|  |
| --- |
| Close-up image showing the leaf-sides of two oversized books side-by-side on a bookshelf, with additional books in soft focus background |
| Hotel Reservation System  Database Final Project |
| |  |  |  | | --- | --- | --- | | M.A.RAMZY |  |  | |

* **Nada Ahmed – 4244**
* **Mohamed Ashraf – 3830**
* **Aliaa Abbas – 3747**
* **Abdel-Rahman Nour - 4311**

**Hotel Reservation System**

* **Project Overview:**  
  We were asked to design and implement a Hotel Reservation System based on specific requirements.

### Normalization:

### First Normal Form (1NF)

1. It should only have single(atomic) valued attributes/columns.
2. Values stored in a column should be of the same domain
3. All the columns in a table should have unique names.
4. And the order in which data is stored, does not matter.

**ER Diagram**

**Attribute**

**Weak** **Entity**

**Weak Relation**

**Relation**

**Attribute For Relation**

**Entity**

**Composite Attribute**

**Count**

(x..x)

**Multi-Valued Attribute**

(1..N)

**Approves**

**Suspends**

Broker

**Owner**

(1..1)

(1..N)

**Has**

(1..1)

(1..N)

Hotel

Room

**Searches**

(1..N)

(1..M)

(1..1)

Hotel

**Reserves**

Customer

(1..1)

**Has**

**Has**

(1..N)

(1..1)

(1..1)

(1..N)

**Design/Tables**

**Hotel**

|  |  |
| --- | --- |
| Name | String |
| Loc | String |
| Star | [1-7] |
| Rate | Real Number [1,10] |
| Approved | Boolean |
| Premium | Boolean |
| Owner\_ID | Foreign Key, Integer |
| Suspend | Boolean |

**Owner**

|  |  |
| --- | --- |
| ID | Integer |
| Name | String |
| E-mail | E-mail |
| PW | Password |

**Room**

|  |  |
| --- | --- |
| ID | Integer |
| Hotel\_Name | Foreign Key, String |
| Type | String (Single, Double, Suite) |
| Price | Integer |
| Facilities | VarChar |
| Image | Image |
| Status | Boolean |
| Count | Integer |

**Customer**

|  |  |
| --- | --- |
| ID | Integer |
| Name | String |
| E-mail | E-mail |
| Class | Boolean |
| BlackListed | Boolean |
| Appeared | Boolean |

**Reservation**

|  |  |
| --- | --- |
| Cust\_ID | Foreign Key, Integer |
| Room\_ID | Foreign Key, Integer |
| Hotel\_ID | Foreign Key, Integer |
| Start\_Date | Timestamp |
| Duration | Integer |
| Price\_Per\_Day | Integer |

**Payment**

|  |  |
| --- | --- |
| Res\_ID | Foreign Key, Integer |
| Amnt\_Due | Integer |
| Paid | Boolean |

**Broker**

|  |  |
| --- | --- |
| Name | String |
| E-mail | E-mail |
| Password | Password |

**Mapping**

Underlined -> Primary Key

Orange -> Foreign Key

**Broker** : Name, E-mail, Password

**Hotel** :Name, Loc, Rate, Premium, Owner\_ID, Star, Approved, Suspend

**Owner** : ID, Name, E-mail, PW

**Room** : ID, Hotel\_Name, Type, Price, Facilities, Image, Status, Count

**Customer** : ID, Name, E-mail, Appeared, Class, BlackListed

**Reservation** : Cust\_ID, Room\_ID, Hotel\_Name, Start\_Date, Duration, Price\_Per\_Day, ID, Payment

**Payment** : Resv\_ID, Amnt\_Due, Paid

**UML Diagrams**

+ ID

+ Name

+ E-mail

+ PW

**Owner**

+ Name   
+ Loc

+ Rate  
+ Premium   
+ Star

+ Approved   
+ Suspend

**Hotel**

+ Name

+ E-mail

+ Password

**Broker**

* **Owner\_ID**

+ ID  
+ Type  
+ Price  
+ Facilities   
+ Image  
+ Status

+ Count

+ Facilities

**Room**

+ Start\_Date  
+ Duration

+ Price\_Per\_Day  
+ ID   
+ Payment

**Reservation**

* **Hotel\_Name**

+ Amnt\_Due

+ Paid

**Payment**

* **Hotel\_Name**
* **Owner\_ID**
* **Room \_ID**

* **Resv \_ID**

+ ID  
+ Name  
+ E-mail  
+ Mobile  
+ Class   
+ BlackListed

+ Appeared

**Customer**

**Roles**

|  |  |
| --- | --- |
| ERD Diagram | Aliaa Ali Abbas - 3747 |
| Relations | **Abdel-Rahman Nour - 4311** |
| Bank End and Queries | **Mohamed Ashraf Ramzy - 3830** |
| CSS an Front End | **Nada Ahmed - 4244** |