**STATUTE**

|  |  |  |
| --- | --- | --- |
| **Attribute** | Code Designation | Elements of Crime |
| **Data Type** | Varchar(12) | Int\*\* |

Relation 1: {Code Designation, Elements of Crime}

Code Designation → Elements of Crime

**Defined-By**

|  |  |  |
| --- | --- | --- |
| **Attribute** | Incident Number | Code Designation |
| **Data Type** | Int (incrementing) | Varchar (12) |

Relation 2: {Code Designation, Incident Number}

Incident Number → Code Designation

**CRIMINAL INCIDENT**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | Incident Number | Time Occurred | Date Occurred | Address |
| **Data Type** | Int (incrementing) | Int (4-digit time)\*\*\*\* | Date | Varchar(50) |

Relation 3: {Incident Number, Time Occurred, Date Occurred, Address}

Incident Number → Time Occurred, Date Occurred, Address

**Reported-Through**

|  |  |  |
| --- | --- | --- |
| **Attribute** | Report Number | Incident Number |
| **Data Type** | Int (incrementing) | Int (incrementing) |

Relation 4: {Report Number, Incident Number}

Report Number → Incident Number

Incident Number → Report Number

**CRIME REPORT**

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute** | Report Number | Date Filed | Description |
| **Data Type** | Int (incrementing) | Date | Varchar(200) |

Relation 5: {Report Number, Date Filed, Description}

Report Number → Date Filed, Description

**Given-A**

|  |  |  |
| --- | --- | --- |
| **Attribute** | Report Number | Report Number |
| **Data Type** | Int (incrementing) | Int (incrementing) |

Relation 6: {Report Number}

**STATUS UPDATE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | Report Number | Revision Number | Date Revised | Status |
| **Data Type** | Int (incrementing) | Int (incrementing) | Date | Int\*\*\* |

Relation 7: {Report Number, Revision Number, Date Revised, Status}

Report Number, Revision Number → Date Revised, Status

Report Number, Date Revised → Revision Number, Status

**Filed-By**

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute** | Date Graduated | Badge Number | Report Number |
| **Data Type** | Date | Int | Int (incrementing) |

Relation 8: {Date Graduated, Badge Number, Report Number}

Date Graduated, Badge Number → Report Number

**POLICE OFFICER**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | Date Graduated | Badge Number | Last Name | First Name |
| **Data Type** | Date | Int | Varchar(25) | Varchar(25) |

Relation 9: {Date Graduated, Badge Number, Last Name, First Name}

Date Graduated, Badge Number → Last Name, First Name

**Member-Of**

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute** | Date Graduated | Badge Number | Precinct Number |
| **Data Type** | Date | Int | Int (tiny) |

Relation 10: {Date Graduated, Badge Number, Precinct Number}

Date Graduated, Badge Number → Precinct Number

**POLICE DEPARTMENT**

|  |  |  |
| --- | --- | --- |
| **Attribute** | Precinct Number | Jurisdiction |
| **Data Type** | Int (tiny) | Varchar(50) |

Relation 11: {Precinct Number, Jurisdiction}

Precinct Number → Jurisdiction

*Notes:*

\*\* Since "Elements of a Crime" is essentially a pooled checklist attribute--that is, it's a series of true/false flags for a pool of common items--it's suggested that it be modeled this way in the data somehow. This way, it will reduce the amount of disk space immensely while simultaneously providing richness of information.

For instance, Aggravated Battery and Murder both contain the crime elements "interpersonal contact" and "injury", but Murder would also contain the "resulting in death" element, whereas Aggravated Battery would not. Similarly, Robbery and Grand Burglary would both contain the crime elements "possession" and "property belonging to another", but whereas Robbery would also contain "interpersonal contact" and "threat of use of force" elements, Burglary would instead contain the "breaking into premises" element.

\*\*\* Since this is a multiple choice-style data element, a very small integer or set of booleans should suffice. This can be implemented in an almost identical manner to the above note.

\*\*\*\*Since the times are only reported to the minute and not to the second, the TIME data type would not be efficient in our case. Therefore we chose to go with the INT data type as we only need to record time down to the minute in a 24 hour format.