

Crime Management

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```
CREATE DATABASE CRIMEMANAGEMENT;
USE CRIMEMANAGEMENT;
CREATE TABLE Crime (
    CrimeID INT PRIMARY KEY,
    IncidentType VARCHAR(255),
    IncidentDate DATE,
    Location VARCHAR(255),
    Description TEXT,
    Status VARCHAR(20)
);
CREATE TABLE Victim (
    VictimID INT PRIMARY KEY,
    CrimeID INT,
    Name VARCHAR(255),
    ContactInfo VARCHAR(255),
    Injuries VARCHAR(255),
    FOREIGN KEY (CrimeID) REFERENCES Crime(CrimeID)
);
CREATE TABLE Suspect (
    SuspectID INT PRIMARY KEY,
    CrimeID INT,
    Name VARCHAR(255),
    Description TEXT,
    CriminalHistory TEXT,
    FOREIGN KEY (CrimeID) REFERENCES Crime(CrimeID)
);
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');
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');
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');
1. Select all open incidents.
SELECT * FROM CRIME
WHERE STATUS = 'Open';
```

Result Grid	Filter Rows:	Edit:	Export/Import:	Wrap Cell Content:	Result Grid
CrimeID	IncidentType	IncidentDate	Location	Description	Status
1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open
4	Fraud	2023-10-01	101 Maple St, Cityville	Fraudulent financial activities	Open
6	Fraud	2023-10-06	202 Pine St, Townsville	Fraudulent financial activities involving online sc...	Open
NULL	NULL	NULL	NULL	NULL	NULL

CRIME 51 x Apply Revert

2. Find the total number of incidents.

```
SELECT COUNT(*) AS TotalIncidents
FROM Crime;
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:	Result Grid
TotalIncidents				
6				

Result 52 x Read Only

3. List all unique incident types.

```
SELECT DISTINCT IncidentType
FROM CRIME;
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:	Result Grid
IncidentType				
Robbery				
Homicide				
theft				
Fraud				
Assault				

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';
```

Result Grid	Filter Rows:	Edit:	Export/Import:	Wrap Cell Content:	Result Grid
CrimeID	IncidentType	IncidentDate	Location	Description	Status
3	theft	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed
NULL	NULL	NULL	NULL	NULL	NULL

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

```
ALTER TABLE VICTIM
ADD AGE INT;
DESCRIBE VICTIM;
UPDATE Victim SET Age = 32 WHERE VictimID = 1;
UPDATE Victim SET Age = 41 WHERE VictimID = 2;
UPDATE Victim SET Age = 25 WHERE VictimID = 3;
SELECT VictimID, Name, Age, CrimeID, Injuries
FROM Victim
ORDER BY Age DESC;
```

Result Grid					
Filter Rows:					
VictimID	Name	Age	CrimeID	Injuries	
2	Jane Smith	41	2	Deceased	
4	James Black	35	4	None	
1	John Doe	32	1	Minor injuries	
5	Emily White	30	5	Burns	
3	Alice Johnson	25	3	None	
*	NULL	NULL	NULL	NULL	

Victim 55 x Apply Revert

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

```
SELECT AVG(Age) AS AverageAge
FROM Victim;
```

Result Grid	
Filter Rows:	
Export: Wrap Cell Content:	
AverageAge	
32.6000	

Result Grid Form Editor

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

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

Result Grid		
Filter Rows:		
Export: Wrap Cell Content:		
IncidentType	IncidentCount	
Robbery	1	
Fraud	2	

Result Grid Form Editor

8. Find persons with names containing 'Doe'.

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

Result Grid					
Filter Rows:					
Edit: Export/Import: Wrap Cell Content:					
VictimID	CrimeID	Name	ContactInfo	Injuries	AGE
1	1	John Doe	john.doe@example.com	Minor injuries	32
*	NULL	NULL	NULL	NULL	NULL

Victim 58 x Apply Revert

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

```
SELECT V.Name, C.Status
FROM Victim V
JOIN Crime C ON V.CrimeID = C.CrimeID
WHERE C.Status IN ('Open', 'Closed');
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
Name	Status			
John Doe	Open			
Alice Johnson	Closed			
James Black	Open			

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

