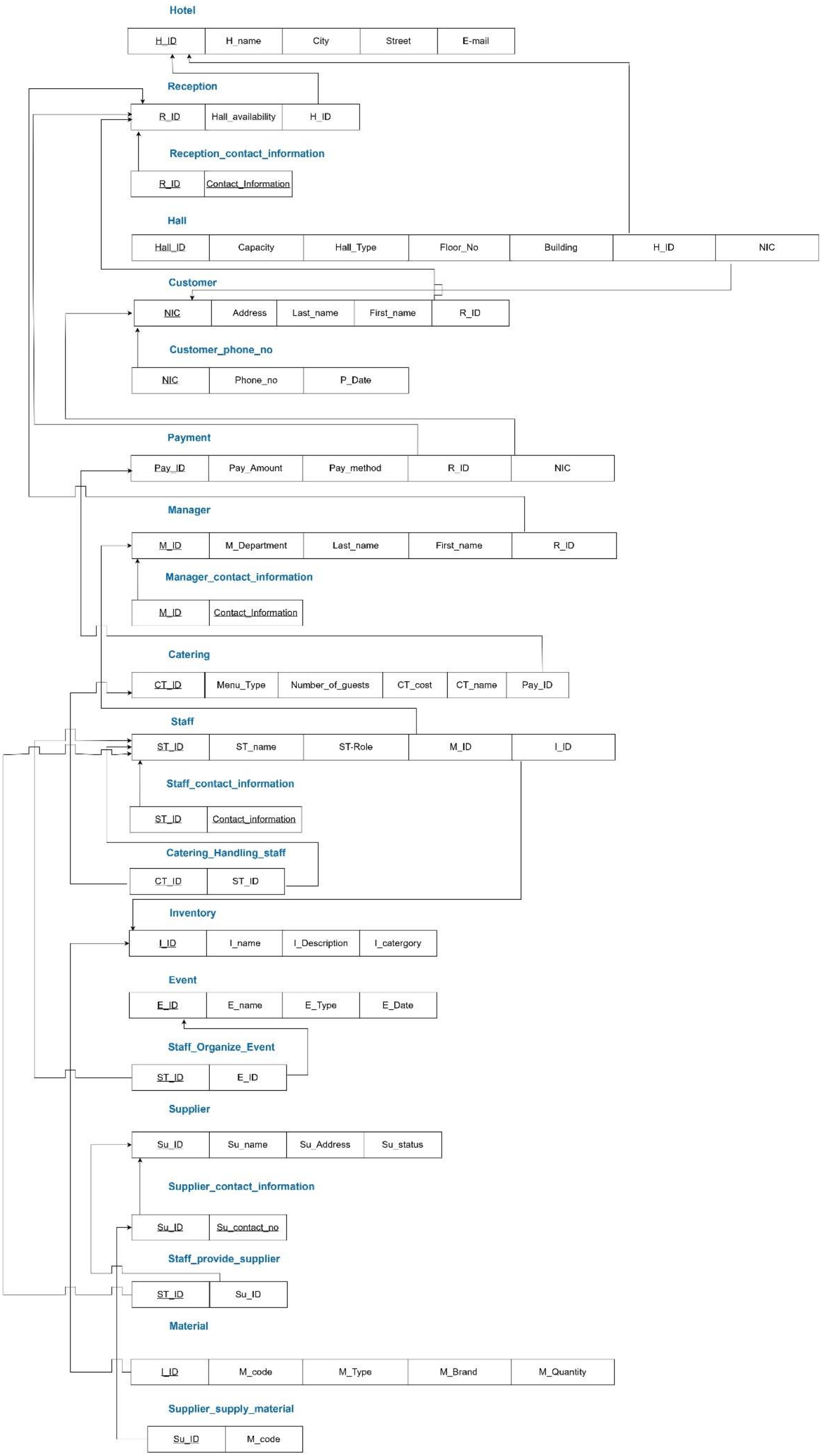
12.Event

- E_Type
- E_ID
- E_name
- E_Date

- **Entity Relationship Diagram (ER-Diagram)**



- **Relational Schema**



Hotel

H_ID	H_name	City	Street	E-mail

Reception

R_ID	Hall_availability	H_ID

Reception_contact_information

R_ID	Contact_Information

Hall

Hall_ID	Capacity	Hall_Type	Floor_No	Building	H_ID	NIC

Customer

NIC	Address	Last_name	First_name	R_ID

Customer_phone_no

NIC	Phone_no	P_Date

Payment

Pay_ID	Pay_Amount	Pay_method	R_ID	NIC

Manager

M_ID	M_Department	Last_name	First_name	R_ID

Manager_contact_information

M_ID	Contact_Information

Catering

CT_ID	Menu_Type	Number_of_guests	CT_cost	CT_name	Pay_ID

Staff

ST_ID	ST_name	ST-Role	M_ID	I_ID

Staff_contact_information

ST_ID	Contact_information

Catering_Handling_staff

CT_ID	ST_ID

Inventory

I_ID	I_name	I_Description	I_catergory

Event

E_ID	E_name	E_Type	E_Date

Staff_Organize_Event

ST_ID	E_ID

Supplier

Su_ID	Su_name	Su_Address	Su_status

Supplier_contact_information

Su_ID	Su_contact_no

Staff_provide_supplier

ST_ID	Su_ID

Material

I_ID	M_code	M_Type	M_Brand	M_Quantity

Supplier_supply_material

Su_ID	M_code

- **SQL Queries**

6.1. Database Create

```
/*--Table Event--*/
CREATE DATABASE Hotel_Reservation_System_for_Special_Events;

/*--Create Tables--*/

--Event Table--
CREATE TABLE Event(
E_ID CHAR (5) UNIQUE NOT NULL,
E_Name VARCHAR(20) NOT NULL,
E_Type CHAR(20) NOT NULL,
E_Date Date NOT NULL,

CONSTRAINT Event_pk PRIMARY KEY (E_ID));


--Inventory Table--
CREATE TABLE Inventory(
I_ID CHAR (5) UNIQUE NOT NULL,
I_Name VARCHAR (20) NOT NULL,
I_Description VARCHAR (20) NOT NULL,
I_Category VARCHAR (20) NOT NULL,

CONSTRAINT Inventory_pk PRIMARY KEY(I_ID));


--Hotel Table--
CREATE TABLE Hotel(
H_ID CHAR (5) UNIQUE NOT NULL,
H_Name VARCHAR (20) NOT NULL,
City VARCHAR (20) NOT NULL,
Street VARCHAR (20) NOT NULL,

CONSTRAINT Hotel_pk PRIMARY KEY(H_ID));


--Supplier Table--
