**SPRING PLAINS HOTEL Database**

Our Database project is for the fictional startup hotel Spring Plains, based in Jordan. The hotel offers a rich international buffet breakfast with an extensive food selection. It provides a perfect place for chilling during the day. As the hotel is still in its early stages, it currently has a small number of employees, but its growth is rapid. To keep up with this growth, we have built a database system for the hotel.

Team Members:

Aws Almahasneh 20200388

Leen Aldib 20200281

Abdelrahman Alshwayat 20200729

Omar Obeid 20201009

-GUEST

The database will store each GUEST’S: **Guest\_ID**, **SSN**, Name (First\_name, Last\_name), Gender, Phone\_number.

-EMPLOYEE

The database will store the EMPLOYEE’S: **Employee\_ID**, **SSN,** Name (First\_name, Last\_name), Address, Birthdate, Salary, Gender.

-ROOM

The database will store each ROOM’S: **Room\_number**, Type, Room\_view, Capacity, Price.

-PROJECT

The database will store each PROJECT’S: **Project\_number**, Name, Cost.

-RESERVATION

The database will store each RESERVATION’S: **Reservation\_number**, Check\_in\_date, Payment\_method, Lengthofstay.

-DEPENDENT

The database will store each DEPENDENT’S: **First\_name**, Gender, Birthdate, Relationship.

-DEPARTMENT

The database will store each DEPARTMENT’S: **Department\_ID**, Department\_Name.

-SUPPLIER

The database will store each SUPPLIER'S: **Supplier\_ID**, Supplier\_name, Phone\_number, Delivery\_date.

**Relationships:**

**1.SUPPLIES:**

A supplier may supply a number of departments.

A department may be supplied by a number of suppliers.

The supplier entity has partial participation because not all suppliers will supply a department.

The department entity has partial participation because not all departments will be supplied by a supplier.

The supplier entity supplies a minimum of 0 departments and a maximum of N departments.

The department entity is supplied by a minimum of 0 suppliers and a maximum of N suppliers.

**2.MANAGER\_OF:**

A department must have an employee managing it.

An employee may be a manager of a department.

The department entity has total participation because every department has a manager.

The employee entity has partial participation because not every employee may be a manager of a department.

The department entity has a minimum and a maximum of 1 manager.

The employee entity manages a minimum of 0 departments and a maximum of 1 department.

**3.MAINTAINS:**

A department may maintain a number of rooms.

A room must be maintained by a number of departments.

The department entity has partial participation because not evey department maintains a room.

The room entity has total participation because every room is maintained by a number of departments.

The department entity maintains a minimum of 0 rooms and a maximum of N rooms.

The room entity is maintained by a minimum of 1 department and a maximum of N departments.

**4.MANAGES:**

A department may manage a number of projects.

A project must be managed by a number of departments.

The department entity has partial participation because not all departments manage a project.

The project entity has total participation because every project is managed by a department.

The department entity manages a minimum of 0 projects and a maximum of N projects.

The project entity is maintained by a minimum of 1 department and a maximum of N departments.

**5.WORKS\_FOR:**

A department must have a number of employees working for it.

An employee must work for a department.

The department entity has total participation because every department has employees working for it.

The employee entity has total participation because every employee works for a department.

The department entity has a minimum of 4 employees and a maximum of N employees.

The employee entity works for a minimum and a maximum of 1 department.

**6.WORKS\_ON\_PROJ:**

A project must be worked on by a number of employees.

An employee may work on a number of projects.

The project entity has total participation because every project is worked on by a number of employees.

The employee entity has partial participation because not every employee works on a project.

The project entity has a minimum of 4 employees and a maximum of N employees.

The employee entity has a minimum of 0 projects and a maximum of N projects.

**7.SUPERVISES:**

An employee(supervisor) may supervise a number of employees(supervisee).

An employee(supervisee) may be supervised by another employee(supervisor).

The employee(supervisor) has partial participation because not every employee is supervising other employees.

The employee(supervisee) has partial participation because not every employee is supervised by a supervisor.

The employee(supervisor) has a minimum of 0 and a maximum of N supervisees.

The employee(supervisee) has a minimum of 0 and a maximum of 1 supervisor.

**8.CARETAKER\_OF:**

The employee may be a caretaker of a number of dependents.

The dependent must have an employee taking care of it.

The employee entity has partial participation because not every employee is a caretaker of a dependent.

The dependent entity has total participation because every dependent must have a caretaker (dependent is a weak entity and needs to have an employee to exist).

The employee has a minimum of 0 and a maximum of N dependents.

The dependent has a minimum of 1 and a maximum of 1 employee.

**9.WORKS\_ON\_ROOM:**

An employee may maintain a number of rooms.

A room must be maintained by a number of employees.

The employee entity has partial participation because not every employee is working on a room.

The room entity has total participation because every room is worked on by a number of employees.

The employee works on a minimum of 0 rooms and a maximum of N rooms.

The room has a minimum of 1 and a maximum of N employees working on it.

