Night Gaming Café

Database Design

The Night Gaming Café (NGC) is a type of internet café which mainly provide a service for people to play online pc games using our up to date Gaming Desktop PCs. It maintains its service by offering a variety of gaming rooms and a main lobby with a total of 90 Gaming Desktop PCs seats. With the rise and demand for gaming social hubs that is participated by most youth, NGC have started its business in Toronto Ontario.

The purpose of the Online Booking Database is to gather information from the members of the café that makes a booking for a room or seating online from the web application form on a daily basis as well as to make the reservation information available to the employee of the café so they can provide an appropriate live service according to the booking day.

1. Conceptual Data Model

1. Member
2. Member Account
3. Booking
4. Room
5. Room Type
6. Seat
7. Seat Type
8. Section
9. Cafe
10. Employee
11. Role

2. Logical Data Modeling

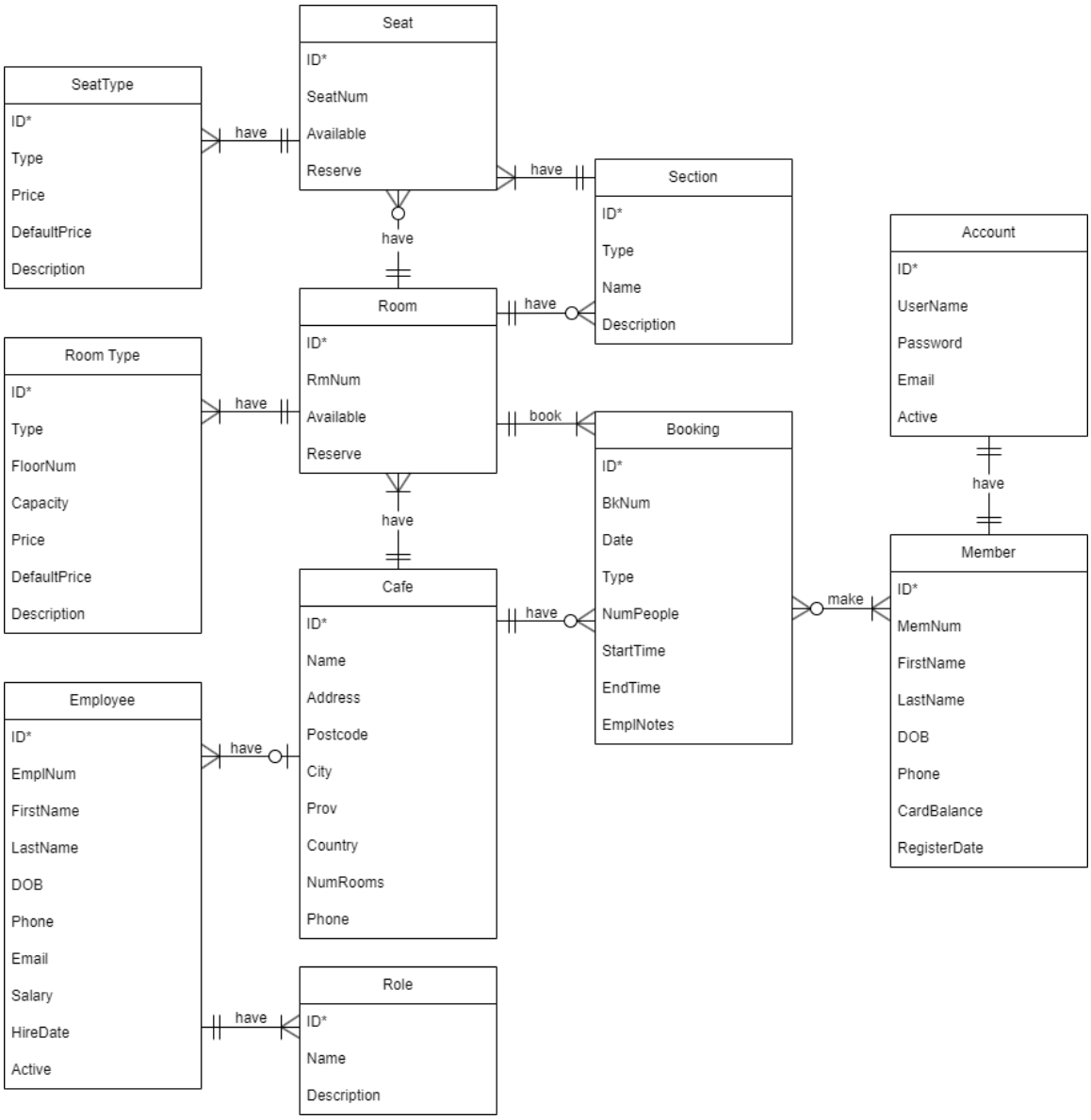
Entity	Attributes
Member	Member ID, Membership Number, First Name, Last Name, Date of Birth, Phone , Card Balance, Register Date
Member Account	Account ID, Username, Password, Email, Active
Booking	Booking ID, Booking Number, Date, Type, Number of People, Start Time, End Time, Employee Notes
Room	Room ID, Seat Number, Available, Reserve
Room Type	Room Type ID, Type, Floor Number, Capacity, Price, Default Price, Description
Seat	Seat ID, Seat Number, Available, Reserve
Seat Type	Seat Type ID, Type, Price, Default Price, Description
Section	Section ID, Type, Name, Description
Cafe	Café ID, Name, Address, Postcode, City, Province, Country, Number of Rooms, Phone
Employee	Employee ID, Employee Number, First Name, Last Name, Date of Birth, Phone, Email, Salary, Hire Date, Active
Role	Role ID, Name, Description

