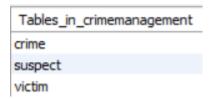
Coding Challenge 3 – Crime Management Solution

Create tables



Solve the below queries:

1. Select all open incidents.



CrimeID	IncidentType	IncidentDate	Location	Description	Status
1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open
4	Robbery	2024-01-23	Market Street, Mumbai	Armed robbery at a local store	Open

2. Find the total number of incidents.

SELECT COUNT(*) AS TotalIncidents FROM Crime;



3. List all unique incident types.

SELECT DISTINCT IncidentType FROM Crime;

IncidentType
Robbery
Homicide
Theft
Assault
Burglary

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

SELECT * FROM Crime WHERE IncidentDate BETWEEN '2023-09-01' AND '2023-09-10';

CrimeID	IncidentType	IncidentDate	Location	Description	Status
3	Theft	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed

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

SELECT Name, Age FROM Victim ORDER BY Age DESC;

Name	Age
Priya Sharma	42
Ravi Kumar	32
Amit Singh	28
Jane Smith	26
John Doe	22
Alice Johnson	16

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

SELECT AVG(Age) AS AverageAge FROM Victim WHERE Age IS NOT NULL;



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

SELECT IncidentType, COUNT(*) AS IncidentCount FROM Crime WHERE Status = 'Open' GROUP BY IncidentType;

IncidentType	IncidentCount
Robbery	2

8. Find persons with names containing 'Doe'.

SELECT * FROM Victim WHERE Name LIKE '%Doe%';

VictimID	CrimeID	Name	ContactInfo	Injuries	Age
1	1	John Doe	johndoe@example.com	Minor injuries	22

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

For open

SELECT Name FROM Victim WHERE CrimeID IN (SELECT CrimeID FROM Crime WHERE Status = 'Open')

Name John Doe Ravi Kumar

For closed

SELECT Name FROM Victim WHERE CrimeID IN (SELECT CrimeID FROM Crime WHERE Status = 'Closed');

Name Alice Johnson Amit Singh

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

SELECT DISTINCT c.IncidentType FROM Crime c JOIN Victim v ON c.CrimeID = v.CrimeID WHERE v.Age IN (30, 35);

IncidentType

Robbery

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

SELECT * FROM Victim v JOIN Crime c ON v.CrimeID = c.CrimeID WHERE c.IncidentType = 'Robbery';

VictimID	CrimeID	Name	ContactInfo	Injuries	Age	CrimeID	IncidentType	IncidentDate	Location
1	1	John Doe	johndoe@example.com	Minor injuries	22	1	Robbery	2023-09-15	123 Main St, Cityville
4	4	Ravi Kumar	+91 98765 43210	Minor injuries	32	4	Robbery	2024-01-23	Market Street, Mumbai
7	4	Ravina Kumari	+91 98765 43210	Minor injuries	30	4	Robbery	2024-01-23	Market Street, Mumbai

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

SELECT IncidentType FROM Crime WHERE Status = 'Open' AND

IncidentType IN (SELECT IncidentType FROM Crime WHERE Status = 'Open' GROUP BY IncidentType HAVING COUNT(*) > 1);

IncidentType Robbery Robbery

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

```
SELECT c.* FROM Crime c JOIN Suspect s ON c.CrimeID = s.CrimeID

WHERE EXISTS (SELECT * FROM Victim v WHERE v.CrimeID <> c.CrimeID AND v.Name = s.Name);
```

CrimeID	IncidentType	IncidentDate	Location	Description	Status
1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open

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

SELECT c.IncidentType,v.VictimID, v.Name AS VictimName,s.SuspectID, s.Name AS SuspectName
FROM Crime c LEFT JOIN Victim v ON c.CrimeID = v.CrimeID LEFT JOIN Suspect s ON c.CrimeID = s.CrimeID;

IncidentType	VictimID	VictimName	SuspectID	SuspectName
Robbery	1	John Doe	1	Robber 1
Robbery	8	Robber 1	1	Robber 1
Homicide	2	Jane Smith	2	Unknown
Theft	3	Alice Johnson	3	Suspect 1
Theft	9	Robber 1	3	Suspect 1
Robbery	4	Ravi Kumar	4	Vikram Gupta
Robbery	7	Ravina Kumari	4	Vikram Gupta
Assault	5	Priya Sharma	5	Annie
Burglary	6	Amit Singh	6	Raman Sahu

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

```
SELECT c.IncidentType FROM Crime c JOIN Suspect s ON c.CrimeID = s.CrimeID JOIN Victim v ON c.CrimeID = v.CrimeID
WHERE s.Age > v.Age;
```

IncidentType

Robbery

Theft

Robbery

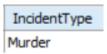
16. Find suspects involved in multiple incidents:

```
SELECT s.Name, s.CrimeID FROM Suspect s WHERE s.Name IN (SELECT Name FROM Suspect GROUP BY Name HAVING COUNT(DISTINCT CrimeID) > 1);
```

Name	CrimeID
Robber 1	1
Robber 1	4

17. List incidents with no suspects involved.

SELECT IncidentType from Crime WHERE CrimeID NOT IN(SELECT CrimeID FROM Suspect);



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

```
SELECT c.CrimeID, c.IncidentType FROM Crime c
WHERE (c.IncidentType = 'Homicide') OR (c.IncidentType = 'Robbery');
```

CrimeID	IncidentType
1	Robbery
2	Homicide
4	Robbery

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

```
SELECT c.CrimeID,c.IncidentType,IFNULL(s.SuspectID, 'No Suspect') AS SuspectID,IFNULL(s.Name, 'No Suspect') AS SuspectName FROM Crime c LEFT JOIN Suspect s ON c.CrimeID = s.CrimeID;
```

CrimeID	IncidentType	SuspectID	SuspectName
1	Robbery	1	Robber 1
1	Robbery	7	Robber 5
2	Homicide	2	Unknown
3	Theft	3	Suspect 1
4	Robbery	4	Vikram Gupta
4	Robbery	8	Robber 1
5	Assault	5	Annie
6	Burglary	6	Raman Sahu

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

SELECT DISTINCT s.Name FROM Suspect s JOIN Crime c ON s.CrimeID = c.CrimeID where c.IncidentType IN ('Robbery', 'Assault');

Name	
Robber 1	
Robber 5	
Vikram Gupta	
Annie	

By – Asutosh Mishra