2.1 Regular Entity

1. Employee:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EmployeeID | Age | Salary\_rate | Name | State | City | Street\_name | Street\_number | Zipcode |

1. Dinning:

|  |  |  |
| --- | --- | --- |
| EmployeeID | Shift | Type |

EmployeeID is a FK referencing to the Employee.EmployeeID.

1. Concierge:

|  |  |
| --- | --- |
| EmployeeID | Concierge\_experience\_year |

EmployeeID is a FK referencing to the Employee.EmployeeID.

1. Housekeeping:

|  |  |
| --- | --- |
| EmployeeID | Housekeeping\_experience\_year |

EmployeeID is a FK referencing to the Employee.EmployeeID.

1. Receptionist:

|  |  |
| --- | --- |
| EmployeeID | Language |

EmployeeID is a FK referencing to the Employee.EmployeeID.

1. Tech\_support:

|  |  |
| --- | --- |
| EmployeeID | Tech\_support\_licence |

EmployeeID is a FK referencing to the Employee.EmployeeID.

1. Management:

|  |  |
| --- | --- |
| EmployeeID | Title |

EmployeeID is a FK referencing to the Employee.EmployeeID.

1. Catering:

|  |
| --- |
| EmployeeID |

EmployeeID is a FK referencing to the Employee.EmployeeID.

1. Accountant:

|  |  |
| --- | --- |
| EmployeeID | Accountant\_licence |

EmployeeID is a FK referencing to the Employee.EmployeeID.

1. Event:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Event\_ID | Event\_date | Event\_time | Event\_manager\_ID | Event\_deposit |

Event\_manager\_ID is a FK referencing to the Management.EmployeeID.

1. Client:

|  |
| --- |
| Customer\_ID |

1. Organization:

|  |
| --- |
| Customer\_ID |

Customer\_ID is a FK referencing to the Client. Customer\_ID.

1. Individual:

|  |  |  |  |
| --- | --- | --- | --- |
| Customer\_ID | Birthdate | Individual\_name | Individual\_sex |

Customer\_ID is a FK referencing to the Client. Customer\_ID.

1. Membership:

|  |
| --- |
| Membership\_number |

1. Room:

|  |  |  |  |
| --- | --- | --- | --- |
| Room\_number | Bed\_type | Room\_type | Per\_night\_price |

2.2: Weak Entity (We do not have this☹)

2.3: Mapping 1:1 relationship

Employee:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EmployeeID | Age | Salary\_rate | Name | State | City | Street\_name | Street\_number | Zipcode | Event\_staff\_ID |

Event\_staff\_ID is a FK referencing to the Employee. EmployeeID.

2.4 Mapping 1:N relationship (We do not have this☹)

2.5 Mapping M:N relationship

1. Clear:

|  |  |  |  |
| --- | --- | --- | --- |
| Employee\_ID | Room\_number | Date | Time |

Employee\_ID is a FK referencing to the Housekeeping.EmployeeID.

Room\_number is a FK referencing to the Room. Room\_number

1. Check\_out\_bill:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Room\_number | Customer\_ID | Check\_out\_bill\_amount | Check\_out\_bill\_issued\_date | Check\_in\_date | Check\_out\_date |

Room\_number is a FK referencing to the Room. Room\_number.

Customer\_ID is a FK referencing to the Individual. Customer\_ID.

1. Has:

|  |  |
| --- | --- |
| Customer\_ID | Membership\_number |

Customer\_ID is a FK referencing to the Individual. Customer\_ID.

Membership\_number is a FK referencing to the Membership. Membership\_number.

1. Holds:

|  |  |
| --- | --- |
| Event\_ID | Customer\_ID |

Event\_ID is a FK referencing to the Event.Event\_ID.

Customer\_ID is a FK referencing to the Organization.Customer\_ID.

1. Serve:

|  |  |  |  |
| --- | --- | --- | --- |
| Event\_ID | Employee\_ID | On\_call\_speaker | On-call\_number |

Event\_ID is a FK referencing to the Event.Event\_ID.

Employee\_ID is a FK referencing to the Employee.Employee\_ID.

2.6: Mapping of Multivalued Attributes

1. Bill\_event\_payment:

(Implemented after 2.7)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Customer\_ID | Event\_bill\_ID | Date | Time | Amount\_of\_event\_payment | Date\_of\_payment |

Customer\_ID is a FK referencing to the Organization.Customer\_ID.

1. Direct\_bill\_account:

|  |  |
| --- | --- |
| Customer\_ID | Direct\_bill\_account |

Customer\_ID is a FK referencing to the Organization.Customer\_ID.

1. Phone:

|  |  |
| --- | --- |
| Customer\_ID | Phone |

Customer\_ID is a FK referencing to the Individual.Customer\_ID.

1. Check\_out\_payment\_ID:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Customer\_ID | Room\_number | COP\_time | COP\_date | COP\_amount\_of\_payment |

Customer\_ID is a FK referencing to the Individual.Customer\_ID.

Room\_number is a FK referencing to the Room.Room\_number.

2.7: Mapping n-ary relationship

1. Check\_in:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Customer\_ID | Employee\_ID | Room\_number | Check\_in\_date | Key\_type | Check\_in\_time | Lounge | Length\_of\_stay |

Customer\_ID is a FK referencing to the Client.Customer\_ID.

Employee\_ID is a FK referencing to the Receptionist.Employee\_ID.

Room\_number is a FK referencing to the Room.Room\_number.

1. Bill\_for\_event:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Customer\_ID | Event\_bill\_ID | Event\_ID | Employee\_ID | Bill\_event\_date\_issued | Bill\_event\_amount |

Customer\_ID is a FK referencing to the Organization.Customer\_ID.

Event\_ID is a FK referencing to the Event.Event\_ID.

Employee\_ID is a FK referencing to the Accountant.Employee\_ID.