

Coding challenge 3

Crime Management

Table Creation

```
SQL File 3*
Limit to 1000 rows

4  /* table creation*/
5
6  CREATE TABLE Crime (
7      CrimeID INT PRIMARY KEY,
8      IncidentType VARCHAR(255),
9      IncidentDate DATE,
10     Location VARCHAR(255),
11     Description TEXT,
12     Status VARCHAR(20)
13 );
14
15 CREATE TABLE Victim (
16     VictimID INT PRIMARY KEY,
17     CrimeID INT,
18     Name VARCHAR(255),
19     ContactInfo VARCHAR(255),
20     Injuries VARCHAR(255),
21     FOREIGN KEY (CrimeID) REFERENCES Crime(CrimeID)
22 );
23
24 CREATE TABLE Suspect (
25     SuspectID INT PRIMARY KEY,
26     CrimeID INT,
27     Name VARCHAR(255),
28     Description TEXT,
29     CriminalHistory TEXT,
30     FOREIGN KEY (CrimeID) REFERENCES Crime(CrimeID)
31 );
32
```

Data Insertion

```
33  /* data insertion */
34  INSERT INTO Crime (CrimeID, IncidentType, IncidentDate, Location, Description, Status)
35  VALUES
36  (1, 'Robbery', '2023-09-15', '123 Main St, Cityville', 'Armed robbery at a convenience store', 'Open'),
37  (2, 'Homicide', '2023-09-20', '456 Elm St, Townsville', 'Investigation into a murder case', 'Under Investigation'),
38  (3, 'Theft', '2023-09-10', '789 Oak St, Villagetown', 'Shoplifting incident at a mall', 'Closed');
39
40  INSERT INTO Victim (VictimID, CrimeID, Name, ContactInfo, Injuries)
41  VALUES
42  (1, 1, 'John Doe', 'johndoe@example.com', 'Minor injuries'),
43  (2, 2, 'Jane Smith', 'janesmith@example.com', 'Deceased'),
44  (3, 3, 'Alice Johnson', 'alicejohnson@example.com', 'None');
45
46  INSERT INTO Suspect (SuspectID, CrimeID, Name, Description, CriminalHistory)
47  VALUES
48  (1, 1, 'Robber 1', 'Armed and masked robber', 'Previous robbery convictions'),
49  (2, 2, 'Unknown', 'Investigation ongoing', NULL),
50  (3, 3, 'Suspect 1', 'Shoplifting suspect', 'Prior shoplifting arrests');
```

Output

Output				
Action Output				
#	Time	Action	Message	Duration / Fetch
1	11:47:47	create database Crime_management	1 row(s) affected	0.328 sec
2	11:47:57	use crime_management	0 row(s) affected	0.000 sec
3	11:49:00	CREATE TABLE Crime (CrimeID INT PRIMARY KEY, IncidentType VARCHAR(255), IncidentDate DATE, L...	0 row(s) affected	1.000 sec
4	11:49:16	CREATE TABLE Victim (VictimID INT PRIMARY KEY, CrimeID INT, Name VARCHAR(255), ContactInfo VA...	0 row(s) affected	0.344 sec
5	11:49:36	CREATE TABLE Suspect (SuspectID INT PRIMARY KEY, CrimeID INT, Name VARCHAR(255), Descriptio...	0 row(s) affected	0.296 sec
6	11:50:00	INSERT INTO Crime (CrimeID, IncidentType, IncidentDate, Location, Description, Status) VALUES (1, 'Robbery',...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.218 sec
7	11:50:22	INSERT INTO Victim (VictimID, CrimeID, Name, ContactInfo, Injuries) VALUES (1, 1, 'John Doe', johndoe@exa...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.078 sec
8	11:50:25	INSERT INTO Suspect (SuspectID, CrimeID, Name, Description, CriminalHistory) VALUES (1, 1, 'Robber 1', 'Am...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.047 sec

Queries:

1.

The screenshot shows a SQL IDE window titled "coding challenge 3_Crime manag...". The SQL editor contains the following code:

```
51  
52  /*1*/  
53  • SELECT * FROM Crime WHERE Status = 'Open';  
54  
55  
56  
57
```

Below the editor, the "Result Grid" shows a table with 6 columns: CrimeID, IncidentType, IncidentDate, Location, Description, and Status. The first row is highlighted:

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

The "Output" pane at the bottom shows the execution log:

#	Time	Action	Message	Duration / Fetch
1	11:55:42	SELECT * FROM Crime WHERE Status = 'Open' LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

2.

