CRIME MANAGEMENT

mysql> CREATE DATABASE CrimeManagement;

Query OK, 1 row affected (0.05 sec)

**Crime Table:**

mysql> CREATE TABLE Crime (

-> CrimeID INT PRIMARY KEY,

-> IncidentType VARCHAR(255),

-> IncidentDate DATE,

-> Location VARCHAR(255),

-> Description TEXT,

-> Status VARCHAR(20)

-> );

Query OK, 0 rows affected (0.11 sec)

**Victim Table:**

mysql> CREATE TABLE Victim (

-> VictimID INT PRIMARY KEY,

-> CrimeID INT,

-> Name VARCHAR(255),

-> ContactInfo VARCHAR(255),

-> Injuries VARCHAR(255),

-> FOREIGN KEY (CrimeID) REFERENCES Crime(CrimeID)

-> );

Query OK, 0 rows affected (0.11 sec)

**Suspect Table:**

mysql> CREATE TABLE Suspect (

-> SuspectID INT PRIMARY KEY,

-> CrimeID INT,

-> Name VARCHAR(255),

-> Description TEXT,

-> CriminalHistory TEXT,

-> FOREIGN KEY (CrimeID) REFERENCES Crime(CrimeID)

-> );

Query OK, 0 rows affected (0.16 sec)

**INSERTING CRIME RECORDS:**

mysql> INSERT INTO Crime (CrimeID, IncidentType, IncidentDate, Location, Description, Status)

-> VALUES

-> (1, 'Robbery', '2023-09-15', '123 Main St, Cityville', 'Armed robbery at a convenience store', 'Open'),

-> (2, 'Homicide', '2023-09-20', '456 Elm St, Townsville', 'Investigation into a murder case', 'Under Investigation'),

-> (3, 'Theft', '2023-09-10', '789 Oak St, Villagetown', 'Shoplifting incident at a mall', 'Closed');

Query OK, 3 rows affected (0.03 sec)

Records: 3 Duplicates: 0 Warnings: 0

**INSERTING VICTIM RECORDS:**

mysql> INSERT INTO Victim (VictimID, CrimeID, Name, ContactInfo, Injuries) VALUES

-> (1, 1, 'John Doe', 'johndoe@example.com', 'Minor injuries'),

-> (2, 2, 'Jane Smith', 'janesmith@example.com', 'Deceased'),

-> (3, 3, 'Alice Johnson', 'alicejohnson@example.com', 'None');

Query OK, 3 rows affected (0.02 sec)

Records: 3 Duplicates: 0 Warnings: 0

**INSERTING SUSPECT RECORDS:**

mysql> INSERT INTO Suspect (SuspectID, CrimeID, Name, Description, CriminalHistory) VALUES

-> (1, 1, 'Robber 1', 'Armed and masked robber', 'Previous robbery convictions'),

-> (2, 2, 'Unknown', 'Investigation ongoing', NULL),

-> (3, 3, 'Suspect 1', 'Shoplifting suspect', 'Prior shoplifting arrests');

Query OK, 3 rows affected (0.02 sec)

Records: 3 Duplicates: 0 Warnings: 0

**ALTER TABLE:**

mysql> ALTER TABLE Victim ADD Age INT;

Query OK, 0 rows affected (0.07 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> ALTER TABLE Suspect ADD Age INT;

Query OK, 0 rows affected (0.04 sec)

Records: 0 Duplicates: 0 Warnings: 0

**UPDATE RECORDS:**

update victim set age = 30 where victimID = 1;

update victim set age = 32 where victimID = 2;

update victim set age = 35 where victimID = 3;

update suspect set age = 40 where suspectID = 1;

update suspect set age = 32 where suspectID = 2;

update suspect set age = 39 where suspectID = 3;

1. Select all open incidents.

mysql> SELECT \* FROM Crime WHERE Status = 'Open';

2. Find the total number of incidents.

mysql> SELECT COUNT(\*) FROM CRIME;

3. List all unique incident types.

mysql> SELECT DISTINCT IncidentType FROM Crime;