**10.HANDLES:**

An employee may handle a number of reservations.

A reservation must be handled by an employee.

The employee entity has partial participation because not every employee handles a reservation.

The reservation entity has total participation because every reservation is handled by an employee.

The employee entity handles a minimum of 0 and a maximum of N reservations.

The reservation entity is handled by a minimum and a maximum of 1 employee.

**11.BOOKS:**

A guest must book a number of reservations.

A reservation must be booked by a guest.

The guest entity has total participation because every guest books a reservation.

The reservation entity has total participation because every reservation is booked by a guest.

The guest has a minimum of 1 and a maximum of N reservations.

The reservation entity has a minimum and a maximum of 1 guest.

**12.RESERVING**

A reservation must reserve a number of rooms.

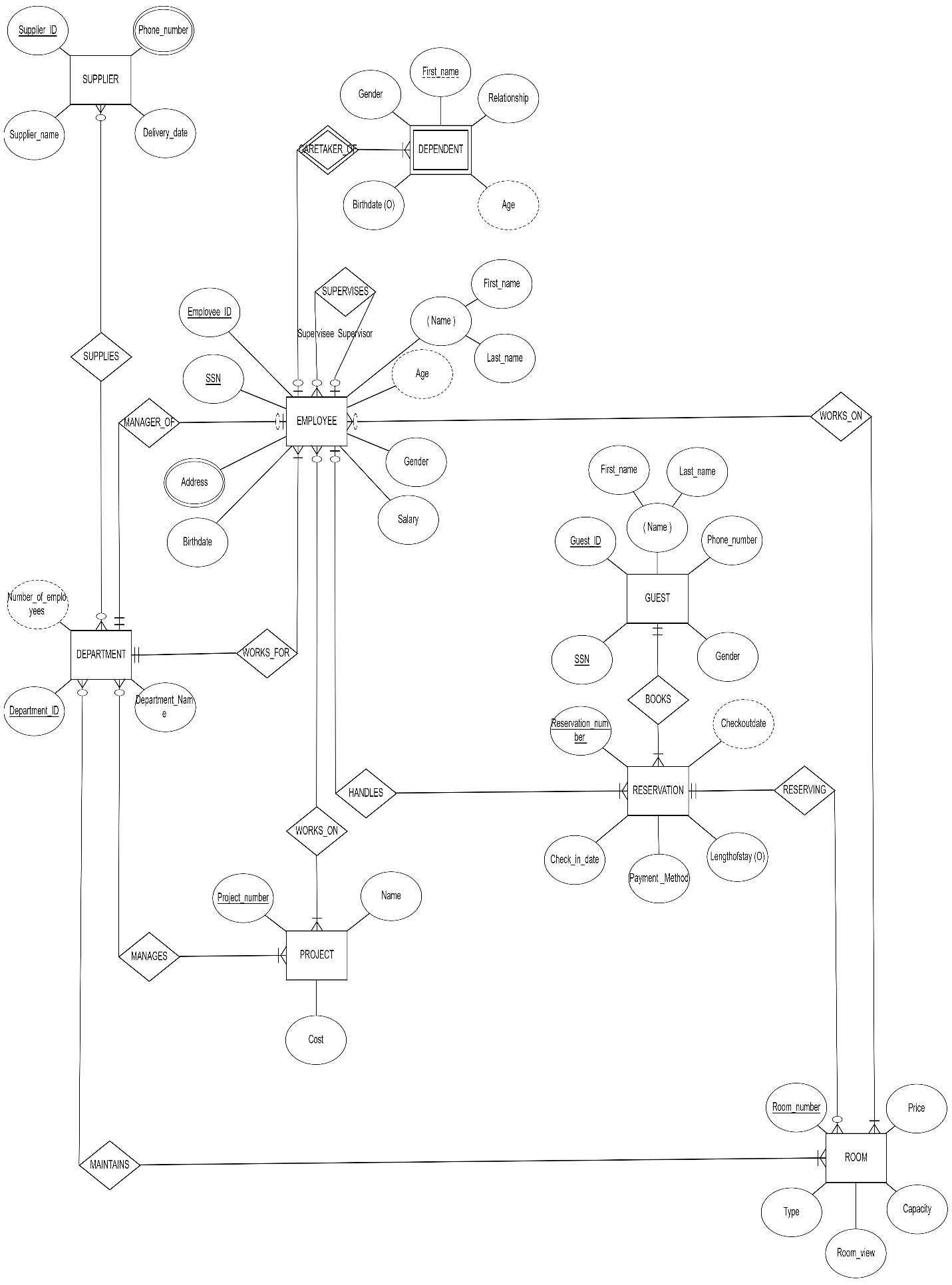
A room may be reserved by 1 reservation.

The reservation entity has total participation because every reservation books a number of rooms.

The room entity has partial participation because a room may be reserved by a reservation.

The reservation entity can reserve a minimum of 1 and a maximum of N rooms.

The room entity can be reserved by a minimum of 0 and a max of N reservations.



Diagram, schematic

Description automatically generated

Diagram

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