The screenshot shows the same SQL IDE window. The SQL editor contains the following code:

```
55  
56  
57  /*2*/  
58  • SELECT COUNT(*) AS TotalIncidents FROM Crime;  
59  
60  
61
```

The "Result Grid" shows a single column table with the following data:

TotalIncidents
3

The "Output" pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
1	12:00:19	SELECT COUNT(*) AS TotalIncidents FROM Crime LIMIT 0, 1000	1 row(s) returned	0.015 sec / 0.000 sec

3.

The screenshot shows a SQL IDE window titled "coding challenge 3_Crime manag...". The SQL editor contains the following code:

```
61  
62  
63  /*3*/  
64  • SELECT DISTINCT IncidentType FROM Crime;  
65  
66  
67
```

Below the editor, the "Result Grid" shows a table with one column, "IncidentType", and three rows: "Robbery", "Homicide", and "Theft".

The "Output" pane at the bottom shows the execution results:

#	Time	Action	Message	Duration / Fetch
1	12:01:06	SELECT DISTINCT IncidentType FROM Crime LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec

4.

The screenshot shows the same SQL IDE window. The SQL editor now contains the following code:

```
67  
68  
69  /*4*/  
70  • SELECT * FROM Crime WHERE IncidentDate BETWEEN '2023-09-01' AND '2023-09-10';  
71  
72  
73
```

The "Result Grid" now displays a table with six columns: "CrimeID", "IncidentType", "IncidentDate", "Location", "Description", and "Status". It contains one row of data:

CrimeID	IncidentType	IncidentDate	Location	Description	Status
3	Theft	2023-09-10	799 Oak St, Villagetown	Shoplifting incident at a mall	Closed

The "Output" pane shows the execution results:

#	Time	Action	Message	Duration / Fetch
1	12:01:36	SELECT * FROM Crime WHERE IncidentDate BETWEEN '2023-09-01' AND '2023-09-10' LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

5.

coding challenge 3_Crime manag SQL File 4*

```
74 /*5*/
75 SELECT Name, Age FROM Victim
76 UNION
77 SELECT Name, Age FROM Suspect
78 ORDER BY Age DESC;
79 /* added column age in suspect and victim as there was no column of age
80 but in query asked it was given column age*/
81
```

Result Grid

Name	Age
Alice Johnson	55
Suspect 1	50
Jane Smith	45
Unknown	40
John Doe	35

Result 8 x

Read Only

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:13:02	SELECT Name, Age FROM Victim UNION SELECT Name, Age FROM Suspect ORDER BY Age DESC	6 row(s) returned	0.000 sec / 0.000 sec

6.

coding challenge 3_Crime manag SQL File 4*

```
81
82 /*6*/
83 SELECT AVG(Age) AS AverageAge FROM (
84     SELECT Age FROM Victim
85     UNION
86     SELECT Age FROM Suspect
87 ) AS AllAges;
88
```

Result Grid

AverageAge
42.5000

Result 10 x

Read Only

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:14:22	SELECT AVG(Age) AS AverageAge FROM (SELECT Age FROM Victim UNION SELECT Age FROM Su...	1 row(s) returned	0.000 sec / 0.000 sec

7.

coding challenge 3_Crime manag SQL File 4*

```
89
90 /*7*/
91 SELECT IncidentType, COUNT(*) AS IncidentCount FROM Crime WHERE Status = 'Open' GROUP BY IncidentType;
92
93
94
95
```

Limit to 1000 rows

Result Grid

IncidentType	IncidentCount
Robbery	1

Result 11 x

Read Only

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:16:11	SELECT IncidentType, COUNT(*) AS IncidentCount FROM Crime WHERE Status = 'Open' GROUP BY Incident...	1 row(s) returned	0.000 sec / 0.000 sec

8.

coding challenge 3_Crime manag SQL File 4*

```
95
96 /*8*/
97 SELECT * FROM Victim WHERE Name LIKE '%Doe%'
98 UNION
99 SELECT * FROM Suspect WHERE Name LIKE '%Doe%';
100
101
```

Limit to 1000 rows

Result Grid

VictimID	CrimeID	Name	ContactInfo	Injuries	age
1	1	John Doe	john.doe@example.com	Minor injuries	35

Result 12 x

Read Only

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:17:12	SELECT * FROM Victim WHERE Name LIKE '%Doe%'; UNION SELECT * FROM Suspect WHERE Name LIKE '%Doe%';	1 row(s) returned	0.000 sec / 0.000 sec

9.

coding challenge 3_Crime manag... SQL File 4*

Limit to 1000 rows

```

101 /*9*/
102 SELECT Name FROM Victim WHERE CrimeID IN (SELECT CrimeID FROM Crime WHERE Status = 'Open')
103 UNION
104 SELECT Name FROM Suspect WHERE CrimeID IN (SELECT CrimeID FROM Crime WHERE Status = 'Open')
105 UNION
106 SELECT Name FROM Victim WHERE CrimeID IN (SELECT CrimeID FROM Crime WHERE Status = 'Closed')
107 UNION
108 SELECT Name FROM Suspect WHERE CrimeID IN (SELECT CrimeID FROM Crime WHERE Status = 'Closed');