```
INSERT INTO Crime (CrimeID, IncidentType, IncidentDate, Location, Description, Status)
VALUES
    (4, 'Fraud', '2023-10-01', '101 Maple St, Cityville', 'Fraudulent financial activities', 'Open'),
    (5, 'Assault', '2023-10-05', '202 Birch Ave, Townsville', 'Deliberate fire set to a building', 'Under Investigation');
SELECT * FROM CRIME;
INSERT INTO Victim (VictimID, CrimeID, Name, ContactInfo, Injuries, AGE)
VALUES
    (4, 4, 'James Black', 'jamesblack@example.com', 'None', 35),
    (5, 5, 'Emily White', 'emilywhite@example.com', 'Burns', 30);
SELECT * FROM VICTIM;
SELECT C.IncidentType
FROM Victim V
JOIN Crime C ON V.CrimeID = C.CrimeID
WHERE V.Age IN (30, 35);
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
IncidentType				
Fraud				
Assault				

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

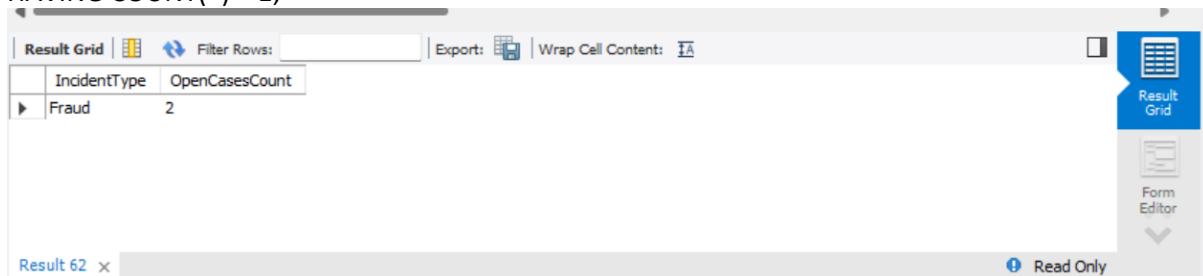
```
SELECT V.Name AS VictimName, C.IncidentType
FROM Crime C
JOIN Victim V ON C.CrimeID = V.CrimeID
WHERE C.IncidentType = 'Robbery';
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
VictimName	IncidentType			
John Doe	Robbery			

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

```
INSERT INTO Crime (CrimeID, IncidentType, IncidentDate, Location, Description, Status)
VALUES
    (6, 'Fraud', '2023-10-06', '202 Pine St, Townsville', 'Fraudulent financial activities involving online scams', 'Open');
SELECT IncidentType, COUNT(*) AS OpenCasesCount
FROM Crime
WHERE Status = 'Open'
```

GROUP BY IncidentType
HAVING COUNT(*) > 1;



IncidentType	OpenCasesCount
Fraud	2

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

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

```
(4, 4, 'John Doe', 'Witness to the incident, now considered a suspect', 'No previous criminal history'),
(5, 5, 'Alice Johnson', 'Involved in the incident, now being investigated as a suspect', 'No previous criminal history');
```

```
SELECT * FROM SUSPECT;
```

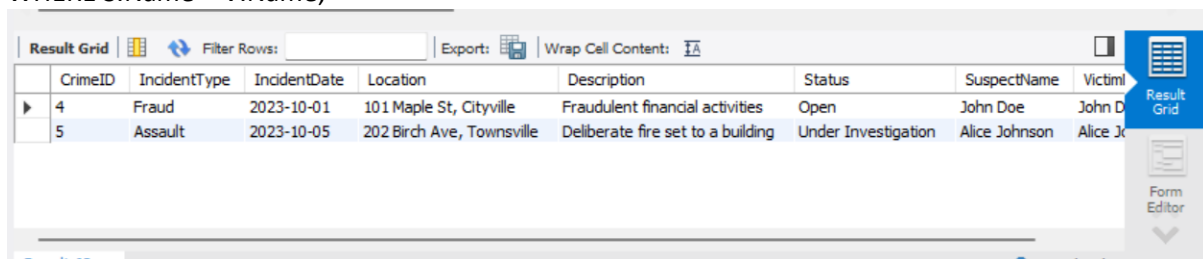
```
SELECT C.CrimeID, C.IncidentType, C.IncidentDate, C.Location, C.Description, C.Status,
       S.Name AS SuspectName, V.Name AS VictimName
```

