



## Entities

- A crime is identified by its `record_no` and it includes information on `crime_code` (Crime Code), `crime_code_description` (Crime Code Description), `crime_code_1`, `crime_code_2`, `crime_code_3`, `crime_code_4`, and `mocodes`.
- A victim is identified by their `descent` and the `record_no` they are associated with. A victim also has `age` and `sex` info.
- Status describes the status of the case, e.g., solved or ongoing, etc. It has a unique key `IC` with a `description` attribute.
- Location is identified by `longitude` and `latitude`. A location also has information about the `address`, `area_code`, `area_name`, and the `report_district_number`.
- The Premise is identified by its `code`, and there is also a `description` of the premise.
- A weapon is identified by the `weapon code`. There's also a `description` of the weapon as info.
- Datetime is uniquely identified by its `date` and `time`.
- Our website needs to keep track of user information. A user is identified by `SSN`, and has a `username`, `password`, `name`, `phone_number`, and `user identity` (Police or Civilian) as attributes.

## Relationships

- Many crimes can share one investigation status, and status can describe many crimes.
- A crime occurs at one location, but a location can have many crimes occurring there.
- A weapon can be used in different crimes. A crime can involve the use of as many weapons as possible.
- A location can only be described by one premise, but a premise can describe many locations.
- A website user with a unique username can only create an account at a specific datetime, but a datetime can be the timestamps of many users.
- A website user can be associated with a crime based on their role in the crime. A crime can have no website user associated with it.

## Relational Schema:

```
Victims (age: INT [PK], record_no: INT [FK to Crime.record_no],  
sex: VARCHAR(1), descent: VARCHAR(20))
```

```
Crime (record_no: INT [PK], crime_status: INT[FK to Status.IC],  
crime_code: INT, crime_code_description: VARCHAR(20), crime_code_1:  
INT, crime_code_2: INT, crime_code_3: INT, crime_code_4: INT,  
mocodes: INT)
```

```
Status (IC: INT [PK], description: VARCHAR(30))
```

Where (record\_no: INT[PK][FK to Crime.record\_no], longitude: INT [FK to Location.longitude], latitude: INT [FK to Location.latitude])

Location (longitude: INT [PK], latitude: INT [PK], address: VARCHAR(20), area\_code: INT, area\_name: VARCHAR(20), district\_number: INT)

Description (longitude: INT[PK] [FK to Location.longitude], latitude: INT[PK] [FK to Location.latitude], premise\_code: INT [FK to Premise.code])

Premise(code: INT[PK], description: VARCHAR(20))

Weapon(code: INT[PK], description: VARCHAR(20))

Weapon\_use (weapon\_code: INT[PK][FK to Weapon.code], record\_no: INT[FK to Crime.record\_no])

Datetime(date: VARCHAR(20)[PK], time: VARCHAR(20)[PK])

User(SSN:INT[PK], username: VARCHAR(20), password: INT, name: VARCHAR(20), phone\_number: INT, identity: VARCHAR(20))

Create\_account(SSN: INT[PK][FK to User.SSN], date: VARCHAR(20) [FK to Datetime.date], time: VARCHAR(20)[FK to Datetime.time])

Associate(SSN: INT[PK][FK to User.SSN], record\_no: INT[PK][FK to Crime.record\_no])