CREATE TABLE Supplier(
SU_ID CHAR (5) ,
SU_Name VARCHAR (20) NOT NULL,
SU_Address VARCHAR (150) NOT NULL,
SU_Status VARCHAR (20) NOT NULL,
CONSTRAINT Supplier_pk PRIMARY KEY(SU_ID));
```

```sql
--Supplier_Contact_Information--
CREATE TABLE Supplier_Contact_Information(
SU_ID CHAR (5) ,
SU_Contact_NO INT NOT NULL,

CONSTRAINT Supplier_Contact_Information_pk PRIMARY KEY(SU_ID,SU_Contact_NO),
CONSTRAINT Supplier_Contact_Information_fk FOREIGN KEY(SU_ID) REFERENCES Supplier(SU_ID));


--Reception Table--
CREATE TABLE Reception(
R_ID CHAR (5) UNIQUE NOT NULL,
Hall_Availability VARCHAR (20) NOT NULL,
H_ID CHAR (5) UNIQUE NOT NULL,

CONSTRAINT Reception_pk PRIMARY KEY(R_ID),
CONSTRAINT Reception_fk FOREIGN KEY(H_ID) REFERENCES Hotel (H_ID));


--Reception Contact Table--
CREATE TABLE Reception_Contact(
R_ID CHAR (5) UNIQUE NOT NULL,
Contact_Information VARCHAR (20) NOT NULL,

CONSTRAINT Reception_Contact_pk PRIMARY KEY(R_ID,Contact_Information),
CONSTRAINT Reception_Contact_fk FOREIGN KEY(R_ID) REFERENCES Reception (R_ID));


--Customer Table--
CREATE TABLE Customer(
NIC VARCHAR (20) NOT NULL,
Addrress VARCHAR (20) NOT NULL,
Last_Name VARCHAR (20) NOT NULL,
First_Name VARCHAR (20) NOT NULL,
R_ID CHAR (5) UNIQUE,

CONSTRAINT Customer_pk PRIMARY KEY(NIC),
CONSTRAINT Customer_fk FOREIGN KEY(R_ID) REFERENCES Reception (R_ID));


--Customer_Phone_NO Table--
CREATE TABLE Customer_Phone_NO(
NIC VARCHAR (20) NOT NULL,
Phone_NO INT,

CONSTRAINT Customer_Phone_NO_pk PRIMARY KEY(NIC,Phone_NO),
CONSTRAINT Customer_Phone_NO_fk FOREIGN KEY(NIC) REFERENCES Customer (NIC));
```

```
--Hall Table--
CREATE TABLE Hall(
Hall_ID CHAR (5) UNIQUE NOT NULL,
Capacity INT NOT NULL,
Hall_Type VARCHAR (20) NOT NULL,
Floor_NO INT NOT NULL,
Building CHAR (5) NOT NULL,
H_ID CHAR (5) UNIQUE,
NIC VARCHAR (20) NOT NULL,

CONSTRAINT Hall_pk PRIMARY KEY(Hall_ID),
CONSTRAINT Hall_fk1 FOREIGN KEY(NIC) REFERENCES Customer (NIC),