4. Retrieve incidents that occurred between '2023-09-01' and '2023-09-10'.

mysql> SELECT \* FROM CRIME WHERE Incidentdate BETWEEN '2023-09-01' AND '2023-09-10';

5. List persons involved in incidents in descending order of age.

mysql> SELECT Name, Age FROM Victim UNION SELECT Name, Age FROM Suspect ORDER BY Age DESC;

6. Find the average age of persons involved in incidents.

mysql> SELECT AVG(Age) FROM Victim UNION SELECT AVG(Age) FROM Suspect;

7. List incident types and their counts, only for open cases.

mysql> SELECT IncidentType, COUNT(\*) From Crime WHERE Status = 'Open' GROUP BY IncidentType;

8. Find persons with names containing 'Doe'.

mysql> SELECT \* FROM Victim WHERE Name LIKE '%Doe';

9. Retrieve the names of persons involved in open cases and closed cases.

mysql> SELECT v.Name FROM Victim v INNER JOIN Crime c ON v.CrimeID = c.CrimeID;

10. List incident types where there are persons aged 30 or 35 involved

mysql> SELECT c.IncidentType FROM Crime c INNER JOIN Victim v ON c.CrimeID = v.VictimID WHERE V.Age IN(30, 35);

11. Find persons involved in incidents of the same type as 'Robbery'.

mysql> SELECT v.Name FROM Victim v INNER JOIN Crime c ON v.CrimeID = c.CrimeID WHERE c.IncidentType = 'Robbery';

12. List incident types with more than one open case.

mysql> SELECT Count(\*) IncidentType FROM Crime WHERE Status = 'Open' GROUP BY IncidentType HAVING Count(\*) >= 1;

13. List all incidents with suspects whose names also appear as victims in other incidents.

mysql> SELECT c.CrimeID, c.IncidentType FROM Crime c JOIN Suspect s ON c.CrimeID = s.CrimeID WHERE s.name IN(SELECT Name FROM Victim);

14. Retrieve all incidents along with victim and suspect details.

mysql> SELECT c.CrimeID, c.IncidentType, v.name as Victim, s.name as Suspect FROM Crime c LEFT JOIN Victim v ON c.CrimeID = v.CrimeID

-> LEFT JOIN Suspect s ON c.CrimeID = s.CrimeID;

15. Find incidents where the suspect is older than any victim.

mysql> SELECT c.CrimeID, c.IncidentType, s.Name as Sus\_name, s.Age as sus\_age FROM Crime c INNER JOIN Suspect s

-> ON c.CrimeID = s.CrimeID INNER JOIN Victim v ON c.CrimeID = v.CrimeID

-> WHERE s.Age > v.Age;

16. Find suspects involved in multiple incidents.

mysql> SELECT Name, COUNT(\*) FROM Suspect GROUP BY Name HAVING COUNT(\*) >= 1;

17. List incidents with no suspects involved.

SELECT c.CrimeID, c.IncidentType FROM Crime c LEFT JOIN Suspect s ON c.CrimeID = s.CrimeID WHERE s.SuspectID IS NULL;

18. List all cases where at least one incident is of type 'Homicide' and all other incidents are of type 'Robbery'.

mysql> SELECT \* FROM Crime WHERE IncidentType = 'Homicide' OR CrimeID NOT IN (SELECT CrimeID FROM Crime WHERE IncidentType <> 'Robbery');

19. Retrieve a list of all incidents and the associated suspects, showing suspects for each incident, or 'No Suspect' if there are none.

mysql> SELECT c.CrimeID, c.IncidentType, IFNULL(s.Name, 'No Suspect') AS Sus\_Name FROM Crime c

-> LEFT JOIN Suspect s ON c.CrimeID = s.CrimeID;

20. List all suspects who have been involved in incidents with incident types 'Robbery' or 'Assault’.

mysql> SELECT s.SuspectID, s.Name FROM Suspect s INNER JOIN Crime c ON s.CrimeID = c.CrimeID WHERE c.IncidentType IN('Robbery', 'Assault');