Create Apartment Table

CREATE TABLE Apartment (

Apartment\_ID SMALLINT PRIMARY KEY,

Floor\_Number TINYINT,

Apartment\_Type VARCHAR(4)

);

Create Owner Table

CREATE TABLE Owner (

Owner\_ID SMALLINT AUTO\_INCREMENT PRIMARY KEY,

Ownership\_Date DATE

);

Create Apartment\_Owned\_by\_Owner Table

CREATE TABLE Apartment\_Owned\_by\_Owner (

Apartment\_ID SMALLINT,

Owner\_ID SMALLINT,

Ownership\_Status CHAR(1),

PRIMARY KEY (Apartment\_ID, Owner\_ID),

FOREIGN KEY (Apartment\_ID) REFERENCES Apartment(Apartment\_ID) ON DELETE CASCADE,

FOREIGN KEY (Owner\_ID) REFERENCES Owner(Owner\_ID) ON DELETE CASCADE

);

Create Tenant Table

CREATE TABLE Tenant (

Tenant\_ID SMALLINT AUTO\_INCREMENT PRIMARY KEY,

Apartment\_ID SMALLINT,

Owner\_ID SMALLINT,

Tenant\_Status CHAR(1),

FOREIGN KEY (Apartment\_ID) REFERENCES Apartment(Apartment\_ID) ON DELETE CASCADE,

FOREIGN KEY (Owner\_ID) REFERENCES Owner(Owner\_ID) ON DELETE CASCADE

);

Create Family\_Member\_Contact\_Info Table

CREATE TABLE Family\_Member\_Contact\_Info (

Contact\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Phone\_Number CHAR(10) CHECK (Phone\_Number REGEXP '^[0-9]{10}$'),

Email VARCHAR(36)

);

Create Family\_ID\_Proof Table

CREATE TABLE Family\_ID\_Proof (

ID\_Proof\_ID INT AUTO\_INCREMENT PRIMARY KEY,

ID\_Type VARCHAR(16),

ID\_Number CHAR(12)

);

Create Family\_Member Table

CREATE TABLE Family\_Member (

Family\_Member\_ID SMALLINT AUTO\_INCREMENT PRIMARY KEY,

First\_Name VARCHAR(20),

Middle\_Name VARCHAR(8),

Last\_Name VARCHAR(20),

Age TINYINT CHECK (Age > 0 AND Age < 120),

Relationship VARCHAR(16),

Contact\_ID INT,

ID\_Proof\_ID INT,

Tenant\_ID SMALLINT NULL,

Owner\_ID SMALLINT NULL,

FOREIGN KEY (Tenant\_ID) REFERENCES Tenant(Tenant\_ID) ON DELETE CASCADE,

FOREIGN KEY (Owner\_ID) REFERENCES Owner(Owner\_ID) ON DELETE CASCADE,

FOREIGN KEY (Contact\_ID) REFERENCES Family\_Member\_Contact\_Info(Contact\_ID),

FOREIGN KEY (ID\_Proof\_ID) REFERENCES Family\_ID\_Proof(ID\_Proof\_ID),

CONSTRAINT Check\_Tenant\_Or\_Owner CHECK (

(Tenant\_ID IS NOT NULL AND Owner\_ID IS NULL) OR

(Owner\_ID IS NOT NULL AND Tenant\_ID IS NULL)

)

);

Create Visitor\_Contact\_Info Table

CREATE TABLE Visitor\_Contact\_Info (

Contact\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Phone\_Number CHAR(10) CHECK (Phone\_Number REGEXP '^[0-9]{10}$'),

Email VARCHAR(36)

);

Create Visitor\_ID\_Proof Table

CREATE TABLE Visitor\_ID\_Proof (

ID\_Proof\_ID INT AUTO\_INCREMENT PRIMARY KEY,

ID\_Type VARCHAR(16),

ID\_Number CHAR(12)

);

Create Visitor Table

CREATE TABLE Visitor (

Visitor\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Contact\_ID INT,

ID\_Proof\_ID INT,

First\_Name VARCHAR(20),

Middle\_Name VARCHAR(8),

Last\_Name VARCHAR(20),

FOREIGN KEY (Contact\_ID) REFERENCES Visitor\_Contact\_Info(Contact\_ID),

FOREIGN KEY (ID\_Proof\_ID) REFERENCES Visitor\_ID\_Proof(ID\_Proof\_ID)

);

Create Driver\_Contact\_Info Table

CREATE TABLE Driver\_Contact\_Info (

Contact\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Phone\_Number CHAR(10) CHECK (Phone\_Number REGEXP '^[0-9]{10}$'),

Email VARCHAR(36)

);

Create Driver\_ID\_Proof Table

CREATE TABLE Driver\_ID\_Proof (

ID\_Proof\_ID INT AUTO\_INCREMENT PRIMARY KEY,

ID\_Type VARCHAR(16),

ID\_Number CHAR(12)

);

