ENTITY DICTIONARY:

Entity: Bank
Description: A Bank employs Bank Employees, stores a Total Dollar Amount, and gets targeted by Gangs.
Attributes:
- BID, int, ID number of the bank, PKEY
- Name, varchar(80), name of the Bank
- Address, varchar(80), address of the Bank
- Risk Level, int, how risky it is to rob the Bank

Notes:

Entity: Bank Employees
Description:
A type of Innocent. Bank Employees work for a Bank and can either be a Cashier or a Guard. Weak Entity owned by a bank.
Attributes:
Notes: Overlapping subclass of Innocents. Superclass to Cashiers and Guards.

Entity: Body Armor
Description: A type of Gang Equipment.
Attributes:
- BoID, int, ID of body armor, PKEY

Notes: Disjoint subclass of Gang Equipment.

Entity: Captains
Description: A type of Police Cop that can assign investigations to any number of cops within the station depending on each investigation's danger level.
Attributes:
- CaID, int, ID number of the Captain, PKEY

Notes: Captains is a disjoint subclass of Police Cops.

Entity: Cashiers
Description: A Cashier is a type of Bank Employee.
Attributes:
- CID, int, ID number of the Cashier, PKEY

Notes: Disjoint subclass member of Bank Employees.

Entity: Cells
Description: Cells are a type of Room.

Attributes:
- CeID, int, ID number of a holding cell, PKEY

Notes: Disjoint subclass of Rooms.

Entity: Chief
Description: A Chief is a type of Police Cop.
Attributes:
- ChID, int, ID number of Chief, PKEY

Notes: Chief is a disjoint subclass of Police Cop.

Entity: Civilians
Description: A civilian is a type of Innocent.
Attributes:
- CivID, int, ID classification of Civilians, PKEY

Notes: Overlapping subclass of Innocents.

Entity: Danger Level
Description:
This is what determines the Investigations. Reputation depends on the Danger Level. Weak Entity owned by Investigations.
Attributes:
- DLID, int, number to show the level based on the investigation, PKEY

Notes:

Entity: Disguises
Description: A type of Gang Equipment.
Attributes:
- Colors, Multivariate, varchar(80), colors of the disguise
- DiID, int, classification of a gang member's disguise, PKEY

Notes: Disjoint subclass of Gang Equipment.

Entity: Evidence
Description: Evidence is a type of Room that the Police Station houses.
Attributes:
- EviID, int, ID number of an evidence room, PKEY

Notes: Disjoint subclass of Rooms.

Entity: Executives
Description: A type of Gang Member that has access to the Vault and can pay and hire Rookies.
Attributes:

- ExID, int, classification number of an executive, PKEY

Notes: Disjoint subclass of Gang Members.

Entity: Firearms
Description: These are a type of Police Equipment that can be used by Police Cops.
Attributes:
- FAID, int, ID of the firearm, PKEY
- Ammo, Multivariate, varchar(80), ammo type of the firearm

Notes: Firearms is a disjoint subclass of Police Equipment

Entity: Gang
Description: A Gang owns Gang Members, has a Reputation and Schedule, and uses Gang Equipment to target Banks and steal from their Total Dollar Amount.
Attributes:
- Name, varchar(80), name of the Gang, PKEY
- Size, int, size indicating how large or small the Gang is
- HQ, varchar(80), location of the headquarters of the Gang

Notes:

Entity: Gang Equipment
Description: Gang Equipment is used by a Gang on Jobs. Gang Equipment can be Body Armor, Masks, and Gang Firearms.
Attributes:
- GEqID, int, number for how many sets of equipment exist, PKEY

Notes: Superclass of Gang Firearms, Masks, and Body Armor.

Entity: Gang Firearms
Description: This is a type of Gang Equipment.
Attributes:
- GFAID, int, classification of which firearm is being used, PKEY
- Ammo, Multivariate, varchar(80), ammo type of the firearm

Notes: Disjoint subclass of Gang Equipment.

Entity: Gang Members
Description:
A type of Human. Two types of Gang Members are Rookies and Executives, which are unique from each other so they are disjoint. Weak entity that belongs to a Gang.
Attributes:
- Alias, varchar(80), alias of the gang member, PKEY
- Income, int, derived attribute based on the job's success

Notes: Disjoint subclass of Humans. Superclass of Rookies and Executives.