```
FROM Crime C
```

```
JOIN Suspect S ON C.CrimeID = S.CrimeID
```

```
JOIN Victim V ON S.Name = V.Name
```

```
WHERE S.Name = V.Name;
```



CrimeID	IncidentType	IncidentDate	Location	Description	Status	SuspectName	VictimName
4	Fraud	2023-10-01	101 Maple St, Cityville	Fraudulent financial activities	Open	John Doe	John Doe
5	Assault	2023-10-05	202 Birch Ave, Townsville	Deliberate fire set to a building	Under Investigation	Alice Johnson	Alice Johnson

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

```
SELECT
```

```
C.CrimeID, C.IncidentType, C.IncidentDate, C.Location, C.Description AS CrimeDescription,
C.Status, V.Name AS VictimName, V.ContactInfo AS VictimContact, V.Injuries, S.Name AS
```

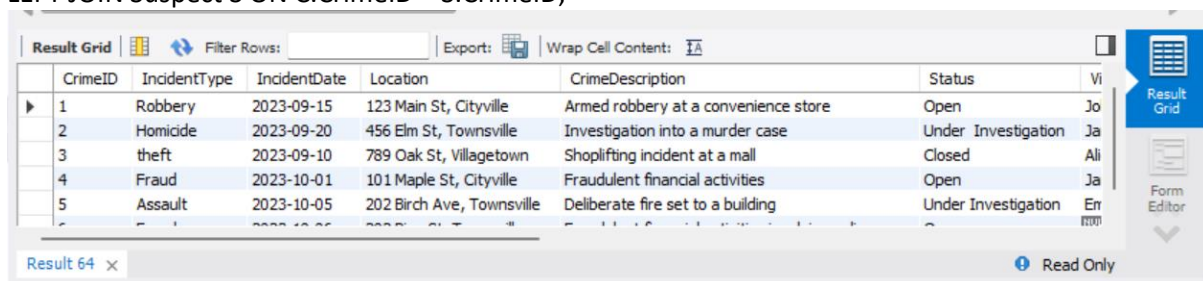
```
SuspectName,
```

```
S.Description AS SuspectDescription, S.CriminalHistory
```

```
FROM Crime C
```

```
LEFT JOIN Victim V ON C.CrimeID = V.CrimeID
```

```
LEFT JOIN Suspect S ON C.CrimeID = S.CrimeID;
```



CrimeID	IncidentType	IncidentDate	Location	CrimeDescription	Status	VictimName
1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open	John Doe
2	Homicide	2023-09-20	456 Elm St, Townsville	Investigation into a murder case	Under Investigation	John Doe
3	theft	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed	Alice Johnson
4	Fraud	2023-10-01	101 Maple St, Cityville	Fraudulent financial activities	Open	John Doe
5	Assault	2023-10-05	202 Birch Ave, Townsville	Deliberate fire set to a building	Under Investigation	John Doe

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

```
ALTER TABLE SUSPECT
```

```
ADD AGE INT;
```

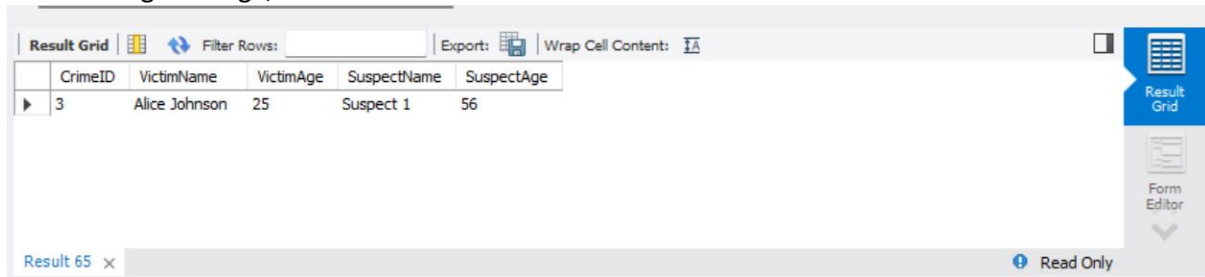
```
UPDATE Suspect SET Age = 23 WHERE SuspectID = 1;
```

