

Coding Challenge 3 – Crime Management Solution

Create tables

Tables_in_crimemanagement
crime
suspect
victim

Solve the below queries:

1. Select all open incidents.

```
SELECT * FROM Crime WHERE Status = 'Open';
```

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;
```

TotalIncidents
6

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;
```

AverageAge
27.6667

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);
```

IncidentType
Murder

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

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