

Coding Challenge SQL Crime Management Schema DDL and DML

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MySQL 8.0 Command Line Client
3 rows in set (0.00 sec)

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 (1.77 sec)

mysql> INSERT INTO Suspect 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 (0.40 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> select * from Suspect;
+-----+-----+-----+-----+-----+
| SuspectID | CrimeID | Name      | Description      | CriminalHistory      |
+-----+-----+-----+-----+-----+
| 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  |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>
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mysql> select * from Suspect;
+-----+-----+-----+-----+-----+
| SuspectID | CrimeID | Name      | Description      | CriminalHistory      |
+-----+-----+-----+-----+-----+
| 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  |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> 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   |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.23 sec)

mysql> SELECT COUNT(*) as total_incidents FROM Crime;
+-----+
| total_incidents |
+-----+
| 3               |
+-----+
1 row in set (0.77 sec)

mysql> SELECT DISTINCT incident_type FROM incidents;
ERROR 1146 (42S02): Table 'crimemanagement.incidents' doesn't exist
mysql> SELECT DISTINCT incident_type FROM incidents;
ERROR 1146 (42S02): Table 'crimemanagement.incidents' doesn't exist
mysql> SELECT DISTINCT incident_type FROM Crime;
ERROR 1054 (42S22): Unknown column 'incident_type' in 'field list'
mysql> SELECT DISTINCT IncidentType FROM Crime;
+-----+
| IncidentType |
+-----+
| Robbery      |
| Homicide     |
| Theft        |
+-----+
3 rows in set (0.15 sec)

mysql>
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MySQL 8.0 Command Line Client

mysql> SELECT * FROM incidents WHERE date BETWEEN '2023-09-01' AND '2023-09-10';
ERROR 1146 (42502): Table 'crimemanagement.incidents' doesn't exist
mysql> SELECT * FROM Crime WHERE date BETWEEN '2023-09-01' AND '2023-09-10';
ERROR 1054 (42S22): Unknown column 'date' in 'where clause'
mysql> 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 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.27 sec)

mysql> SELECT * FROM crime ORDER BY IncidentDate DESC;
+-----+-----+-----+-----+-----+-----+
| CrimeID | IncidentType | IncidentDate | Location | Description | Status |
+-----+-----+-----+-----+-----+-----+
| 2 | Homicide | 2023-09-20 | 456 Elm St, Townsville | Investigation into a murder case | Under Investigation |
| 1 | Robbery | 2023-09-15 | 123 Main St, Cityville | Armed robbery at a convenience store | Open |
| 3 | Theft | 2023-09-10 | 789 Oak St, Villagetown | Shoplifting incident at a mall | Closed |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.06 sec)

mysql> SELECT IncidentType, COUNT(*) as count FROM crime WHERE status = 'Open' GROUP BY IncidentType;
+-----+-----+
| IncidentType | count |
+-----+-----+
| Robbery | 1 |
+-----+-----+
1 row in set (0.05 sec)

mysql> SELECT * FROM victim WHERE Name LIKE '%Doe%';
+-----+-----+-----+-----+-----+
| VictimID | CrimeID | Name | ContactInfo | Injuries |
+-----+-----+-----+-----+-----+
| 1 | 1 | John Doe | johndoe@example.com | Minor injuries |
+-----+-----+-----+-----+-----+
1 row in set (0.07 sec)

mysql>
```

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MySQL 8.0 Command Line Client
1 row in set (0.07 sec)

mysql> SELECT DISTINCT victim.Name, crime.status FROM victim
-> JOIN incidents ON victim.CrimeID = crime.CrimeID;
ERROR 1146 (42502): Table 'crimemanagement.incidents' doesn't exist
mysql> SELECT DISTINCT victim.Name, crime.status FROM victim
-> JOIN crime ON victim.CrimeID = crime.CrimeID;
+-----+-----+
| Name | status |
+-----+-----+
| John Doe | Open |
| Jane Smith | Under Investigation |
| Alice Johnson | Closed |
+-----+-----+
3 rows in set (0.07 sec)

mysql> SELECT DISTINCT persons.name FROM persons
-> JOIN incidents ON persons.person_id = incidents.person_id
-> ^C
mysql> SELECT DISTINCT Suspect.name FROM Suspect
-> JOIN incidents ON Suspect.SuspectID = Crime.CrimeID
-> WHERE crime.IncidentType = 'Robbery';
ERROR 1146 (42502): Table 'crimemanagement.incidents' doesn't exist
mysql> SELECT DISTINCT Suspect.name FROM Suspect
-> JOIN crime ON Suspect.SuspectID = Crime.CrimeID
-> WHERE crime.IncidentType = 'Robbery';
+-----+
| name |
+-----+
| Robber 1 |
+-----+
1 row in set (0.00 sec)

mysql>
```