```

Result Grid

Name
John Doe
Robber 1
Alice Johnson
Suspect 1

Result 13 x

Read Only Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:18:21	SELECT Name FROM Victim WHERE CrimeID IN (SELECT CrimeID FROM Crime WHERE Status = 'Open') UNI...	4 row(s) returned	0.031 sec / 0.000 sec

10.

coding challenge 3_Crime manag... SQL File 4*

Limit to 1000 rows

```

109
110 /*10*/
111 select distinct c.IncidentType from crime c
112 left join victim v on v.CrimeID=c.CrimeID
113 where v.age=30 or v.age=35 ;
114
115
116

```

Result Grid

IncidentType
Robbery

Result 15 x

Read Only Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:23:20	select distinct c.IncidentType from crime c left join victim v on v.CrimeID=c.CrimeID where v.age=30 or v.age=35...	1 row(s) returned	0.000 sec / 0.000 sec

11.

The screenshot shows a SQL IDE interface with a query editor, a result grid, and an output pane. The query editor contains the following SQL code:

```
117
118
119 /*11*/
120 • SELECT Name FROM Victim WHERE CrimeID IN (SELECT CrimeID FROM Crime WHERE IncidentType = 'Robbery')
121 UNION
122 SELECT Name FROM Suspect WHERE CrimeID IN (SELECT CrimeID FROM Crime WHERE IncidentType = 'Robbery');
123
124
```

The result grid shows the following data:

Name
John Doe
Robber 1

The output pane shows the following message:

```
1 12:24:39 SELECT Name FROM Victim WHERE CrimeID IN (SELECT CrimeID FROM Crime WHERE IncidentType = 'Rob... 2 row(s) returned
0.000 sec / 0.000 sec
```

12.

The screenshot shows a SQL IDE interface with a query editor, a result grid, and an output pane. The query editor contains the following SQL code:

```
124
125
126 /*12*/
127 • SELECT IncidentType, COUNT(*) AS OpenCases FROM Crime WHERE Status = 'Open' GROUP BY IncidentType HAVING COUNT(*) > 1;
128
129
130
131
```

The result grid shows the following data:

IncidentType	OpenCases
--------------	-----------

The output pane shows the following message:

```
1 12:25:39 SELECT IncidentType, COUNT(*) AS OpenCases FROM Crime WHERE Status = 'Open' GROUP BY IncidentTy... 0 row(s) returned
0.000 sec / 0.000 sec
```

13.

coding challenge 3_Crime manag... SQL File 4*

```

132
133 /*13*/
134 • SELECT DISTINCT C.*, S.Name AS SuspectName
135 FROM Crime C
136 JOIN Suspect S ON C.CrimeID = S.CrimeID
137 WHERE S.Name IN (SELECT Name FROM Victim WHERE CrimeID = C.CrimeID);
138
139

```

Result Grid

CrimeID	IncidentType	IncidentDate	Location	Description	Status	SuspectName
---------	--------------	--------------	----------	-------------	--------	-------------

Result 19 x

Read Only

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:26:46	SELECT DISTINCT C.*, S.Name AS SuspectName FROM Crime C JOIN Suspect S ON C.CrimeID = S.CrimeID ...	0 row(s) returned	0.000 sec / 0.000 sec

14.

coding challenge 3_Crime manag... SQL File 4*

```

139
140 /*14*/
141 • SELECT C.*, V.Name AS VictimName, V.ContactInfo, V.Injuries, S.Name AS SuspectName, S.Description AS SuspectDescription, S.CriminalHistory
142 FROM Crime C
143 LEFT JOIN Victim V ON C.CrimeID = V.CrimeID
144 LEFT JOIN Suspect S ON C.CrimeID = S.CrimeID;
145
146

```

Result Grid

CrimeID	IncidentType	IncidentDate	Location	Description	Status	VictimName	ContactInfo	Injuries	SuspectName	SuspectDescription	SuspectCriminalHistory
1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open	John Doe	john.doe@example.com	Minor injuries	Robert Johnson	Investigation into a robbery case	Armed robbery at a convenience store
2	Homicide	2023-09-20	456 Elm St, Townsville	Investigation into a murder case	Under Investigation	Jane Smith	jane.smith@example.com	Deceased	John Doe	Investigation into a murder case	Investigation into a murder case
3	Theft	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed	Alice Johnson	alice.johnson@example.com	None	Alice Johnson	Shoplifting incident at a mall	Shoplifting incident at a mall