CONSTRAINT Hall_fk2 FOREIGN KEY(H_ID) REFERENCES Hotel (H_ID));


--Payment Table--
CREATE TABLE Payment(
Pay_ID CHAR (5) UNIQUE,
Pay_Amount MONEY NOT NULL,
Pay_Method VARCHAR (20) NOT NULL,
R_ID CHAR (5) UNIQUE NOT NULL,
NIC VARCHAR (20) NOT NULL,
P_Date DATE NOT NULL,

CONSTRAINT Payment_pk PRIMARY KEY(Pay_ID),
CONSTRAINT Payment_fk1 FOREIGN KEY(R_ID) REFERENCES Reception (R_ID),
CONSTRAINT Payment_fk2 FOREIGN KEY(NIC) REFERENCES Customer (NIC));


--Manager Table--
CREATE TABLE Manager(
M_ID CHAR (5) UNIQUE,
M_Department VARCHAR (20) NOT NULL,
Last_Name VARCHAR (20) NOT NULL,
First_Name VARCHAR (20) NOT NULL,
R_ID CHAR (5) UNIQUE,

CONSTRAINT Manager_pk PRIMARY KEY(M_ID),
CONSTRAINT Manager_fk1 FOREIGN KEY(R_ID) REFERENCES Reception (R_ID));


--Manager_Contact_Information--
CREATE TABLE Manager_Contact_Info(
M_ID CHAR (5) UNIQUE,
Contact_Information INT NOT NULL,

CONSTRAINT Manager_Contact_Info_pk PRIMARY KEY(M_ID,Contact_Information),
CONSTRAINT Manager_Contact_Info_fk FOREIGN KEY(M_ID) REFERENCES Manager (M_ID));
```

```sql
--Catering Table--
CREATE TABLE Catering(
CT_ID CHAR (5) UNIQUE,
Menu_Type VARCHAR (20) NOT NULL,
Number_of_Guest VARCHAR (20) NOT NULL,
CT_Cost MONEY NOT NULL,
CT_Name VARCHAR (20) NOT NULL,
Pay_ID CHAR (5) UNIQUE,

CONSTRAINT Catering_pk PRIMARY KEY(CT_ID),
CONSTRAINT Catering_fk FOREIGN KEY (Pay_ID) REFERENCES Payment (Pay_ID));


--Staff Table--
CREATE TABLE Staff(
ST_ID CHAR (5) UNIQUE NOT NULL,
ST_Name VARCHAR (20) NOT NULL,
ST_Rol VARCHAR (20) NOT NULL,
M_ID CHAR (5) UNIQUE NOT NULL,
I_ID CHAR (5) UNIQUE,

CONSTRAINT Staff_pk PRIMARY KEY(ST_ID),
CONSTRAINT Staff_fk1 FOREIGN KEY(M_ID) REFERENCES Manager (M_ID),
CONSTRAINT Staff_fk2 FOREIGN KEY(I_ID) REFERENCES Inventory (I_ID));


--Staff_Contact_Information--
CREATE TABLE Staff_Contact_Info(
ST_ID CHAR (5) UNIQUE NOT NULL,
Contact_Information INT NOT NULL,

CONSTRAINT Staff_Contact_Info_pk PRIMARY KEY(ST_ID,Contact_Information),
