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**CPIS 340**

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**Hotel reservation project**

Project Description

‏Project idea: a website through which several hotels are displayed and the user reserve a hotel room in one of the hotels or cancels the reservation and showing the available rooms for the reservation and the reserved rooms in each hotel

The tables used in the database are:

* The hotel
* Hotel rooms
* Employees
* Invoices
* Customers
* The restaurant
* Meals

The relationships between tables are:

* One to many Relation (hotel -room)
* One to many Relation (hotel-employees)
* One to many Relation(restaurants-meals)
* One to One Relation (customers-invoice)

clarification of the table

The table includes the following entities and their attributes:

Hotel: It contains many rooms available for reservation and not available and a restaurant (hotel number-hotel name-hotel classification-number of hotel rooms-hotel address)

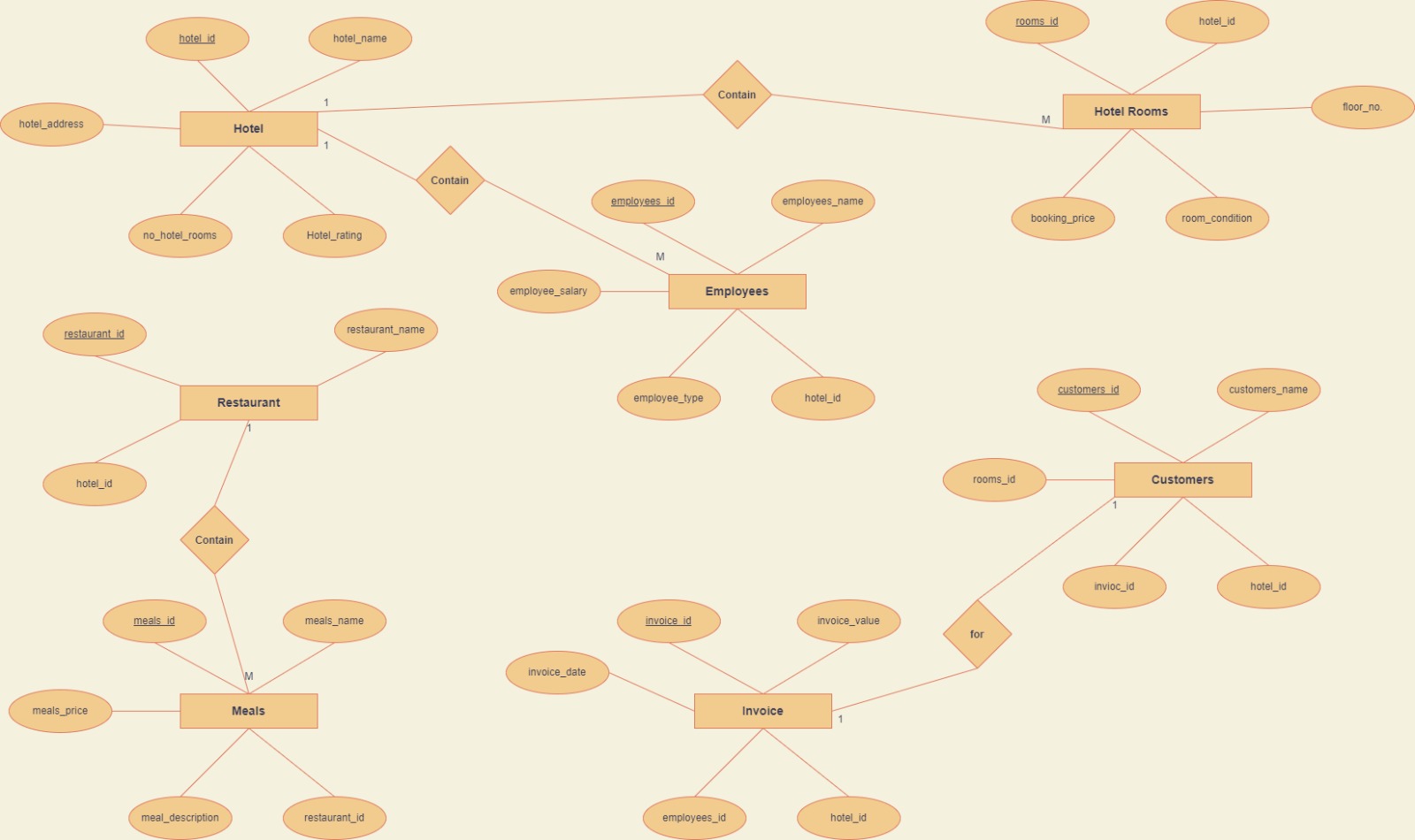
Rooms: (room number - hotel number - floor number - reservation price - room condition) Employees: (employee ID - employee name - employee salary - job description [employee type] - hotel number)

Invoices: (invoice number - invoice value - invoice issuance date - hotel number - the number of the employee who issued the invoice)