Result 20 x

Read Only

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:27:53	SELECT C.*, V.Name AS VictimName, V.ContactInfo, V.Injuries, S.Name AS SuspectName, S.Description AS Su...	3 row(s) returned	0.000 sec / 0.000 sec

15.

coding challenge 3_Crime manag... SQL File 4*

```
145
146
147 /*15*/
148 SELECT C.*
149 FROM Crime C
150 JOIN Suspect S ON C.CrimeID = S.CrimeID
151 WHERE S.Age > ANY (SELECT Age FROM Victim WHERE CrimeID = C.CrimeID);
152
```

Result Grid

CrimeID	IncidentType	IncidentDate	Location	Description	Status
---------	--------------	--------------	----------	-------------	--------

Result 21 x Read Only Context Help Snippets

Output

#	Time	Action	Message	Duration / Fetch
1	12:28:30	SELECT C.* FROM Crime C JOIN Suspect S ON C.CrimeID = S.CrimeID WHERE S.Age > ANY (SELECT Age F...	0 row(s) returned	0.000 sec / 0.000 sec

16.

coding challenge 3_Crime manag... SQL File 4*

```
153
154 /*16*/
155 SELECT SuspectID, Name, COUNT(CrimeID) AS IncidentCount
156 FROM Suspect
157 GROUP BY SuspectID, Name
158 HAVING COUNT(CrimeID) > 1;
159
160
```

Result Grid

SuspectID	Name	IncidentCount
-----------	------	---------------

Result 22 x Read Only Context Help Snippets

Output

#	Time	Action	Message	Duration / Fetch
1	12:29:12	SELECT SuspectID, Name, COUNT(CrimeID) AS IncidentCount FROM Suspect GROUP BY SuspectID, Name ...	0 row(s) returned	0.000 sec / 0.000 sec

17

coding challenge 3_Crime manag... SQL File 4*

```
159
160
161 /*17*/
162 SELECT C.*
163 FROM Crime C
164 LEFT JOIN Suspect S ON C.CrimeID = S.CrimeID
165 WHERE S.SuspectID IS NULL;
166
```

Result Grid

CrimeID	IncidentType	IncidentDate	Location	Description	Status
---------	--------------	--------------	----------	-------------	--------

Result 23 x

Read Only

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:30:33	SELECT C.* FROM Crime C LEFT JOIN Suspect S ON C.CrimeID = S.CrimeID WHERE S.SuspectID IS NULL LI...	0 row(s) returned	0.000 sec / 0.000 sec

18.

coding challenge 3_Crime manag... SQL File 4*

```
167
168
169 /*18*/
170 SELECT C.*
171 FROM Crime C
172 WHERE IncidentType = 'Homicide'
173 AND NOT EXISTS (SELECT 1 FROM Crime WHERE CrimeID <> C.CrimeID AND IncidentType <> 'Robbery');
174
```

Result Grid

CrimeID	IncidentType	IncidentDate	Location	Description	Status
NULL	NULL	NULL	NULL	NULL	NULL

Crime 24 x

Apply Revert

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:31:47	SELECT C.* FROM Crime C WHERE IncidentType = 'Homicide' AND NOT EXISTS (SELECT 1 FROM Crime ...	0 row(s) returned	0.000 sec / 0.000 sec

19.

coding challenge 3_Crime manag... SQL File 4*

```

175
176
177 /*19*/
178 • SELECT C.*, IFNULL(S.Name, 'No Suspect') AS SuspectName
179 FROM Crime C
180 LEFT JOIN Suspect S ON C.CrimeID = S.CrimeID;
181
182

```

Result Grid

CrimeID	IncidentType	IncidentDate	Location	Description	Status	SuspectName
1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open	Robber 1
2	Homicide	2023-09-20	456 Elm St, Townsville	Investigation into a murder case	Under Investigation	Unknown
3	Theft	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed	Suspect 1

Result 25 x Read Only Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:32:46	SELECT C.*, IFNULL(S.Name, 'No Suspect') AS SuspectName FROM Crime C LEFT JOIN Suspect S ON C.Crim...	3 row(s) returned	0.000 sec / 0.000 sec

20.

coding challenge 3_Crime manag... SQL File 4*

```

181
182
183 /*20*/
184 • SELECT DISTINCT S.*
185 FROM Suspect S
186 JOIN Crime C ON S.CrimeID = C.CrimeID
187 WHERE C.IncidentType IN ('Robbery', 'Assault');
188

```

Result Grid

SuspectID	CrimeID	Name	Description	CriminalHistory	age
1	1	Robber 1	Armed and masked robber	Previous robbery convictions	30

Result 26 x Read Only Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:33:23	SELECT DISTINCT S.* FROM Suspect S JOIN Crime C ON S.CrimeID = C.CrimeID WHERE C.IncidentType IN (...	1 row(s) returned	0.000 sec / 0.000 sec