

LAB 6/7

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Normalized DDL Statements:

1. Applicant Table

```
CREATE TABLE LicensingAuthority.Applicant (  
    ApplicantID INT PRIMARY KEY,  
    FirstName VARCHAR(50) NOT NULL,  
    LastName VARCHAR(50) NOT NULL,  
    DateOfBirth DATE,  
    Email VARCHAR(100) UNIQUE  
);
```

2. LicenseType Table

```
CREATE TABLE LicensingAuthority.LicenseType (  
    LicenseTypeID INT PRIMARY KEY,  
    LicenseName VARCHAR(50) NOT NULL,  
    Description VARCHAR(255)  
);
```

3. Vehicle Table

```
CREATE TABLE LicensingAuthority.Vehicle (  
    VehicleID INT PRIMARY KEY,  
    VehicleModel VARCHAR(50) NOT NULL,  
    VehicleYear INT CHECK (VehicleYear >= 1990 AND VehicleYear <=  
YEAR(CURDATE()))  
);
```

4. License Table

```
CREATE TABLE LicensingAuthority.License (  
    LicenseID INT PRIMARY KEY,  
    ApplicantID INT,  
    LicenseTypeID INT,  
    IssuedDate DATE NOT NULL,  
    ExpiryDate DATE NOT NULL,  
    ValidityPeriod INT CHECK (ValidityPeriod >= 1 AND <= 10),
```

```

        FOREIGN KEY (ApplicantID) REFERENCES
        LicensingAuthority.Applicant(ApplicantID) ON DELETE CASCADE ON
UPDATE CASCADE,
        FOREIGN KEY (LicenseTypeID) REFERENCES
        LicensingAuthority.LicenseType(LicenseTypeID) ON DELETE
RESTRICT ON UPDATE CASCADE
);

```

5. Test Table

```

CREATE TABLE LicensingAuthority.Test (
    TestID INT PRIMARY KEY,
    ApplicantID INT,
    VehicleID INT,
    TestDate DATE NOT NULL,
    Result VARCHAR(10) CHECK (Result IN ('Pass', 'Fail')),
    FOREIGN KEY (ApplicantID) REFERENCES
    LicensingAuthority.Applicant(ApplicantID) ON DELETE CASCADE ON
UPDATE CASCADE,
    FOREIGN KEY (VehicleID) REFERENCES LicensingAuthority.Vehicle(VehicleID)
    ON DELETE SET NULL ON
UPDATE CASCADE
);

```

6. TestSchedule Table

```

CREATE TABLE LicensingAuthority.TestSchedule (
    ScheduleID INT PRIMARY KEY,
    TestID INT,
    ScheduledDate DATETIME NOT NULL,
    FOREIGN KEY (TestID) REFERENCES LicensingAuthority.Test(TestID) ON
DELETE CASCADE ON UPDATE
CASCADE
);

```

7. User Table

```

CREATE TABLE LicensingAuthority.User (
    UserID INT PRIMARY KEY,
    Username VARCHAR(50) NOT NULL UNIQUE,
    PasswordHash VARCHAR(255) NOT NULL,
    Role VARCHAR(20) CHECK (Role IN ('Admin', 'Applicant'))
);

```

8. Payment Table

```

CREATE TABLE LicensingAuthority.Payment (
    PaymentID INT PRIMARY KEY,
    UserID INT,
    LicenseID INT,
    PaymentDate DATE NOT NULL,

```

```
        Amount DECIMAL(10,2) CHECK (Amount > 0),
        FOREIGN KEY (UserID) REFERENCES LicensingAuthority.User(UserID) ON
        DELETE CASCADE ON UPDATE
CASCADE,
        FOREIGN KEY (LicenseID) REFERENCES LicensingAuthority.License(LicenseID)
        ON DELETE RESTRICT ON
        UPDATE CASCADE
);
```

9. Renewal Table

```
CREATE TABLE LicensingAuthority.Renewal (
    RenewalID INT PRIMARY KEY,
    LicenseID INT,
    RenewalDate DATE NOT NULL,
    NewExpiryDate DATE NOT NULL,
    FOREIGN KEY (LicenseID) REFERENCES LicensingAuthority.License(LicenseID)
    ON DELETE CASCADE ON
    UPDATE CASCADE
);
```