Create Vehicle Table

CREATE TABLE Vehicle (

Vehicle\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Model VARCHAR(16),

Type VARCHAR(12),

Driver\_First\_Name VARCHAR(24),

Driver\_Middle\_Name VARCHAR(12),

Driver\_Last\_Name VARCHAR(24),

Contact\_ID INT,

ID\_Proof\_ID INT,

Visitor\_ID INT,

Owner\_Type CHAR(1),

FOREIGN KEY (Contact\_ID) REFERENCES Driver\_Contact\_Info(Contact\_ID),

FOREIGN KEY (ID\_Proof\_ID) REFERENCES Driver\_ID\_Proof(ID\_Proof\_ID),

FOREIGN KEY (Visitor\_ID) REFERENCES Visitor(Visitor\_ID) ON DELETE SET NULL

);

Create Owner\_Family\_Vehicle Table

CREATE TABLE Owner\_Family\_Vehicle (

Owner\_ID SMALLINT,

Vehicle\_ID INT,

Family\_Member\_ID SMALLINT,

PRIMARY KEY (Owner\_ID, Vehicle\_ID, Family\_Member\_ID),

FOREIGN KEY (Owner\_ID) REFERENCES Owner(Owner\_ID) ON DELETE CASCADE,

FOREIGN KEY (Vehicle\_ID) REFERENCES Vehicle(Vehicle\_ID) ON DELETE CASCADE,

FOREIGN KEY (Family\_Member\_ID) REFERENCES Family\_Member(Family\_Member\_ID) ON DELETE CASCADE

);

Create Tenant\_Family\_Vehicle Table

CREATE TABLE Tenant\_Family\_Vehicle (

Tenant\_ID SMALLINT,

Vehicle\_ID INT,

Family\_Member\_ID SMALLINT,

PRIMARY KEY (Tenant\_ID, Vehicle\_ID, Family\_Member\_ID),

FOREIGN KEY (Tenant\_ID) REFERENCES Tenant(Tenant\_ID) ON DELETE CASCADE,

FOREIGN KEY (Vehicle\_ID) REFERENCES Vehicle(Vehicle\_ID) ON DELETE CASCADE,

FOREIGN KEY (Family\_Member\_ID) REFERENCES Family\_Member(Family\_Member\_ID) ON DELETE CASCADE

);

Create Entry\_Details Table

CREATE TABLE Entry\_Details (

Entry\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Entry\_Date DATE,

Entry\_Time TIME,

Person\_Count TINYINT CHECK (Person\_Count >= 0)

);

Create Exit\_Details Table

CREATE TABLE Exit\_Details (

Exit\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Exit\_Date DATE,

Exit\_Time TIME,

Person\_Count TINYINT CHECK (Person\_Count >= 0)

);

Create Enters Table

CREATE TABLE Enters (

Vehicle\_ID INT,

Apartment\_ID SMALLINT,

Entry\_ID INT,

PRIMARY KEY (Vehicle\_ID, Apartment\_ID, Entry\_ID),

FOREIGN KEY (Vehicle\_ID) REFERENCES Vehicle(Vehicle\_ID) ON DELETE CASCADE,

FOREIGN KEY (Apartment\_ID) REFERENCES Apartment(Apartment\_ID) ON DELETE CASCADE,

FOREIGN KEY (Entry\_ID) REFERENCES Entry\_Details(Entry\_ID) ON DELETE CASCADE

);

Create Exits Table

CREATE TABLE Exits (

Vehicle\_ID INT,

Apartment\_ID SMALLINT,

Exit\_ID INT,

PRIMARY KEY (Vehicle\_ID, Apartment\_ID, Exit\_ID),

FOREIGN KEY (Vehicle\_ID) REFERENCES Vehicle(Vehicle\_ID) ON DELETE CASCADE,

FOREIGN KEY (Apartment\_ID) REFERENCES Apartment(Apartment\_ID) ON DELETE CASCADE,

FOREIGN KEY (Exit\_ID) REFERENCES Exit\_Details(Exit\_ID) ON DELETE CASCADE

);

Create Visit\_Timing Table

CREATE TABLE Visit\_Timing (

Visit\_Timing\_ID INT AUTO\_INCREMENT PRIMARY KEY,

In\_Time TIME,

Out\_Time TIME,

Purpose VARCHAR(40),

Person\_Count TINYINT CHECK (Person\_Count >= 0)

);

Create Visits Table

CREATE TABLE Visits (

Apartment\_ID SMALLINT,

Visitor\_ID INT,

Visit\_Timing\_ID INT,

PRIMARY KEY (Apartment\_ID, Visitor\_ID, Visit\_Timing\_ID),

FOREIGN KEY (Apartment\_ID) REFERENCES Apartment(Apartment\_ID) ON DELETE CASCADE,

FOREIGN KEY (Visitor\_ID) REFERENCES Visitor(Visitor\_ID) ON DELETE CASCADE,

FOREIGN KEY (Visit\_Timing\_ID) REFERENCES Visit\_Timing(Visit\_Timing\_ID) ON DELETE CASCADE

);