CONSTRAINT Staff_Contact_Info_fk FOREIGN KEY(ST_ID) REFERENCES Staff (ST_ID));


--Material Table--
CREATE TABLE Material(
I_ID CHAR (5) UNIQUE,
M_Code CHAR (5) UNIQUE NOT NULL,
M_Type VARCHAR (20) NOT NULL,
M_Brand VARCHAR (20) NOT NULL,
M_Quantity INT NOT NULL,

CONSTRAINT Material_pk PRIMARY KEY(I_ID,M_Code),
CONSTRAINT Material_fk FOREIGN KEY (I_ID) REFERENCES Inventory (I_ID));
```

```
--Catering_handaling_Staff--
CREATE TABLE Catering_handaling_Staff(
CT_ID CHAR (5) UNIQUE NOT NULL,
ST_ID CHAR (5) UNIQUE NOT NULL,

CONSTRAINT Catering_handaling_Staff_pk PRIMARY KEY(CT_ID,ST_ID),
CONSTRAINT Catering_handaling_Staff_fk1 FOREIGN KEY (ST_ID) REFERENCES Staff (ST_ID),
CONSTRAINT Catering_handaling_Staff_fk2 FOREIGN KEY (CT_ID) REFERENCES Catering (CT_ID));


--Staff_Organize_Event Table--
CREATE TABLE Staff_Organize_Event(
ST_ID CHAR (5) UNIQUE NOT NULL,
E_ID CHAR (5) UNIQUE NOT NULL,

CONSTRAINT Staff_Organize_Event_pk PRIMARY KEY(ST_ID,E_ID),
CONSTRAINT Staff_Organize_Event_fk1 FOREIGN KEY (ST_ID) REFERENCES Staff (ST_ID),
CONSTRAINT Staff_Organize_Event_fk2 FOREIGN KEY (E_ID)  REFERENCES  Event (E_ID));


--Staff_Provide_Supplier--
CREATE TABLE Staff_Provide_Supplier(
ST_ID CHAR (5) UNIQUE NOT NULL,
SU_ID CHAR (5) UNIQUE NOT NULL,

CONSTRAINT Staff_Provide_Supplier_pk PRIMARY KEY(ST_ID,SU_ID),
CONSTRAINT Staff_Provide_Supplier_fk1 FOREIGN KEY (ST_ID) REFERENCES Staff (ST_ID),
CONSTRAINT Staff_Provide_Supplier_fk2 FOREIGN KEY (SU_ID) REFERENCES  Supplier (SU_ID));


--Supplier_Supply_Matirial--
CREATE TABLE Supplier_Supply_Matirial(
SU_ID CHAR (5) UNIQUE NOT NULL,
M_Code CHAR (5) UNIQUE NOT NULL,

CONSTRAINT Supplier_Supply_Material_pk PRIMARY KEY(M_Code,SU_ID),
CONSTRAINT Supplier_Supply_Material_fk1 FOREIGN KEY (M_Code) REFERENCES Material (M_Code),
CONSTRAINT Supplier_Supply_Matirial_fk2 FOREIGN KEY (SU_ID) REFERENCES  Supplier (SU_ID));
```