```
UPDATE Suspect SET Age = 34 WHERE SuspectID = 2;
```

```

UPDATE Suspect SET Age = 56 WHERE SuspectID = 3;
UPDATE Suspect SET Age = 32 WHERE SuspectID = 4;
UPDATE Suspect SET Age = 25 WHERE SuspectID = 5;
SELECT
    C.CrimeID,
    V.Name AS VictimName, V.Age AS VictimAge,
    S.Name AS SuspectName, S.Age AS SuspectAge
FROM Crime C
JOIN Victim V ON C.CrimeID = V.CrimeID
JOIN Suspect S ON C.CrimeID = S.CrimeID
WHERE S.Age > V.Age;

```



The screenshot shows a database interface with a 'Result Grid' tab. The grid displays the results of a query that joins the Crime, Victim, and Suspect tables. The columns are CrimeID, VictimName, VictimAge, SuspectName, and SuspectAge. There is one row of data where CrimeID is 3, VictimName is Alice Johnson, VictimAge is 25, SuspectName is Suspect 1, and SuspectAge is 56. The interface includes a 'Filter Rows' field, an 'Export' button, and a 'Wrap Cell Content' option. A 'Read Only' status is indicated at the bottom right.

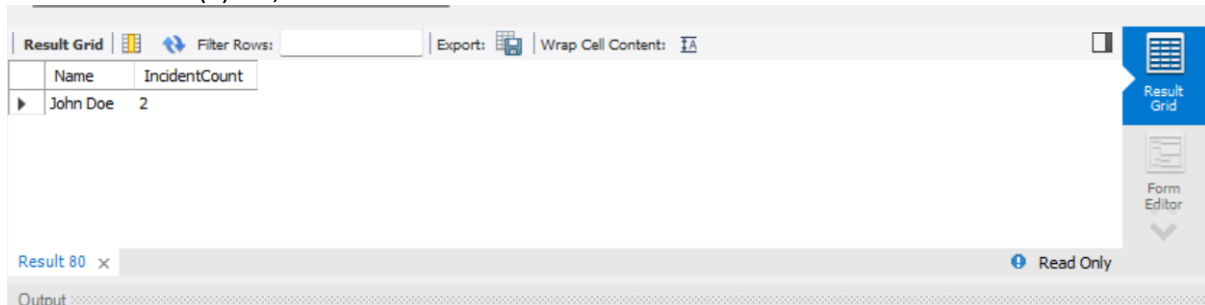
CrimeID	VictimName	VictimAge	SuspectName	SuspectAge
3	Alice Johnson	25	Suspect 1	56

16. Find suspects involved in multiple incidents:

```

INSERT INTO Suspect (SuspectID, CrimeID, Name, Description, CriminalHistory)
VALUES
(6, 5, 'John Doe', 'Involved in another case as a prime suspect', 'Previously convicted of fraud');
SELECT Name, COUNT(*) AS IncidentCount
FROM Suspect
GROUP BY Name
HAVING COUNT(*) > 1;

```



The screenshot shows a database interface with a 'Result Grid' tab. The grid displays the results of a query that groups suspects by name and counts the number of incidents they are involved in. The columns are Name and IncidentCount. There is one row of data where Name is John Doe and IncidentCount is 2. The interface includes a 'Filter Rows' field, an 'Export' button, and a 'Wrap Cell Content' option. A 'Read Only' status is indicated at the bottom right.

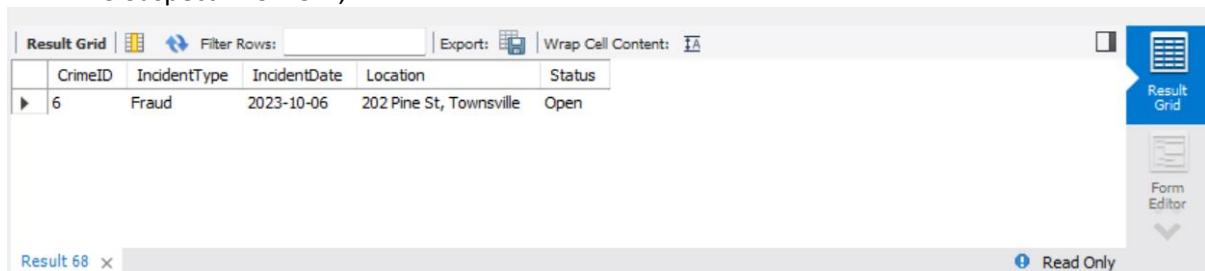
Name	IncidentCount
John Doe	2

17. List incidents with no suspects involved.