Entity Relationship Analysis

a) A member must have one and only one account. An account must have one and only one member.
b) A member may make one or more bookings. A booking must have one or more members.
c) A booking must book one and only one room. A room may be booked by one or more bookings.
d) A booking must reserve at one and only one café. A cafe may have one or more bookings.
e) A cafe must have one or more rooms. A room must belong to one and only one cafe.
f) A cafe must have one or more employees. An employee may work for one and only one cafe.
g) An employee may have one or more roles. A role must belong to one and only one employee.
h) A room must have one or more room types. A room type must belong to one and only one rooms.

i) A room may have one or more sections. A section must belong to one and only one rooms.
j) A room may have one or more seats. A seat must belong to one and only one rooms.
k) A seat must have one or more seat types. A seat type must belong to one and only one seat.
l) A seat must belong to one and only one section. A section must have one or more seats.

Entity Relationship Diagram



3. Physical Data Modeling

Table: Account

Columns:

ID	int AI PK
Username	varchar(50)
Password	varchar(100)
Email	varchar(255)
Active	enum('Y','N')

Table: Member

Columns:

ID	int AI PK
MemNum	varchar(9)
FirstName	varchar(50)
LastName	varchar(50)
DOB	date
Phone	varchar(15)
CardBalance	decimal(5,2)
RegisterDate	date
AcctID	int

Table: Cafe

Columns:

ID	int AI PK
Name	varchar(255)
Address	varchar(255)
Postcode	varchar(7)
City	varchar(50)
Prov	varchar(50)
Country	varchar(50)
NumRooms	smallint
Phone	varchar(15)

Table: Booking

Columns:

ID	int AI PK
BkNum	varchar(11)
Date	date
Type	enum('Gaming Room','VIP Room','eSports Conference Room','Lounge Lobby','Lounge eSports','Lounge Stage')
NumPeople	enum('1','2','3','4','5','6','7','8','9','10')
StartTime	enum('12:00','13:00','14:00','15:00','16:00','17:00','18:0','19:00','20:00','21:00')
EndTime	enum('Not Sure','13:00','14:00','15:00','16:00','17:00','18:0','19:00','20:00','21:00','22:00','23:00','24:00','01:00','02:00')
EmplNotes	varchar(100)
MemID	int
RmID	int
CafeID	int

Table: Room _Type

Columns:

ID	int AI PK
Type	enum('Lounge','Gaming Room','VIP Room','EC Room','None','Nonexistant')
FloorNum	varchar(7)
Capacity	smallint
Price	decimal(5,2)
DefaultPrice	decimal(5,2)
Description	varchar(100)

Table: Room

Columns:

ID	int AI PK
RmNum	varchar(15)
Available	enum('Y','N','None')
Reserve	enum('Y','N')
RmTypeID	int
CafeID	int

Table: Section

Columns:

ID	int AI PK
Type	enum('Lobby','eSports','Stage')
Name	varchar(11)
Description	varchar(100)
RmID	int

Table: Seat_Type

Columns:

ID	int AI PK
Type	enum('Lobby','eSports','Stage')
Price	decimal(4,2)
DefaultPrice	decimal(4,2)
Description	varchar(100)

Table: Seat

Columns:

ID	int AI PK
SeatNum	varchar(5)
Available	enum('Y','N')
Reserve	enum('Y','N')
RmID	int
SeatTypeID	int
SectionID	int

Table: Employee

Columns:

ID	int AI PK
EmplNum	varchar(9)
FirstName	varchar(50)
LastName	varchar(50)
DOB	date
Phone	varchar(15)
Email	varchar(255)
Salary	decimal(10,2)
HireDate	date
Active	enum('Y','N')
RoleID	int
CafeID	int

Table: Role

Columns:

ID	int AI PK
Name	varchar(15)
Description	varchar(120)

System Modules

Module	Supporting Entities
1. Registration a. Create Online Account b. Create Customer Account - Profile	Account Member
2. Authentication a. Log In b. Log Out	Account
3. Booking Management a. Add/Update/Delete Booking b. Check/Sort Booking c. Count Booking	Booking Member Room Cafe
4. Room Management a. Add/Update/Delete Room b. Check Room Availability	Room Room Type Section Cafe
5. Seat Management a. Add/Update/Delete Seat b. Check Seat Availability	Room Room Type Seat Seat Type Section Cafe
6. System Support a. Add/Update Role b. Add/Update Employee c. Add/Update Member	Employee Role Member