Entity: Guards
Description: A Guard is a type of Bank Employee.
Attributes:
- GID, int, ID number of guard, PKEY

Notes: Disjoint subclass member of Bank Employees.

Entity: Humans
Description: All entities that represent people in the crime city fall under this entity. Humans can be Police Cops, Innocents, or Gang Members
Attributes:
- Name, varchar(80), name of the human, PKEY
- Gender, char, gender of the human
- Age, int, age of the human

Notes: Superclass of Police Cops, Innocents, and Gang Members. All the subclasses are disjoint.

Entity: Innocents
Description: An Innocent is a type of Humans. Civilians and Bank Employees can be Innocents.
Attributes:
- InID, int, identification of an innocent

Notes: Disjoint subclass of Humans.

Entity: Interrogation
Description: Interrogation is a type of Room that the Police Station houses.
Attributes:
- IRID, int, ID number of an interrogation room, PKEY

Notes: Disjoint subclass of Rooms.

Entity: Investigations
Description: Investigations are determined by their Danger Level and can be performed by Police Cops.
Attributes:
- I.ID, int, ID number of the Investigation, PKEY

Notes:

Entity: Jobs
Description: Jobs are taken on by Rookies and the money acquired by them is sent to the Vault.
Attributes:
- JID, int, ID of the job, PKEY

- Type, varchar(80), type of job (e.g. smuggling, heist)
- Location, varchar(80), location where the job takes place
- Time, int, time when the job occurs

Notes:

Entity: Lobby
Description: A Lobby is a type of Room.
Attributes:
- LobID, int, ID number of the lobby, PKEY

Notes: Disjoint subclass of Rooms.

Entity: Medical Supplies
Description: Medical supplies used by Police Cops. This is a type of Police Equipment.
Attributes:
- MSID, int, ID of the set of supplies equipped, PKEY

Notes: Disjoint subclass of Police Equipment.

Entity: Office
Description: An Office is a type of Room.
Attributes:
- OffID, int, ID number of an office, PKEY

Notes: Disjoint subclass of Rooms.

Entity: Officers
Description: A basic, standard Police Cop.
Attributes:
- OID, int, ID number of the Officer, PKEY

Notes: Disjoint subclass member of Police Cops.

Entity: Police Armor
Description: Armor used by Police Cops. This is a type of Police Equipment.
Attributes:
- PaID, int, identification of the set of armor used, PKEY

Notes: Disjoint subclass of Police Equipment.

Entity: Police Cops
Description:
A cop that can use police equipment, perform investigations, and is employed by a police station. Police Cops can be Officers, Captains, or a Chief. Weak entity owned by the Police Station.
Attributes:

- PID, int, ID of the Police Cop, PID, PKEY

Notes: Superclass of Officers, Captains, and Chief (all of which are disjoint). Police Cops is a disjoint subclass member of Humans.

Entity: Police Equipment
Description: Equipment that is stored in a Police Station and used by Police Cops. Equipment can be Firearms, Police Armor, Radio, and Medical Supplies.
Attributes:
- PEqID, int, ID of the equipment, PKEY

Notes: Superclass of Firearms, Police Armor, Radio, and Medical Supplies. All subclasses are different and therefore disjoint.

Entity: Police Station
Description: A building of the crime city that houses Rooms, stores Police Equipment, and employs Police Cops.
Attributes:
- Location, varchar(80), location of the police station, PKEY

Notes:

Entity: Radio
Description: Radio communications used by Police Cops. This is a type of Police Equipment.
Attributes:
- RadID, int, identification of the type of radio used for communication, PKEY

Notes: Disjoint subclass member of Police Equipment.

Entity: Reputation
Description: A Reputation is something that a Gang has that is dependent on the Danger Level.
Attributes:
- RepID, int, ID to show the level of reputation a gang has, PKEY

Notes: Disjoint related subclass member of Gang.

Entity: Rookies
Description: A Rookie is a type of Gang Member that can get hired by Executives and can take on Jobs.
Attributes:
- RookID, int, ID number of rookie, PKEY

Notes: Disjoint subclass of Gang Member.