6.2 Data store in Database

```
--Insert Data into Event--
INSERT INTO Event VALUES
('EI123','Luxury Banquets','Wedding','2024-03-12'),
('EI456','Birthday Bonanza','Birthday Party','2024-04-11'),
('EI124','Luxury Banquets','Wedding','2024-05-16'),
('EI125','Luxury Banquets','Wedding','2024-07-18'),
('EI126','Art Show','Exhibition','2024-09-23');

--Insert Data into Inventory--
INSERT INTO Inventory VALUES
('II123','Chairs','Various Styles Chairs','Seating And Furniture'),
('II124','Flower Bouquets','Floral Decoration For Venue Enhancement','Floral
Arrangements'),
('II125','Decoration Items','Banners, Tables, Clothes, and Other
Elements','Event Decoration'),
('II126','Light System','String Lights and Spot Lights','Lighting Equipment'),
('II127','Sound Setup','Speakers, Microphones for Clear Audio','Audio And
Visual Equipment');

--Insert Data into Hotel--
INSERT INTO Hotel VALUES
('HI123','Galadari','Colombo','Lotus Rd'),
('HI124','Avandra','Kollupitiya','Kollupitiya Sinaman Rd'),
('HI125','Ananthara','Kaluthara','Kaluthara Kolonthora Rd'),
('HI126','Shagrila','Colombo','Galle Rd'),
('HI127','Avani','Badulla','Muthiyangana Rd');
```

```
--Insert Data into Supplier--
INSERT INTO Supplier VALUES
('SUI12','Amal','25 Galle Road Colombo3','Senior'),
('SUI24','Kamal','1/152 Kandy Road Kegalla','Junior'),
('SUI35','Sunimal','No.10 Lake View Lane Nuwara Eliya','Senior'),
('SUI46','Nimal','2/45 Main Street Mathara','Senior'),
('SUI57','Jayawindi','12 Temple Road Jaffna','Junior');

--Insert Data into Supplier_Contact_Information--
INSERT INTO Supplier_Contact_Information VALUES
('SUI12','0719859215'),
('SUI24','0775432673'),
('SUI35','0716578467'),
('SUI46','0724356753'),
('SUI57','0773457934');

--Insert Data into Reception--
INSERT INTO Reception VALUES
('RI123','Available','HI123'),
('RI134','Available','HI124'),
('RI128','Available','HI125'),
('RI125','Available','HI126'),
('RI193','Available','HI127');

--Insert Data into Reception_contact_information--
INSERT INTO Reception_contact_information VALUES
('RI123','0553556680'),
('RI134','0342345673'),
('RI128','0342365783'),
('RI125','0112334456'),
('RI193','0912435635');
```

```
--Insert Data into Customer--
INSERT INTO Customer VALUES
('200333802763','25 Battharamulla Road Colombo3','Fernando','Thisara','RI123'),
('200274838493','18/68 Pinarawa Badulla','Dasanayaka','Kavintha','RI134'),
('200034255363','Aluthgama Darka Town','Rathnayaka','Lahiru','RI128'),
('199984756448','Panthiya Mathugama','Gamaethige','Praveena','RI125'),
('200023748384','Pittugala Malabe','Karunathilake','Nethmi','RI193');

--Insert Data into Customer_Phone_no--
INSERT INTO Customer_Phone_no VALUES
('200333802763','0768567899'),
('200274838493','0778905432'),
('200034255363','0786543789'),
('199984756448','0724567902'),
('200023748384','0776783215');

--Insert Data into Hall--
INSERT INTO Hall VALUES
('HA123',1000,'Conference',3,'A','HI123','200333802763'),
('HA124',500,'Wedding Hall',5,'B','HI124','200274838493'),
('HA125',450,'Bar & Restaurant',2,'C','HI125','200034255363'),
('HA126',750,'Birthday Hall',4,'D','HI126','199984756448'),
('HA127',1500,'Play Zone',6,'E','HI127','200023748384');

--Insert Data into Payment--
INSERT INTO Payment VALUES
('PI123',2340000.00,'Online','RI123','200333802763','2024-09-04'),
('PI124',1250000.00,'Card','RI134','200274838493','2024-04-08'),
('PI125',4567000.00,'eZ-cash','RI128','200034255363','2024-05-07'),
('PI126',5000000.00,'Online','RI125','199984756448','2024-12-03'),
('PI127',6000000.00,'Cash','RI193','200023748384','2024-06-12');
```

```
--Insert Data into Manager--
INSERT INTO Manager VALUES
('MI123','Finance','Amarasinghe','Chaviga','RI123'),
('MI124','Food','Amarathunga','Maleesha','RI134'),
('MI125','Decoration','Disanayaka','Sodul','RI128'),
('MI126','Management','Perera','Nethmi','RI125'),
('MI127','Staff Management','Alwis','Osanda','RI193');

--Insert Data into Manager_Contact_Information--
INSERT INTO Manager_contact_Information VALUES
('MI123','0772349054'),
('MI124','0777765435'),
('MI125','0767778855'),
('MI126','0723344556'),
('MI127','0786677992');

--Insert Data into Catering--
INSERT INTO Catering VALUES
('CT123','Food Package',500,100000.00,'Nethmi Food','PI123'),
('CT124','Beverage Package',1500,120000.00,'Sumuhiri','PI124'),
('CT125','Bakery Items',750,150000.00,'Ruhunu','PI125'),
('CT126','Dessert & Sweet',1000,75000.00,'Candy Sweet','PI126'),
('CT127','Juice',900,90000.00,'Milk Bar','PI127');

--Insert Data into Staff--
INSERT INTO Staff VALUES
('ST123','Chalitha','Waiter','MI123','II123'),
('ST124','Isuru','Cleaner','MI124','II124'),
('ST125','Venura','Cashier','MI125','II125'),
('ST126','Keshara','Delivery Boy','MI126','II126'),
('ST127','Nayani','Chef','MI127','II127');
```

```sql
--Insert Data into Staff_contact_Information--
INSERT INTO Staff_contact_Information VALUES
('ST123','0777889933'),
('ST124','0781122334'),
('ST125','0766677888'),
('ST126','0777733556'),
('ST127','0721111177');

--Insert Data into Material--
INSERT INTO Material VALUES
('MT123','II123','IE1010','Ignite',50),
('MT124','II124','IE1020','Leo',100),
('MT125','II125','IE1030','Brandex',150),
('MT126','II126','IE1040','Mas',200),
('MT127','II127','IE1050','Jobs',250);

--Insert Data into Catering_Handling_Staff--
INSERT INTO Catering_Handling_Staff VALUES
('CT123','ST123'),
('CT124','ST124'),
('CT125','ST125'),
('CT126','ST126'),
('CT127','ST127');

--Insert Data into Staff_Organize_Event--
INSERT INTO Staff_Organize_Event VALUES
('ST123','EI123'),
('ST124','EI456'),
('ST125','EI124'),
('ST126','EI125'),
('ST127','EI126');
```

```
--Insert Data into Staff_Provide_Supplier--
INSERT INTO Staff_Provide_Supplier VALUES
('ST123','SUI12'),
('ST124','SUI24'),
('ST125','SUI35'),
('ST126','SUI46'),
('ST127','SUI57');

--Insert Data into Supplier_Supply_Material--
INSERT INTO Supplier_Supply_Material VALUES
('MT123','SUI12'),
('MT124','SUI24'),
('MT125','SUI35'),
('MT126','SUI46'),
('MT127','SUI57');
```

