

23CSIS10P

Introduction to Information Systems

# Phase 2 Report

# Hotel data base

# Project Description:

We want to create a database to store data about a hotel. For each guest, it’s important to know his social security number, name, date of birth, phone number, gender, email, room type, room code, payment number along with his check-in and check-out dates. These information is gathered by the receptionist. Each receptionist has a unique ID, a name, date of birth, salary, gender and building ID. The reservation made by the guest has a unique number, a booking date, arrival date, departure date, room type and price, guest ID, guest’s email, guest’s phone number and guest’s social security number. Each room in the hotel has a unique code, type, price per night, location, capacity, building ID and availability. Each housekeeper of the rooms has a social security number, gender, contact information, salary and number of working hours. The hotel consists of many buildings, there is a unique building ID, location, number of floors, type and manager for each building. The hotel also has many facilities. For each one, there is a unique facility type, opening and closing times, restrictions and location. Each event organized by the hotel has a unique name, type, organizer, start and end dates, building ID and hall number. Each hall has a unique number, type, availability, capacity and Building ID. Also, Maintenance staff each has a unique social security number, a name, date of birth, address, contact information, salary, renovation type and building ID. Each manager of the hotel has a unique social security number, a name, date of birth, address, job description, area of responsibility, contact information, number of experience years and building ID. Before the departure of the guest, a bill is paid. Each bill has a unique number, a method, date, amount, reservation number and the guest’s social security number.

# Entity Relationship Diagram:

N

M

Facility

N

M

Maintenance

1

1

Manager

M

1

Event

M

1

M

1

Hall

Receptionist

1

M

N

M

Housekeeper

Building

Room

M

1

M

1

Reservation

1

1

Bill

Guest

# Tables and Attributes:

|  |  |
| --- | --- |
| Bill | |
| Bill\_Number(PK) | Number |
| Bill\_Method | Short Text |
| Bill\_Date | Date/Time |
| Bill\_Amount | Currency |
| Guest\_SSN(FK) | Number |
| Reservation\_Number(FK) | Number |

|  |  |
| --- | --- |
| Building | |
| Building\_ID(PK) | Number |
| Building\_Name | Short Text |
| Building\_Number\_Of\_Floors | Number |
| Building\_Type | Short Text |
| Building\_Manager\_Code | Short Text |
| Building\_Facility | Short Text |
| Manager\_SSN(FK) | Number |

|  |  |
| --- | --- |
| Cleans | |
| Room\_Code(PK) | Number |
| Housekeeper\_SSN(PK) | Number |
| Cleaning\_Day | Date/Time |

|  |  |
| --- | --- |
| Event | |
| Event\_Number(PK) | Number |
| Event\_Type | Short Text |
| Event\_Organizor | Short Text |
| Event\_Begining\_Date | Date/Time |
| Event\_End\_Date | Date/Time |
| Event\_Building\_ID(FK) | Number |
| Hall\_Number(FK) | Number |

|  |  |
| --- | --- |
| Facility | |
| Facility\_Code(PK) | Short Text |
| Facility\_Open\_Time | Short Text |
| Facility\_Close\_Time | Short Text |
| Facility\_Location | Short Text |
| Facility\_Type | Short Text |

|  |  |
| --- | --- |
| Fixing | |
| Maintenance\_ID(PK) | Number |
| Facility\_Code(PK) | Short Text |
| Maintenance\_Time | Date/Time |
| Facility\_Location | Short Text |

|  |  |
| --- | --- |
| Guest | |
| Guest\_SSN(PK) | Number |
| Guest\_Full\_Name | Short Text |
| Guest\_Room\_Number | Number |
| Guest\_DOB | Date/Time |
| Guest\_Phone\_Number | Number |
| Guest\_Checkin\_Date | Date/Time |
| Guest\_Checkout\_Date | Date/Time |
| Guest\_Gender | Short Text |
| Guest\_Email | Short Text |

|  |  |
| --- | --- |
| Hall | |
| Hall\_Number(PK) | Number |
| Hall\_Type | Short Text |
| Hall\_Availability | Yes/No |
| Hall\_Capacity | Number |
| Building\_ID(FK) | Number |