```

SELECT C.CrimeID, C.IncidentType, C.IncidentDate, C.Location, C.Status
FROM Crime C
LEFT JOIN Suspect S ON C.CrimeID = S.CrimeID
WHERE S.SuspectID IS NULL;

```



The screenshot shows a database interface with a 'Result Grid' tab. The grid displays the results of a query that lists incidents with no suspects involved. The columns are CrimeID, IncidentType, IncidentDate, Location, and Status. There is one row of data where CrimeID is 6, IncidentType is Fraud, IncidentDate is 2023-10-06, Location is 202 Pine St, Townsville, and Status is Open. The interface includes a 'Filter Rows' field, an 'Export' button, and a 'Wrap Cell Content' option. A 'Read Only' status is indicated at the bottom right.

CrimeID	IncidentType	IncidentDate	Location	Status
6	Fraud	2023-10-06	202 Pine St, Townsville	Open

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

```

UPDATE Crime SET IncidentType = 'Robbery' WHERE CrimeID IN (3, 4, 5,6);
UPDATE Crime SET IncidentType = 'theft' WHERE CrimeID = 3;

```

```

UPDATE Crime SET IncidentType = 'Fraud' WHERE CrimeID = 4;
UPDATE Crime SET IncidentType = 'Assault' WHERE CrimeID = 5;
UPDATE Crime SET IncidentType = 'Fraud' WHERE CrimeID = 6;
SELECT * FROM Crime
WHERE IncidentType IN ('Homicide', 'Robbery')
AND EXISTS (
    SELECT 1 FROM Crime C2 WHERE C2.IncidentType = 'Homicide'
)
AND NOT EXISTS (
    SELECT 1
    FROM Crime C3
    WHERE C3.IncidentType NOT IN ('Homicide', 'Robbery')
);
SELECT * FROM CRIME;
SELECT * FROM VICTIM;

```

The screenshot shows a database application window with a table titled 'Crime 72'. The table has 7 columns: CrimeID, IncidentType, IncidentDate, Location, Description, and Status. The data is as follows:

CrimeID	IncidentType	IncidentDate	Location	Description	Status
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	Robbery	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed
4	Robbery	2023-10-01	101 Maple St, Cityville	Fraudulent financial activities	Open
5	Robbery	2023-10-05	202 Birch Ave, Townsville	Deliberate fire set to a building	Under Investigation
6	Robbery	2023-10-06	202 Pine St, Townsville	Fraudulent financial activities involving online sc...	Open

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,
    C.IncidentDate,
    C.Location,
    COALESCE(S.Name, 'No Suspect') AS SuspectName
FROM
    Crime C
LEFT JOIN
    Suspect S ON C.CrimeID = S.CrimeID;

```

The screenshot shows a database application window with a table titled 'Result 73'. The table has 6 columns: CrimeID, IncidentType, IncidentDate, Location, and SuspectName. The data is as follows:

CrimeID	IncidentType	IncidentDate	Location	SuspectName
1	Robbery	2023-09-15	123 Main St, Cityville	Robber 1
2	Homicide	2023-09-20	456 Elm St, Townsville	Unknown
3	Robbery	2023-09-10	789 Oak St, Villagetown	Suspect 1
4	Robbery	2023-10-01	101 Maple St, Cityville	John Doe
5	Robbery	2023-10-05	202 Birch Ave, Townsville	Alice Johnson
6	Robbery	2023-10-06	202 Pine St, Townsville	No Suspect

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

```

SELECT S.SuspectID, S.Name, C.IncidentType
FROM Suspect S
JOIN Crime C ON S.CrimeID = C.CrimeID
WHERE C.IncidentType IN ('Robbery', 'Assault');

```

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	SuspectID	Name	IncidentType
▶	1	Robber 1	Robbery
	5	Alice Johnson	Assault

Result Grid

Form Editor

Result 75 x

Read Only