RELATIONAL SCHEMA

Crime(
DRNO: INT [PK],
ReportID: INT [FK to SelfReportCime.ReportID],
DateRpt: DATE,
DateOcc: DATE,
TimeOcc: TIME,
VictimAge: INT,
VictimSex: VARCHAR(1),
VictimDescent: VARCHAR(1),
Location: VARCHAR(255),
Lat: REAL,
Long: REAL,
RptDistNo: INT(4) [FK to SubArea.RptDistNo],
CrimeCD: INT(3) [FK to CrimeType.CrimeCD],
StatusCD: VARCHAR(2) [FK to Status.StatusCD],
PremisCD: INT(3) [FK to Premis.PremisCD],
WeaponCD: INT(3) [FK to WeaponInfo.WeaponCD]
)

SelfReportCrime(
ReportID: INT [PK],
DateOcc: DATETIME,
TimeOcc: TIME,
Location: VARCHAR(255),
Crime: Varchar(255),
Description: Varchar(500),
Fname: Varchar(255),
Lname: Varchar(255),
Phone: Varchar(10),
Email: Varchar(255),
AdminUsername: VARCHAR(20) [FK to Admin]
)

CrimeType(
CrimeCD: INT(3) [PK],
CrimeDesc: VARCHAR(255)
)

Status(
StatusCD: VARCHAR(2) [PK],
StatusDesc: VARCHAR(255)
)

Premis(
PremisCD: INT(3) [PK],
PremisDesc: VARCHAR(100)
)

WeaponInfo(
WeaponCD: INT(3) [PK],
WeaponDesc: VARCHAR(255)
)

Admin(
Username: VARCHAR (20) [PK],
Password: VARCHAR (50)
)

SubArea(
RptDistNo: INT(4) [PK],
AreaID: INT(2),
AreaName: VARCHAR(100)
)

General Description:

Our Crime database contains information about Crimes reported from 2010 - 2019 and 2020 - 2023 in Los Angeles, California. We separated the 2 decades because we are getting our info from 2 databases, one for each decade, and we want to compare them. Each Crime contains its own ID (for a Crime it's DRNO - Division of Records Number, and for a self-reported crime it's ReportID)

The **Crime** table has 16 attributes: DRNO - Division of Records Number, ReportID, DateRpt, DateOcc, TimeOcc, VictimAge, VictimSex, VictimDescent, Location, Lat, Long, RptDistNo, CrimeCD, StatusCD, PremisCD, and WeaponCD. The DRNO is the primary key for this table and identifies each crime that occurred. ReportID is a foreign key that references ReportID from SelfReportCrime. ReportID is an identifier given to crimes that are self-reported. DateRpt represents the date the crime was reported, and the DateOcc and TimeOcc represent the date and time the crime occurred respectively. VictimAge, VictimSec, and VictimDescent represent the Age, Gender, and Ethnicity of the victim respectively. Location, Lat, and Long represent the location, longitude, and latitude respectively of where the crime occurred. RptDistNo (Report District Number), CrimeCD, StatusCD, PremisCD, and WeaponCD are foreign keys that reference the Subarea, CrimeType, Status, Premis, and WeaponInfo tables respectively (more to be said about them in the following paragraphs).

SelfReportCrime has similar entries as the Crime entity except it has ReportID as its primary key, which marks the difference between several entries by the residents of LA. This connects to the Crime entity to mark whether or not something from this entity exists in the SelfReportCrime.

CrimeType has a specific code for each type of crime committed, which goes along with a description that varies from code to code.

Status has two attributes - StatusCD and StatusDesc. This is similar to CrimeType in the regard that StatusCD is a unique code that is then described by the StatusDesc, which is a unique description for each code. This basically indicates the current progress the LAPD is at in terms of the investigation.

Premis once again has two attributes - PremisCD and PremisDesc. PremisCD is the unique code for different types of premises, for eg. a restaurant, bus, cafe, etc. The PremisDesc is basically a unique description for each code.

WeaponInfo has two attributes - WeaponCD and WeaponDesc. WeaponCD is the unique code for different types of premises, for eg. a gun, fists, car, etc. The WeaponDesc is basically a unique description for each code.

Admin has two attributes - Username and Password. The usernames are unique to people who have access to the database i.e. they can edit the database by updating or deleting entries. The password can be the same for two separate entries.

Area has 2 attributes: AreaID and AreaName. The AreaID is the primary key used to identify the area, and the AreaName represents the name of the Area within LA where the crime occurred.

SubArea has two attributes: RptDistNo and AreaID. RptDistNo is the primary key used to identify the specific location within LA (and within the Area) where the crime occurred. The AreaID is a foreign key that references the AreaID attribute from the Area table. Since the SubArea is in the Area, it makes sense to also identify the SubArea by the Area it is in.

Relationship Descriptions:

The entity Crime consists of a bunch of information regarding the crime with some relations to other entities. The foreign key RptDistNo connects to the entity SubArea that holds information regarding the specific sub-area where the crime happened. The foreign key CrimeCD gives the description of the actual crime i.e. how it happened/what happened and the key is located in the entity called CrimeType. The foreign key StatusCD connects to the entity Status that holds information regarding the current status of the case and how much progress has been made by the LAPD regarding the investigation. The foreign key PremisCD connects to the entity Premis that holds information regarding the specific type of location the incident took place in, for eg. a bus, cafe, or restaurant. The foreign key WeaponCD connects to the entity WeaponInfo that holds information regarding the specific weapon used to commit the crime whether that be hands, a gun, or a bullet. Lastly, the foreign key ReportID that is a part of the entity SelfReportCime tells us the one-to-one relationship between the potential reports and the ones that are already a part of the Crime entity i.e. which entries submitted by the citizens have been put in the database.

The entity SubArea contains a foreign key to the Area entity, which is the AreaID that essentially gets the general area that the sub-area falls under.

Lastly, the entity SelfReportCime has a foreign key called AdminUsername, which maps to the entity called Admin. The key that the foreign key maps to is called Username, which keeps track of the usernames of all the people that can accept or decline a crime reported by the citizens after conducting research on it.