Entity: Rooms

Description: Rooms are housed in a Police Station. A Room can be a Lobby, Cell, Interrogation, Evidence, or Office.

Attributes:
- RoID, int, ID of the room, PKEY

Notes: Superclass of Lobby, Cells, Interrogation Room, Evidence, and Office.

Entity: Schedule

Description: A Schedule is another entity that a Gang has.

Attributes:
- Time, int, specified time for a job to be taken, PKEY
- Date, varchar(80), specified date for a job to be taken

Notes: Disjoint related subclass of Gang.

Entity: Total Dollar Amount

Description:

This is the amount of money that is stored in a bank. This money can be stolen by gangs. Weak Entity owned by Bank.

Attributes:
- $$ID, int, number for recognizing the amount of cash the bank currently holds, PKEY

Notes:

Entity: Vault

Description: A Vault is accessed by an Executive Gang Member and acquires money from jobs completed.

Attributes:
- VID, int, ID number for the vault the gang possesses, PKEY

Notes:

Entity: Vehicles

Description: A Vehicle is a type of Gang Equipment.

Attributes:
- VeID, int, ID number for the type of the vehicle the gang is using, PKEY

Notes: Disjoint subclass of Gang Equipment.

RELATIONSHIP DICTIONARY:

Relationship: Access to
Description: The gang executives can access the vault and take money from there.
Entities: Executives, Vault
Cardinality: M:1 (Many-to-One)

Relationship: Belong to
Description: Gangs members belong to a certain gang
Entities: Gang Members, Gang
Cardinality: M:1 (Many-to-One)

Relationship: Classified by
Description: Investigations urgencies and classifications are determined by the danger level of them
Entities: Investigations, Danger level
Cardinality: 1:1 (One-to-One)

Relationship: Depends on
Description: The danger level of an investigation depends on the reputation of the gang involved
Entities: Danger Level, Reputation
Cardinality: 1:1(One-toOne)

Relationship: Employs
Description: Police stations employ police cops
Entities: Police station, Police cops
Cardinality: 1:N (One-to-Many)

Relationship: Has a
Description: Gangs have schedules which they act upon
Entities: Gang, Schedule
Cardinality: 1:1 (One-to-One)

Relationship: Has a
Description: Gangs have reputation that describe how dangerous they are
Entities: Gang, Reputation
Cardinality: 1:1 (One-to-One)

Relationship: Houses
Description: The police stations houses rooms for all purposes

Entities: Police station, Rooms
Cardinality: 1:N(One-to-Many)

Relationship: Money goes to
Description: The money earned in a gang's job goes to the gang's vault
Entities: Jobs, Vault
Cardinality: M:1(Many-to-One)

Relationship: Paid and hired by
Description: Gang rookies are being paid and hired by Gang executives
Entities: Rookies, Executives
Cardinality: M:N(Many-to-Many)

Relationship: Start
Description: Police cops start and operate investigations
Entities: Police cops, Investigations
Cardinality: M:N(Many-to-Many)

Relationship: Steals from
Description: Gangs steal from banks their total dollar amount
Entities: Gang, Total dollar amount
Cardinality: 1:1(One-to-One)

Relationship: Stored by
Description: The police equipment is being stored in police stations
Entities: Police equipment, Police station
Cardinality: M:1(Many-to-One)

Relationship: Stores
Description: Banks store their total money
Entities: Bank, Total dollar amount
Cardinality: 1:1(One-to-one)

Relationship: Take on
Description: Rookies take on jobs they are assigned to
Entities: Rookies, Jobs
Cardinality: M:N(Many-to-Many)

Relationship: Targets
Description: Gangs target Banks to steal their total money

Entities: Gang, Bank
Cardinality: 1:N(One-to-Many)

Relationship: Used by
Description: Police equipment is used by police cops to do their job
Entities: Police Equipment, Police Cops
Cardinality: M:N(Many-to-Many)

Relationship: Uses
Description: Gangs use gang equipment to get their job done
Entities: Gang, Gang Equipment
Cardinality: 1:N(one-to-Many)

Relationship: Work for
Description: Bank employees work for and operate banks
Entities: Bank Employees, Bank
Cardinality: M:1 (Many-to-One)