|  |  |
| --- | --- |
| Housekeeper | |
| Housekeeper\_SSN(PK) | Number |
| Housekeeper\_Gender | Short Text |
| Housekeeper\_Contact\_Info | Number |
| Housekeeper\_Salary | Currency |
| Housekeeper\_Working\_Hours | Number |
| City | Short Text |

|  |  |
| --- | --- |
| MaintenanceOfBuildings | |
| Maintenance\_ID(PK) | Number |
| Building\_ID(PK) | Number |
| Issue | Short Text |

|  |  |
| --- | --- |
| Maintenance | |
| Maintenance\_ID(PK) | Number |
| Maintenance\_Start\_Date | Date/Time |
| Maintenance\_End\_Date | Date/Time |
| Maintenance\_Renovation\_Type | Short Text |
| Maintenance\_Building\_ID(FK) | Number |
| Maintenance\_Status | Short Text |
| Last\_Maintenance | Date/Time |

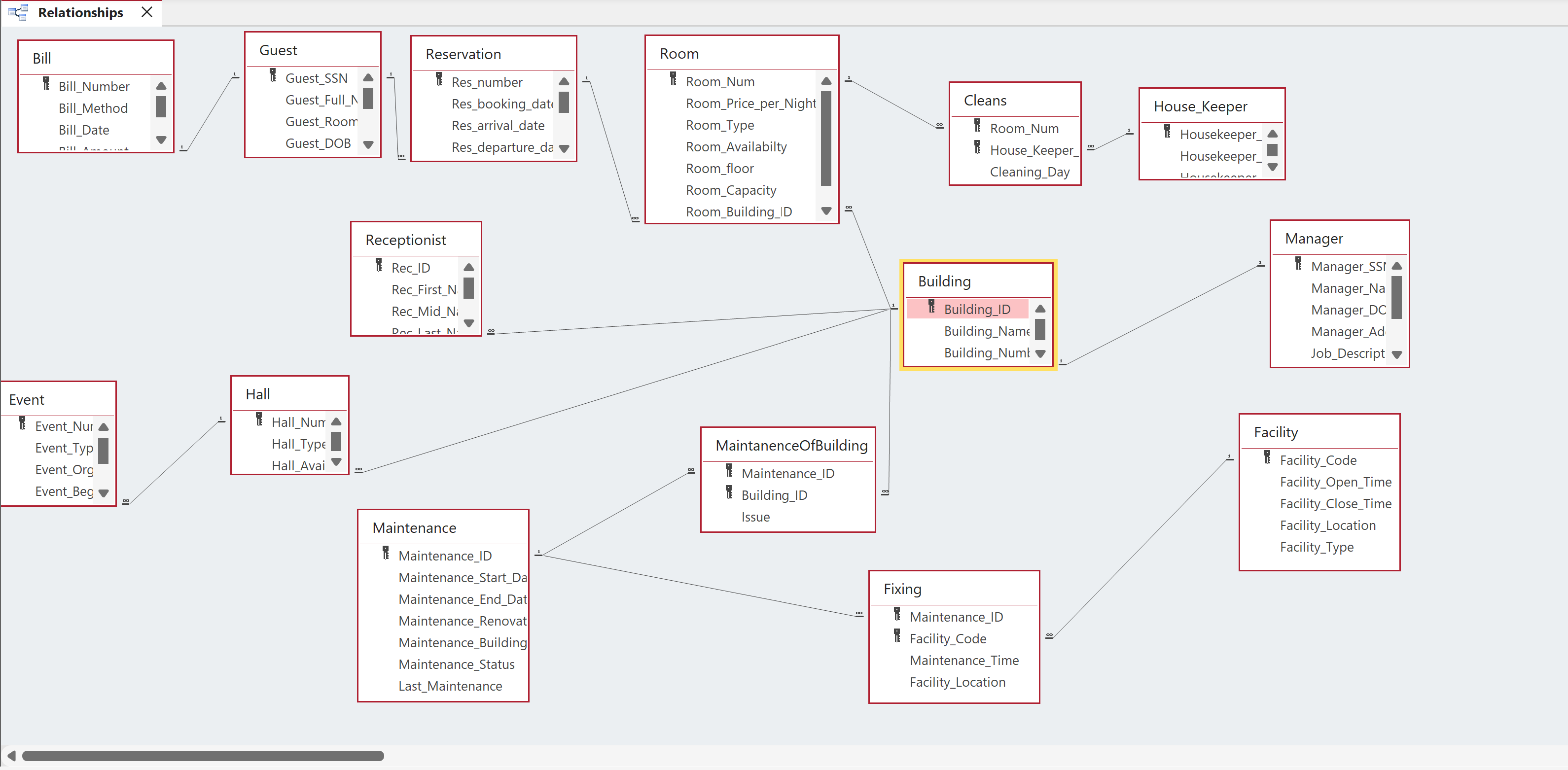
|  |  |
| --- | --- |
| Manager | |
| Manager\_SSN(PK) | Number |
| Manager\_Name | Short Text |
| Manager\_DOB | Date/Time |
| Manager\_Address | Short Text |
| Job\_Description | Short Text |
| Manager\_Years\_Of\_Experience | Number |
| Manager\_Mail | Long Text |
| Manager\_Building\_Code | Short Text |

