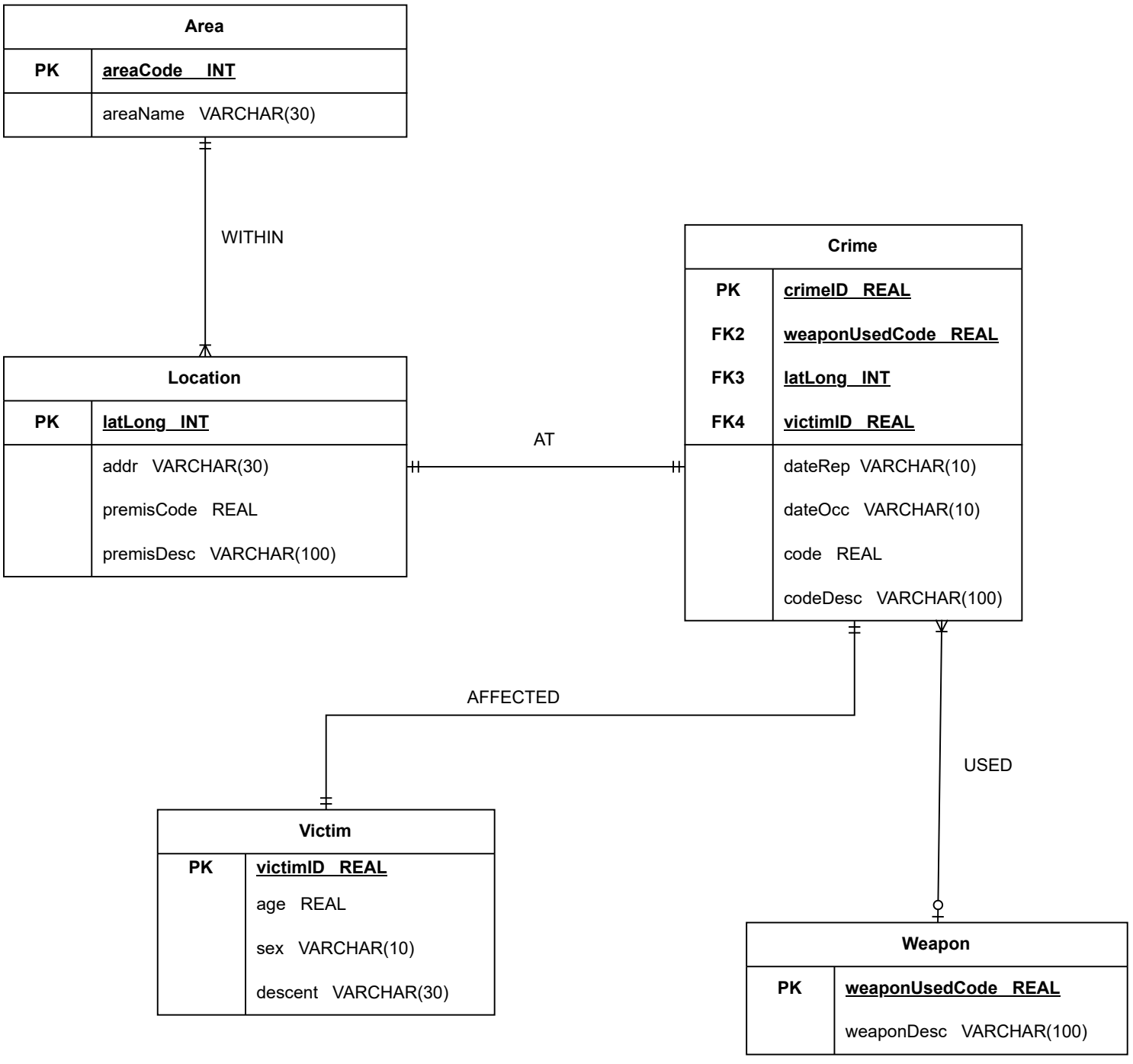
Area
PK
areaCode INT
areaName VARCHAR(30)
WITHIN
Location
PK
latLong INT
addr VARCHAR(30)
premisCode REAL
premisDesc VARCHAR(100)
AT
Crime
PK
crimeID REAL
FK2
weaponUsedCode REAL
FK3
latLong INT
FK4
victimID REAL
dateRep VARCHAR(10)
dateOcc VARCHAR(10)
code REAL
codeDesc VARCHAR(100)
AFFECTED
USED
Victim
PK
victimID REAL
age REAL
sex VARCHAR(10)
descent VARCHAR(30)
Weapon
PK
weaponUsedCode REAL
weaponDesc VARCHAR(100)

Relational Schema

Area(
areaCode:INT [PK],
areaName:VARCHAR(30))

Location(
latLong:INT [PK],
addr:VARCHAR(30),
premisCode:Real,
premisDesc:VARCHAR(100))

Crime(
crimeID:REAL [PK],
weaponUsedCode:REAL [FK to Weapon.weaponUsedCode,
latLong:INT [FK to Location.latLong],
victimID:REAL [FK to Victim.victimID],
dateRep:VARCHAR(10),
dateOcc:VARCHAR(10),
code:REAL,
codeDesc:VARCHAR(100))

Weapon(
weaponUsedCode:REAL [PK],
weaponDesc:VARCHAR(100))

Victim(
victimID:REAL [PK],
age:REAL,
sex:VARCHAR(10),
descent:VARCHAR(30))

Relationships Description/Assumptions:

- Area to Location Description: Area is a broader range compared to the more precise location. Location can be considered a subset of Area. Cardinality from Area to Location is one to many.

- Crime to Location Description: Crime occurs at a specific location with a specified Lat/Long. Cardinality from Crime to Location is one to one.

- Crime to Victim Description: Here, we are making the assumption that one crime has one victim (According to the dataset we used). Cardinality from Crime to Victim is one to one.

- Weapon to Crime Description: Weapons are used in crimes. Making the assumption that one weapon can be used to commit several crimes. So, cardinality for weapons to crime would be one to many.