**Advanced Database Management**

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**DDL Exercise 3: Build Rental System**

**Version 1.0 Revision 1**

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|  |  |  |
| --- | --- | --- |
| **Num** | **Topic** | **Page num.** |
| 1 | Relational Schema for reference | 3 |
| 2 | Data Dictionary | 4-10 |
| 3 | Database Diagram | 11 |
| 4 | Screen display to show check and defaults | 12 |
| 5 | MDM and LDF files | 12 |
|  |  |  |
|  |  |  |
|  |  |  |

**Relational Schema (for reference):**



**Data Dictionary:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table** | **Tenant** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| TenantID | PK to uniquely identify the Tenant table | int |  | Y | Y |  |  |  |  | Y |
| FName | First Name of the tenant | varchar | 25 |  |  |  |  |  |  |  |
| LName | Last Name of the tenant | varchar | 25 |  |  |  |  |  |  |  |
| PhoneNum | Phone num of the tenant | char | 10 |  |  |  |  |  |  |  |
| EmailID | Email ID of tenant | varchar | 50 |  |  |  |  |  |  |  |
| NumLatePayments | Number of time tenant made late payments | int |  |  |  | 0 |  |  |  |  |
|  | | | | | | | | | | |
| **Table** | **ConductInspection** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| **Inspection\_ID** | PK to uniquely identify the ConductInspection table | int |  | Y | Y |  |  |  |  | Y |
| Type | Type of inspection done by a Tenant | Char | 10 |  |  |  | Move-In,  Move-Out,  Air-Filter |  |  |  |
| PhotoID | Type of PhotoID provided | Char | 20 |  |  |  |  |  |  |  |
| *TenantID* | FK of Tenant table | int |  |  |  |  |  |  |  | Y |
| *PropertyID* | FK of Property table | int |  |  |  |  |  |  |  | Y |
|  | | | | | | | | | | |
| **Table** | **Property** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| PropertyID | PK to uniquely identify Property table | int |  | Y | Y |  |  |  |  | Y |
| PropertyNum | Property number like Apt#, House#, etc | char | 6 |  |  |  |  |  |  |  |
| Street | Street address of the property | varchar | 25 |  |  |  |  |  |  |  |
| City | City location of the property | varchar | 25 |  |  | "Tampa" |  |  |  |  |
| Zip | Poncode of the property | char | 5 |  |  |  | 5 digits |  |  |  |
| LocInfo | Additional info of the location | char | 50 |  |  |  |  |  | Y |  |
| *LandlordID* | FK to identify Landlord table | int |  |  |  |  |  |  |  | Y |
|  | | | | | | | | | | |
| **Table** | **Landlord** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| LandlordID | PK to uniquely identify Landlord table | int |  | Y | Y |  |  |  |  | Y |
| FirstName | First Name of the tenant | varchar | 25 |  |  |  |  |  |  |  |
| LastName | Last Name of the tenant | varchar | 25 |  |  |  |  |  |  |  |
| Phone | Phone num of the tenant | char | 10 |  |  |  |  |  |  |  |
| EmailID | Email ID of tenant | varchar | 50 |  |  |  |  |  |  |  |
|  | | | | | | | | | | |
| **Table** | **Maintenance** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| MaintenanceID | PK to uniquely identify Maintenance table | int |  | Y | Y |  |  |  |  | Y |
| Type | Maintenance type req by Tenant | char | 7 |  |  | Routine | "Fix",  "Routine",  "Inspect" |  |  |  |
| *PropertyID* | FK to identify Property table | int |  |  |  |  |  |  |  | Y |
| *VendorID* | FK to identify Vendor table | int |  |  |  |  |  |  |  | Y |
|  | | | | | | | | | | |
| **Table** | **Vendor** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| VendorID | PK to uniquely identiofy Vendor | int |  | Y | Y |  |  |  |  | Y |
| FName | First Name of a Vendor | varchar | 25 |  |  |  |  |  |  |  |
| LName | Last Name of a Vendor | varchar | 25 |  |  |  |  |  |  |  |
| PhoneNum | Phone num of a Vendor | char | 10 |  |  |  |  |  |  |  |
| EmailID | Email ID of a Vendor | varchar | 50 |  |  |  |  |  |  |  |
|  | | | | | | | | | | |
| **Table** | **ServicesOffered** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| VendorID | Composite key to uniquely identify Vendor and its services | int |  |  |  |  |  |  |  | Y |
| ServicesOffered | Composite Primary key to identify the Service Offered by Vendor | varchar | 50 |  |  |  |  |  |  | Y |
|  | | | | | | | | | | |
| **Table** | **Service** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| MaintenanceID | Composite Foreign Key to identify Maintenance table | int |  |  |  |  |  |  |  | Y |
| VendorID | Composite Foreign Key to identify Vendor table | int |  |  |  |  |  |  |  | Y |
| PropID | Composite Foreign Key to identify Property table | int |  |  |  |  |  |  |  | Y |
| DateOfMaintenance | Date when maintenance was done | date |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | |
| **Table** | **RentPayment** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| RentTxId | PK to uniquely identify RentPayment table | int |  | Y | Y |  |  |  |  | Y |
| DateOfPayment | Date when rent was paid | date |  |  |  |  |  |  |  |  |
| *TenantID* | FK to identify Tenant table | int |  |  |  |  |  |  |  | Y |
| *PropID* | FK to identify Property table | int |  |  |  |  |  |  |  | Y |
|  | | | | | | | | | | |
| **Table** | **Request** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| TenantID | Composite Foreign Key to identify Tenant table | int |  |  |  |  |  |  |  | Y |
| MaintenanceID | Composite Foreign Key to identify Maintenance table | int |  |  |  |  |  |  |  | Y |
|  | | | | | | | | | | |
| **Table** | **Require** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| PropID | Composite Foreign Key to identify Property table | int |  |  |  |  |  |  |  | Y |
| MaintenanceID | Composite Foreign Key to identify Maintenance table | int |  |  |  |  |  |  |  | Y |
|  | | | | | | | | | | |
| **Table** | **Receive** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| RentTxID | Composite Foreign Key to identify RentPayment table | int |  |  |  |  |  |  |  | Y |
| PropID | Composite Foreign Key to identify Property table | int |  |  |  |  |  |  |  | Y |
|  | | | | | | | | | | |
| **Table** | **Rent** | | | | | | | | | |
| **Column Name** | **Description** | **Data Type** | **Size** | **Identity** | **Unique** | **Default** | **Check** | **Rule** | **AllowNulls** | **Index** |
| TenantID | Composite Foreign Key to identify Tenant table | int |  |  |  |  |  |  |  | Y |
| RentTxID | Composite Foreign Key to identify RentPayment table | int |  |  |  |  |  |  |  | Y |
| PropID | Composite Foreign Key to identify Property table | int |  |  |  |  |  |  |  | Y |

**2. Database Diagram:**

Diagram

Description automatically generated

**3. Screen Capture of expanded Inspection table to display check**

Graphical user interface, application

Description automatically generated

**Screen Capture of expanded Maintenance table to display check and default**

Graphical user interface, application, Word

Description automatically generated

**4. MDF and LDF files:**

Attached separately