|  |  |
| --- | --- |
| Receptionist | |
| Rec\_ID(PK) | Number |
| Rec\_First\_Name | Short Text |
| Rec\_Mid\_Name | Short Text |
| Rec\_Last\_Name | Short Text |
| Rec\_DOB | Date/Time |
| Rec\_Salary | Currency |
| Rec\_Gender | Short Text |
| Rec\_Building\_ID(FK) | Number |

|  |  |
| --- | --- |
| Reservation | |
| Res\_number(PK) | Number |
| Res\_booking\_date | Date/Time |
| Res\_arrival\_date | Date/Time |
| Res\_departure\_date | Date/Time |
| Room\_type | Short Text |
| Room\_price | Currency |
| Guest\_ID | Number |
| Guest\_Email(FK) | Hyperlink |
| Guest\_Phone\_Number(FK) | Number |
| Guest\_SSN(FK) | Number |

|  |  |
| --- | --- |
| Room | |
| Room\_Num(PK) | Number |
| Room\_Price\_per\_Night | Currency |
| Room\_Type | Short Text |
| Room Availability | Short Text |
| Room\_floor | Short Text |
| Room\_Capacity | Number |
| Room\_Building\_ID(FK) | Number |
| Res\_number(FK) | Number |

# Database Schema (Clear Screenshot from Microsoft Access):



# Application Form 1:

EVENT INFORMATION FORM:

A screenshot of a computer

Description automatically generated

# Description of Output:

This form inputs information about every new event in the event table.

# Application Form 2:

MANAGER INFORMATION FORM:

A screenshot of a computer

Description automatically generated

# Description of Output:

This form inputs the information of each manager.

# Application Form 3:

HOUSEKEEPER\_DATA FORM:

A screenshot of a hotel registration form

Description automatically generated

# Description of Output:

A sub\_form that would assign courses to the newly added housekeeper members.

# Application Form 4:

Maintenance Form:

A screenshot of a hotel

Description automatically generated

# Description of Output:

A Sub\_form to assign the data of maintenance.

# Application Form 5:

Payment Information Form:

A screenshot of a hotel payment information

Description automatically generated

# Description of Output:

This form inputs the payment information of a new guest in the Bill table.

# Application Form 6:

Guest Information Form:

A screenshot of a computer

Description automatically generated

# Description of Output:

This form inputs the information of a new guest in the Guest table.

# Application Form 7:

Room Form:

A screenshot of a hotel form

Description automatically generated

# Description of Output:

The room form is to help the staff to check the rooms and to change them.

# Application Form 8:

Building Form:

A screenshot of a computer

Description automatically generated

# Description of Output:

The building form helps the staff to check the buildings and to check every manager responsible for that building and to change in it.

# Application Form 9:

Receptionist Form:

A screenshot of a computer

Description automatically generated

# Description of Output:

This form is to add new receptionists or view data about specific receptionist.

# Application Form 10:

Reservation Form:

A screenshot of a computer

Description automatically generated

# Description of Output:

This form is to add new reservation or cancel a reservation.

# Application Form 11:

Hall Form:

A screenshot of a computer

Description automatically generated

# Description of Output:

# Application Form 12:

Facility Form:

A screenshot of a computer

Description automatically generated

# Description of Output:

# Report 1:

EVENT REPORTA screenshot of a hotel

Description automatically generated

# Description of Output:

This report displays all the details of each event and gives you the option to go to the event date information directly.

