**Entity-Relationship (ER) model** for the **Car Rental Management System**

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| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Related Table** |
| admin\_id | INT | **PK, Auto Increment** | Admin |
| username | VARCHAR (255) | NOT NULL | Admin |
| password | VARCHAR (255) | NOT NULL | Admin, User |
| user\_id | INT | **PK, Auto Increment** | User |
| full\_name | VARCHAR (255) | NOT NULL | User |
| email | VARCHAR (255) | **UNIQUE, NOT NULL** | User, Subscriber, Contact Query |
| date\_of\_birth | DATE | NOT NULL | User |
| address | TEXT | NULL | User |
| contact\_number | VARCHAR (20) | NOT NULL | User, Contact Query |
| brand\_id | INT | **PK, Auto Increment** | Brands |
| brand\_name | VARCHAR (255) | NOT NULL | Brands |
| vehicle\_id | INT | **PK, Auto Increment** | Vehicles |
| model\_name | VARCHAR (255) | NOT NULL | Vehicles |
| status | ENUM ('Available', 'Booked', 'Maintenance') | DEFAULT 'Available' | Vehicles |
| Booking \_id | INT | **PK, Auto Increment** | Booking |
| status | ENUM ('Pending', 'Confirmed', 'Cancelled') | DEFAULT 'Pending' | Booking |
| Testimonial \_id | INT | **PK, Auto Increment** | Testimonial |
| message | TEXT | NOT NULL | Testimonial, Contact Query |
| subscriber\_id | INT | **PK, Auto Increment** | Subscriber |
| name | VARCHAR (255) | NOT NULL | Subscriber, Contact Query |
| query\_id | INT | **PK, Auto Increment** | Contact Query |

**Entities and Their Attributes**

**Admin**

* admin\_id (PK, Auto Increment)
* username
* password

**User**

* user\_id (PK, Auto Increment)
* full\_name
* email (UNIQUE)
* password
* date\_of\_birth
* address
* contact\_number

**Brands**

* brand\_id (PK, Auto Increment)
* brand\_name

**Vehicles**

* vehicle\_id (PK, Auto Increment)
* brand\_id (FK → Brands)
* model\_name
* status (ENUM: 'Available', 'Booked', 'Maintenance')

**Booking**

* booking\_id (PK, Auto Increment)
* user\_id (FK → Users)
* vehicle\_id (FK → Vehicles)
* status (ENUM: 'Pending', 'Confirmed', 'Cancelled')

**Payment**

* payment\_id (PK, Auto Increment)
* booking\_id (FK → Booking)
* amount
* payment\_date
* payment\_status (ENUM: 'Completed', 'Pending', 'Failed')

**Testimonial**

* testimonial\_id (PK, Auto Increment)
* user\_id (FK → Users)
* message

**Contact Query**

* query\_id (PK, Auto Increment)
* name
* email
* message
* contact\_number

**Subscriber**

* subscriber\_id (PK, Auto Increment)
* name
* email (UNIQUE)

**Admin**

* Username
* Password

**User**

* Full Name
* Email ID
* Password
* Date of Birth
* Address
* Contact Number

**Brands**

* Brand Name

**Vehicles**

* Vehicle ID
* Status

**Booking**

* Email ID (User)
* Vehicle ID
* Status

**Testimonial**

* User Email

**Subscriber**

* Name
* Email ID

**Contact Query**

* Name
* Email ID
* Message
* Contact Number