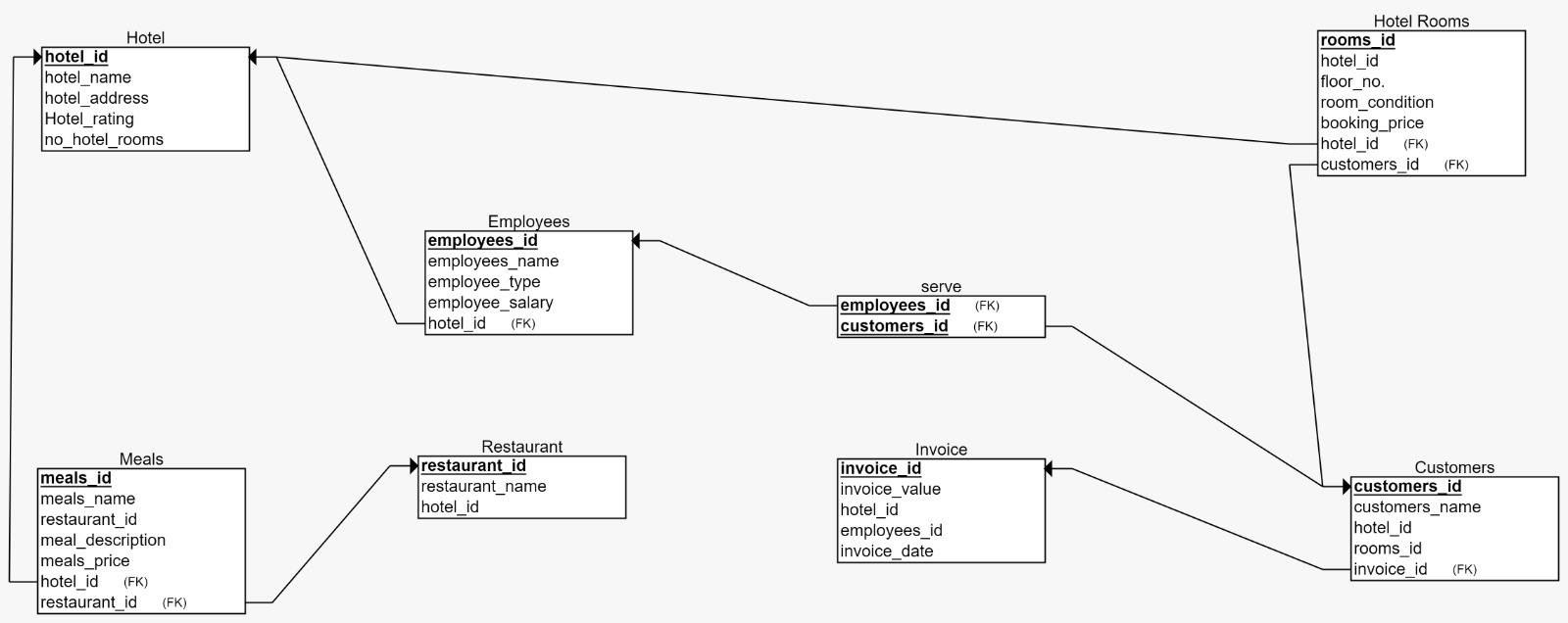
Customers (customer number - customer name - hotel number in which the reservation was made - room number booked - invoice number)

Restaurant: (restaurant number - restaurant name - hotel number)

Meals: (meal number-meal name-meal description-meal price-restaurant number)



**ERD**

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**Database Schema**

**Hotel table description:**

|  |  |  |
| --- | --- | --- |
| **constraint** | **datatype** | **field** |
| **PK** | **int** | **hotel\_id** |
| **Not null** | **varchar** | **hotel\_name** |
| **Not null** | **int** | **hotel\_rating** |
| **Not null** | **int** | **nnumber\_hotel\_rooms** |
| **Not null** | **varchar** | **hotel\_address** |

**Hotel Rooms table description:**

|  |  |  |
| --- | --- | --- |
| **constraint** | **datatype** | **field** |
| **PK** | **int** | **rooms\_id** |
| **FK** | **int** | **hotel\_id** |
| **Not null** | **int** | **floor\_number** |
| **Not null** | **int** | **booking\_price** |
| **Not null** | **int** | **room\_condition** |

**Employees table description:**

|  |  |  |
| --- | --- | --- |
| **constraint** | **datatype** | **field** |
| **PK** | **int** | **employees\_id** |
| **FK** | **int** | **hotel\_id** |
| **Not null** | **varchar** | **employees\_name** |
| **Not null** | **int** | **employee\_salary** |
| **Not null** | **varchar** | **employee\_type** |

**Customers table description:**

|  |  |  |
| --- | --- | --- |
| **constraint** | **datatype** | **field** |
| **PK** | **int** | **customers\_id** |
| **Not null** | **varchar** | **customers\_name** |
| **FK** | **int** | **hotel\_id** |
| **FK** | **int** | **rooms\_id** |