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MySQL 8.0 Command Line Client
mysql> SELECT SuspectID, COUNT(*) as incident_count FROM Suspect
-> WHERE SuspectID IS NOT NULL
-> GROUP BY SuspectID HAVING COUNT(*) >=1;
+-----+-----+
| SuspectID | incident_count |
+-----+-----+
| 1         | 1             |
| 2         | 1             |
| 3         | 1             |
+-----+-----+
3 rows in set (0.06 sec)

mysql> SELECT * FROM Suspect WHERE SuspectID IS NULL;
Empty set (0.00 sec)

mysql> SELECT * FROM Suspect WHERE SuspectID=2 and Name !='unknown';
+-----+-----+-----+-----+-----+
| SuspectID | CrimeID | Name   | Description          | CriminalHistory |
+-----+-----+-----+-----+-----+
| 2         | 2       | Unknown | Investigation ongoing | NULL            |
+-----+-----+-----+-----+-----+
1 row in set (0.05 sec)

mysql> SELECT * FROM crime WHERE
-> (IncidentType = 'Homicide' AND EXISTS (SELECT 1 FROM crime WHERE IncidentType = 'Robbery'))
-> OR (IncidentType = 'Robbery' AND NOT EXISTS (SELECT 1 FROM crime WHERE IncidentType = 'Homicide'));
+-----+-----+-----+-----+-----+-----+
| CrimeID | IncidentType | IncidentDate | Location              | Description          | Status |
+-----+-----+-----+-----+-----+-----+
| 2       | Homicide    | 2023-09-20   | 456 Elm St, Townsville | Investigation into a murder case | Under Investigation |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.06 sec)

mysql>
mysql> SELECT DISTINCT Suspect.name FROM Suspect
-> JOIN victim ON victim.VictimID = crime.suspect_id
-> WHERE crime.IncidentType IN ('Robbery', 'Assault');
ERROR 1054 (42S22): Unknown column 'crime.IncidentType' in 'where clause'
mysql> SELECT DISTINCT Suspect.name FROM Suspect
-> JOIN crime ON crime.CrimeID = suspect.suspect_id
-> WHERE crime.IncidentType IN ('Robbery', 'Assault');
ERROR 1054 (42S22): Unknown column 'suspect.suspect_id' in 'on clause'
mysql> SELECT DISTINCT Suspect.name FROM Suspect
```

```
MySQL 8.0 Command Line Client
Investigation |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.06 sec)

mysql>
mysql> SELECT DISTINCT Suspect.name FROM Suspect
-> JOIN victim ON victim.VictimID = crime.suspect_id
-> WHERE crime.IncidentType IN ('Robbery', 'Assault');
ERROR 1054 (42S22): Unknown column 'crime.IncidentType' in 'where clause'
mysql> SELECT DISTINCT Suspect.name FROM Suspect
-> JOIN crime ON crime.CrimeID = suspect.suspect_id
-> WHERE crime.IncidentType IN ('Robbery', 'Assault');
ERROR 1054 (42S22): Unknown column 'suspect.suspect_id' in 'on clause'
mysql> SELECT DISTINCT Suspect.name FROM Suspect
-> JOIN crime ON crime.CrimeID = Suspect.SuspectID
-> WHERE crime.IncidentType IN ('Robbery', 'Assault');
+-----+
| name |
+-----+
| Robber 1 |
+-----+
1 row in set (0.02 sec)

mysql>
```