# Report 2:

EVENT DATE INFORMATION REPORT

A screenshot of a computer

Description automatically generated

# Description of Output:

This report displays the start date and end date of each event between 12/1/2023 to 12/30/2023 and their hall numbers and the event type. (from event date information query)

# Report 3:

MAINTENANCE REPORT:

A screenshot of a computer

Description automatically generated

# Description of Output:

A report that shows maintenance data.

# Report 4:

NUMBER\_OF\_HOUSEKEEPER\_GENDER\_IN\_EACH\_CITY:

A screenshot of a computer

Description automatically generated

# Description of Output:

A report that shows how many housekeepers female and male in each city.

# Report 5:

Guests with more than $3000 bill amount:

A screenshot of a computer

Description automatically generated

# Description of Output:

This report displays the guests, identified by the SSN, with more than $3000 bill amount.

# Report 6:

Bill Information Report:

A screenshot of a computer screen

Description automatically generated

# Description of Output:

This report displays the bill information of each guest.

# Report 7:

Receptionists’ salaries report:

A screenshot of a hotel

Description automatically generated

# Description of Output:

This report is to show data about receptionists' salaries.

# Report 8:

Reservation Report:

A screenshot of a computer

Description automatically generated

# Description of Output:

This report is to show all data about all reservations.

# Report 9:

Building Report:

A screenshot of a hotel report

Description automatically generated

# Description of Output:

The building report shows a report of every building and status only.

# Report 10:

Available Room Report:

A screenshot of a computer

Description automatically generated

# Description of Output:

The available room report helps allow the guest to check the empty rooms and to do the reserving form and reserve a room.

# Report 11:

Facility Report:

A screenshot of a computer

Description automatically generated

# Description of Output:

# Report 12:

Available\_Halls Report:

A screenshot of a computer

Description automatically generated

# Description of Output:

# Query 1:

**Event\_Date\_Information:**

# Description of Output:

Retrieve all events between 12/1/2023 to 12/30/2023 by order and write their type and their hall number.

# Query 2:

**Manager\_Data:**

# Description of Output:

Retrieve all information about each manager as their name, address, building code, and job description.

# Query 3:

**Number\_Of\_Each\_Building:**

# Description of Output:

Retrieve the number of each building type.

# Query 4:

**Ascendingly ordered bill amount:**

# Description of Output:

Retrieve the bill amount of each guest, identified by his SSN, in ascending order along with the payment method.

# Query 5:

**Guests in 2021:**

# Description of Output:

Retrieve the guests who visited the hotel in 2021.

# Query 6:

**Guests with more than $3000 bill amount:**

# Description of Output:

This query retrieves the guests, identified by SSN, who have paid more than $3000.

# Query 7:

**Maintenance\_Start\_Date\_Between\_3/1/2024\_And\_10/1/2024:**

# Description of Output:

Retrieve Maintenance\_Start\_Date between 3/1/2024 and 10/1/2024.

# Query 8:

**Similar\_Salary:**

# Description of Output:

Retrieve how many housekeepers have the same salary (only if they are more than 1 housekeeper).

# Query 9:

**HowManyFemaleAndMaleInEachCity:**

# Description of Output:

Retrieve in housekeeper how many females and males in each city.

# Query 10:

**Average\_And\_Maximum\_And\_Minimum\_Price\_Of\_Room:**

# Description of Output:

Retrieve the average, maximum, and minimum prices of the rooms per night.

# Query 11:

**Empty\_Rooms:**

# Description of Output:

Get every available room.

# Query 12:

**Number\_Of\_Room\_Per\_Price:**

# Description of Output:

Show the number of rooms with similar prices.

# Query 13:

**receptionists’ salaries:**

# Description of Output:

This query is to retrieve the receptionist ID

, first name, last name , and salary

The salary is ordered descendingly

# Query 14:

**receptionists’ salary info:**

# Description of Output:

This query is to retrieve the average, minimum, and maximum salary earned by receptionists.

# Query 15:

**single rooms reservations info:**

# Description of Output:

This query is to retrieve data about all single rooms reserved.

# Query 16:

**double rooms reservations:**

# Description of Output:

This query is to retrieve data about all double rooms reserved.

# Query 17:

**trible rooms reservations:**

# Description of Output:

This query is to retrieve data about all trible rooms reserved.