**Invoice table description:**

|  |  |  |
| --- | --- | --- |
| **constraint** | **datatype** | **field** |
| **PK** | **int** | **Number\_id** |
| **FK** | **int** | **employees\_id** |
| **FK** | **int** | **hotel\_id** |
| **FK** | **int** | **customers\_id** |
| **Not null** | **date** | **invoice\_date** |
| **Not null** | **int** | **invoice\_value** |

**Restaurant table description**

|  |  |  |
| --- | --- | --- |
| **constraint** | **datatype** | **field** |
| **PK** | **int** | **restaurant\_id** |
| **Not null** | **varchar** | **restaurant\_name** |
| **FK** | **int** | **hotel\_id** |

**Meals table description:**

|  |  |  |
| --- | --- | --- |
| **constraint** | **datatype** | **field** |
| **PK** | **int** | **meals\_id** |
| **Not null** | **varchar** | **meals\_name** |
| **Not null** | **varchar** | **meal\_description** |
| **Not null** | **int** | **meals\_price** |
| **FK** | **int** | **restaurant\_id** |

**CREATE TABLE Employees (**

**employees\_id INT(5) NOT NULL,**

**employees\_name VARCHAR(255) NOT NULL,**

**employee\_type INT(5) NOT NULL,**

**employee\_salary INT(5) NOT NULL,**

**hotel\_id INT(5) NOT NULL,**

**PRIMARY KEY (employees\_id),**

**FOREIGN KEY (hotel\_id) REFERENCES Hotel(hotel\_id)**

**)**

**CREATE TABLE Hotel (**

**hotel\_id INT(5) NOT NULL,**

**hotel\_name VARCHAR(255) NOT NULL,**

**hotel\_address VARCHAR(255) NOT NULL,**

**Hotel\_rating INT(5) NOT NULL,**

**no\_hotel\_rooms INT(5) NOT NULL,**

**PRIMARY KEY (hotel\_id)**

**)**

**CREATE TABLE Invoice (**

**invoice\_id INT(5) NOT NULL,**

**invoice\_value INT(5) NOT NULL,**

**hotel\_id INT(5) NOT NULL,**

**employees\_id INT(5) NOT NULL,**

**invoice\_date INT(5) NOT NULL,**

**PRIMARY KEY (invoice\_id)**

**FOREIGN KEY (hotel\_id) REFERENCES Hotel(hotel\_id)**

**)**

**CREATE TABLE Restaurant (**

**restaurant\_id INT(5) NOT NULL,**

**restaurant\_name varchar(255) NOT NULL,**

**hotel\_id INT(5) NOT NULL,**

**PRIMARY KEY (restaurant\_id),**

**FOREIGN KEY (hotel\_id) REFERENCES Hotel(hotel\_id)**

**)**

**CREATE TABLE Meals (**

**meals\_id INT(5) NOT NULL,**

**meals\_name VARCHAR(255) NOT NULL,**

**restaurant\_id INT(5) NOT NULL,**

**meal\_description VARCHAR(255) NOT NULL,**

**meals\_price FLOAT NOT NULL,**

**hotel\_id INT(5) NOT NULL,**

**PRIMARY KEY (meals\_id),**

**FOREIGN KEY (hotel\_id) REFERENCES Hotel(hotel\_id), FOREIGN KEY (restaurant\_id) REFERENCES Restaurant(restaurant\_id)**

**)**

**CREATE TABLE Customers (**

**customers\_id INT(5) NOT NULL,**

**customers\_name VARCHAR(255) NOT NULL,**

**hotel\_id INT(5) NOT NULL,**

**rooms\_id INT(5) NOT NULL,**

**invoice\_id INT(5) NOT NULL,**

**PRIMARY KEY (customers\_id),**

**FOREIGN KEY (invoice\_id) REFERENCES Invoice(invoice\_id),**

**FOREIGN KEY (hotel\_id) REFERENCES Hotel(hotel\_id) )**

**CREATE TABLE serve (**

**employees\_id INT(5) NOT NULL,**

**customers\_id INT(5) NOT NULL,**

**PRIMARY KEY (employees\_id, customers\_id),**

**FOREIGN KEY (employees\_id) REFERENCES Employees(employees\_id),**

**FOREIGN KEY (customers\_id) REFERENCES Customers(customers\_id)**

**)**

**CREATE TABLE Hotel\_Rooms (**

**rooms\_id INT(5) NOT NULL**

**, hotel\_id INT(5) NOT NULL,**

**floor\_no INT(5) NOT NULL,**

**room\_condition INT(5) NOT NULL,**

**booking\_price INT(5) NOT NULL,**

**customers\_id INT(5) NOT NULL,**

**PRIMARY KEY (rooms\_id),**

**FOREIGN KEY (hotel\_id) REFERENCES Hotel(hotel\_id),**

**FOREIGN KEY (customers\_id) REFERENCES Customers(customers\_id)**

**)**