- **Performance Requirements**

1. Reservation Processing Time: Each reservation should be processed within 5 minutes to minimize guest wait times.
2. Information Retrieval Speed: Staff should retrieve hall availability and guest information within 1- 2 minutes.
3. Capacity to Handle Volume: The system must accommodate a minimum of 100 reservations per day during peak events.
4. Update Frequency: Hall availability must be updated immediately after reservations to prevent overbooking.
5. Service Response Time: Guest inquiries should be addressed within 2 minutes, and special requests processed within 10 minutes.
6. Error Handling Time: Reservation errors should be resolved within 10 minutes to maintain guest satisfaction.
7. Backup Procedures: Critical records should have a backup process, allowing for restoration within a few hours.
8. Peak Time Management: Additional staff should be present during high-demand periods to maintain efficient operations.
9. Physical Space Utilization: The reservation area should be organized to minimize bottlenecks and facilitate smooth guest interactions.
10. Documentation Maintenance: All forms and logs must be up to date, with regular checks for accuracy and completeness.

- **Security Requirements**

User Authentication: Only authorized staff should access the system using secure methods, such as multi-factor authentication.

Guest Data Encryption: All guest data, including personal details and payment information, must be encrypted during transmission and storage.

Role-Based Access Control: Staff should have access to system features based on their roles (e.g., reception, management), ensuring only relevant personnel can modify bookings or access sensitive data.

Activity Logging: All actions, including booking modifications and cancellations, must be logged for security monitoring and audits.

Firewall and Network Security: The system should be protected by firewalls and network security measures to block unauthorized access from external sources.

Regular Security Updates: The reservation system should receive timely updates to fix vulnerabilities and ensure compliance with security standards.

Data Backup and Recovery: Regular backups of reservation and guest data must be maintained, with secure storage and a recovery plan in case of data loss.

Intrusion Detection System (IDS): Implement a system to detect unauthorized access or potential breaches, with real-time alerts for quick action.

Physical Security: Only authorized personnel should access servers or physical hardware storing reservation data, with security measures such as keycards or biometric access.

Incident Response Plan: A documented procedure for responding to security incidents, ensuring that breaches or unauthorized activities are swiftly managed and reported.