# Car Rental System Analysis and Design

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# Car Rental System ERD

Graphical user interface, application, Teams

Description automatically generated

# Data Dictionary

Table USER

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Key | Description | Mandatory (Yes/No) |
| 1 | User\_ID | Number | 10 | PK | A unique user identification | Yes |
| 2 | User\_Name | Character | 20 |  | Name of the user | Yes |
| 3 | User\_Pass | Character | 20 |  | Password of the user account | Yes |

Table OWNER

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Key | Description | Mandatory (Yes/No) |
| 1 | Own\_ID | Number | 10 | PK | A unique owner identification | Yes |
| 2 | Own\_Name | Character | 20 |  | Name of owner | Yes |
| 3 | Own\_Pass | Character | 20 |  | Password of owner account | Yes |

Table VEHICLE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Key | Description | Mandatory (Yes/No) |
| 1 | V\_ID | Number | 10 | PK | A unique vehicle identification | Yes |
| 2 | Own\_ID | Number | 10 | FK | A foreign key of table OWNER | Yes |
| 3 | V\_Type | Character | 20 |  | Vehicle type | Yes |
| 4 | V\_Brand | Character | 20 |  | Vehicle brand | No |
| 5 | V\_PlateNum | Character | 20 |  | Vehicle plate number | No |
| 6 | V\_Price | Number | 10 |  | The price of the rental per day | Yes |
| 7 | V\_Status | Character | 20 |  | (available/unavailable) | No |

Table RENTED

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Key | Description | Mandatory (Yes/No) |
| 1 | R\_ID | Number | 10 | PK | A unique rental identification | Yes |
| 2 | V\_ID | Number | 10 | FK | A foreign key of table VEHICLE | Yes |
| 3 | User\_ID | Number | 10 | FK | A foreign key of table USER | Yes |
| 4 | R\_Date | Date |  |  | The date when the rental starts | No |
| 5 | R\_End | Date |  |  | The date when the rental ends | No |
| 6 | R\_Status | Character | 30 |  | (active/returned) | No |

Table RETURNED

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Key | Description | Mandatory (Yes/No) |
| 1 | Return\_ID | Number | 10 | PK | A unique rental returned identification | Yes |
| 2 | R\_ID | Number | 10 | FK | A foreign key of table RENTED | Yes |
| 3 | Return\_Date | Date |  |  | The date of rental returned/cancellation | No |
| 4 | Return\_Earn | Number | 10 |  | Calculated rent cost by day | No |

# Car Rental System DFD

**Context Diagram**

**Diagram

Description automatically generated**

**Level-1**

**Diagram

Description automatically generated**

# Car Rental System Flowchart

Diagram

Description automatically generated

Diagram

Description automatically generated