# MERISE:

## Data dictionary:

* **Admin:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute | Meaning | Observation | Length | Constraint |
| ID | Admin identifier | *Integer* |  | *Primary key* |
| Full\_Name | Full name of the Admin | *Nvarchar* | 255 | *Not null* |
| Email | Email of the Admin | *Varchar* | 255 | *Not null* |
| Phone | Phone of the Admin | *Varchar* | 255 | *Not null* |
| Password | Password | *Varchar* | 255 | *Not null* |
| Last\_Update\_Date | Last update date | *Date* |  | *Not null* |
| Last\_Update\_By | Last update by which admin | *Integer* |  | *Foreign key* |

* **VehicleType:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute | Meaning | Observation | Length | Constraint |
| ID | Vehicle type identifier | *Integer* |  | *Primary key* |
| Name | The name of the vehicle type | *Nvarchar* | 255 | *Not null* |
| Last\_Update\_Date | Last update date | *Date* |  | *Not null* |
| Last\_Update\_By | Last update by which admin | *Integer* |  | *Foreign key* |

* **Vehicle:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute | Meaning | Observation | Length | Constraint |
| ID | Vehicle identifier | *Integer* |  | *Primary key* |
| Name | First name of the vehicle | *Nvarchar* | 255 | *Not null* |
| Vehicle\_Type\_ID | Vehicle type of the vehicle | *Integer* |  | *Foreign key* |
| Price | Price of the vehicle | *Float* |  | *Not null* |
| Color | Color of the vehicle | *Varchar* | 255 | *Not null* |
| Weight | Weight of the vehicle | *Float* |  | *Not null* |
| Cylinder | Cylinder of the vehicle | *Float* |  |  |
| Door\_Number | Number of doors of the vehicle | *Integer* |  |  |
| Length | Length of the vehicle | *Float* |  |  |
| Last\_Update\_Date | Last update date | *Date* |  | *Not null* |
| Last\_Update\_By | Last update by which admin | *Integer* |  | *Foreign key* |

* **User:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute | Meaning | Observation | Length | Constraint |
| ID | User identifier | *Integer* |  | *Primary key* |
| Full\_Name | Full name of the user | *Nvarchar* | 255 | *Not null* |
| Email | Email of the user | *Varchar* | 255 | *Not null* |
| Password | Password | *Varchar* | 255 |  |
| Phone | Phone of the user | *Nvarchar* | 255 | *Not null* |
| Role | Role of the user | *Varchar* | 255 | *Not null* |
| Last\_Update\_Date | Last update date | *Date* |  | *Not null* |
| Last\_Update\_By | Last update by which admin | *Integer* |  | *Foreign key* |

* **Reservation :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute | Meaning | Observation | Length | Constraint |
| ID | Reservation identifier | *Integer* |  | *Primary key* |
| User\_ID | User identifier | *Integer* |  | Foreign Key |
| Vehicle\_ID | Vehicle identifier | *Integer* |  | Foreign Key |
| Start\_Date | Start date of the reservation | *Date* |  | *Not null* |
| Return\_Date | Return date of the reservation | *Date* |  | *Not null* |
| Total\_Price | Total price of the reservation | *Float* |  | *Not null* |
| Last\_Update\_Date | Last update date of the seminar | *Date* |  | *Not null* |
| Last\_Update\_By | Last update by which admin | *Integer* |  | *Foreign key* |

* **Comment :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute | Meaning | Observation | Length | Constraint |
| ID | Comment identifier | *Integer* |  | *Primary key* |
| User\_ID | User identifier | *Integer* |  | Foreign Key |
| Vehicle\_ID | Vehicle identifier | *Integer* |  | Foreign Key |
| Content | Content of the comment | *Nvarchar* | 255 | *Not null* |
| Comment\_Date | Date of the comment | Date |  | *Not null* |
| Last\_Update\_Date | Last update date | *Date* |  | *Not null* |
| Last\_Update\_By | Last update by which admin | *Integer* |  | *Foreign key* |

## Determation of objects :

**Admin:**

* Admin (**ID**, Full\_Name, Email, Phone, Last\_Update\_Date, Last\_Update\_By)

**VehicleType:**

* VehicleType (**ID**, Name, Last\_Update\_Date, Last\_Update\_By)

**Vehicle:**

* Vehicle (**ID**, Name, Vehicle\_Type\_ID, Price, Color, Weight, Cylinder, Door\_Number, Length, Last\_Update\_Date, Last\_Update\_By)

**User:**

* User (**ID**, Full\_Name, Email, Phone, Role, Last\_Update\_Date, Last\_Update\_By)

**Reservation:**

* Reservation (**ID,** User\_ID, Vehicle\_ID, Start\_Date, Return\_Date, Total\_Price, Last\_Update\_Date, Last\_Update\_By)

**Comment:**

* Comment (**ID**, User\_ID, Vehicle\_ID, Content, Comment\_Date, Last\_Update\_Date, Last\_Update\_By)

## Relationship Determinations:

* **User to Comment:**
  + One user can make many comments.
  + One comment is made by only one user.
  + Relationship: One-to-Many (1 User - Makes - Many Comments)
* **Reservation to User:**
  + One reservation is made by one user.
  + One user can conduct many reservations.
  + Relationship: One-to-Many (1 Reservation - Conducted by - 1 User)
* **Vehicle to Comment:**
  + One vehicle can have many comments.
  + One comment is associated with only one vehicle.
  + Relationship: One-to-Many (1 Vehicle - Has - Many Comments)
* **VehicleType to Vehicle:**
  + One vehicle type can have many vehicles.
  + One vehicle is associated with only one vehicle type.
  + Relationship: One-to-Many (1 VehicleType - Has - Many Vehicles)
* **Vehicle to Reservation:**
  + One vehicle can be in many reservations.
  + One reservation is associated with only one vehicle.
  + Relationship: One-to-Many (1 Vehicle - In - Many Reservations)

 **Admin to VehicleType (Last\_Update\_By):**

* Each vehicle type has a last update done by an admin.
* Each admin can update many vehicle types.
* Relationship: One-to-Many (1 Admin - Updates - Many Vehicle types)

 **Admin to Vehicle (Last\_Update\_By):**

* Each vehicle has a last update done by an admin.
* Each admin can update many vehicles.
* Relationship: One-to-Many (1 Admin - Updates - Many Vehicles)

 **Admin to User (Last\_Update\_By):**

* Each user’s information is last updated by an admin.
* Each admin can update information for many users.
* Relationship: One-to-Many (1 Admin - Updates - Many Users)

 **Admin to Reservation (Last\_Update\_By):**

* Each reservation’s information is last updated by an admin.
* Each admin can update information for many reservations.
* Relationship: One-to-Many (1 Admin - Updates - Many Reservations)

 **Admin to Comment (Last\_Update\_By):**

* Each comment is last updated by an admin.
* Each admin can update many comments.
* Relationship: One-to-Many (1 Admin - Updates - Many Comments)

## Conceptual data model

A computer screen shot of a diagram

Description automatically generated

## Logical data model

A computer screen shot of a diagram

Description automatically generated